



MEASURING INSTRUMENTS

CATALOGUE NO.2012E



QUALITY | INNOVATION | SERVICE | VALUE



Welcome to INSIZE.

Founded in 1995, INSIZE is a dedicated supplier of measuring instruments. To enable us to serve the world-wide market, we are setting up an INSIZE distribution network on a global basis, so that, wherever you are, INSIZE products with service and support are not far away.

Our key aims are:

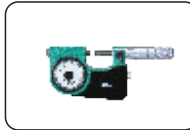
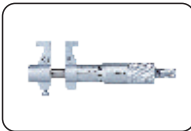
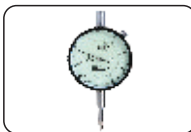
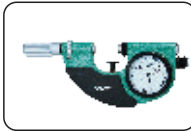
- Quality products made to international standards with full guarantee.
- Innovation by continually striving to improve and develop new products.
- Service and support to ensure you have trouble-free use of INSIZE products.
- Value is always a key element. Our aim is to give you high-performance products at a good price.

Our dedication to Quality, Innovation, Service and Value has created a worldwide demand for the INSIZE products.

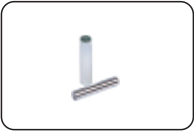
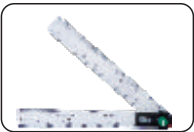
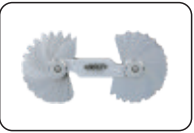
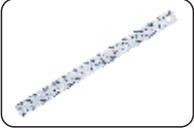
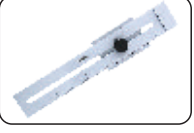
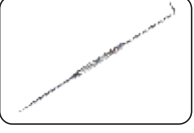
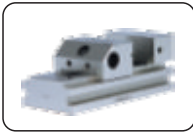
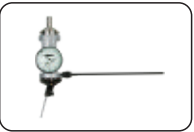
INSIZE is positioning itself for today's economic demands and tomorrow's future!



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SPC CABLE



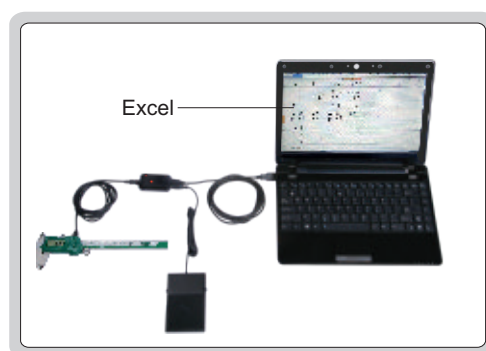
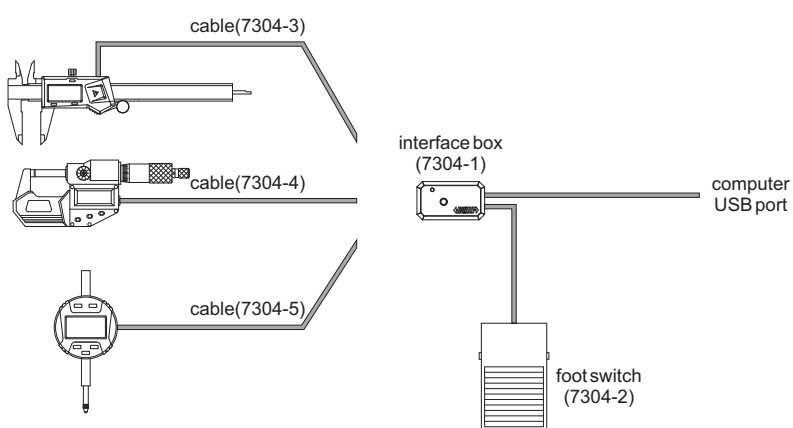
7304-1



7304-2



7304-3



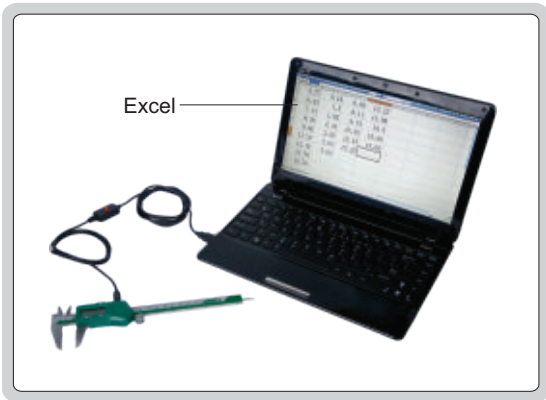
- Without special software, the data can be input as keyboard signal to Excel, Word, CAD, Skype, etc.
- Press the red button on the interface box or the foot switch to input data. Foot switch is optional
- The interface box can accept all cables (code **7304-3**, **7304-4**, **7304-5**), but can accept only one cable at the same time

Code	Description	Applicable products
7304-1	interface box with cable (length 2m)	
7304-2	foot switch with cable (length 1.5m)	
7304-3	cable (length 0.5m)	 digital calipers and digital depth gauges
7304-4	cable (length 0.5m)	  digital micrometers(except 3108 and 3109)
7304-5	cable (length 0.5m)	  digital indicators

SPC CABLE



7302-SPC2



- Without special software, the data can be input as keyboard signal to Excel, Word, CAD, Skype, etc.
- Press the red button on the interface box to input data
- Connected to USB port of computer
- Cable length 2.5m

Code	Applicable products	
7302-SPC1		digital calipers and digital depth gauges
7302-SPC2	 	digital micrometers(except 3108 and 3109)
7302-SPC3	 	digital indicators

SPC CABLE

- Work with software

Code	Applicable products
7301-SPC1	large digital calipers 1106(type B), 1117(type B), 1136(type B), 1135
7301-SPC2	digital height gauges 1151
7301-SPC5	digital height gauges 1150

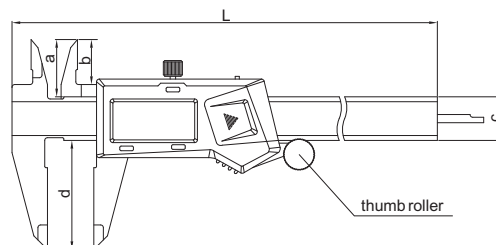


7301-SPC1



1108-150

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



(mm)

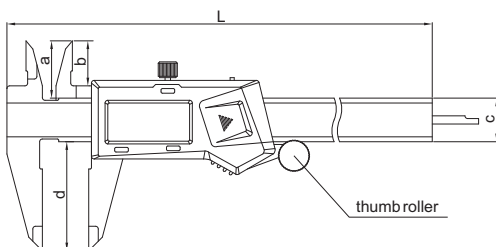
Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1108-150	0-150mm/0-6"	±0.03mm	with	236	21	16	16	40
1108-200	0-200mm/0-8"	±0.03mm	with	286	24	19	16	50
1108-300	0-300mm/0-12"	±0.03mm	with	400	25	20.5	17	60
1108-150W	0-150mm/0-6"	±0.03mm	without	236	21	16	16	40
1108-200W	0-200mm/0-8"	±0.03mm	without	286	24	19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



1109-150

- Resolution: 0.01mm
- Buttons: on/off, zero, ABS
- Absolute and incremental measurement
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

METRIC DIGITAL CALIPER



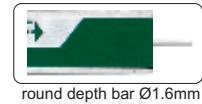
(mm)

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

DIGITAL CALIPER WITH ROUND DEPTH BAR

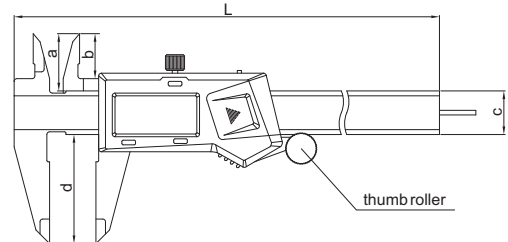


1119-150



round depth bar Ø1.6mm

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



(mm)

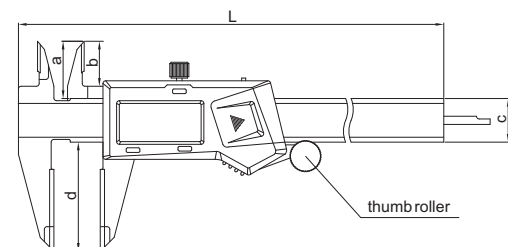
Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1119-150	0-150mm/0-6"	±0.03mm	with	236	21	16	16	40
1119-150W	0-150mm/0-6"	±0.03mm	without	236	21	16	16	40

DIGITAL CALIPER WITH CARBIDE TIPPED JAWS



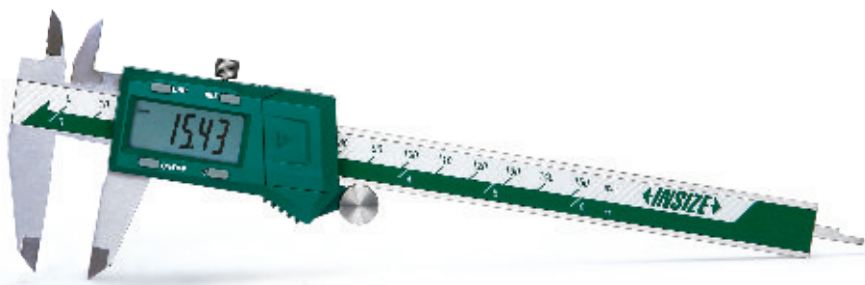
1110-150A

- Carbide tipped jaws for inside and outside measurements
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

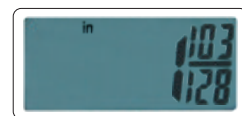


(mm)

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



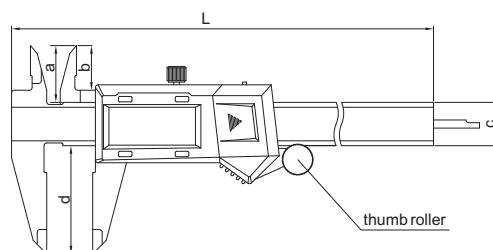
DIGITAL CALIPER



fraction reading

1102-150

- Resolution: 0.01mm, 0.0005", 1/128"
- Buttons: unit (mm/in/fraction), ABS, on/off, zero
- Absolute and incremental measurement
- Battery CR2032, automatic power off
- Data output
- Meet DIN862
- Made of stainless steel



(mm)

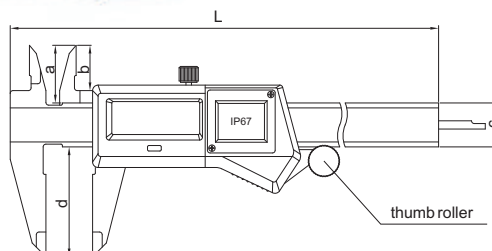
Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1102-150	0-150mm/0-6"	±0.03mm	with	234	21	16.5	16	40
1102-200	0-200mm/0-8"	±0.03mm	with	286	24	19	16	50
1102-300	0-300mm/0-12"	±0.03mm	with	390	26	21.5	16	60
1102-150W	0-150mm/0-6"	±0.03mm	without	234	21	16.5	16	40
1102-200W	0-200mm/0-8"	±0.03mm	without	286	24	19	16	50
1102-300W	0-300mm/0-12"	±0.03mm	without	390	26	21.5	16	60



WATERPROOF DIGITAL CALIPER

1118-150

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



(mm)

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

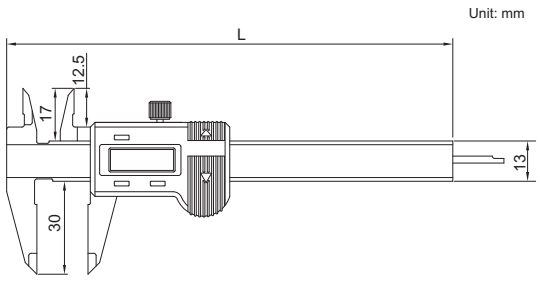
MINI DIGITAL CALIPER



1111-100

- Resolution: 0.01mm/0.0005"
- Buttons: zero, mm/inch, on/off
- Battery SR44 or LR44
- Meet DIN862
- Made of stainless steel

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



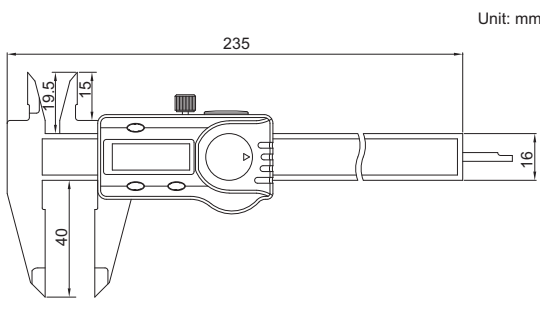
PLASTIC DIGITAL CALIPER

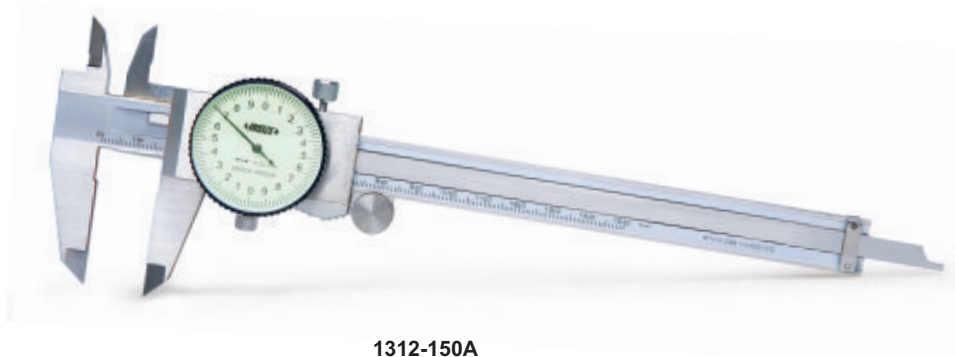


1139-150

- Made of hard plastic
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off

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





DIAL CALIPER

1312-150A

- Shockproof dial indicator
- Made of stainless steel

Dial indicator graduation 0.02mm

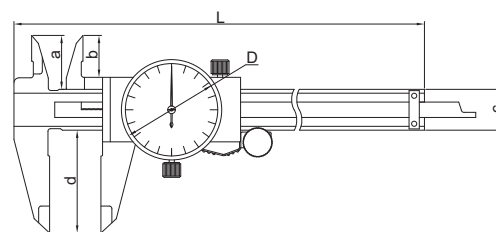
(mm)

Code	Range	Accuracy	L	a	b	c	d	D
1312-150A	0-150mm	±0.03mm	233	21	16.5	16	40	Ø39
1312-200A	0-200mm	±0.03mm	288	24	19	16	50	Ø39
1312-300A	0-300mm	±0.04mm	390	30	25	20	64	Ø44

Dial indicator graduation 0.01mm

(mm)

Code	Range	Accuracy	L	a	b	c	d	D
1311-150A	0-150mm	±0.03mm	233	21	16.5	16	40	Ø39
1311-200A	0-200mm	±0.03mm	288	24	19	16	50	Ø39
1311-300A	0-300mm	±0.04mm	390	24	19.5	17	64	Ø39



DIAL CALIPER WITH TITANIUM PLATED BEAM

1315-150



titanium plated beam

Dial indicator graduation 0.02mm

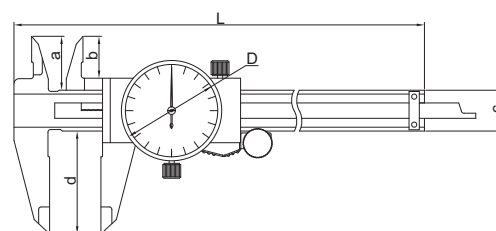
(mm)

Code	Range	Accuracy	L	a	b	c	d	D
1315-150	0-150mm	±0.03mm	233	21	16.5	16	40	Ø39
1315-200	0-200mm	±0.03mm	288	24	19	16	50	Ø39
1315-300	0-300mm	±0.04mm	390	30	25	20	64	Ø44

Dial indicator graduation 0.01mm

(mm)

Code	Range	Accuracy	L	a	b	c	d	D
1317-150	0-150mm	±0.03mm	233	21	16.5	16	40	Ø39
1317-200	0-200mm	±0.03mm	288	24	19	16	50	Ø39
1317-300	0-300mm	±0.04mm	390	24	19.5	17	64	Ø39



- Titanium plated beam for wear resistant and easy moving
- Shockproof dial indicator
- Made of stainless steel

VERNIER CALIPER



1205-150S

Graduation 0.02mm (mm)

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

Graduation 0.02mm/0.001" (mm)

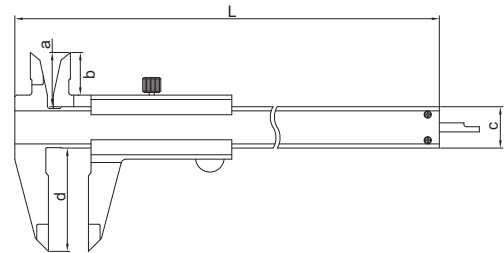
Code	Range	Accuracy	L	a	b	c	d
1205-1502S	0-150mm/0-6"	±0.03mm	235	20.5	15.5	16	40
1205-2002S	0-200mm/0-8"	±0.03mm	290	23.5	19	16	50
1205-3002S	0-300mm/0-12"	±0.03mm	414	27.5	22	20	64

Graduation 0.05mm (mm)

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

Graduation 0.05mm/1/128" (mm)

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



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

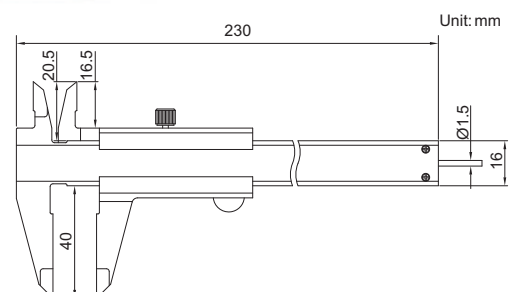
VERNIER CALIPER WITH ROUND DEPTH BAR



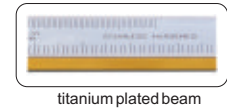
1202-1503

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

Code	Range	Accuracy
1202-1503	0-150mm	±0.05mm



VERNIER CALIPER WITH TITANIUM PLATED BEAM



1219-150

Graduation 0.02mm

Code	Range	Accuracy
1219-1501	0-150mm	±0.03mm

Graduation 0.02mm/0.001"

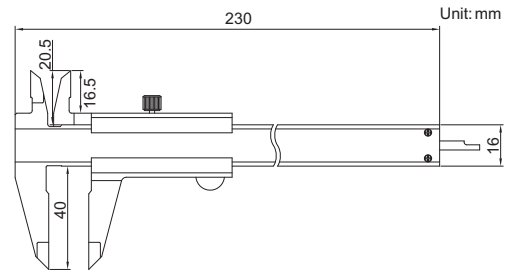
Code	Range	Accuracy
1219-1502	0-150mm/0-6"	±0.03mm

Graduation 0.05mm

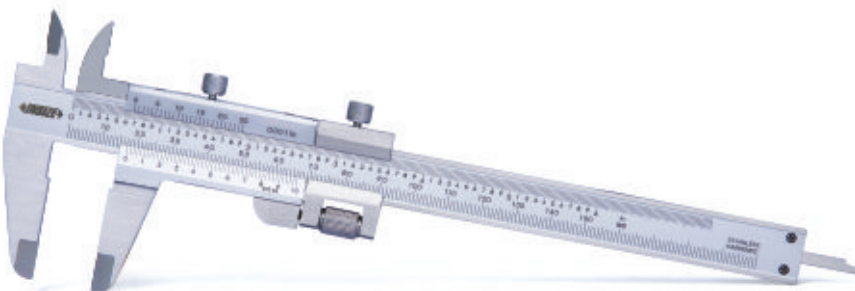
Code	Range	Accuracy
1219-1503	0-150mm	±0.05mm

Graduation 0.05mm/1/128"

Code	Range	Accuracy
1219-150	0-150mm/0-6"	±0.05mm



- Meet DIN862
- Titanium plated beam for wear resistant and easy moving
- Made of stainless steel
- Satin chrome plated reading surface



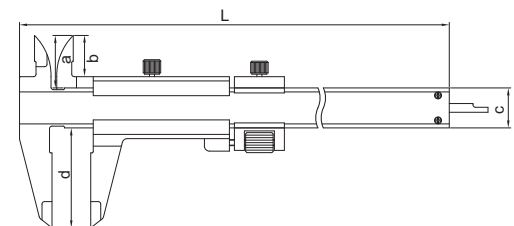
1233-130

Graduation 0.02mm

Code	Range	Accuracy	L	a	b	c	d
1233-1301	0-130mm	±0.03mm	230	20.5	16.5	16	40
1233-1801	0-180mm	±0.03mm	295	23.5	19	16	50
1233-2801	0-280mm	±0.03mm	410	26	20	20	60

Graduation 0.02mm/0.001"

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



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



1223-150

VERNIER CALIPER

Graduation 0.02mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1223-1501	0-150mm	±0.03mm	230	20.5	16.5	16	40
1223-2001	0-200mm	±0.03mm	295	23.5	19	16	50
1223-3001	0-300mm	±0.03mm	405	26	20	20	60

Graduation 0.02mm/0.001" (mm)

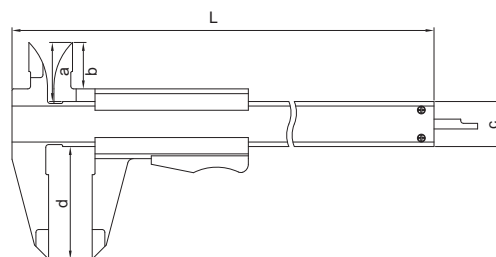
Code	Range	Accuracy	L	a	b	c	d
1223-1502	0-150mm/0-6"	±0.03mm	230	20.5	16.5	16	40
1223-2002	0-200mm/0-8"	±0.03mm	295	23.5	19	16	50
1223-3002	0-300mm/0-12"	±0.03mm	405	26	20	20	60

Graduation 0.05mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1223-1503	0-150mm	±0.05mm	230	20.5	16.5	16	40
1223-2003	0-200mm	±0.05mm	295	23.5	19	16	50
1223-3003	0-300mm	±0.05mm	405	26	20	20	60

Graduation 0.05mm/1/128" (mm)

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



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



1212-1503

NO PARALLAX VERNIER CALIPER

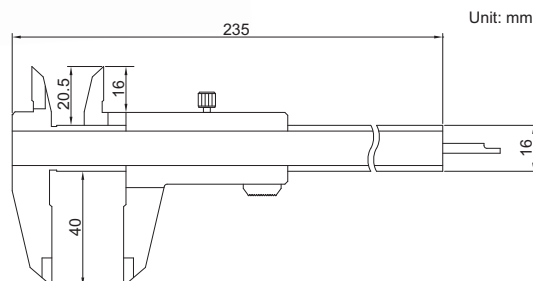
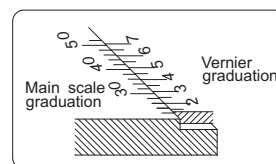
Graduation 0.02mm

Code	Range	Accuracy
1212-1501	0-150mm	±0.03mm

Graduation 0.05mm

Code	Range	Accuracy
1212-1503	0-150mm	±0.05mm

- Meet DIN862
- No parallax
- Made of stainless steel
- Satin chrome plated reading surface



LEFT HAND VERNIER CALIPER



1239-150

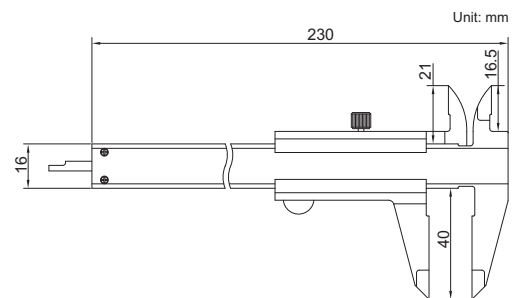
- Meet DIN862
- Designed for left handers
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm

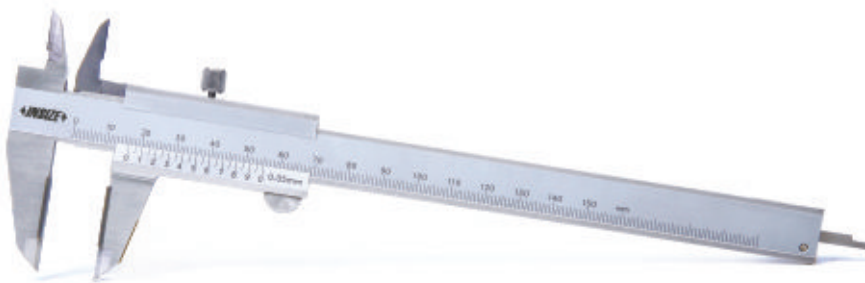
Code	Range	Accuracy
1239-1503	0-150mm	±0.05mm

Graduation 0.05mm/1/128"

Code	Range	Accuracy
1239-150	0-150mm/0-6"	±0.05mm



VERNIER CALIPER WITH CARBIDE TIPPED JAWS



1238-1503

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

Graduation 0.02mm

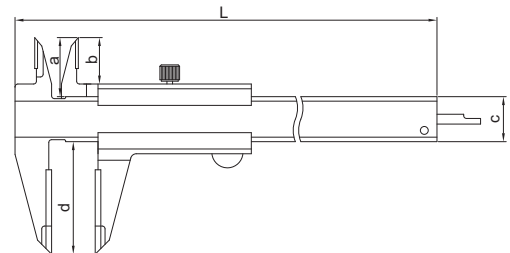
(mm)

Code	Range	Accuracy	L	a	b	c	d
1238-1501	0-150mm	±0.03mm	230	21	16.5	16	40
1238-2001	0-200mm	±0.03mm	295	24	19	16	50
1238-3001	0-300mm	±0.03mm	410	25	20	17	60

Graduation 0.05mm

(mm)

Code	Range	Accuracy	L	a	b	c	d
1238-1503	0-150mm	±0.05mm	230	21	16.5	16	40
1238-2003	0-200mm	±0.05mm	295	24	19	16	50
1238-3003	0-300mm	±0.05mm	410	25	20	17	60



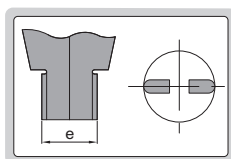
DIGITAL CALIPER



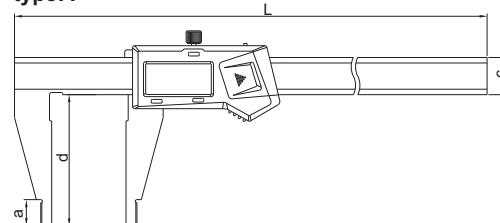
1106-306A



1106-501

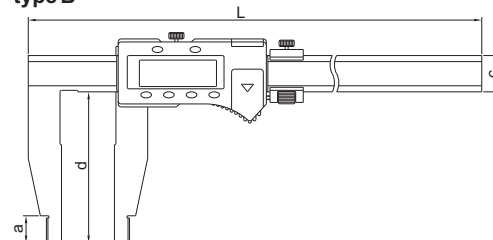


type A



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

type B



- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Absolute and incremental measurement
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

Code	Range	Type	Accuracy	a	c	d	e	L
1106-256A	0-250mm/0-10"	A	±0.03mm	12	17	60	10	375
1106-306A	0-300mm/0-12"	A	±0.04mm	12	17	60	10	420
1106-301	0-300mm/0-12"	B	±0.05mm	12	24	100	20	420
1106-302	0-300mm/0-12"	B	±0.05mm	12	24	150	20	420
1106-451	0-450mm/0-18"	B	±0.05mm	18	24	100	20	625
1106-501	0-500mm/0-20"	B	±0.05mm	18	24	100	20	675
1106-502	0-500mm/0-20"	B	±0.06mm	18	24	150	20	675
1106-503	0-500mm/0-20"	B	±0.06mm	18	31	200	20	675
1106-505	0-500mm/0-20"	B	±0.08mm	18	42	300	20	675
1106-601	0-600mm/0-24"	B	±0.05mm	18	24	100	20	770
1106-602	0-600mm/0-24"	B	±0.06mm	18	24	150	20	770
1106-603	0-600mm/0-24"	B	±0.06mm	18	31	200	20	770
1106-802	0-800mm/0-32"	B	±0.07mm	24	31	150	20	1025
1106-1002	0-1000mm/0-40"	B	±0.08mm	24	31	150	20	1220
1106-1003	0-1000mm/0-40"	B	±0.08mm	24	31	200	20	1220
1106-1005	0-1000mm/0-40"	B	±0.10mm	24	42	300	20	1220
1106-1502	0-1500mm/0-60"	B	±0.11mm	24	42	150	20	1780
1106-1503	0-1500mm/0-60"	B	±0.12mm	24	42	200	20	1780
1106-2002	0-2000mm/0-80"	B	±0.14mm	24	42	150	20	2290
1106-2003	0-2000mm/0-80"	B	±0.14mm	24	42	200	20	2290

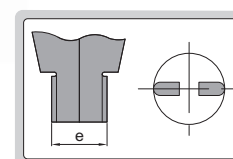
DIGITAL CALIPER



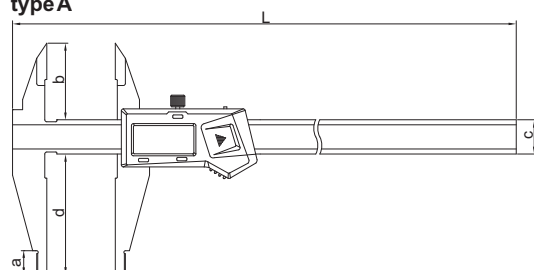
1117-306A



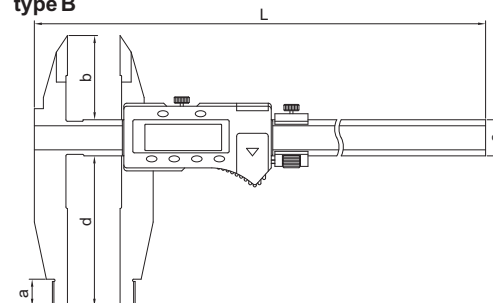
1117-501



type A



type B



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

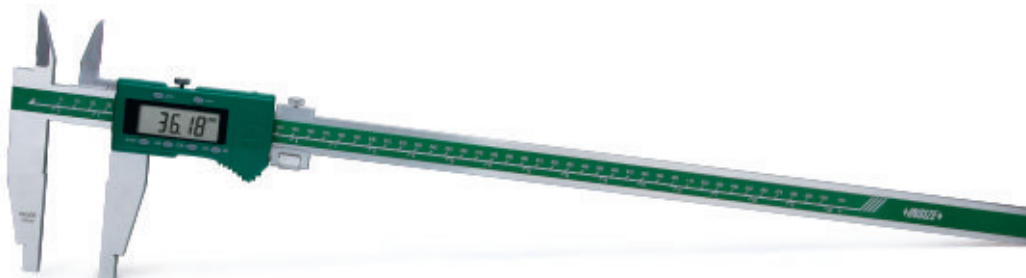
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Absolute and incremental measurement
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

(mm)									
Code	Range	Type	Accuracy	a	b	c	d	e	L
1117-256A	0-250mm/0-10"	A	±0.03mm	12	38	17	60	10	375
1117-306A	0-300mm/0-12"	A	±0.04mm	12	38	17	60	10	420
1117-301	0-300mm/0-12"	B	±0.05mm	12	38	24	100	20	420
1117-501	0-500mm/0-20"	B	±0.05mm	18	56	24	100	20	675
1117-502	0-500mm/0-20"	B	±0.06mm	18	56	24	150	20	675
1117-601	0-600mm/0-24"	B	±0.05mm	18	56	24	100	20	770
1117-802	0-800mm/0-32"	B	±0.07mm	24	67	31	150	20	1025
1117-1002	0-1000mm/0-40"	B	±0.08mm	24	67	31	150	20	1220

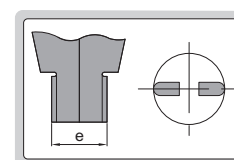
DIGITAL CALIPER



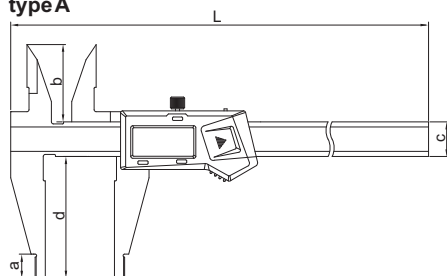
1136-306A



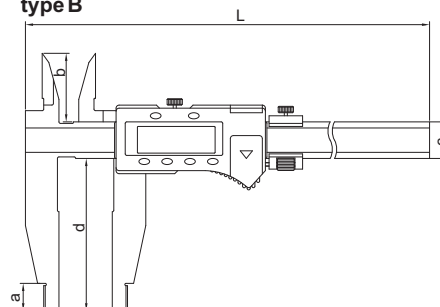
1136-501



type A



type B



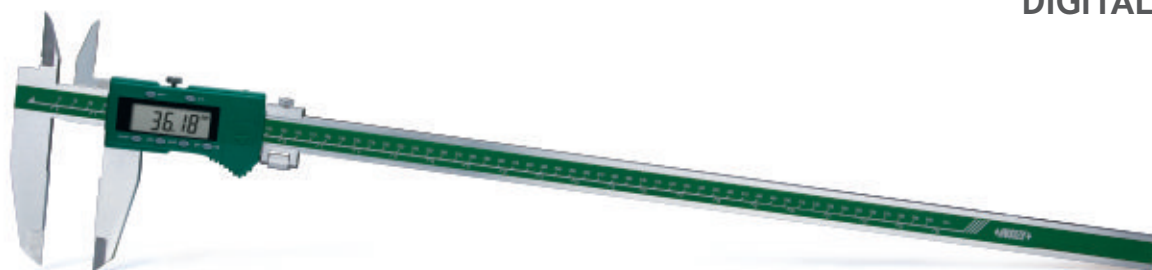
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Absolute and incremental measurement
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

(mm)

Code	Range	Type	Accuracy	a	b	c	d	e	L
1136-256A	0-250mm/0-10"	A	±0.03mm	12	28	17	60	10	375
1136-306A	0-300mm/0-12"	A	±0.04mm	12	28	17	60	10	420
1136-301	0-300mm/0-12"	B	±0.05mm	12	28	24	100	20	420
1136-451	0-450mm/0-18"	B	±0.05mm	18	45	24	100	20	625
1136-501	0-500mm/0-20"	B	±0.05mm	18	45	24	100	20	675
1136-502	0-500mm/0-20"	B	±0.06mm	18	45	24	150	20	675
1136-503	0-500mm/0-20"	B	±0.06mm	18	45	31	200	20	675
1136-601	0-600mm/0-24"	B	±0.05mm	18	45	24	100	20	770
1136-1002	0-1000mm/0-40"	B	±0.08mm	24	60	31	150	20	1220
1136-1502	0-1500mm/0-60"	B	±0.11mm	24	60	42	150	20	1780
1136-2002	0-2000mm/0-80"	B	±0.14mm	24	60	42	150	20	2290

DIGITAL CALIPER

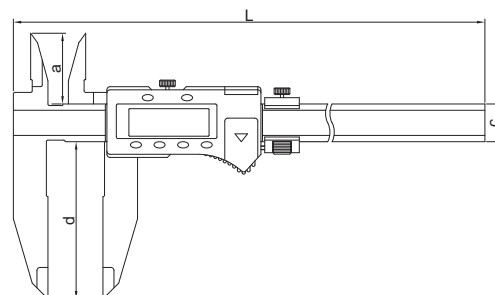


1135-601

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Absolute and incremental measurement
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

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

(mm)

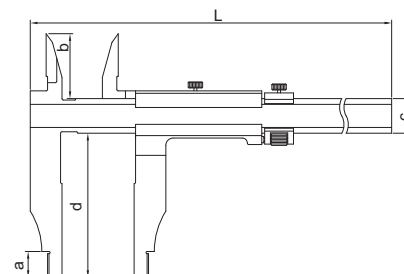
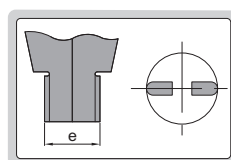


VERNIER CALIPER



1236-521

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



Graduation 0.02mm

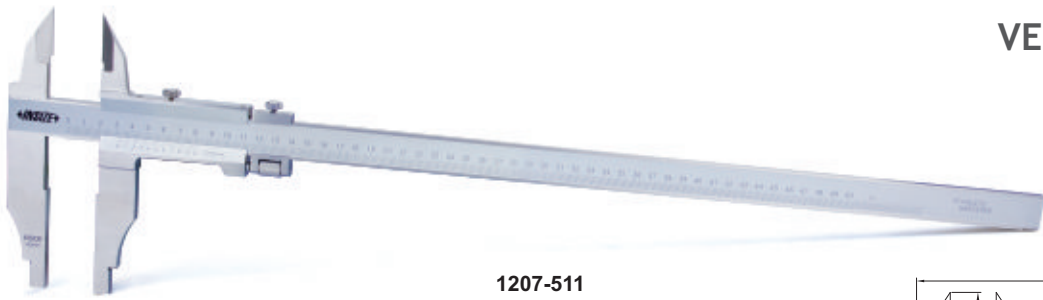
Code	Range	Accuracy	d(mm)
1236-391	0-300mm	±0.05mm	90
1236-511	0-500mm	±0.05mm	100
1236-521	0-500mm	±0.06mm	150
1236-611	0-600mm	±0.05mm	100
1236-821	0-800mm	±0.07mm	150
1236-1021	0-1000mm	±0.08mm	150

Graduation 0.05mm

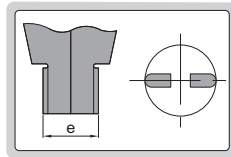
Code	Range	Accuracy	d(mm)
1236-393	0-300mm	±0.07mm	90
1236-513	0-500mm	±0.07mm	100
1236-523	0-500mm	±0.08mm	150
1236-613	0-600mm	±0.08mm	100
1236-823	0-800mm	±0.09mm	150
1236-1023	0-1000mm	±0.12mm	150

(mm)

Range	a	b	c	e	L
0-300mm	12	38	20	10	450
0-500mm	18	45	24	20	670
0-600mm	18	45	24	20	770
0-800mm	24	60	31	20	1030
0-1000mm	24	60	31	20	1230



1207-511



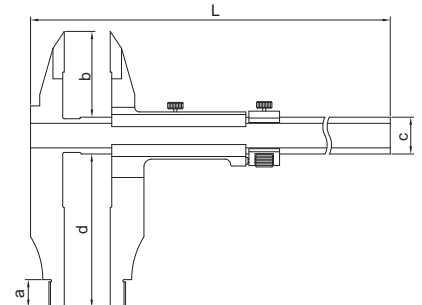
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy	d(mm)
1207-391	0-300mm	±0.05mm	90
1207-511	0-500mm	±0.05mm	100
1207-521	0-500mm	±0.06mm	150
1207-821	0-800mm	±0.07mm	150
1207-1021	0-1000mm	±0.08mm	150

Graduation 0.05mm

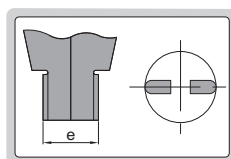
Code	Range	Accuracy	d(mm)
1207-393	0-300mm	±0.07mm	90
1207-513	0-500mm	±0.07mm	100
1207-523	0-500mm	±0.08mm	150
1207-823	0-800mm	±0.09mm	150
1207-1023	0-1000mm	±0.12mm	150



Range	a	b	c	e	L
0-300mm	12	40	20	10	440
0-500mm	18	56	24	20	670
0-800mm	24	67	31	20	930
0-1000mm	24	67	31	20	1230



1208-611



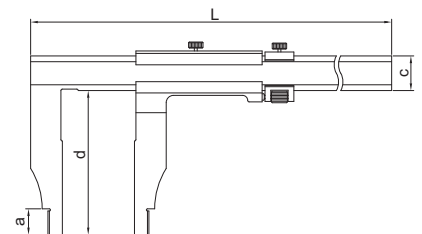
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy	a	c	d	e	L
1208-211	0-200mm	±0.04mm	18	24	100	20	330
1208-391	0-300mm	±0.05mm	12	20	90	10	410
1208-321	0-300mm	±0.05mm	18	24	150	20	410
1208-511	0-500mm	±0.05mm	18	24	100	20	670
1208-521	0-500mm	±0.06mm	18	24	150	20	670
1208-611	0-600mm	±0.05mm	18	24	100	20	770
1208-621	0-600mm	±0.06mm	18	24	150	20	770
1208-821	0-800mm	±0.07mm	24	31	150	20	1030
1208-1021	0-1000mm	±0.08mm	24	31	150	20	1230
1208-1521	0-1500mm	±0.11mm	24	42	150	20	1820
1208-2021	0-2000mm	±0.14mm	24	42	150	20	2330

Graduation 0.05mm

Code	Range	Accuracy	a	c	d	e	L
1208-213	0-200mm	±0.06mm	18	24	100	20	330
1208-393	0-300mm	±0.07mm	12	20	90	10	410
1208-323	0-300mm	±0.07mm	18	24	150	20	410
1208-513	0-500mm	±0.07mm	18	24	100	20	670
1208-523	0-500mm	±0.08mm	18	24	150	20	670
1208-613	0-600mm	±0.08mm	18	24	100	20	770
1208-623	0-600mm	±0.09mm	18	24	150	20	770
1208-823	0-800mm	±0.09mm	24	31	150	20	1030
1208-1023	0-1000mm	±0.12mm	24	31	150	20	1230
1208-1523	0-1500mm	±0.16mm	24	42	150	20	1820
1208-2023	0-2000mm	±0.20mm	24	42	150	20	2330





VERNIER CALIPER

1210-611

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

Graduation 0.02mm

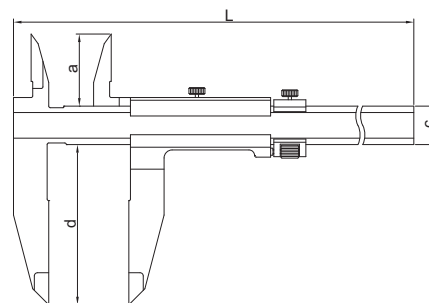
(mm)

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

Graduation 0.05mm

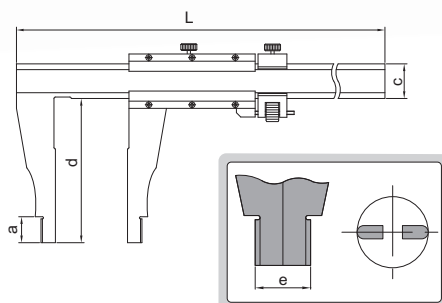
(mm)

Code	Range	Accuracy	a	c	d	L
1210-613	0-600mm	±0.08mm	45	24	100	770
1210-1023	0-1000mm	±0.12mm	60	31	150	1230



1214-500

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



(mm)

Range	a	c	e	L
0-300mm	10	20	10	410
0-450mm	18	24	20	620
0-500mm	18	24	20	670
0-600mm	18	24	20	770
0-1000mm	24	32	20	1216
0-1500mm	24	42	20	1830
0-2000mm	24	42	20	2320

Graduation 0.02mm

(mm)

Code	Range	Accuracy	d
1214-301	0-300mm	±0.05mm	75
1214-451	0-450mm	±0.05mm	100
1214-501	0-500mm	±0.05mm	100
1214-601	0-600mm	±0.05mm	100
1214-1001	0-1000mm	±0.08mm	140
1214-1501	0-1500mm	±0.12mm	180
1214-2001	0-2000mm	±0.14mm	200

Graduation 0.02mm/0.001"

(mm)

Code	Range	Accuracy	d
1214-300	0-300mm/0-12"	±0.05mm	75
1214-450	0-450mm/0-18"	±0.05mm	100
1214-500	0-500mm/0-20"	±0.05mm	100
1214-600	0-600mm/0-24"	±0.05mm	100
1214-1000	0-1000mm/0-40"	±0.08mm	140
1214-1500	0-1500mm/0-60"	±0.12mm	180
1214-2000	0-2000mm/0-80"	±0.14mm	200

Graduation 0.05mm

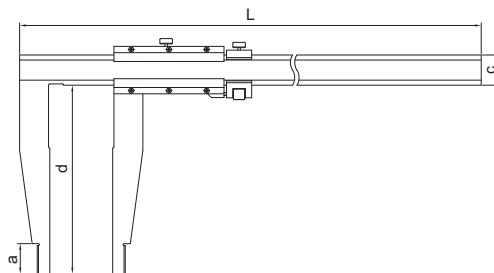
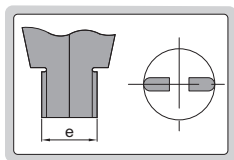
(mm)

Code	Range	Accuracy	d
1214-303	0-300mm	±0.07mm	75
1214-453	0-450mm	±0.07mm	100
1214-503	0-500mm	±0.07mm	100
1214-603	0-600mm	±0.08mm	100
1214-1003	0-1000mm	±0.12mm	140
1214-1503	0-1500mm	±0.18mm	180
1214-2003	0-2000mm	±0.20mm	200

LONG JAW VERNIER CALIPER



1215-1032



(mm)			
Range	a	e	L
0-300mm	10	10	410
0-500mm	18	20	670
0-600mm	24	20	770
0-800mm	24	20	1016
0-1000mm	24	20	1216

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

Graduation 0.02mm (mm)

Code	Range	Accuracy	c	d
1215-391	0-300mm	±0.05mm	17	90
1215-321	0-300mm	±0.05mm	24	150
1215-521	0-500mm	±0.06mm	24	150
1215-531	0-500mm	±0.06mm	24	200
1215-621	0-600mm	±0.06mm	24	150
1215-641	0-600mm	±0.08mm	32	250
1215-821	0-800mm	±0.07mm	32	150
1215-831	0-800mm	±0.07mm	32	200
1215-1031	0-1000mm	±0.08mm	32	200
1215-1051	0-1000mm	±0.11mm	32	300

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	c	d
1215-392	0-300mm/0-12"	±0.05mm	17	90
1215-322	0-300mm/0-12"	±0.05mm	24	150
1215-522	0-500mm/0-20"	±0.06mm	24	150
1215-532	0-500mm/0-20"	±0.06mm	24	200
1215-622	0-600mm/0-24"	±0.06mm	24	150
1215-642	0-600mm/0-24"	±0.08mm	32	250
1215-822	0-800mm/0-32"	±0.07mm	32	150
1215-832	0-800mm/0-32"	±0.07mm	32	200
1215-1032	0-1000mm/0-40"	±0.08mm	32	200
1215-1052	0-1000mm/0-40"	±0.11mm	32	300

Graduation 0.05mm (mm)

Code	Range	Accuracy	c	d
1215-393	0-300mm	±0.07mm	17	90
1215-533	0-500mm	±0.08mm	24	200
1215-833	0-800mm	±0.10mm	32	200
1215-1033	0-1000mm	±0.12mm	32	200

Graduation 0.05mm/1/128" (mm)

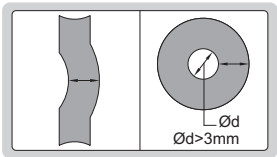
Code	Range	Accuracy	c	d
1215-394	0-300mm/0-12"	±0.07mm	17	90
1215-524	0-500mm/0-20"	±0.08mm	24	150
1215-534	0-500mm/0-20"	±0.08mm	24	200
1215-624	0-600mm/0-24"	±0.08mm	24	150
1215-834	0-800mm/0-32"	±0.10mm	32	200
1215-1034	0-1000mm/0-40"	±0.12mm	32	200
1215-1054	0-1000mm/0-40"	±0.15mm	32	300

DIGITAL TUBE THICKNESS CALIPER

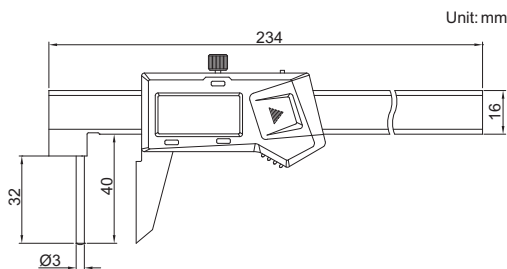


1161-150A

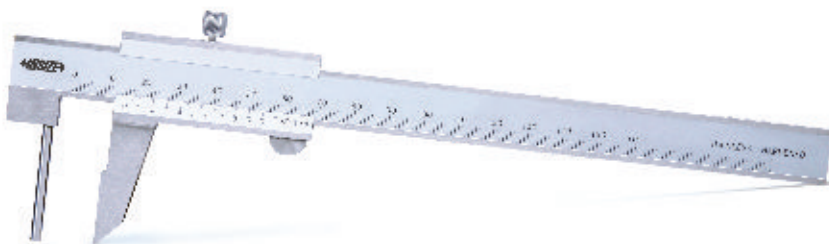
- Measure wall thickness of tubes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



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

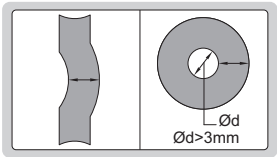


TUBE THICKNESS VERNIER CALIPER



1261-1503

- Measure wall thickness of tubes
- Made of stainless steel
- Stain chrome plated reading surface

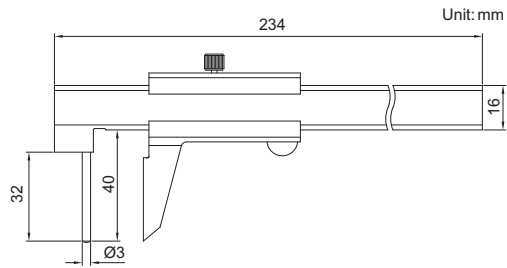


Graduation 0.02mm

Code	Range	Accuracy
1261-1501	0-150mm	±0.05mm

Graduation 0.05mm

Code	Range	Accuracy
1261-1503	0-150mm	±0.05mm

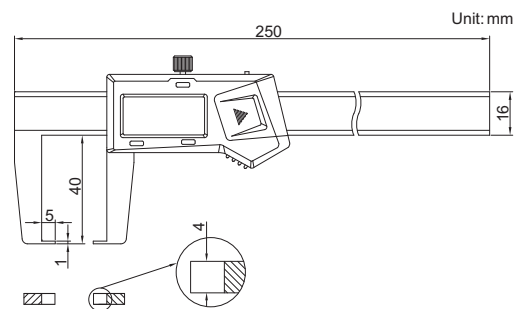
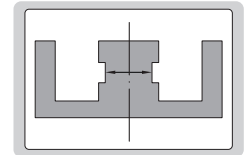


DIGITAL OUTSIDE NECK CALIPER



1187-150A

- Measure grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



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

OUTSIDE NECK VERNIER CALIPER



1287-1503

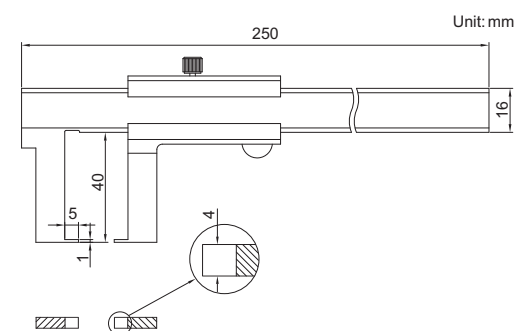
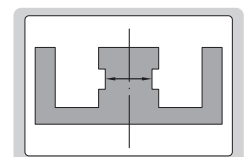
- Measure grooves and recesses
- Made of stainless steel
- Stain chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy
1287-1501	0-150mm	±0.04mm

Graduation 0.05mm

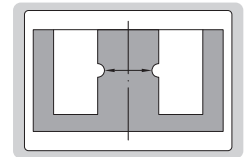
Code	Range	Accuracy
1287-1503	0-150mm	±0.05mm



DIGITAL OUTSIDE POINT CALIPER

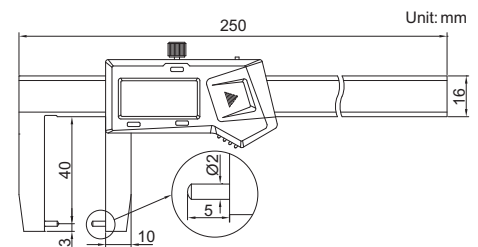


1185-150A



- Measure wall thickness inside bores and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

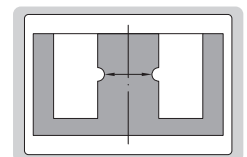
Code	Range	Accuracy
1185-150A	0-150mm/0-6"	±0.04mm



OUTSIDE POINT VERNIER CALIPER



1285-1503



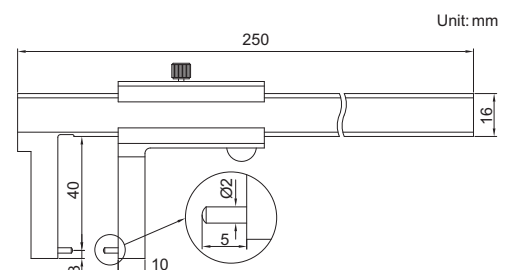
- Measure wall thickness inside bores and recesses
- Made of stainless steel
- Stain chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy
1285-1501	0-150mm	±0.04mm

Graduation 0.05mm

Code	Range	Accuracy
1285-1503	0-150mm	±0.05mm

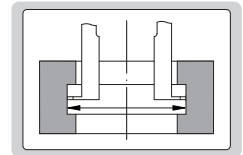


DIGITAL INSIDE GROOVE CALIPER



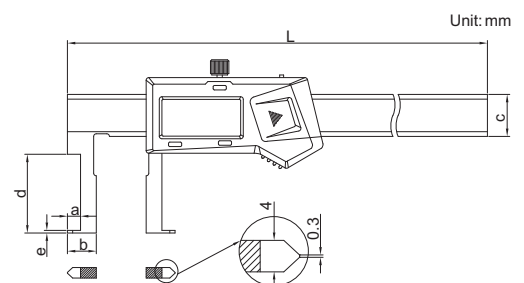
1120-150A

- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



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

(mm)



INSIDE GROOVE VERNIER CALIPER



1262-1503

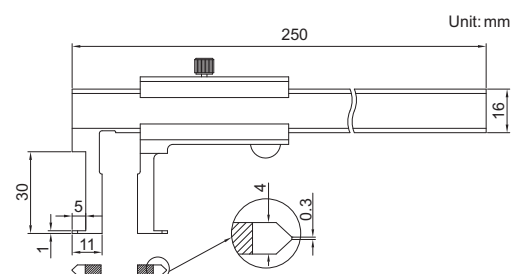
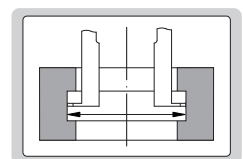
- Measure groove diameter
- Made of stainless steel
- Stain chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy
1262-151	22-150mm	±0.04mm

Graduation 0.05mm

Code	Range	Accuracy
1262-1503	22-150mm	±0.05mm

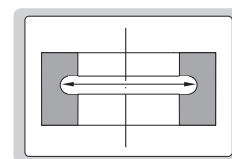


DIGITAL INSIDE POINT CALIPER



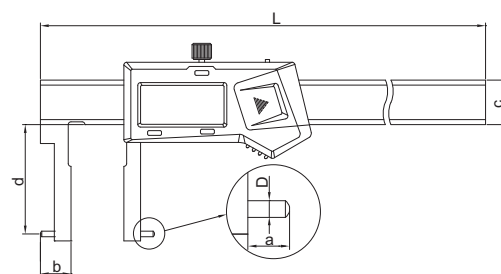
1121-150A

- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



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

(mm)



INSIDE POINT VERNIER CALIPER



1263-153

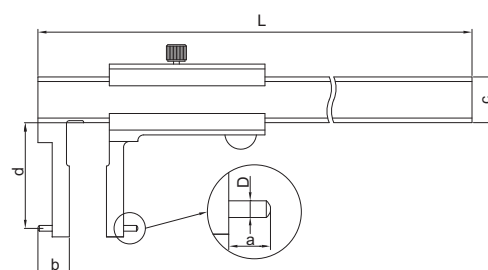
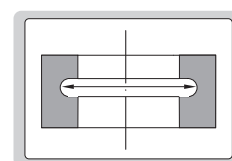
- Measure groove diameter
- Made of stainless steel
- Stain chrome plated reading surface

Graduation 0.02mm (mm)

Code	Range	Accuracy	L	a	b	c	d	D
1263-151	24-150mm	±0.04mm	250	5	12	16	30	Ø2
1263-3011	50-300mm	±0.06mm	410	8	25	17	80	Ø3

Graduation 0.05mm (mm)

Code	Range	Accuracy	L	a	b	c	d	D
1263-153	24-150mm	±0.05mm	250	5	12	16	30	Ø2
1263-3013	50-300mm	±0.08mm	410	8	25	17	80	Ø3

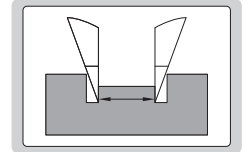


DIGITAL POINT CALIPER

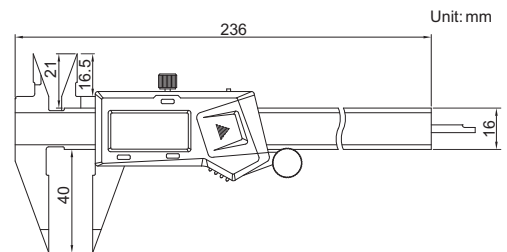


1183-150A

- Pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



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



POINT VERNIER CALIPER



1283-1503

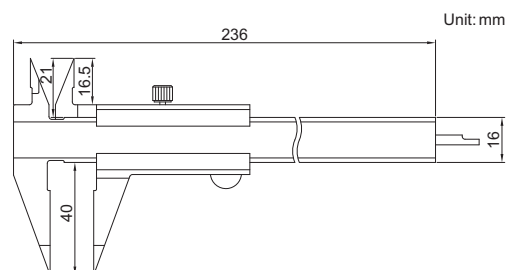
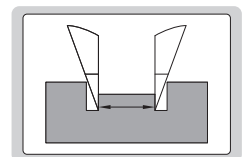
- Pointed jaws fit into small grooves and recesses
- Made of stainless steel
- Stain chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy
1283-1501	0-150mm	±0.03mm

Graduation 0.05mm

Code	Range	Accuracy
1283-1503	0-150mm	±0.05mm

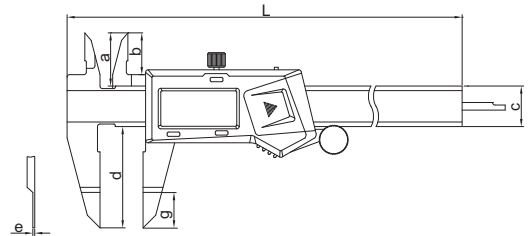


DIGITAL BLADE CALIPER

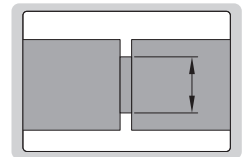


1188-150A

- The blade jaws fit into small grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



Code	Range	Accuracy	L	a	b	c	d	e	g	(mm)
1188-150A	0-150mm/0-6"	±0.03mm	236	21	16	16	40	0.75	17	
1188-200A	0-200mm/0-8"	±0.03mm	286	24	19	16	50	0.75	17	
1188-300A	0-300mm/0-12"	±0.04mm	400	25	20.5	17	60	1.00	17	

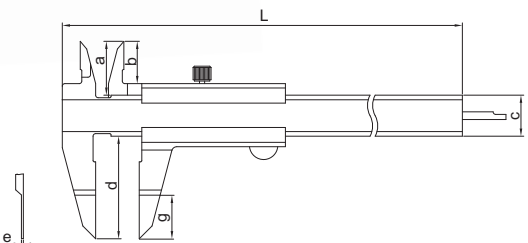


BLADE VERNIER CALIPER



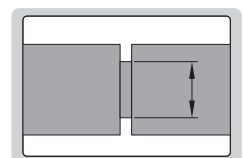
1288-1503

- The blade jaws fit into small grooves
- Made of stainless steel
- Stain chrome plated reading surface



Code	Range	Accuracy	L	a	b	c	d	e	g	(mm)
1288-1501	0-150mm	±0.03mm	236	21	16.5	16	40	0.75	17	
1288-2001	0-200mm	±0.03mm	286	24	19.5	16	50	0.75	17	
1288-3001	0-300mm	±0.04mm	400	25	20.5	17	60	1.00	17	

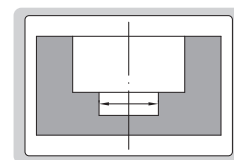
Code	Range	Accuracy	L	a	b	c	d	e	g	(mm)
1288-1503	0-150mm	±0.05mm	236	21	16.5	16	40	0.75	17	
1288-2003	0-200mm	±0.05mm	286	24	19.5	16	50	0.75	17	
1288-3003	0-300mm	±0.08mm	400	25	20.5	17	60	1.00	17	



DIGITAL INSIDE KNIFE-EDGE CALIPER

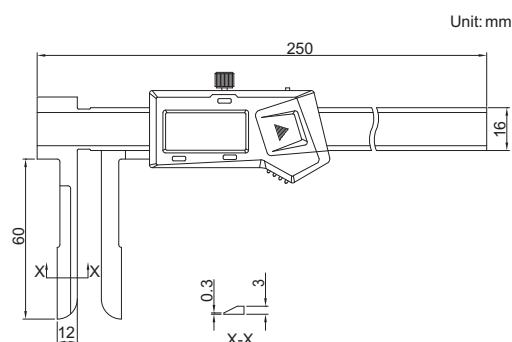


1123-150A

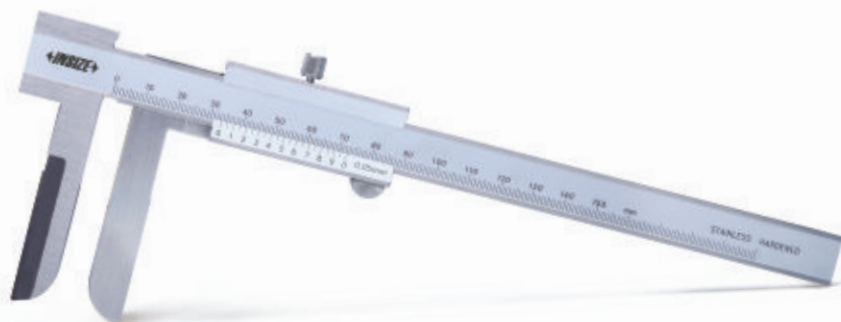


- Measure diameter of deep step holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

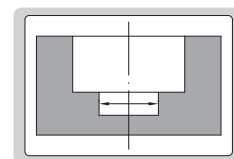
Code	Range	Accuracy
1123-150A	15-150mm/0.6-6"	±0.05mm



INSIDE KNIFE-EDGE VERNIER CALIPER



1264-153



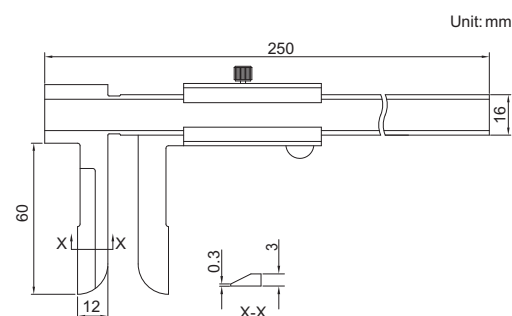
- Measure diameter of deep step holes
- Made of stainless steel
- Stain chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy
1264-151	15-150mm	±0.05mm

Graduation 0.05mm

Code	Range	Accuracy
1264-153	15-150mm	±0.05mm

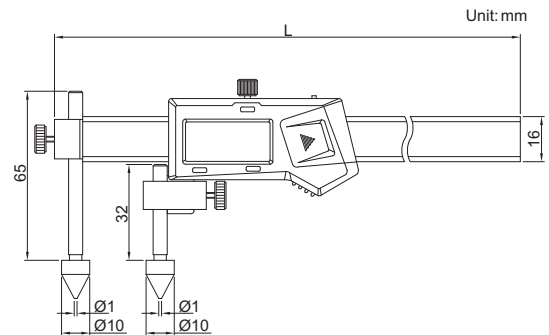
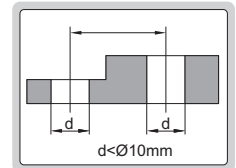


DIGITAL OFFSET CENTERLINE CALIPER



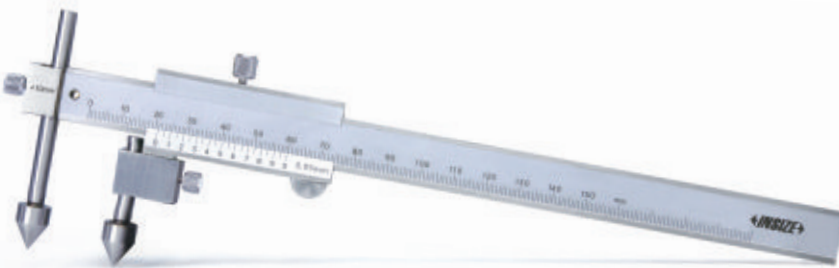
1192-150A

- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



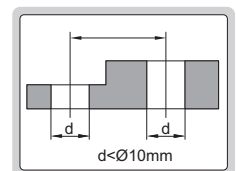
Code	Range	Accuracy	L (mm)
1192-150A	10-150mm	±0.05mm	236
1192-200A	10-200mm	±0.07mm	246
1192-300A	10-300mm	±0.09mm	396

OFFSET CENTERLINE VERNIER CALIPER



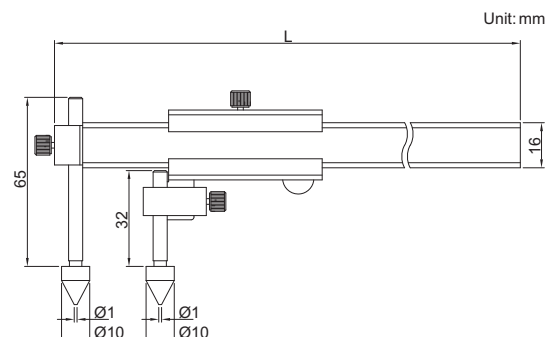
1292-1503

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



Code	Range	Accuracy	L (mm)
1292-1501	10-150mm	±0.05mm	236
1292-2001	10-200mm	±0.07mm	246
1292-3001	10-300mm	±0.09mm	396

Code	Range	Accuracy	L (mm)
1292-1503	10-150mm	±0.05mm	236
1292-2003	10-200mm	±0.07mm	246
1292-3003	10-300mm	±0.09mm	396





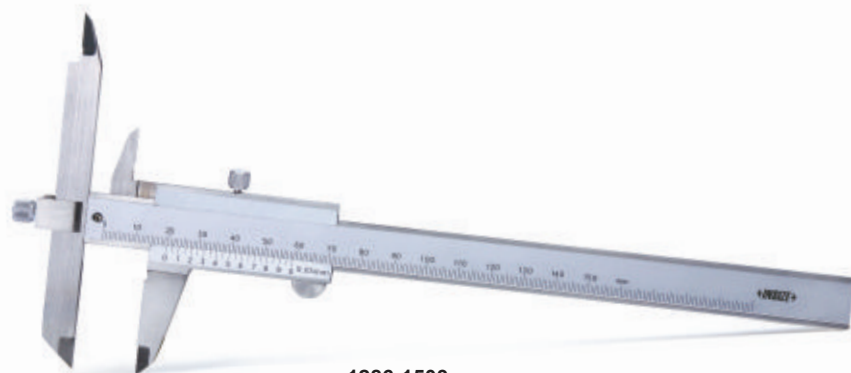
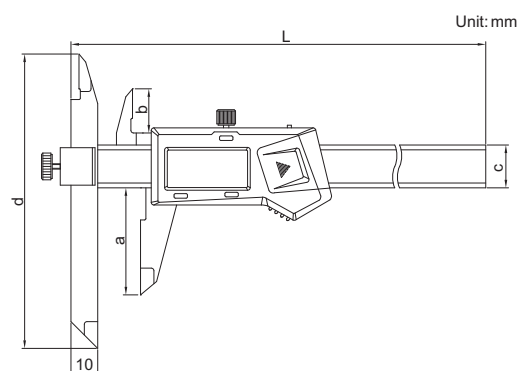
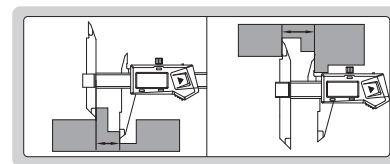
1186-150A

- The left jaw can slide up and down to facilitate measurement of stepped sections
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

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

(mm)

DIGITAL OFFSET CALIPER



1286-1503

- The left jaw can slide up and down to facilitate measurement of stepped sections
- Made of stainless steel
- Stain chrome plated reading surface

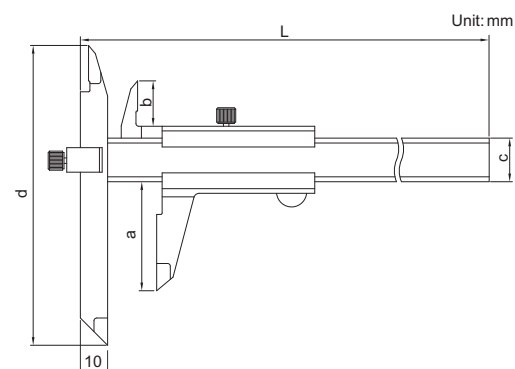
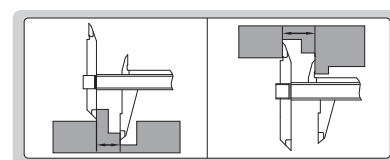
Graduation 0.02mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1286-1501	0-150mm	±0.04mm	240	40	16.5	16	110
1286-2001	0-200mm	±0.04mm	290	50	19.5	16	120
1286-3001	0-300mm	±0.05mm	390	60	20.5	17	130

Graduation 0.05mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1286-1503	0-150mm	±0.05mm	240	40	16.5	16	110
1286-2003	0-200mm	±0.05mm	290	50	19.5	16	120
1286-3003	0-300mm	±0.08mm	390	60	20.5	17	130

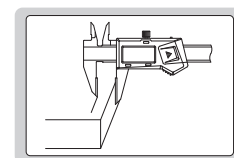
OFFSET VERNIER CALIPER



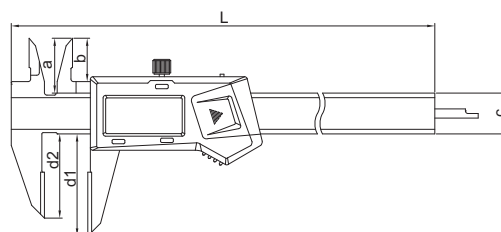
DIGITAL SCRIBING CALIPER



1166-150A

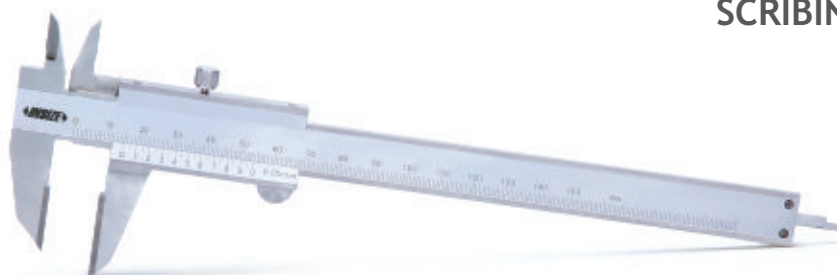


- The carbide-tipped jaws facilitate scribing on workpieces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

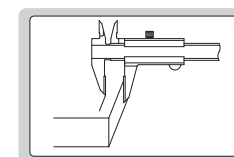


Code	Range	Accuracy	L	a	b	c	d1	d2	(mm)
1166-150A	0-150mm/0-6"	±0.03mm	236	21	16.5	16	40	33	
1166-200A	0-200mm/0-8"	±0.03mm	286	24	19.5	16	50	43	
1166-300A	0-300mm/0-12"	±0.04mm	400	25	20.5	17	60	53	

SCRIBING VERNIER CALIPER



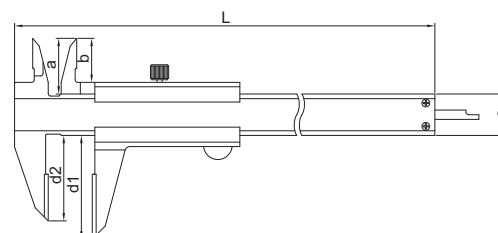
1266-1503



- The carbide-tipped jaws facilitate scribing on workpieces
- Made of stainless steel
- Stain chrome plated reading surface

Graduation 0.02mm									(mm)
Code	Range	Accuracy	L	a	b	c	d1	d2	
1266-1501	0-150mm	±0.03mm	236	21	16.5	16	40	33	
1266-2001	0-200mm	±0.03mm	286	24	19.5	16	50	43	
1266-3001	0-300mm	±0.04mm	400	25	20.5	17	60	53	

Graduation 0.05mm									(mm)
Code	Range	Accuracy	L	a	b	c	d1	d2	
1266-1503	0-150mm	±0.05mm	236	21	16.5	16	40	33	
1266-2003	0-200mm	±0.05mm	286	24	19.5	16	50	43	
1266-3003	0-300mm	±0.08mm	400	25	20.5	17	60	53	

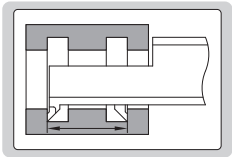


DIGITAL HOOK CALIPER

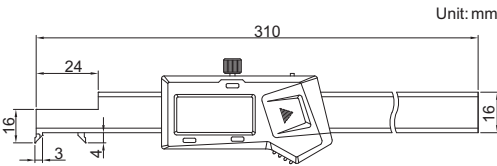


1122-200A

- Measure width of groove inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



Code	Range	Accuracy
1122-200A	3-200mm/0.12-8"	±0.04mm

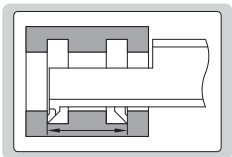


HOOK VERNIER CALIPER



1265-2003

- Measure width of groove inside bores
- Made of stainless steel
- Stain chrome plated reading surface

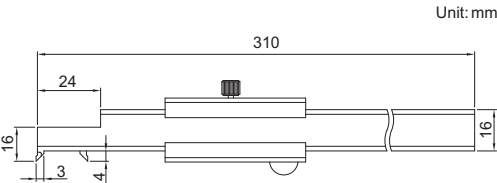


Graduation 0.02mm

Code	Range	Accuracy
1265-2001	3-200mm	±0.04mm

Graduation 0.05mm

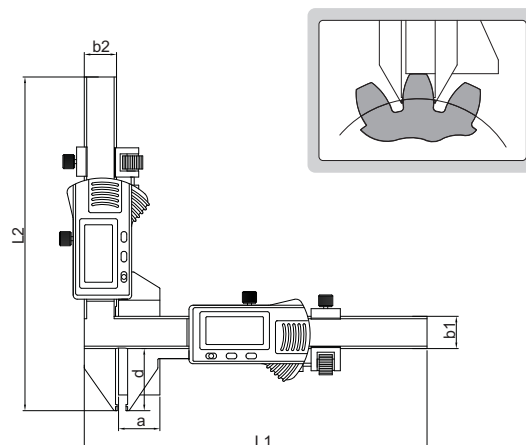
Code	Range	Accuracy
1265-2003	3-200mm	±0.05mm



DIGITAL GEAR TOOTH CALIPER



1181-M25A



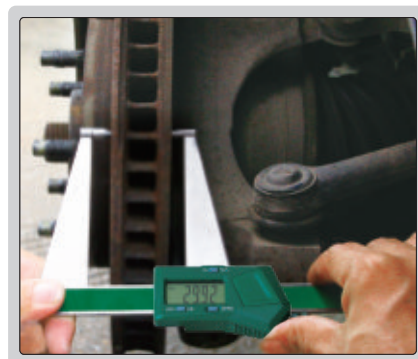
(mm)								
Code	Range	Accuracy	L1	L2	a	b1	b2	d
1181-M25A	M1-25mm	±0.04mm	170	165.5	21	16	16	30.5
1181-M50A	M5-50mm	±0.04mm	220	190	50.5	16	16	55

- Resolution: 0.01mm/0.0005"
- Carbide tips
- Buttons: zero, on/off, mm/inch
- Battery SR44 or LR44
- Made of stainless steel

DIGITAL DISK BRAKE CALIPER

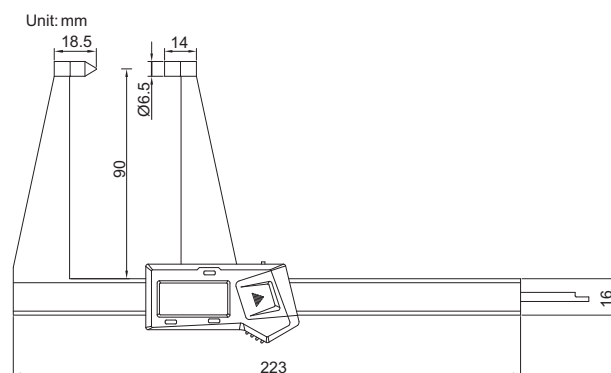


1162-125A



- Measure thickness of disk brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

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



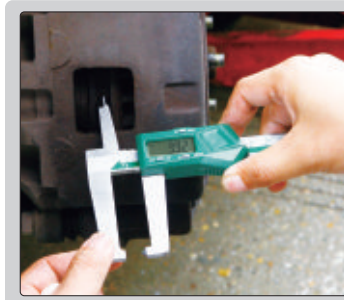
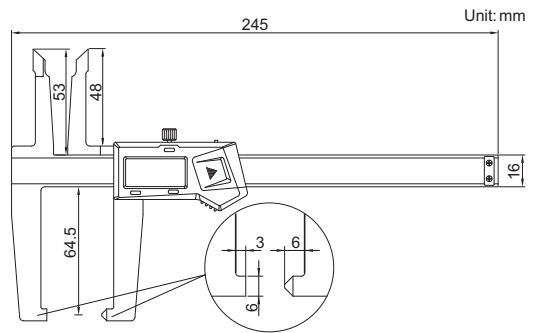


1167-150A

- Measure thickness of disk brakes and pad wear
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

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

DIGITAL DISK BRAKE AND PAD CALIPER

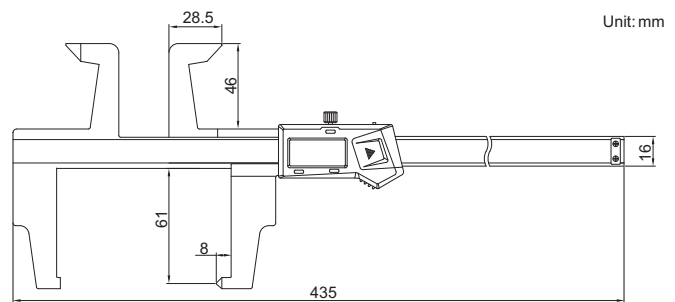


1168-300A

- Measure internal and external diameter of drum brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

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

DIGITAL DRUM BRAKE CALIPER



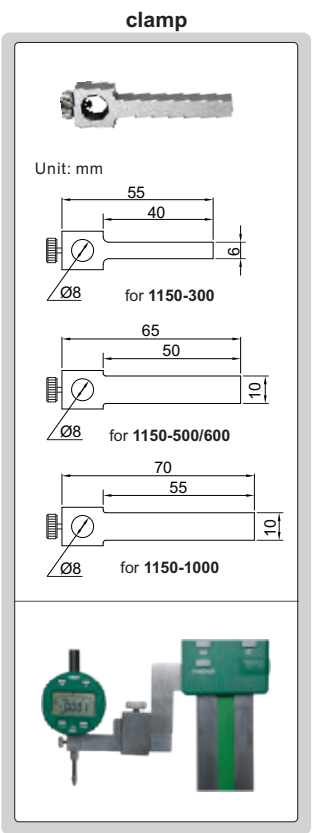
DIGITAL HEIGHT GAUGE



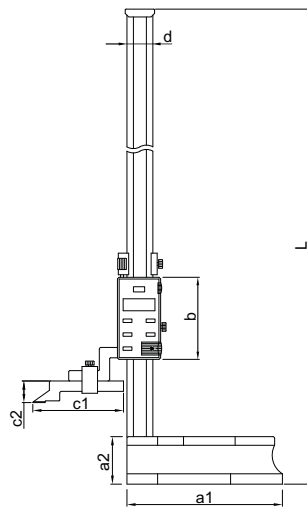
1150-1000



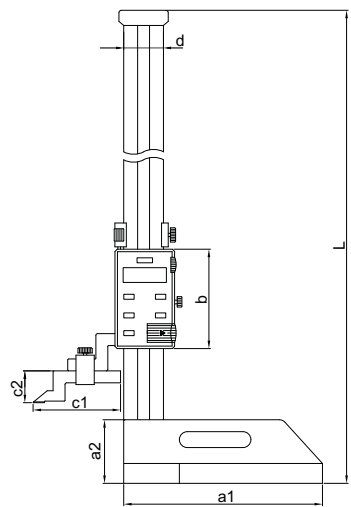
1150-500



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Carbide tipped scriber
- Made of stainless steel (except the base)
- SR44 or LR44 battery
- Data output
- Supplied with clamp
- Optional accessory: SPC cable (page A1-A2)



type A



type B

(mm)

Code	Range	Type	Accuracy	L	a1	a2	b	c1	c2	d
1150-300	0-300mm/0-12"	A	±0.04mm	470	135	45	80	76	25	23
1150-500	0-500mm/0-20"	A	±0.05mm	720	180	55	95	103	25	30
1150-600	0-600mm/0-24"	A	±0.05mm	820	180	55	95	103	25	30
1150-1000	0-1000mm/0-40"	B	±0.07mm	1275	250	80	125	110	39	50

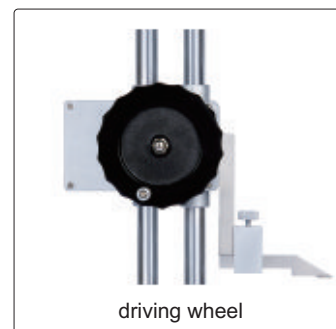
DIGITAL HEIGHT GAUGE



1151-1000

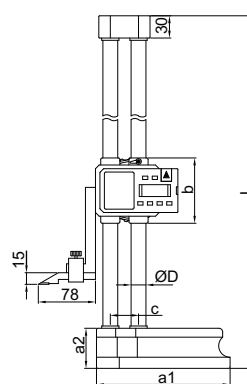


1151-300

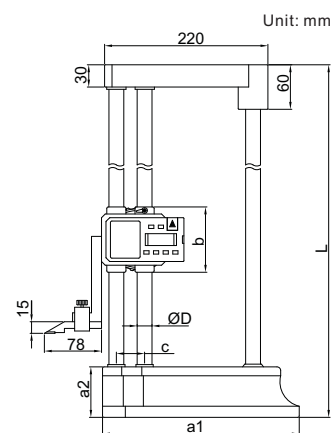


driving wheel

- Resolution: 0.01mm/0.001"
- Buttons: on/off, zero, mm/inch, ABS/INC, preset +, preset -, set
- ABS/INC is for absolute and incremental measurement
- Carbide tipped scriber
- Made of stainless steel (except the base)
- SR44 or LR44 battery
- Data output
- With driving wheel
- Optional accessory: SPC cable (page A1-A2)



type A



type B

Unit: mm

(mm)

Code	Range	Type	Accuracy	L	a1	a2	b	c	ØD
1151-300	0-300mm/0-12"	A	±0.04mm	475	135	43	84	33	15
1151-450	0-450mm/0-18"	A	±0.05mm	660	180	54	88	38	20
1151-600	0-600mm/0-24"	A	±0.05mm	810	180	54	88	38	20
1151-1000	0-1000mm/0-40"	B	±0.07mm	1230	265	68	88	38	20

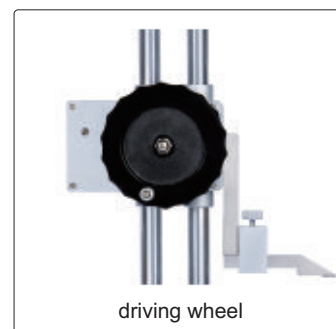
DIAL HEIGHT GAUGE



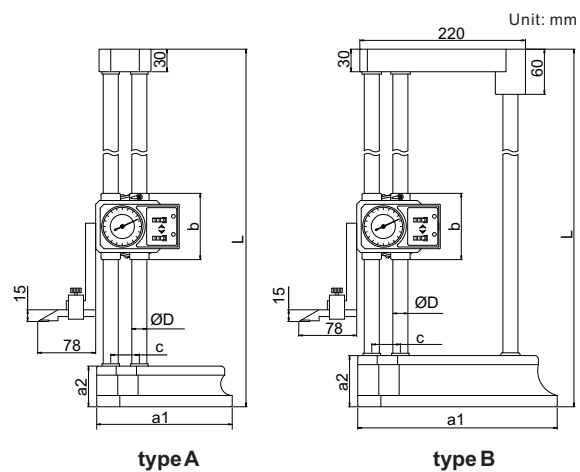
1351-1000



1351-300



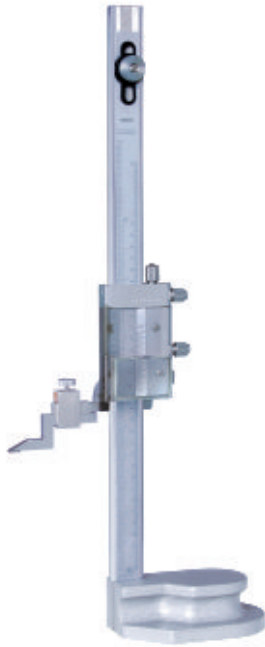
- Dial indicator graduation: 0.01mm
- One counter reads in the plus direction and another in the minus direction, so incremental measurement can be made in either direction
- Carbide tipped scriber
- Made of stainless steel (except the base)
- With driving wheel



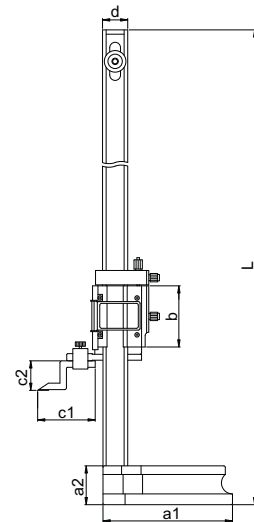
Code	Range	Type	Accuracy	L	a1	a2	b	c	ØD
1351-300	0-300mm	A	±0.04mm	475	135	43	84	33	15
1351-450	0-450mm	A	±0.05mm	660	180	54	88	38	20
1351-600	0-600mm	A	±0.05mm	810	180	54	88	38	20
1351-1000	0-1000mm	B	±0.07mm	1230	265	68	88	38	20

(mm)

VERNIER HEIGHT GAUGE



1250-300



(mm)

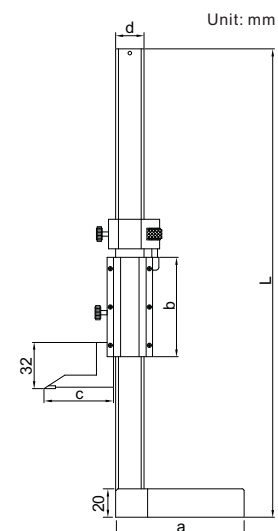
Code	Range	Accuracy	L	a1	a2	b	c1	c2	d
1250-300	0-300mm/0-12"	±0.04mm	545	135	43	75	80	30	28
1250-450	0-450mm/0-18"	±0.05mm	720	180	54	85	80	41	35
1250-600	0-600mm/0-24"	±0.05mm	870	180	54	85	80	41	35
1250-1000	0-1000mm/0-40"	±0.07mm	1310	270	70	85	204	50	40

- Graduation: 0.02mm/0.001"
- Adjustable main scale to set zero
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Supplied with magnifier
- With fine adjustment



1253-200

VERNIER HEIGHT GAUGE



(mm)

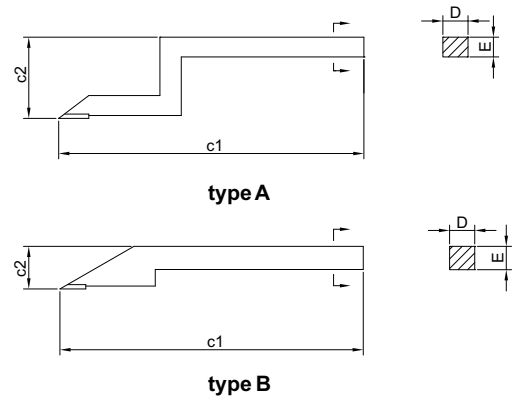
Code	Range	Accuracy	L	a	b	c	d
1253-150	0-150mm/0-6"	±0.03mm	475	75	57	43	16
1253-200	0-200mm/0-8"	±0.03mm	660	90	70	49	20
1253-250	0-250mm/0-10"	±0.03mm	710	90	70	49	20

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

SCRIBER FOR HEIGHT GAUGES

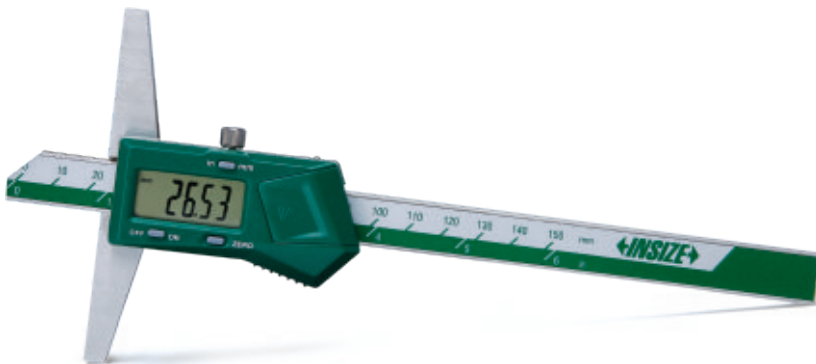


7150-SC1



- Carbide tipped

		(mm)				
Code	For height gauges	Type	c1	c2	D	E
7150-SC1	1150-300	A	76	25	6	8
7150-SC2	1150-500, 1150-600	A	103	25	10	12
7150-SC3	1150-1000	A	110	39	10	15
7150-SC4	1151-300, 1151-450, 1151-600, 1151-1000, 1351-300, 1351-450, 1351-600, 1351-1000	B	78	15	9	9
7150-SC6	1250-300	A	80	30	9	9
7150-SC7	1250-450, 1250-600	A	80	41	9	9
7150-SC8	1250-1000	A	204	50	10	16

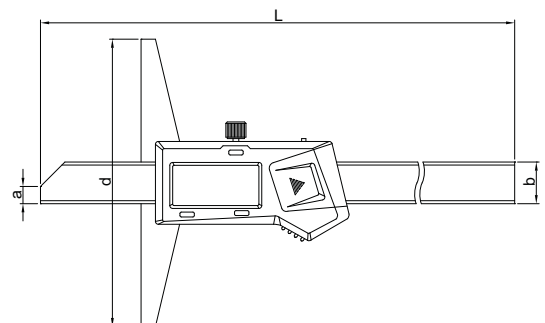


1141-150A

DIGITAL DEPTH GAUGE

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

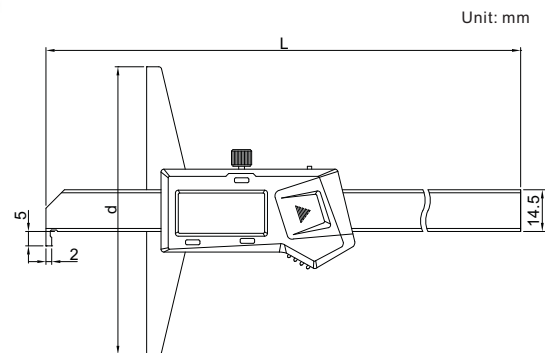
		(mm)				
Code	Range	Accuracy	L	a	b	d
1141-150A	0-150mm/0-6"	±0.03mm	230	6	14.5	100
1141-200A	0-200mm/0-8"	±0.03mm	280	6	14.5	100
1141-300A	0-300mm/0-12"	±0.04mm	380	6	14.5	150
1141-500A	0-500mm/0-20"	±0.05mm	585	7	15	150





1142-150A

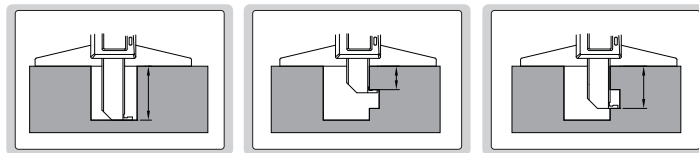
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)



Unit: mm

Code	Range	Accuracy	L	d
1142-150A	0-150mm/0-6"	±0.04mm	230	100
1142-200A	0-200mm/0-8"	±0.04mm	280	100
1142-300A	0-300mm/0-12"	±0.05mm	380	150

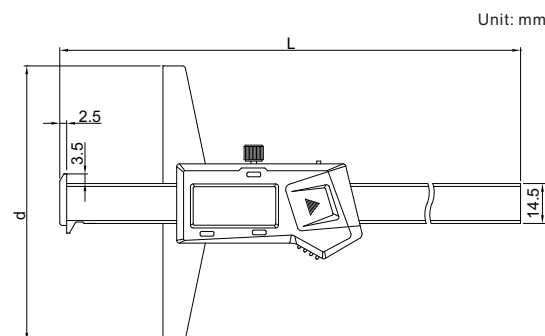
(mm)



1144-150A

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

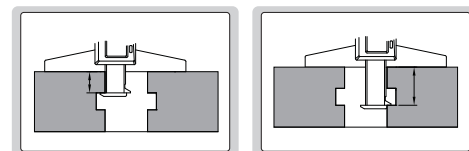
DIGITAL DOUBLE HOOK DEPTH GAUGE



Unit: mm

Code	Range	Accuracy	L	d
1144-150A	0-150mm/0-6"	±0.03mm	233	100
1144-200A	0-200mm/0-8"	±0.03mm	283	100
1144-300A	0-300mm/0-12"	±0.04mm	383	150

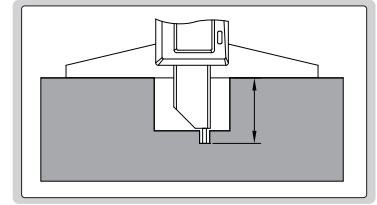
(mm)



DIGITAL POINT DEPTH GAUGE

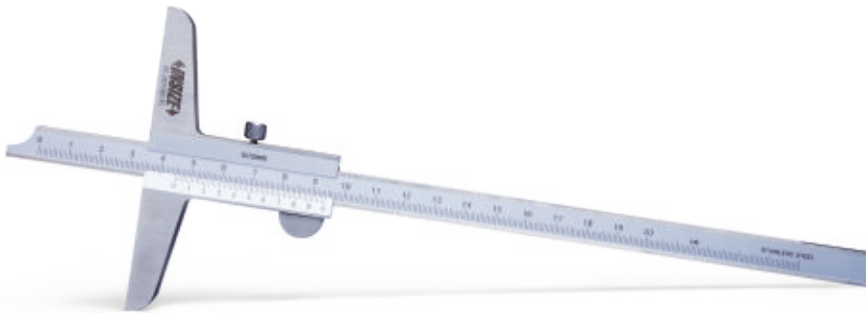
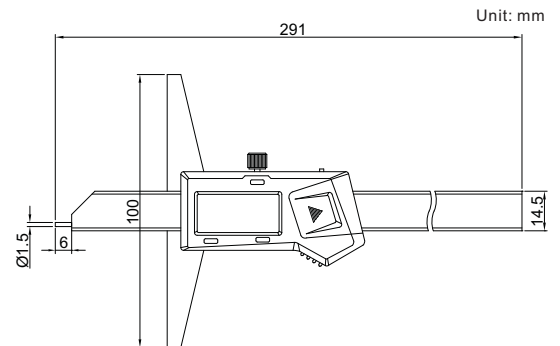


1143-200A



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

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



1240-2001

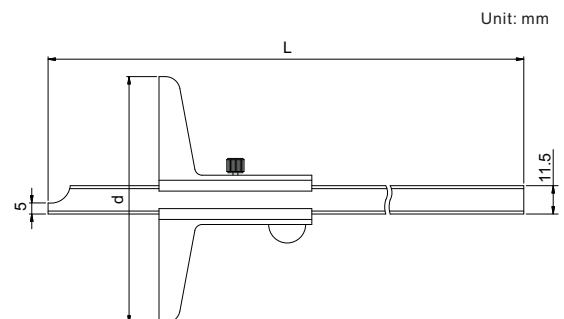
VERNIER DEPTH GAUGE

Graduation 0.02mm (mm)

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

Graduation 0.05mm (mm)

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



- Made of stainless steel
- Satin chrome plated reading surface

VERNIER DEPTH GAUGE



1247-1501

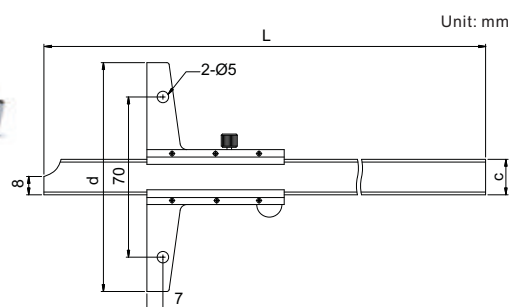
- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

Graduation 0.02mm

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

Graduation 0.05mm

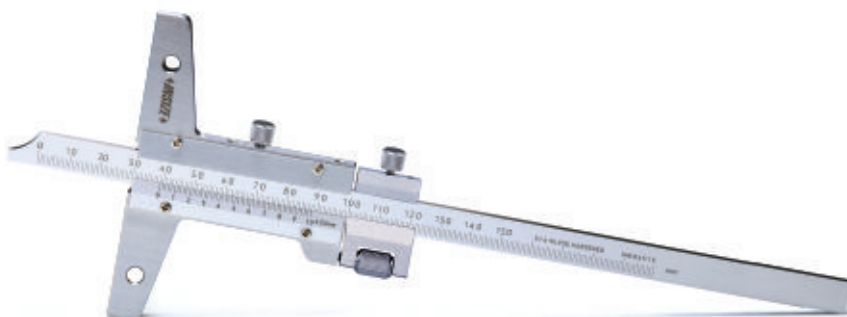
Code	Range	Accuracy
1247-150	0-150mm	±0.05mm
1247-200	0-200mm	±0.05mm
1247-300	0-300mm	±0.08mm
1247-600	0-600mm	±0.10mm
1247-1000	0-1000mm	±0.15mm



Unit: mm

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

(mm)



1249-1501

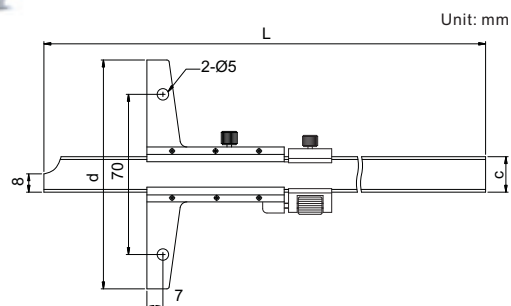
- With fine adjustment
- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

Graduation 0.02mm

Code	Range	Accuracy
1249-1501	0-150mm	±0.03mm
1249-2001	0-200mm	±0.03mm
1249-3001	0-300mm	±0.04mm
1249-6001	0-600mm	±0.05mm
1249-1001	0-1000mm	±0.07mm

Graduation 0.05mm

Code	Range	Accuracy
1249-150	0-150mm	±0.05mm
1249-200	0-200mm	±0.05mm
1249-300	0-300mm	±0.08mm
1249-600	0-600mm	±0.10mm
1249-1000	0-1000mm	±0.15mm

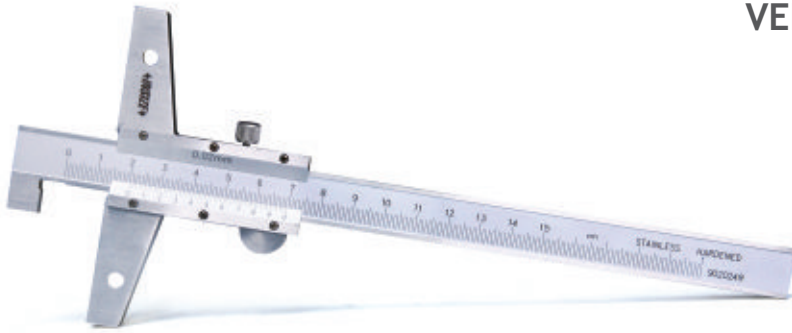


Unit: mm

Range	L	c	d
0-150mm	256	16	100
0-200mm	306	16	100
0-300mm	406	16	100
0-600mm	720	18	150
0-1000mm	1140	18	200

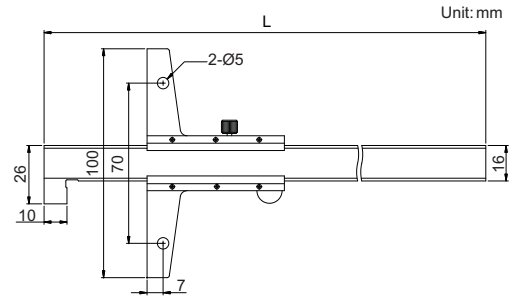
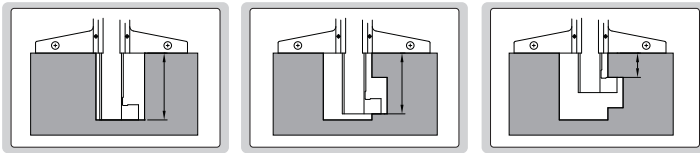
(mm)

VERNIER HOOK DEPTH GAUGE



1248-1501

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



Graduation 0.02mm

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

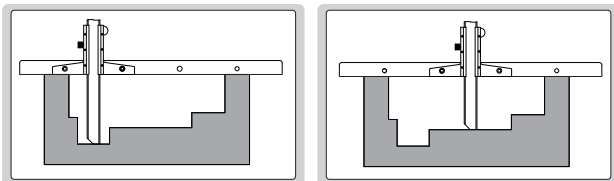
Graduation 0.05mm

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

EXTENSION BASE

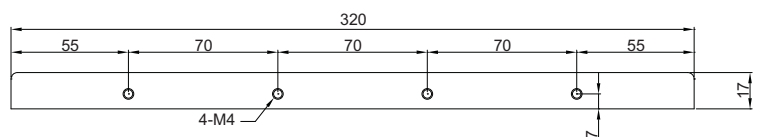
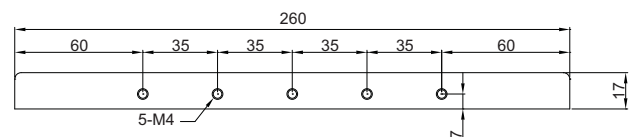
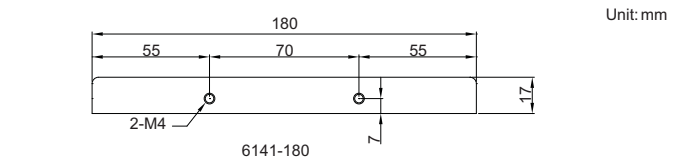


6141-260



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

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



VERNIER DEPTH GAUGE

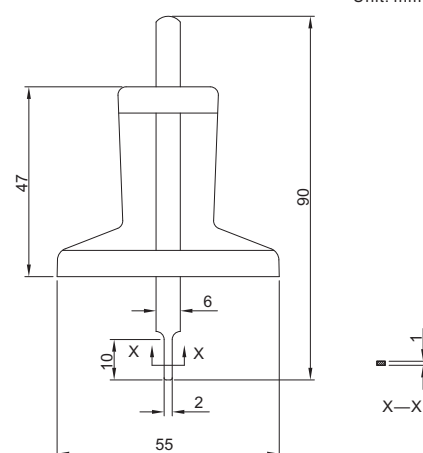


Unit: mm

- Graduation: 0.1mm
- Made of stainless steel

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

1244-30

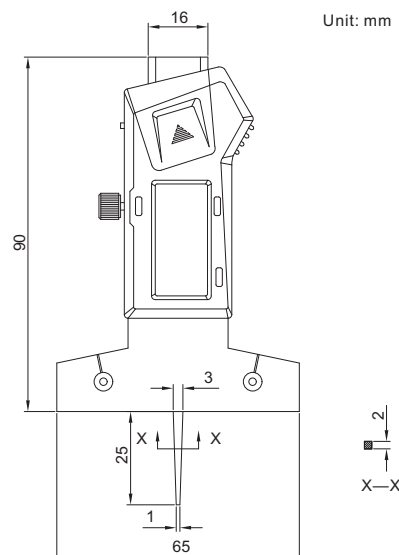


DIGITAL DEPTH GAUGE



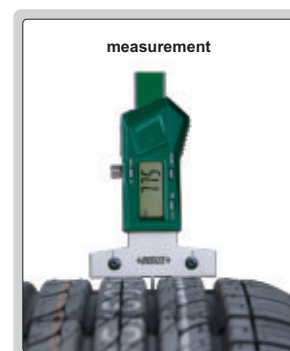
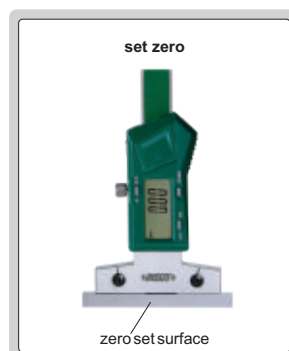
1145-25A

Unit: mm

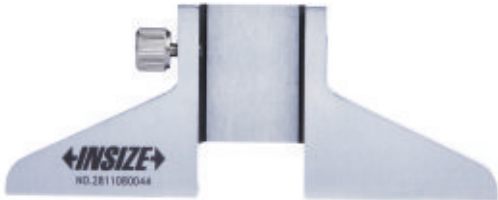


- Measure depth of small groove and hole, also measure depth of tire thread
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Supplied with zero set surface
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

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



DEPTH BASE ATTACHMENT

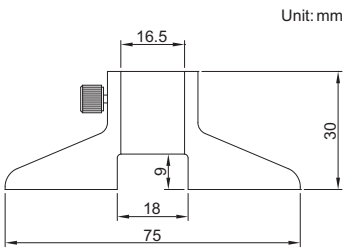


6140



Code
6140

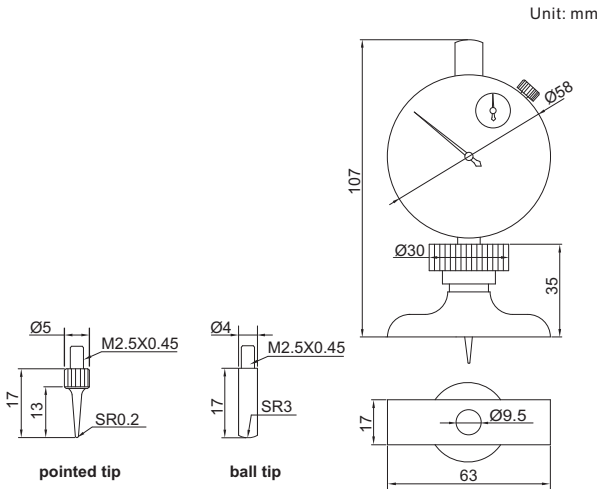
- To increase the stability of depth measurement
- Suitable for 0-150mm and 0-200mm of vernier calipers, digital calipers and dial calipers with beam width 16mm
- Made of stainless steel



DIAL DEPTH GAUGE



2341-101A



- Stainless steel base
- Supplied with pointed tip and ball tip

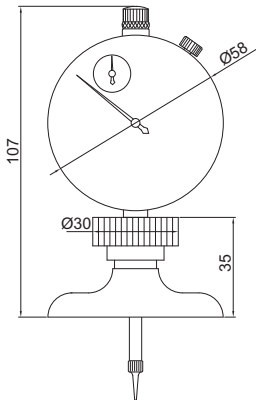
Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy
2341-101A	0-10mm	10mm	0.01mm	±0.017mm

DIAL DEPTH GAUGE

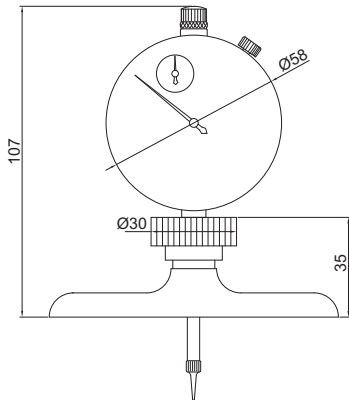


2342-202

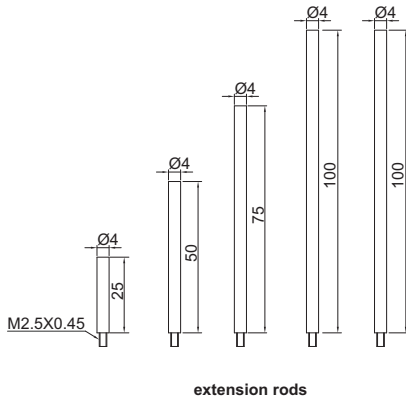
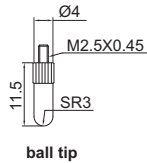
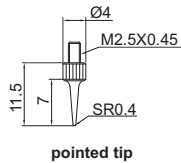
Unit: mm



2342-201



2342-202



- Stainless steel base
- Extension rods: 25mm(1pc), 50mm(1pc), 75mm(1pc), 100mm(2pcs)
- Supplied with pointed tip and ball tip

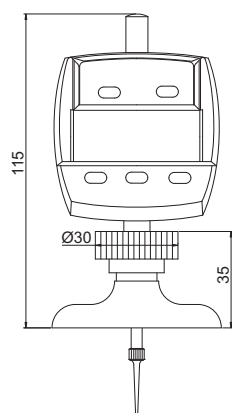
Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy	Base
2342-201	0-300mm	30mm	0.01mm	±0.03mm	63x17mm
2342-202	0-300mm	30mm	0.01mm	±0.03mm	101.5x17mm

DIGITAL DEPTH GAUGE

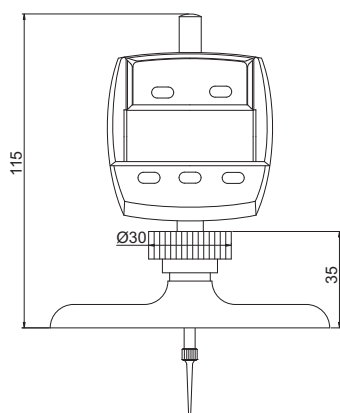


2141-202

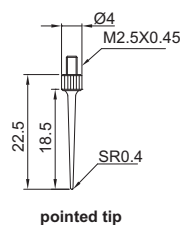
Unit: mm



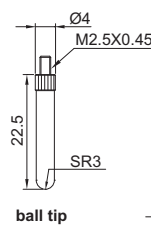
2141-201



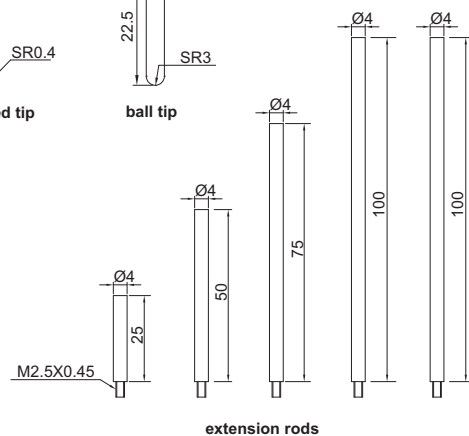
2141-202



pointed tip



ball tip



extension rods

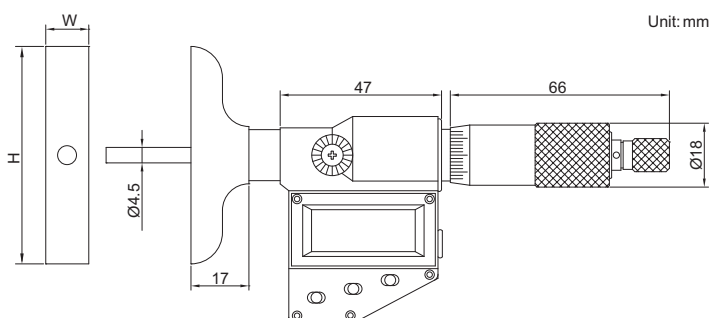
- Mode button : to track the minimum or maximum reading
- '+/-' button: to change measuring direction
- CR2032 battery, automatic power off
- Stainless steel base
- Extension rods: 25mm(1pc), 50mm(1pc), 75mm(1pc), 100mm(2pcs)
- Supplied with pointed tip and ball tip

Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy	Base
2141-201	0-300mm/0-12"	25.4mm/1"	0.005mm/0.0005"	±0.03mm	63x17mm
2141-202	0-300mm/0-12"	25.4mm/1"	0.005mm/0.0005"	±0.03mm	101.5x17mm

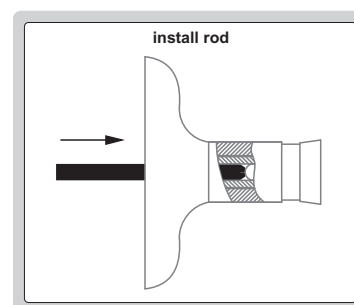
DIGITAL DEPTH MICROMETER



3540-50



Unit: mm



- Resolution: 0.001mm/0.00005"
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2 + L/75)\mu\text{m}$, L is the measuring range in mm
- Button function: on/off, set, mm/inch, ABS/INC, data output
- IP54 dust/waterproof
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Rods with flat end
- Optional accessory: SPC cable (page A1-A2)

Base: HxW=101.5x17mm

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

Base: HxW=63x17mm

Code	Range	Rods
3540-B50	0-50mm/0-2"	2pcs
3540-B150	0-150mm/0-6"	6pcs
3540-B300	0-300mm/0-12"	12pcs

DEPTH MICROMETER



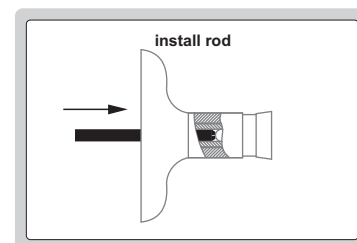
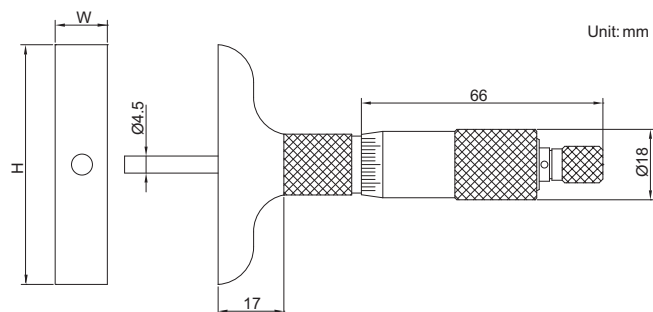
3240-100

Base: HxW=101.5x17mm

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

Base: HxW=63x17mm

Code	Range	Rods
3240-B25	0-25mm	1pc
3240-B50	0-50mm	2pcs
3240-B75	0-75mm	3pcs
3240-B100	0-100mm	4pcs
3240-B150	0-150mm	6pcs
3240-B200	0-200mm	8pcs
3240-B300	0-300mm	12pcs



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

DEPTH MICROMETER



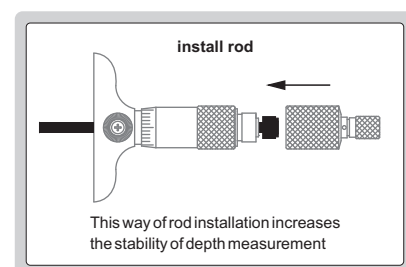
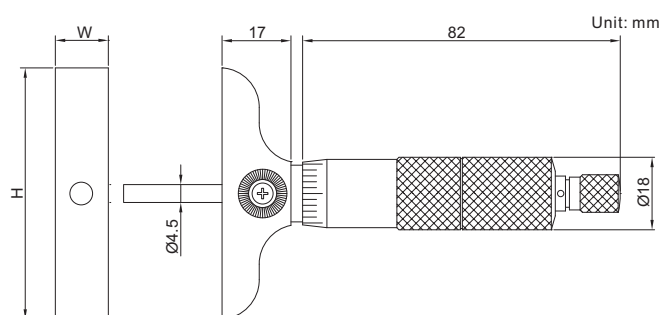
3241-100

Base: HxW=101.5x17mm

Code	Range	Rods
3241-25	0-25mm	1pc
3241-50	0-50mm	2pcs
3241-75	0-75mm	3pcs
3241-100	0-100mm	4pcs
3241-150	0-150mm	6pcs
3241-200	0-200mm	8pcs
3241-300	0-300mm	12pcs

Base: HxW=63x17mm

Code	Range	Rods
3241-B25	0-25mm	1pc
3241-B50	0-50mm	2pcs
3241-B75	0-75mm	3pcs
3241-B100	0-100mm	4pcs
3241-B150	0-150mm	6pcs
3241-B200	0-200mm	8pcs
3241-B300	0-300mm	12pcs

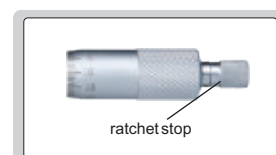


- Graduation: 0.01mm
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Rods with flat end
- Ratchet stop

DIGITAL OUTSIDE MICROMETER



3101-25A

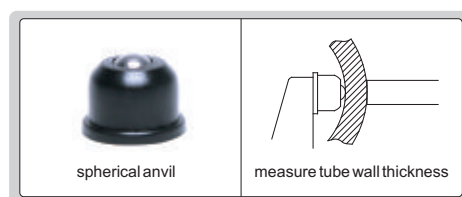
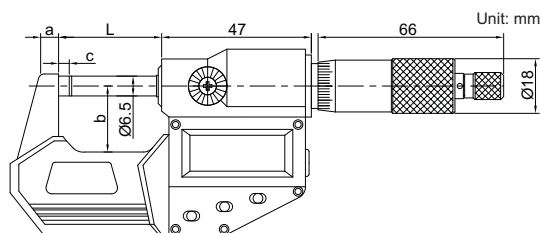


- Resolution 0.001mm/0.00005"
(resolution of **3101-275A** and **3101-300A** is 0.001mm/0.0001")
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included(except 0-25mm/0-1")
- Optional accessory: SPC cable (page A1-A2)

Ratchet stop type

(mm)

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



Ratchet thimble type

(mm)

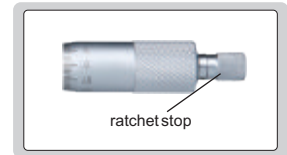
Code	Range	Accuracy	L	a	b	c
3101-25FA	0-25mm/0-1"	±2μm	32.5	6	24	3
3101-50FA	25-50mm/1-2"	±2μm	57.5	8	32	3
3101-75FA	50-75mm/2-3"	±3μm	82.5	8	44.5	3
3101-100FA	75-100mm/3-4"	±3μm	107.5	8	57	3

METRIC DIGITAL OUTSIDE MICROMETER



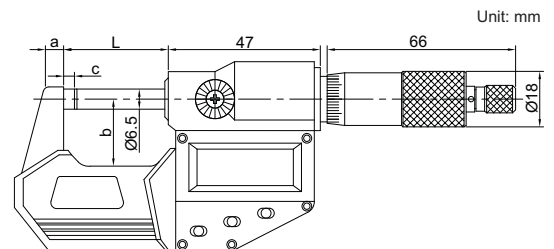
3108-25A

- Resolution 0.001mm
- IP54 dust/waterproof
- Button function: on/off, set, ABS/INC
- Without data output
- SR44 or LR44 battery, automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included(except 0-25mm)



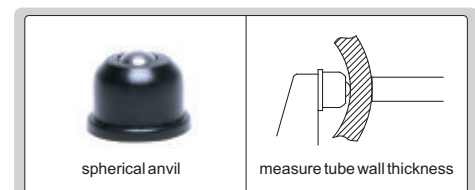
Ratchet stop type (mm)

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



Ratchet thimble type (mm)

Code	Range	Accuracy	L	a	b	c
3108-25FA	0-25mm	±2μm	32.5	6	24	3
3108-50FA	25-50mm	±2μm	57.5	8	32	3
3108-75FA	50-75mm	±3μm	82.5	8	44.5	3
3108-100FA	75-100mm	±3μm	107.5	8	57	3

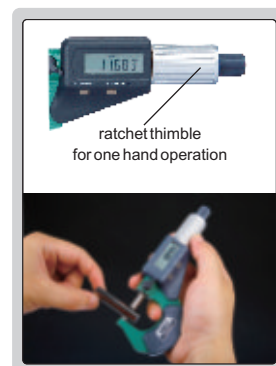
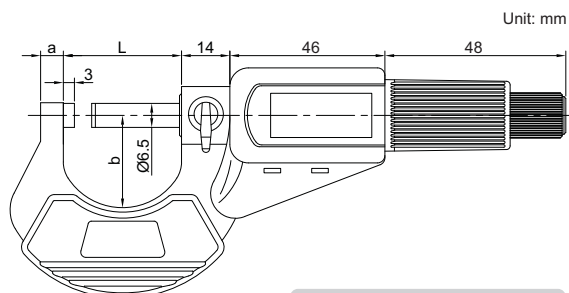


DIGITAL OUTSIDE MICROMETER



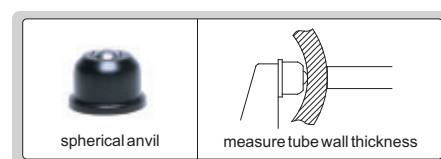
3109-25A

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC
- Without data output
- SR44 or LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet thimble
- Supplied with spherical anvil
- Setting standards are included(except 0-25mm/0-1")



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

(mm)



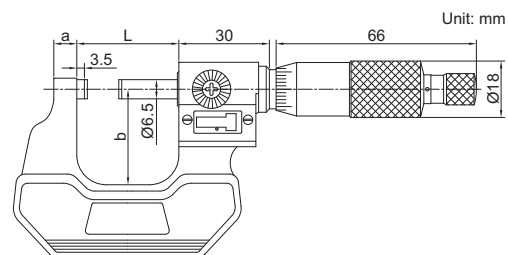
OUTSIDE MICROMETER WITH COUNTER



3400-25

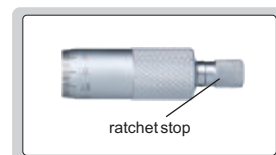
Code	Range	Accuracy	L	a	b
3400-25	0-25mm	4μm	32	6	26
3400-50	25-50mm	4μm	57	8	32
3400-75	50-75mm	5μm	82	8	44.5
3400-100	75-100mm	5μm	107	8	57
3400-125	100-125mm	6μm	132.4	8	71.8
3400-150	125-150mm	6μm	157.8	8	84

(mm)



- Counter resolution 0.01mm
- Thimble graduation 0.01mm
- Carbide measuring faces
- Ratchet stop
- Meet DIN863
- Supplied with setting standards(except 0-25mm)

OUTSIDE MICROMETER



- Graduation: metric 0.01mm
imperial 0.0001"
- Carbide measuring faces
- Meet DIN863
- Supplied with setting standards(except 0-25mm and 0-1")

Metric(ratchet stop type) (mm)

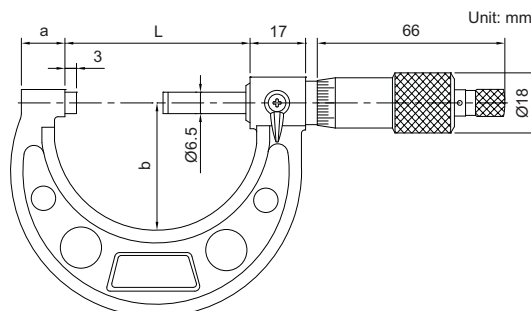
Code	Range	Accuracy	L	a	b
3203-25A	0-25mm	4μm	32	9	28
3203-50A	25-50mm	4μm	57	14	38
3203-75A	50-75mm	5μm	82	15	49
3203-100A	75-100mm	5μm	107	15	60
3203-125A	100-125mm	6μm	133	16.5	73
3203-150A	125-150mm	6μm	158	16.5	85
3203-175A	150-175mm	7μm	183	19.4	104
3203-200A	175-200mm	7μm	209	19.4	117
3203-225A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

Metric(ratchet thimble type) (mm)

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

Imperial(ratchet stop type) (mm)

Code	Range	Accuracy	L	a	b
3203-1A	0-1"	0.00015"	32	9	28
3203-2A	1-2"	0.00015"	57	14	38
3203-3A	2-3"	0.0002"	82	15	49
3203-4A	3-4"	0.0002"	107	15	60
3203-5A	4-5"	0.00025"	133	16.5	73
3203-6A	5-6"	0.00025"	158	16.5	85



Metric micrometer set (ratchet stop type)

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



3210-25A

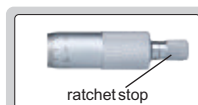
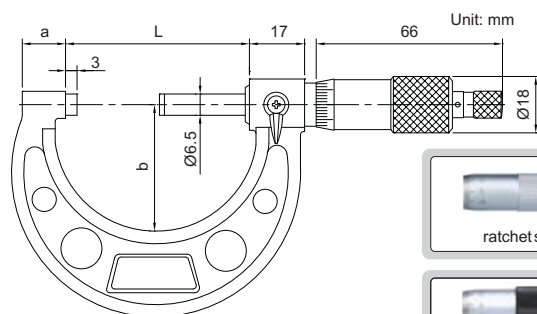
Ratchet stop type (mm)

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

Ratchet thimble type (mm)

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

1μm GRADUATION OUTSIDE MICROMETER



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

Micrometer set (ratchet stop type)

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



3202-25A

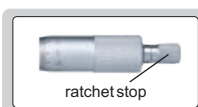
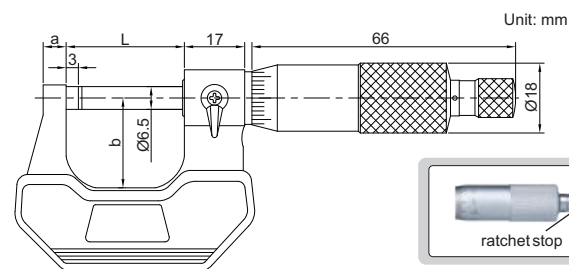
Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b
3202-25A	0-25mm	4μm	32	6	24
3202-50A	25-50mm	4μm	57	8	32
3202-75A	50-75mm	5μm	82	8	45
3202-100A	75-100mm	5μm	107	8	57
3202-125A	100-125mm	6μm	133	8	70
3202-150A	125-150mm	6μm	158	8	82
3202-175A	150-175mm	7μm	183	8	95
3202-200A	175-200mm	7μm	209	8	107

Ratchet thimble type (mm)

Code	Range	Accuracy	L	a	b
3202-25FA	0-25mm	4μm	32	6	24
3202-50FA	25-50mm	4μm	57	8	32

OUTSIDE MICROMETER



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

Micrometer set (ratchet stop type)

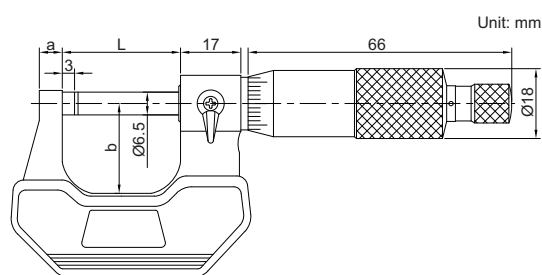
Code	Range	Micrometers included
3202-753A	0-75mm	3202-25A, 3202-50A, 3202-75A
3202-1004A	0-100mm	3202-25A, 3202-50A, 3202-75A, 3202-100A
3202-1506A	0-150mm	3202-25A, 3202-50A, 3202-75A, 3202-100A, 3202-125A, 3202-150A



3211-25

(mm)					
Code	Range	Accuracy	L	a	b
3211-25	0-25mm	4μm	32	6	24
3211-50	25-50mm	4μm	57	8	32

1μm GRADUATION OUTSIDE MICROMETER



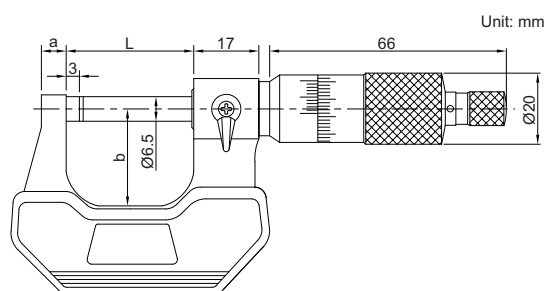
- Graduation 0.001mm
- Carbide measuring faces
- Ratchet stop
- Meet DIN863
- Supplied with setting standards(except 0-25mm)



3207-25A

(mm)					
Code	Range	Accuracy	L	a	b
3207-25A	0-25mm	4μm	32	6	24
3207-50A	25-50mm	4μm	57	8	32
3207-75A	50-75mm	5μm	82	8	45
3207-100A	75-100mm	5μm	107	8	57

NO PARALLAX OUTSIDE MICROMETER



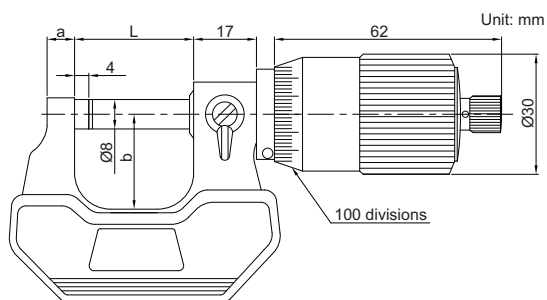
- Graduation 0.001mm
- No parallax
- Ratchet stop
- Carbide measuring faces
- Meet DIN863
- Supplied with setting standards (except 0-25mm)



3208-25B

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

QUICK SETTING OUTSIDE MICROMETER



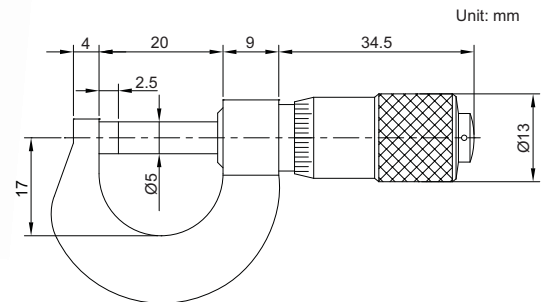
- Graduation 0.01mm
- 1mm feeding of each turn
- Ratchet thimble
- Carbide measuring faces
- Meet DIN863
- Supplied with setting standards (except 0-25mm)



3200-15

Code	Range	Graduation	Accuracy
3200-15	0-15mm	0.01mm	4μm

MINI OUTSIDE MICROMETER



OUTSIDE MICROMETER FOR LEFT AND RIGHT HAND

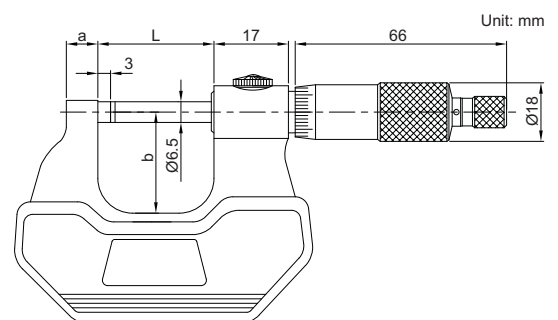


front



back

3236-25B



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

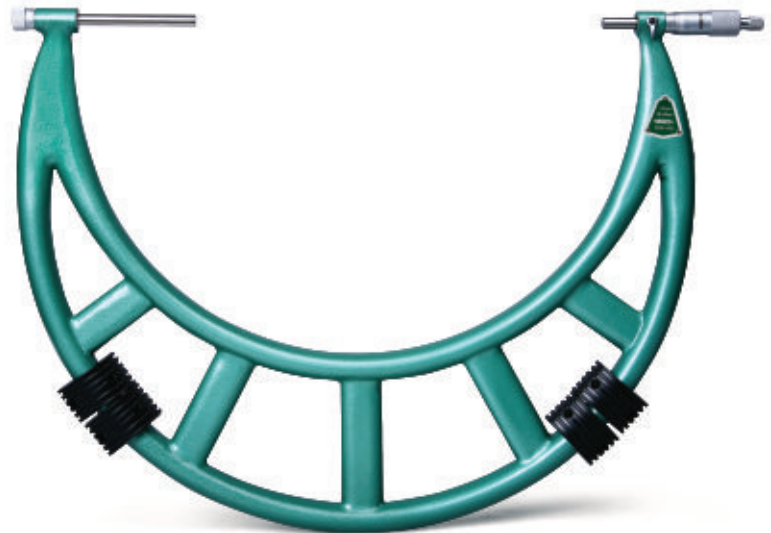
(mm)

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

OUTSIDE MICROMETER WITH INTERCHANGEABLE ANVILS

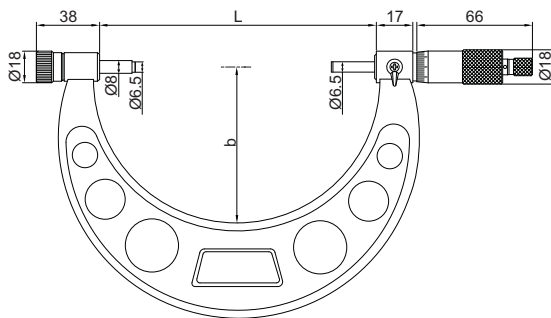


3206-150A

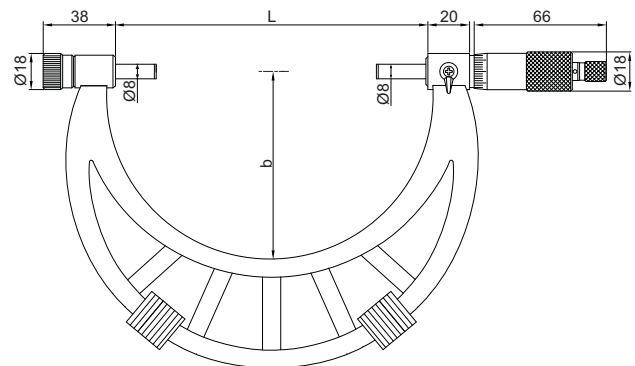


3206-400

Unit: mm



type A



type B

(mm)

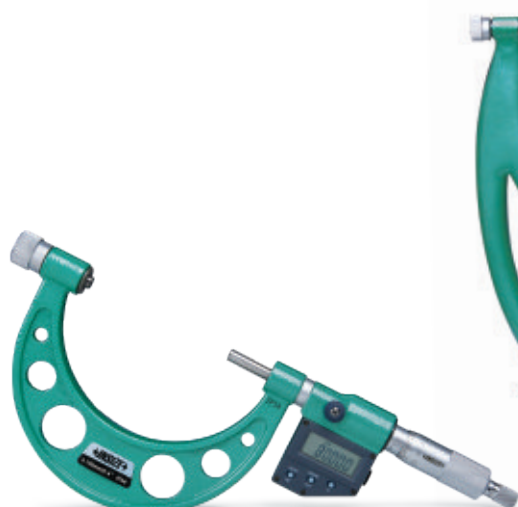
Code	Range	Type	Accuracy	L	b
3206-50A	0-50mm	A	4μm	58	35
3206-100A	0-100mm	A	5μm	108	57
3206-150A	0-150mm	A	6μm	158	82
3206-151A	50-150mm	A	6μm	158	82
3206-200A	100-200mm	A	7μm	208	114
3206-300A	150-300mm	A	9μm	308	165
3206-301A	200-300mm	A	9μm	308	165
3206-400	300-400mm	B	11μm	409	224
3206-500	400-500mm	B	13μm	509	275
3206-600	500-600mm	B	14μm	609	321
3206-700	600-700mm	B	16μm	709	371
3206-800	700-800mm	B	18μm	809	426
3206-900	800-900mm	B	20μm	909	476
3206-1000	900-1000mm	B	22μm	1009	576



interchangeable anvils
for different measuring ranges

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

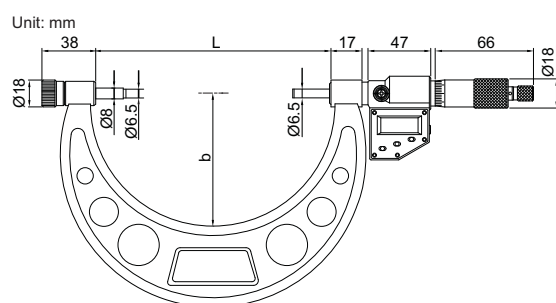
DIGITAL OUTSIDE MICROMETER WITH INTERCHANGEABLE ANVILS



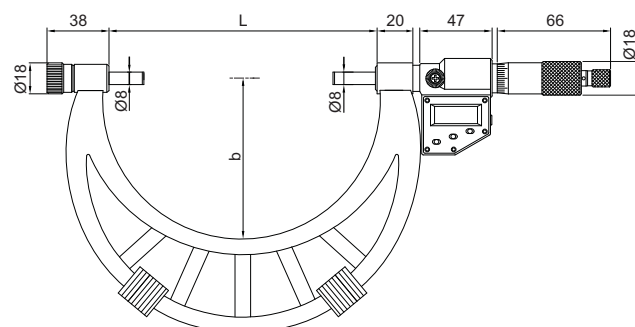
3506-100A



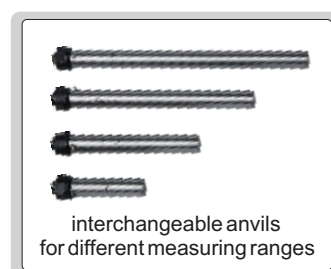
3506-400A



type A



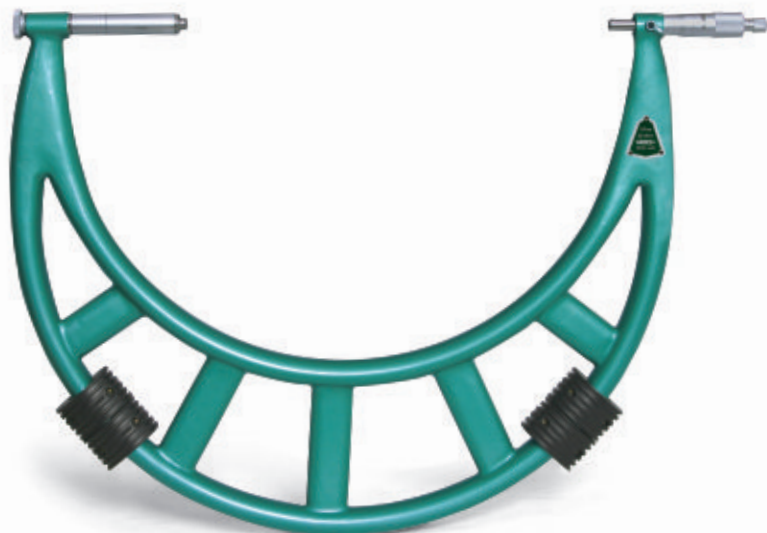
type B



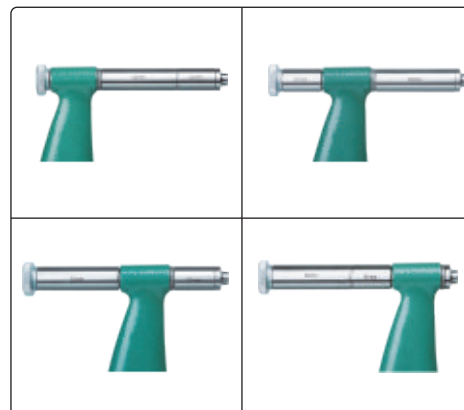
Code	Range	Type	Accuracy	L	b
3506-100A	0-100mm/0-4"	A	±5μm	105	57
3506-150A	0-150mm/0-6"	A	±6μm	155	82
3506-300A	150-300mm/6-12"	A	±8μm	305	165
3506-301A	200-300mm/8-12"	A	±8μm	305	165
3506-400A	300-400mm/12-16"	B	±9μm	405	224
3506-500A	400-500mm/16-20"	B	±11μm	505	275
3506-600A	500-600mm/20-24"	B	±12μm	605	321
3506-700A	600-700mm/24-28"	B	±13μm	705	371
3506-800A	700-800mm/28-32"	B	±15μm	805	426
3506-900A	800-900mm/32-36"	B	±16μm	905	476
3506-1000A	900-1000mm/36-40"	B	±17μm	1005	576

- Resolution 0.001mm/0.0001"
(resolution of **3506-100A** and **3506-150A** is 0.001mm/0.00005")
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch,
- ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: SPC cable (page A1-A2)

OUTSIDE MICROMETER WITH EXTENSION ANVIL COLLAR

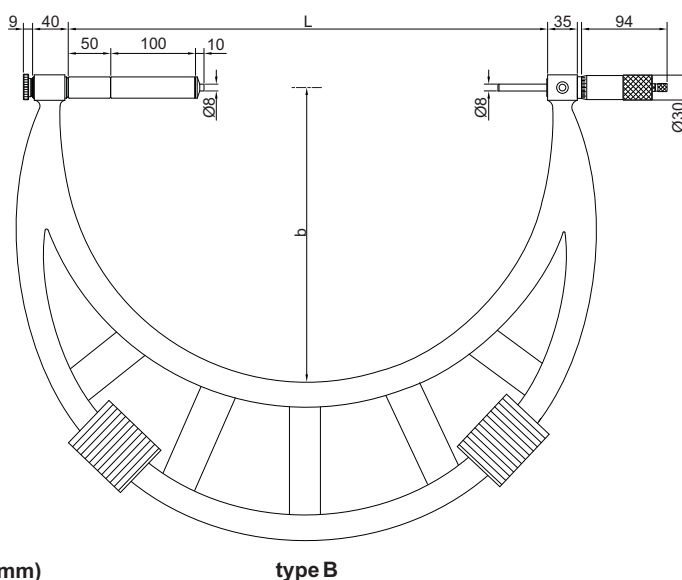
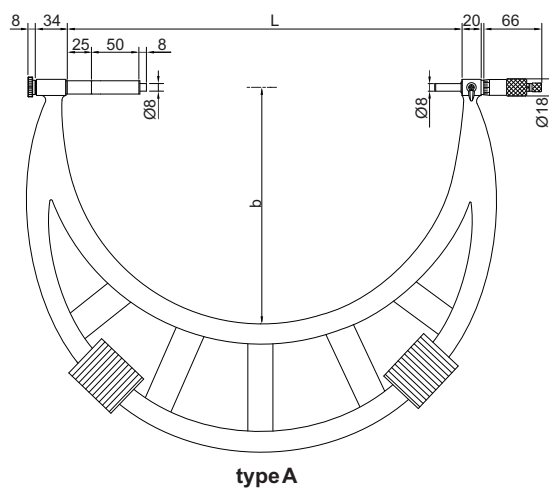


3205-400



adjust collars for different measuring ranges

Unit: mm



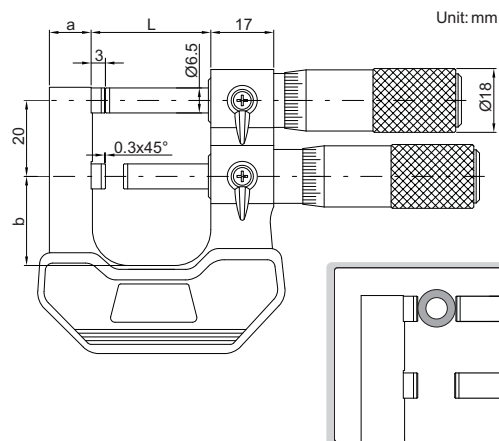
Code	Range	Type	Accuracy	L	b
3205-400	300-400mm	A	11μm	410	250
3205-500	400-500mm	A	13μm	510	295
3205-600	500-600mm	A	14μm	610	345
3205-700	600-700mm	A	16μm	710	395
3205-800	700-800mm	A	18μm	810	445
3205-900	800-900mm	A	20μm	910	495
3205-1000	900-1000mm	A	22μm	1010	545
3205-1200	1000-1200mm	B	22μm	1210	645
3205-1400	1200-1400mm	B	24μm	1410	745
3205-1600	1400-1600mm	B	28μm	1610	845
3205-1800	1600-1800mm	B	31μm	1810	945
3205-2000	1800-2000mm	B	34μm	2010	1045

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



3235-25A

LIMIT MICROMETER

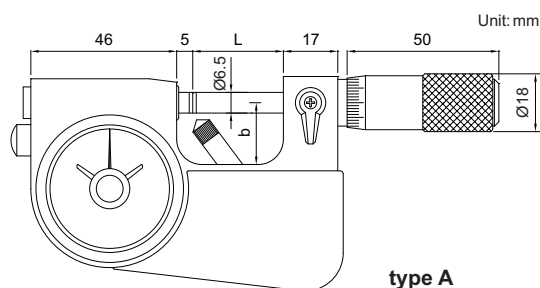


(mm)					
Code	Range	Accuracy	L	a	b
3235-25A	0-25mm	4μm	32	12	24
3235-50A	25-50mm	4μm	57	15	32

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



3332-25



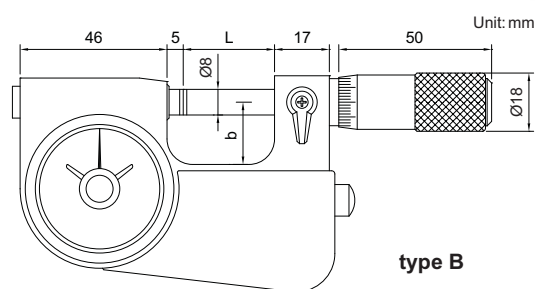
type A

(mm)					
Code	Micrometer head range	Micrometer head accuracy	Type	L	b
3332-25	0-25mm	4μm	A	28.5	19
3332-50	25-50mm	4μm	A	53.5	30
3332-75	50-75mm	5μm	A	78.5	45
3332-100	75-100mm	5μm	A	103.5	57
3332-25B	0-25mm	4μm	B	28.5	19

INDICATING MICROMETER



3332-25B



type B

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

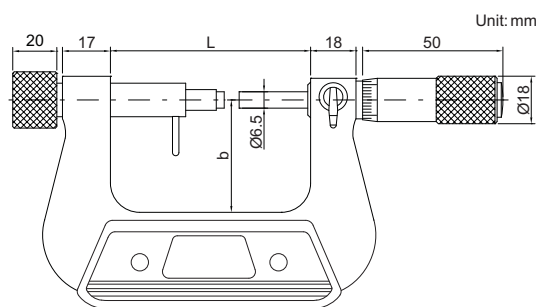


dial indicator
is not included

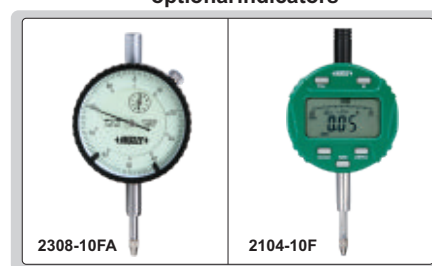
3331-25A

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

INDICATING MICROMETER



optional indicators

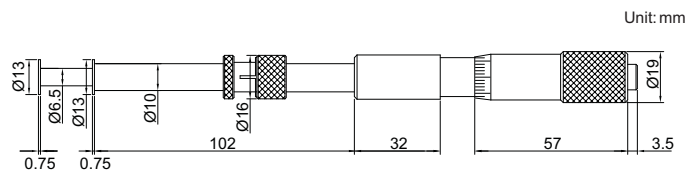


- Micrometer head graduation 0.01mm
- Anvil retracting range: 8mm
- Optional indicators:
 - dial indicator, range 10mm, graduation 0.01mm (code **2308-10FA**)
 - digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2104-10F**)
- Carbide measuring faces
- Supplied with setting standards(except 0-25mm)

GROOVE MICROMETER

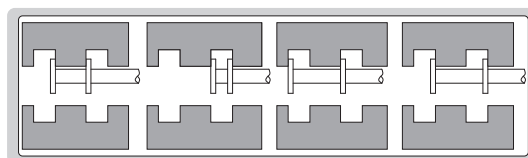


3287-25A



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

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



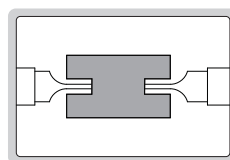
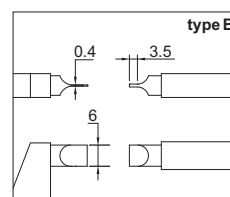
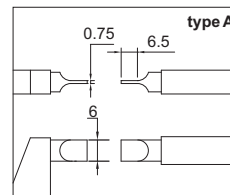
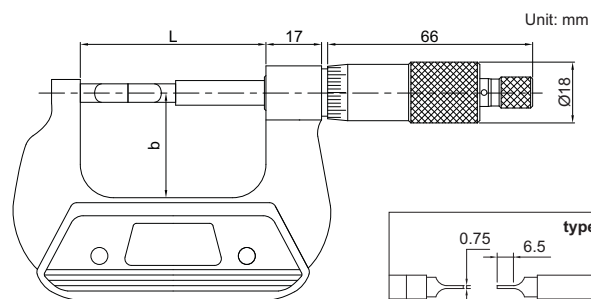
BLADE MICROMETER



3232-25A

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

(mm)



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

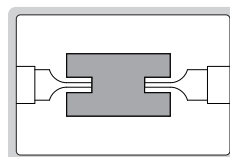
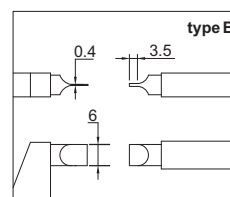
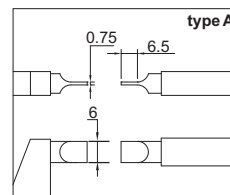
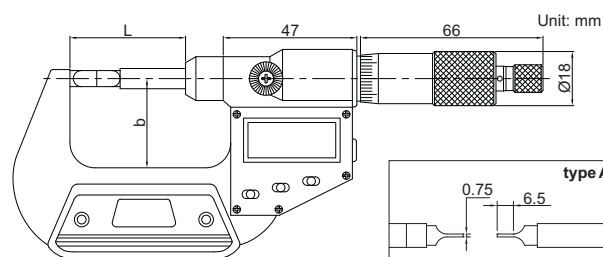
DIGITAL BLADE MICROMETER



3532-25A

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

(mm)



- Measure the groove diameter of shafts and keyways
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards(except 0-25mm/0-1")
- Optional accessory: SPC cable (page A1-A2)

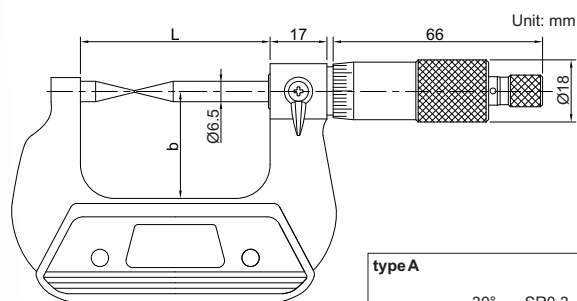
POINT MICROMETER



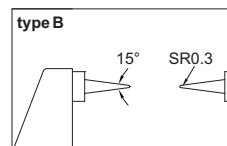
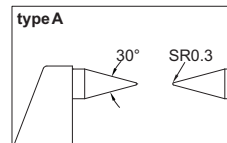
3230-25A

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

(mm)



Unit: mm



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

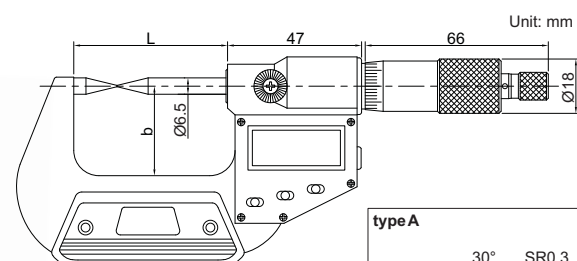
DIGITAL POINT MICROMETER



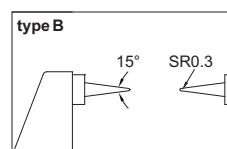
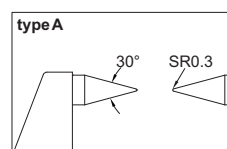
3530-25A

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

(mm)



Unit: mm



- Measure the web thickness of drills, small grooves and keyways
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide tips
- Supplied with setting standards(except 0-25mm/0-1")
- Optional accessory: SPC cable (page A1-A2)

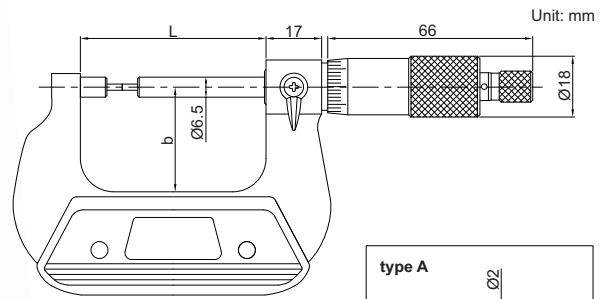
SPLINE MICROMETER



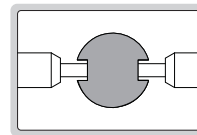
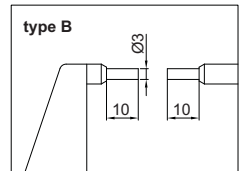
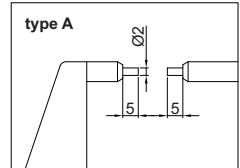
3233-25BA

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

(mm)



Unit: mm



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

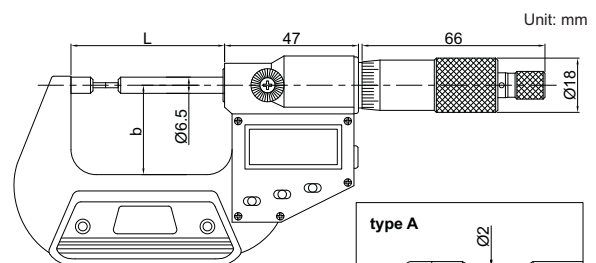
DIGITAL SPLINE MICROMETER



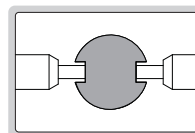
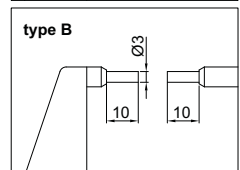
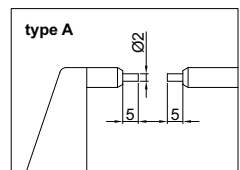
3533-25BA

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

(mm)



Unit: mm



- Measure splined shafts, slots and keyways
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards(except 0-25mm/0-1")
- Optional accessory: SPC cable (page A1-A2)

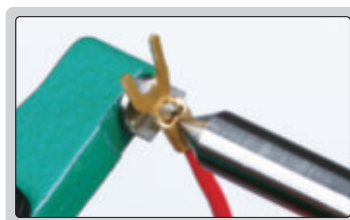
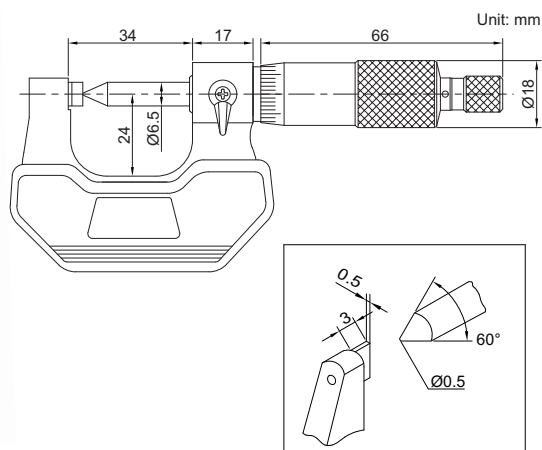
CRIMP HEIGHT MICROMETER



3266-25BA

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

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



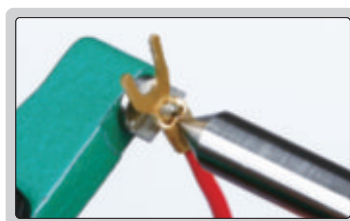
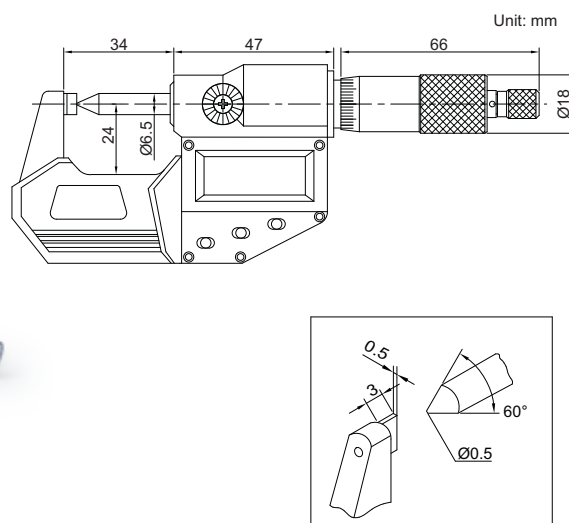
DIGITAL CRIMP HEIGHT MICROMETER



3566-25BA

- Measure the height of crimp contact
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: SPC cable (page A1-A2)

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

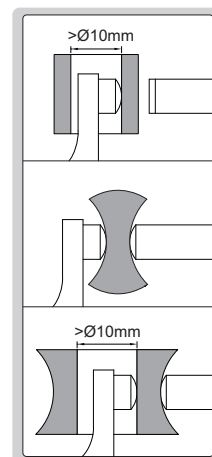
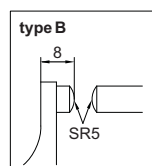
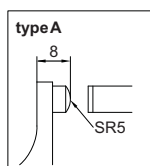
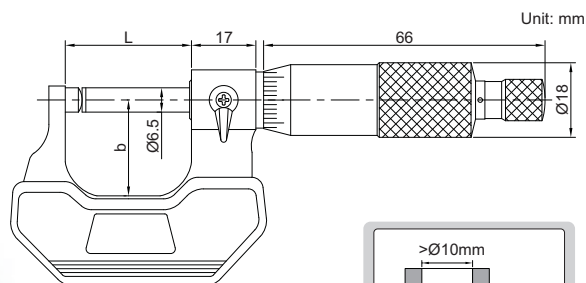


SPHERICAL ANVIL TUBE MICROMETER



3260-25A

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



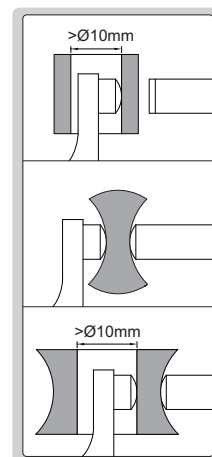
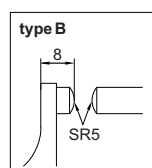
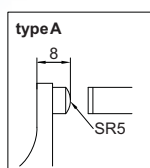
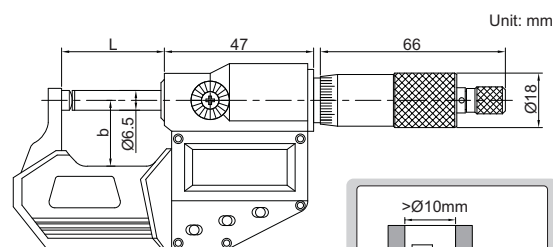
- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards(except 0-25mm)

DIGITAL SPHERICAL ANVIL TUBE MICROMETER



3560-25A

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



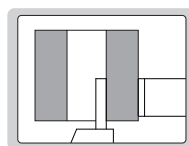
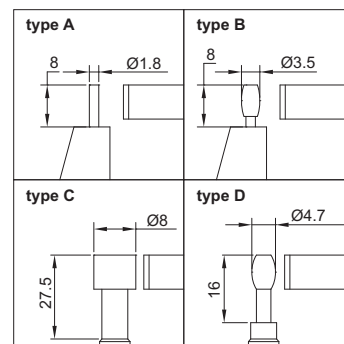
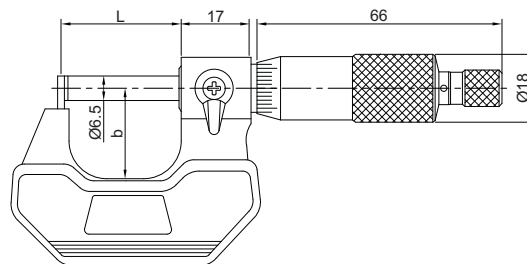
- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards(except 0-25mm/0-1")
- Optional accessory: SPC cable (page A1-A2)

CYLINDRICAL ANVIL TUBE MICROMETER

Unit: mm



3261-25A



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

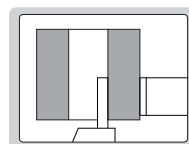
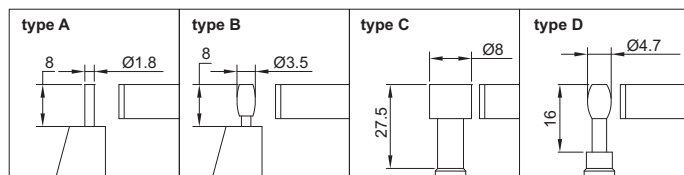
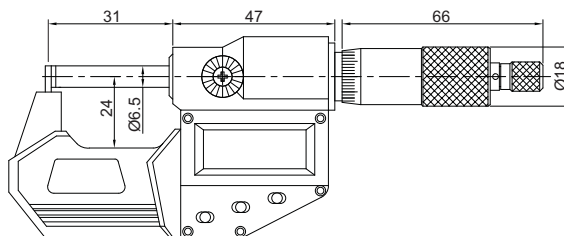
- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards(except 0-25mm)

DIGITAL CYLINDRICAL ANVIL TUBE MICROMETER

Unit: mm



3561-25A



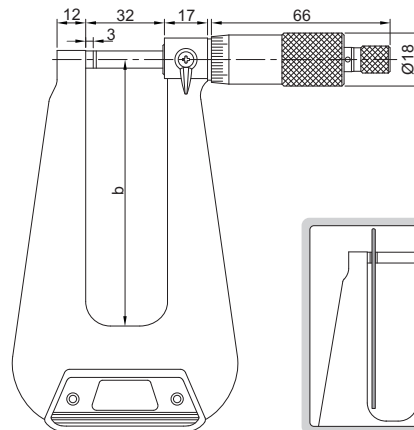
Code	Range	Type	Accuracy
3561-25A	0-25mm/0-1"	A	±6μm
3561-25BA	0-25mm/0-1"	B	±6μm
3561-25CA	0-25mm/0-1"	C	±6μm
3561-25DA	0-25mm/0-1"	D	±6μm

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards(except 0-25mm/0-1")
- Optional accessory: SPC cable (page A1-A2)

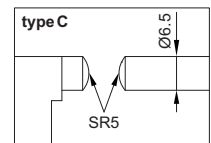
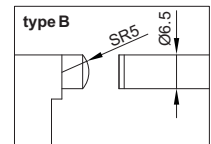
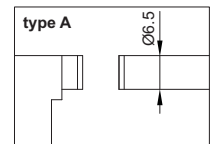
SHEET METAL MICROMETER



3239-253



Unit: mm



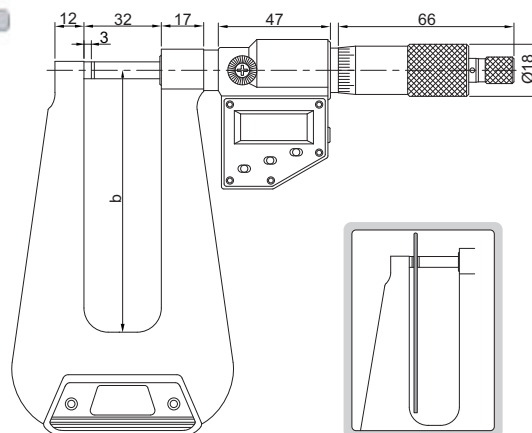
Code	Range	Type	Accuracy	b (mm)
3239-253	0-25mm	A	5μm	155
3239-253F	0-25mm	B	5μm	155
3239-254F	0-25mm	B	6μm	310
3239-253S	0-25mm	C	5μm	155

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

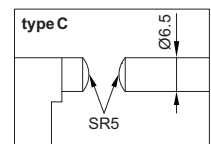
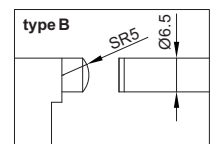
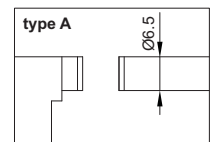
DIGITAL SHEET METAL MICROMETER



3539-253A



Unit: mm



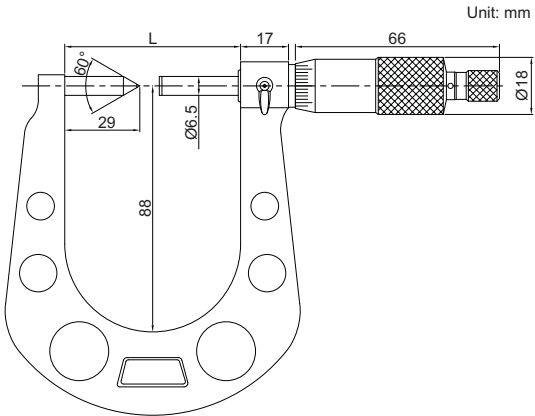
Code	Range	Type	Accuracy	b (mm)
3539-253A	0-25mm/0-1"	A	±5μm	155
3539-253FA	0-25mm/0-1"	B	±5μm	155
3539-254FA	0-25mm/0-1"	B	±6μm	310
3539-253SA	0-25mm/0-1"	C	±5μm	155

- Deep frame suitable for sheet metal, paper and plastic
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: SPC cable (page A1-A2)

DISK BRAKE MICROMETER



3288-33A



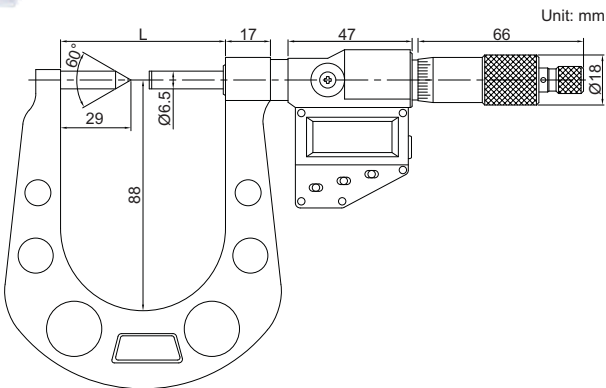
Code	Range	Accuracy	L (mm)
3288-33A	7.6-33mm	5µm	64.5
3288-50A	25-50mm	5µm	82

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

DIGITAL DISK BRAKE MICROMETER



3588-33A



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

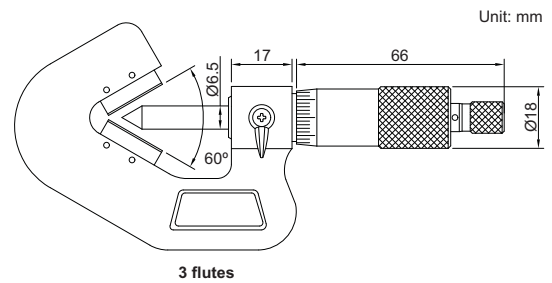
- Measure thickness of disk brakes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: SPC cable (page A1-A2)

V-ANVIL MICROMETER

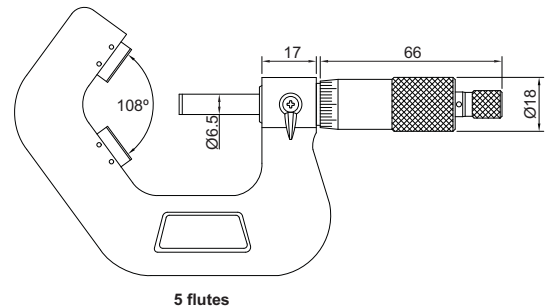


3290-153A

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



3 flutes



5 flutes

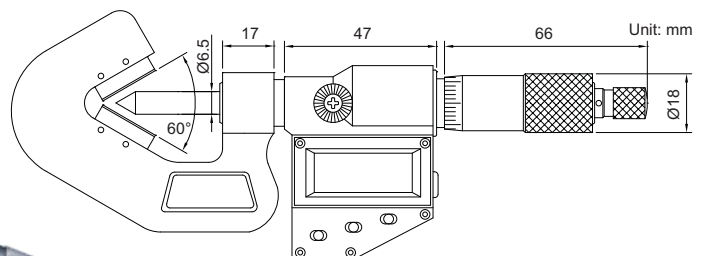
- Measure the outside diameter of cutting tools (such as taps, reamers, end mills) with 3 or 5 flutes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards

DIGITAL V-ANVIL MICROMETER



3590-153A

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



- Measure the outside diameter of cutting tools (such as taps, reamers, end mills) with 3 flutes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: SPC cable (page A1-A2)

INTERCHANGEABLE ANVIL MICROMETER

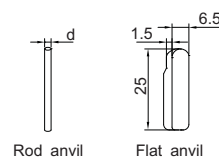
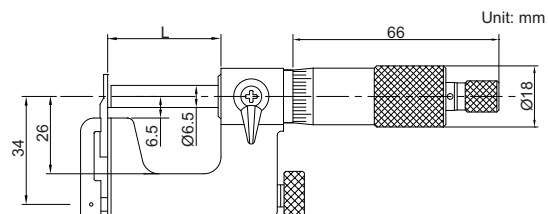


3262-25A

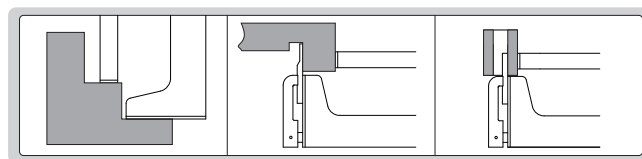
- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Setting standards are included(except 0-25mm)

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

(mm)



Rod anvil Flat anvil



DIGITAL INTERCHANGEABLE ANVIL MICROMETER

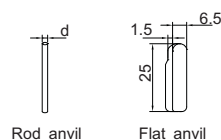
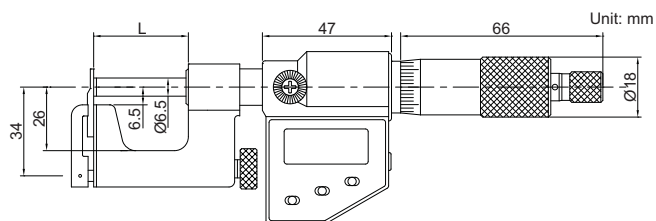


3562-25A

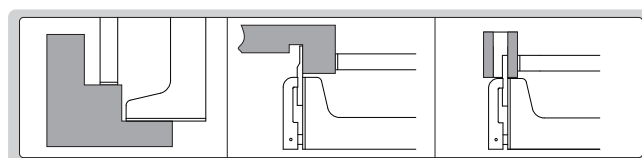
- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide spindle tip
- Setting standards are included(except 0-25mm/0-1")
- Optional accessory: SPC cable (page A1-A2)

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

(mm)



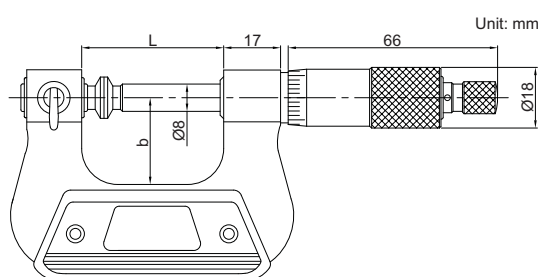
Rod anvil Flat anvil



NON ROTATING SPINDLE UNIVERSAL MICROMETER



3280-25A



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

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

standard anvil/spindle tip

Unit: mm

Flat		
Spherical		
Spline		
Disk		
Blade		
Knife-edge		
Point		

optional 55° anvil/spindle tip

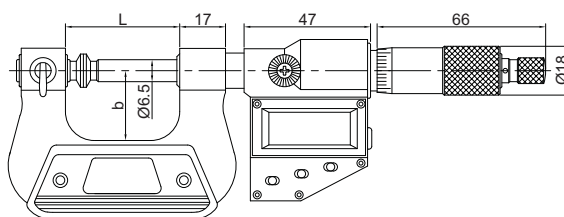
Code 3280-SP1 Knife-edge		
Code 3280-SP2 Point		

DIGITAL UNIVERSAL MICROMETER

Unit: mm



3580-25A



Code	Range	Accuracy	L	b
3580-25A	0-25mm/0-1"	$\pm 4\mu\text{m}$	42	26
3580-50A	25-50mm/1-2"	$\pm 4\mu\text{m}$	67	38

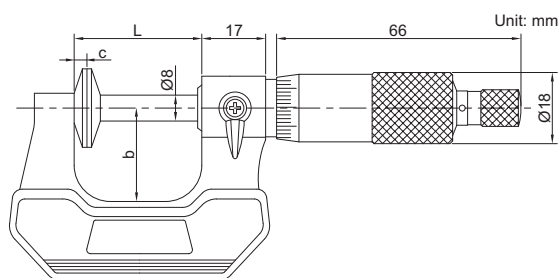
(mm)

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip (same as series 3280, previous page)
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: 55° anvil/spindle tip code 3280-SP1 and 3280-SP2 (same as series 3280, previous page), SPC cable (page A1-A2)



3282-25

DISK MICROMETER

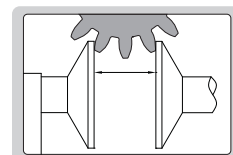
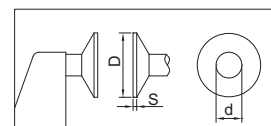


Unit: mm

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

Code	Range	Accuracy	L	b	c	D	S	d
3282-25	0-25mm	$4\mu\text{m}$	34	24	3.3	Ø20	0.7	Ø8
3282-50	25-50mm	$4\mu\text{m}$	59	32	3.3	Ø20	0.7	Ø8
3282-75	50-75mm	$5\mu\text{m}$	85	45	3.3	Ø20	0.7	Ø8
3282-100	75-100mm	$5\mu\text{m}$	110	57	3.3	Ø20	0.7	Ø8
3282-125	100-125mm	$6\mu\text{m}$	138	70	4.3	Ø30	0.9	Ø12
3282-150	125-150mm	$6\mu\text{m}$	163	82	4.3	Ø30	0.9	Ø12
3282-175	150-175mm	$7\mu\text{m}$	188	95	4.3	Ø30	0.9	Ø12
3282-200	175-200mm	$7\mu\text{m}$	214	107	4.3	Ø30	0.9	Ø12

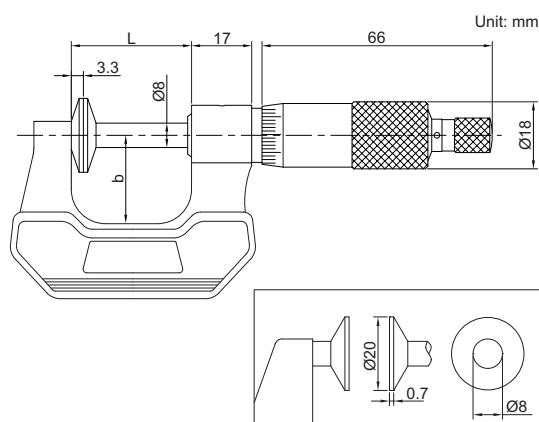
(mm)



NON ROTATING SPINDLE DISK MICROMETER

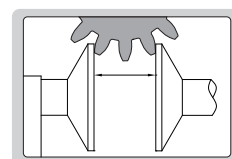


3294-25



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

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



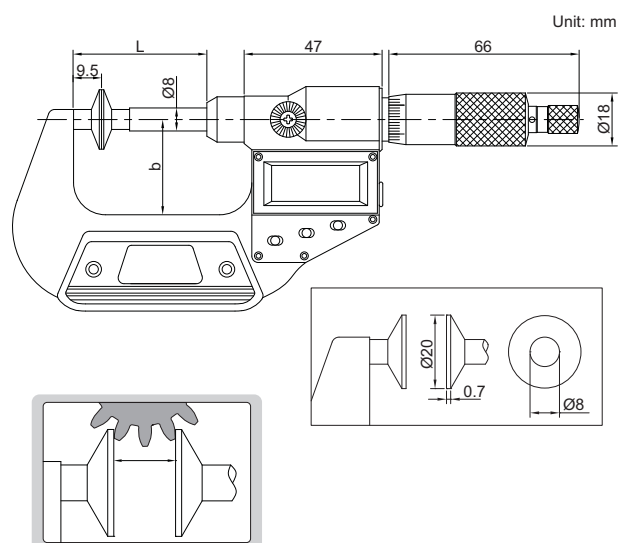
DIGITAL NON ROTATING SPINDLE DISK MICROMETER



3594-25A

- Measure root tangent length of gear
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards(except 0-25mm/0-1")
- Optional accessory: SPC cable (page A1-A2)

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

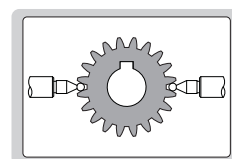
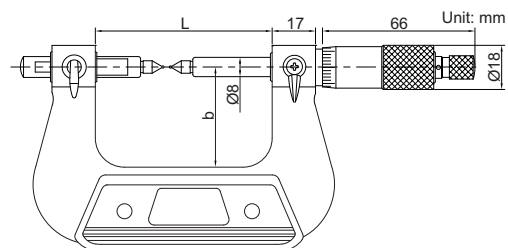


GEAR TOOTH MICROMETER

ball tips are not included



3291-25



Code	Range	Micrometer head accuracy	Ball tips accuracy	L	b
3291-25	0-25mm	4μm	8μm	67	38
3291-50	25-50mm	4μm	8μm	92.4	50
3291-75	50-75mm	5μm	10μm	117.6	62
3291-100	75-100mm	5μm	10μm	143	70
3291-125	100-125mm	6μm	15μm	168.2	82
3291-150	125-150mm	6μm	15μm	192	94.5
3291-175	150-175mm	7μm	15μm	217	107

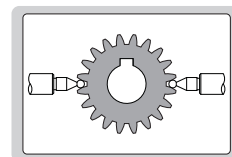
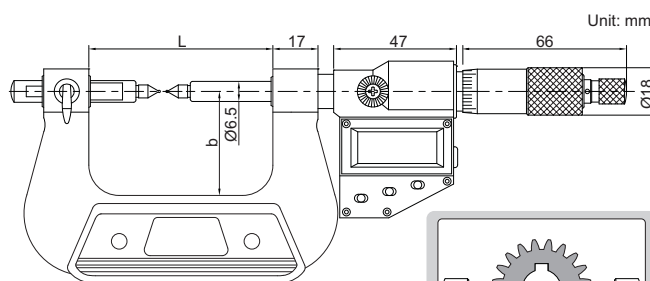
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards(except 0-25mm)
- Optional accessory: ball tips(code **7391**, next page)

DIGITAL GEAR TOOTH MICROMETER

ball tips are not included



3591-25A



Code	Range	Micrometer head accuracy	Ball tips accuracy	L	b
3591-25A	0-25mm/0-1"	±4μm	8μm	67	38
3591-50A	25-50mm/1-2"	±4μm	8μm	92.4	50
3591-75A	50-75mm/2-3"	±5μm	10μm	117.6	62
3591-100A	75-100mm/3-4"	±5μm	10μm	143	70

- Measure over-pin diameter of gears
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards(except 0-25mm/0-1")
- Optional accessory: ball tips(code **7391**, next page), SPC cable(page A1-A2)

BALL TIPS FOR GEAR TOOTH MICROMETER

Code	Ball dia.(D)	Module
7391-T1	SØ1mm	0.6-0.65
7391-T2	SØ1.5mm	0.9-1.0
7391-T3	SØ2.0mm	1.25
7391-T4	SØ2.5mm	1.5
7391-T5	SØ3.0mm	1.75
7391-T6	SØ3.5mm	2
7391-T7	SØ4.0mm	2.25
7391-T8	SØ4.5mm	2.5
7391-T9	SØ5.0mm	2.75
7391-T10	SØ6.0mm	3.5
7391-TS	10 pairs/set, including all above tips	



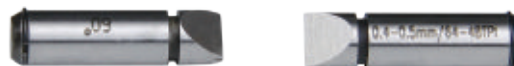
7391-T5



MEASURING TIPS FOR SCREW THREAD MICROMETER

Metric and unified thread (60° thread angle)

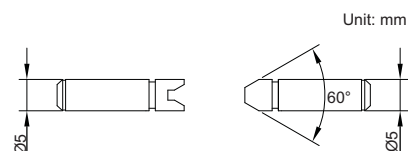
Code	Pitch
7381-T11	0.4-0.5mm/64-48TPI
7381-T12	0.6-0.9mm/44-28TPI
7381-T13	1-1.75mm/24-14TPI
7381-T14	2-3mm/13-9TPI
7381-T15	3.5-5mm/8-5TPI
7381-T16	5.5-7mm/4.5-3.5TPI
7381-TS	6 pairs/set, including all above tips



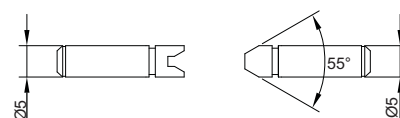
7381-T11

Whitworth thread (55° thread angle)

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



60° thread angle



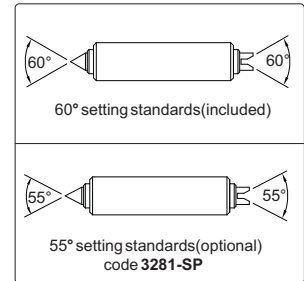
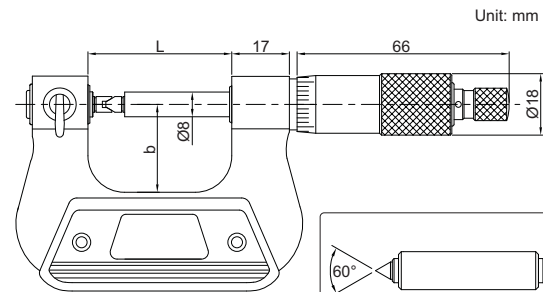
55° thread angle

measuring tips are not included



3281-25A

SCREW THREAD MICROMETER



(mm)

Code	Range	Micrometer head accuracy	Measuring tips accuracy	L	b
3281-25A	0-25mm	4μm	8μm	42	26
3281-50A	25-50mm	4μm	8μm	67	38
3281-75A	50-75mm	5μm	10μm	92	50
3281-100A	75-100mm	5μm	10μm	117.6	62
3281-125A	100-125mm	6μm	15μm	143	70
3281-150A	125-150mm	6μm	15μm	168.2	82
3281-175A	150-175mm	7μm	15μm	192	94.5
3281-200A	175-200mm	7μm	15μm	217	107

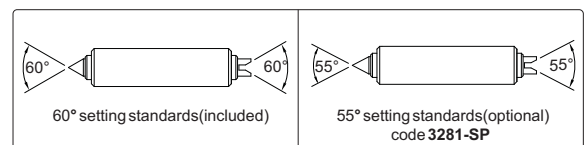
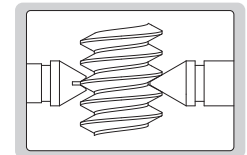
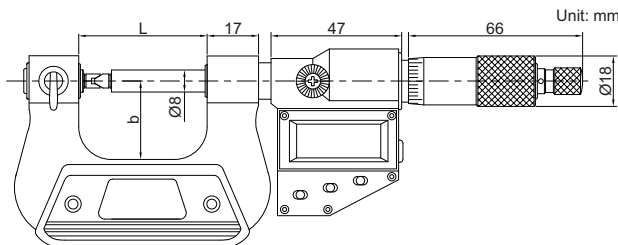
- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards(except 0-25mm)
- Optional accessory: 55° setting standards (code **3281-SP**), measuring tips (code **7381**, previous page)

measuring tips are not included



3581-25A

DIGITAL SCREW THREAD MICROMETER



(mm)

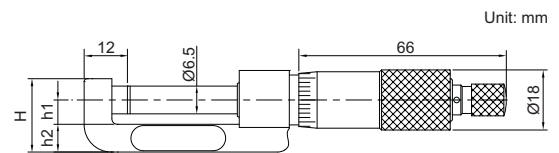
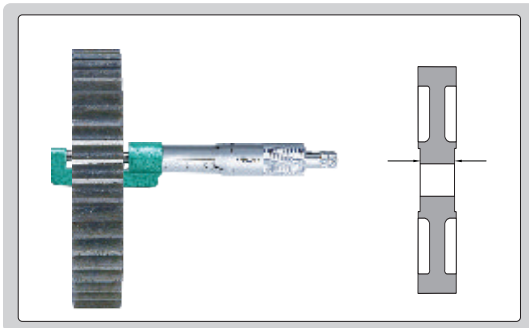
Code	Range	Micrometer head accuracy	Measuring tips accuracy	L	b
3581-25A	0-25mm/0-1"	±4μm	8μm	42	26
3581-50A	25-50mm/1-2"	±4μm	8μm	67	38
3581-75A	50-75mm/2-3"	±5μm	10μm	92	50
3581-100A	75-100mm/3-4"	±5μm	10μm	117.6	62

- Measure pitch diameter of screw threads
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Non- rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-25mm/0-1")
- Optional accessory: 55° setting standards (code **3281-SP**), measuring tips (code **7381**, previous page), SPC cable (page A1-A2)

HUB MICROMETER



3292-25



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

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

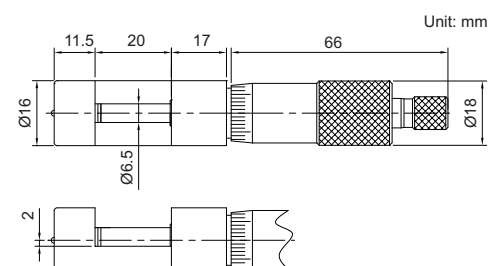
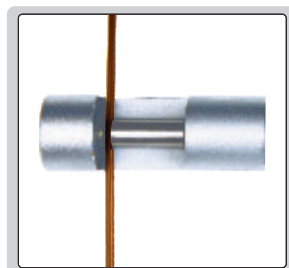
WIRE MICROMETER



3285-10

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

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

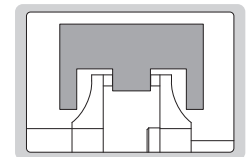


A digital depth gauge with a green base and silver-colored metal components. The digital display shows 0.000 mm. The gauge is shown at an angle, highlighting its L-shaped design and the sliding beam.

Unit: mm

Technical drawing showing the front view of a mechanical part with dimensions:

- Overall length: 17
- Distance from left end to start of threaded section: 66
- Left flange thickness: 12.5
- Left flange width: 25.5
- Left flange central hole diameter: Ø4
- Main body diameter: Ø8
- Right threaded section diameter: Ø18
- Internal step diameter: Ø4
- Internal step length: 7.5
- Internal step offset: 3.5



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

Unit: mm

8 32 17

SR5

50

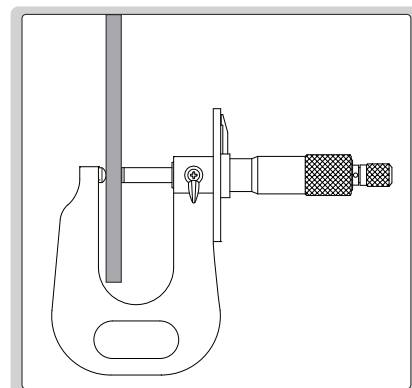
Ø6.5

Ø60

Ø18

SR5

Ø6.5



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

CAN SEAM MICROMETER



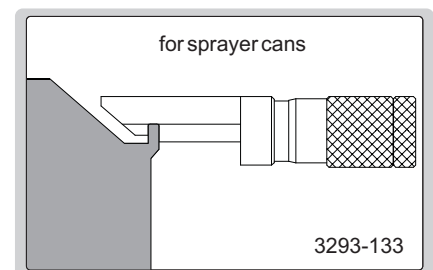
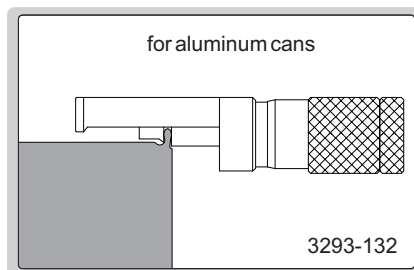
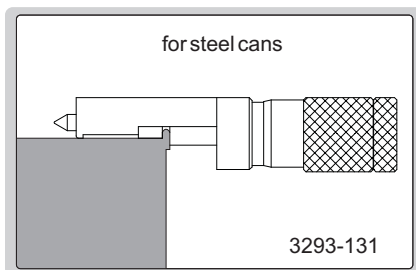
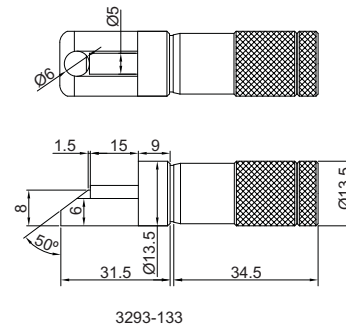
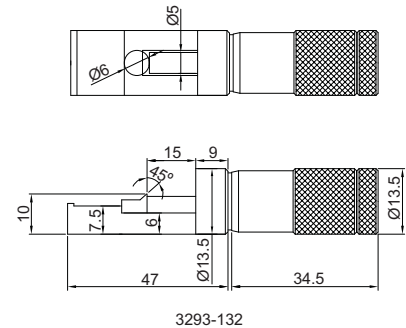
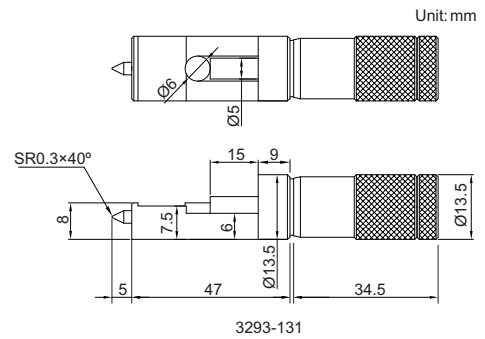
3293-131



3293-132



3293-133



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

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

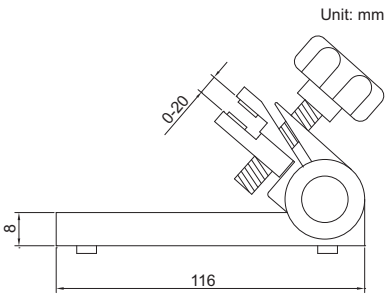
MICROMETER STAND

- Suitable for micrometers up to 100mm

Code
6300



6300



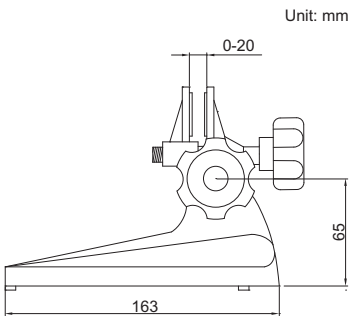
MICROMETER STAND

- Suitable for micrometers up to 100mm

Code
6301



6301



OPTICAL PARALLEL

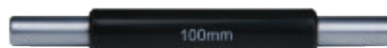
- Check the flatness and parallelism of measuring faces of micrometer

Code	Parallels included
4184-41	12mm, 12.12mm, 12.25mm, 12.37mm
4184-42	25mm, 25.12mm, 25.25mm, 25.37mm

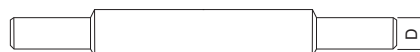


MICROMETER SETTING STANDARD

Code	Length	Type	Accuracy	D
6310-25	25mm	A	$\pm 1.5\mu\text{m}$	$\varnothing 7\text{mm}$
6310-50	50mm	A	$\pm 2\mu\text{m}$	$\varnothing 7\text{mm}$
6310-75	75mm	A	$\pm 2.5\mu\text{m}$	$\varnothing 7\text{mm}$
6310-100	100mm	A	$\pm 3\mu\text{m}$	$\varnothing 8\text{mm}$
6310-125	125mm	A	$\pm 3.5\mu\text{m}$	$\varnothing 8\text{mm}$
6310-150	150mm	A	$\pm 4\mu\text{m}$	$\varnothing 8\text{mm}$
6310-175	175mm	A	$\pm 4.5\mu\text{m}$	$\varnothing 8\text{mm}$
6310-200	200mm	A	$\pm 5\mu\text{m}$	$\varnothing 8\text{mm}$
6310-225	225mm	A	$\pm 5.5\mu\text{m}$	$\varnothing 8\text{mm}$
6310-250	250mm	A	$\pm 6\mu\text{m}$	$\varnothing 8\text{mm}$
6310-275	275mm	A	$\pm 6.5\mu\text{m}$	$\varnothing 8\text{mm}$
6310-300	300mm	B	$\pm 7\mu\text{m}$	$\varnothing 16\text{mm}$
6310-325	325mm	B	$\pm 7.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-350	350mm	B	$\pm 8\mu\text{m}$	$\varnothing 16\text{mm}$
6310-375	375mm	B	$\pm 8.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-400	400mm	B	$\pm 9\mu\text{m}$	$\varnothing 16\text{mm}$
6310-425	425mm	B	$\pm 9.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-450	450mm	B	$\pm 10\mu\text{m}$	$\varnothing 16\text{mm}$
6310-475	475mm	B	$\pm 10.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-500	500mm	B	$\pm 11\mu\text{m}$	$\varnothing 16\text{mm}$
6310-525	525mm	B	$\pm 11.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-575	575mm	B	$\pm 12.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-625	625mm	B	$\pm 13.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-675	675mm	B	$\pm 14.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-725	725mm	B	$\pm 15.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-775	775mm	B	$\pm 16.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-825	825mm	B	$\pm 17.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-875	875mm	B	$\pm 18.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-925	925mm	B	$\pm 19.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-975	975mm	B	$\pm 20.5\mu\text{m}$	$\varnothing 16\text{mm}$
6310-1050	1050mm	B	$\pm 22\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1150	1150mm	B	$\pm 24\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1250	1250mm	B	$\pm 26\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1350	1350mm	B	$\pm 28\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1450	1450mm	B	$\pm 30\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1550	1550mm	B	$\pm 32\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1650	1650mm	B	$\pm 34\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1750	1750mm	B	$\pm 36\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1850	1850mm	B	$\pm 38\mu\text{m}$	$\varnothing 23\text{mm}$
6310-1950	1950mm	B	$\pm 40\mu\text{m}$	$\varnothing 23\text{mm}$



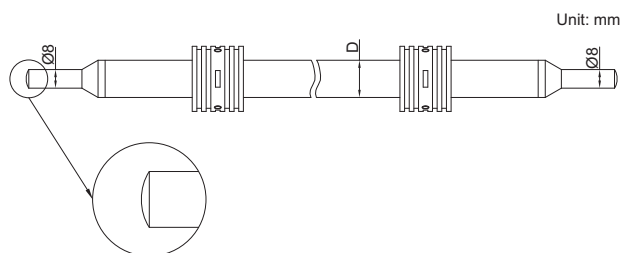
6310-100



type A



6310-300

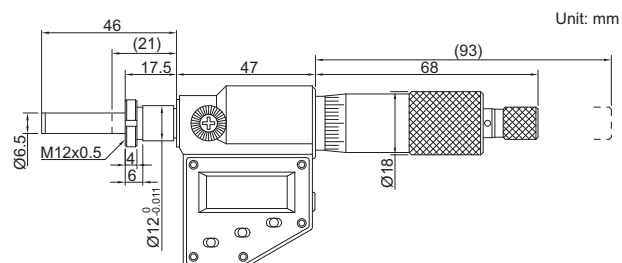


type B

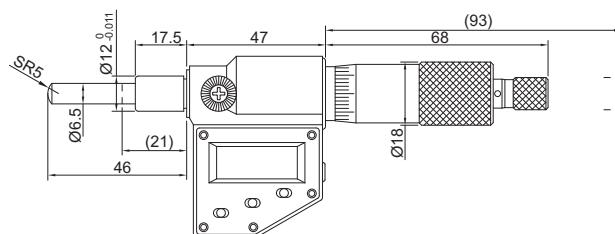
DIGITAL MICROMETER HEAD



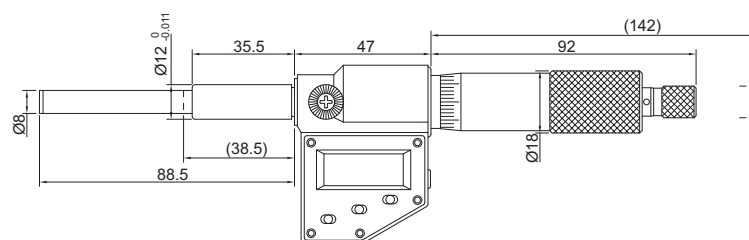
6353-25W



6353-25

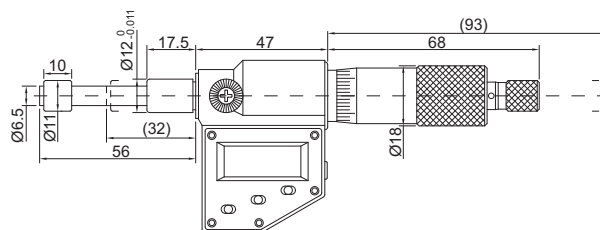


6353-25WS



6353-50W

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: SPC cable (page A1-A2)



6354-25W

Rotating spindle

Code	Range	Stem	Spindle tip	Accuracy
6353-25	0-25mm/0-1"	with clamp nut	flat (carbide)	±2μm
6353-25W	0-25mm/0-1"	plain	flat (carbide)	±2μm
6353-25S	0-25mm/0-1"	with clamp nut	spherical (SR5)	±2μm
6353-25WS	0-25mm/0-1"	plain	spherical (SR5)	±2μm
6353-50W	0-50mm/0-2"	plain	flat (carbide)	±4μm

Non-rotating spindle

Code	Range	Stem	Spindle tip	Accuracy
6354-25W	0-25mm/0-1"	plain	flat (carbide)	±2μm

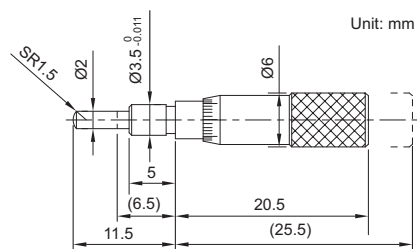
SMALL MICROMETER HEAD



6372-5WS

- Graduation 0.02mm

Code	Range	Stem	Spindle tip	Accuracy
6372-5WS	0-5mm	plain	spherical (SR1.5)	5μm



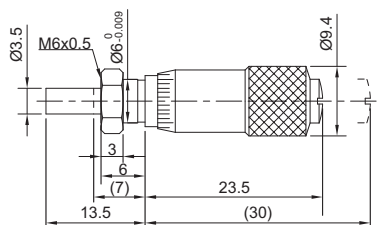
SMALL MICROMETER HEAD



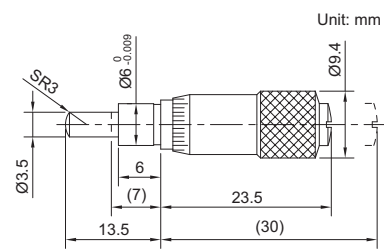
6385-65W

- Graduation 0.01mm

Code	Range	Stem	Spindle tip	Accuracy
6385-65	0-6.5mm	with clamp nut	flat (carbide)	5μm
6385-65W	0-6.5mm	plain	flat (carbide)	5μm
6385-65S	0-6.5mm	with clamp nut	spherical (SR3)	5μm
6385-65WS	0-6.5mm	plain	spherical (SR3)	5μm



6385-65



6385-65WS

LARGE THIMBLE MICROMETER HEAD



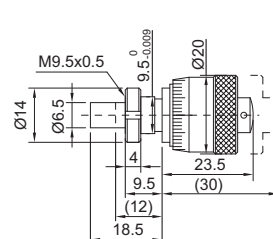
6373-65



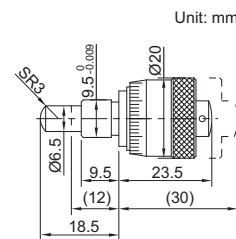
6373-13

- Large thimble diameter for easy reading
- Graduation 0.01mm

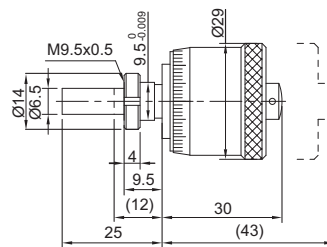
Code	Range	Stem	Spindle tip	Accuracy
6373-65	0-6.5mm	with clamp nut	flat (carbide)	3μm
6373-65W	0-6.5mm	plain	flat (carbide)	3μm
6373-65S	0-6.5mm	with clamp nut	spherical (SR3)	3μm
6373-65WS	0-6.5mm	plain	spherical (SR3)	3μm
6373-13	0-13mm	with clamp nut	flat (carbide)	3μm
6373-13W	0-13mm	plain	flat (carbide)	3μm



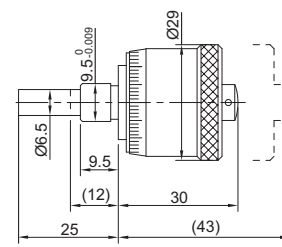
6373-65



6373-65WS



6373-13



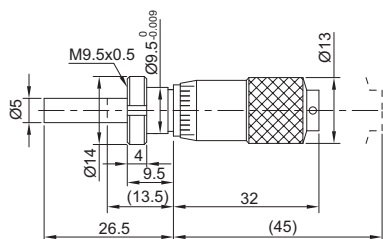
6373-13W

MICROMETER HEAD

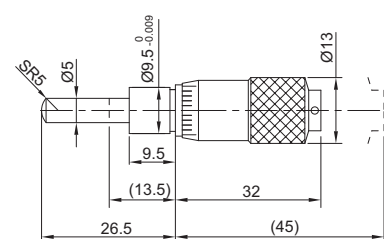
Unit: mm



6386-13W



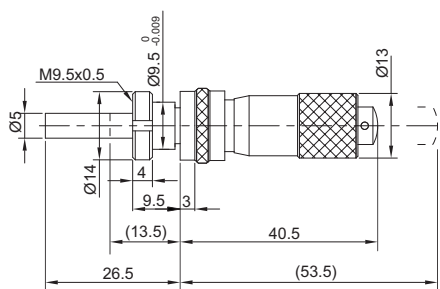
6386-13



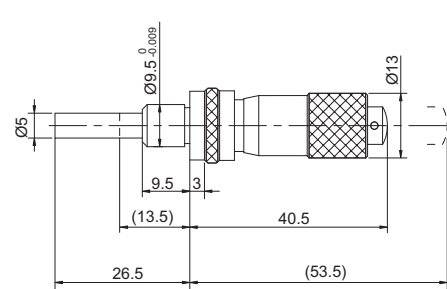
6386-13WS



6386-13P



6386-13P



6386-13WP

- Graduation 0.01mm

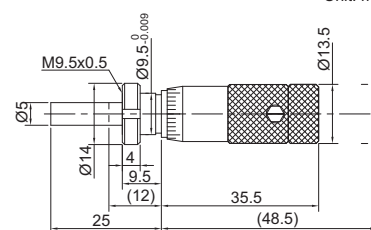
Code	Range	Stem	Spindle tip	Remark	Accuracy
6386-13	0-13mm	with clamp nut	flat (carbide)		3μm
6386-13W	0-13mm	plain	flat (carbide)		3μm
6386-13S	0-13mm	with clamp nut	spherical (SR5)		3μm
6386-13WS	0-13mm	plain	spherical (SR5)		3μm
6386-13P	0-13mm	with clamp nut	flat (carbide)	with spindle lock	3μm
6386-13WP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

MICROMETER HEAD WITH ZERO ADJUSTABLE THIMBLE

Unit: mm



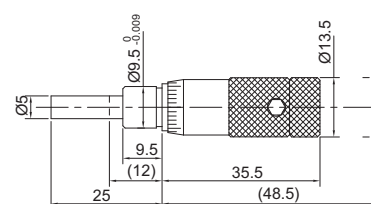
6384-13W



6384-13

- Graduation 0.01mm
- The thimble can be set to zero at any position

Code	Range	Stem	Spindle tip	Accuracy
6384-13	0-13mm	with clamp nut	flat (carbide)	3μm
6384-13W	0-13mm	plain	flat (carbide)	3μm



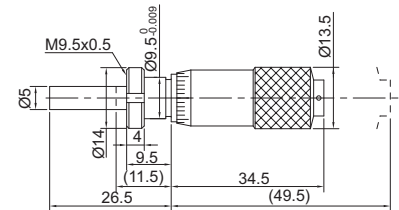
6384-13W

MICROMETER HEAD

Unit: mm



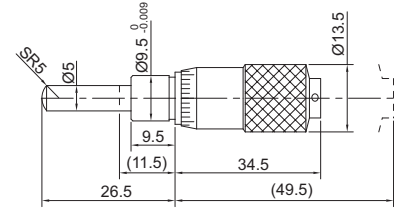
6387-15WS



6387-15

- Graduation 0.01mm

Code	Range	Stem	Spindle tip	Accuracy
6387-15	0-15mm	with clamp nut	flat (carbide)	3μm
6387-15W	0-15mm	plain	flat (carbide)	3μm
6387-15S	0-15mm	with clamp nut	spherical (SR5)	3μm
6387-15WS	0-15mm	plain	spherical (SR5)	3μm



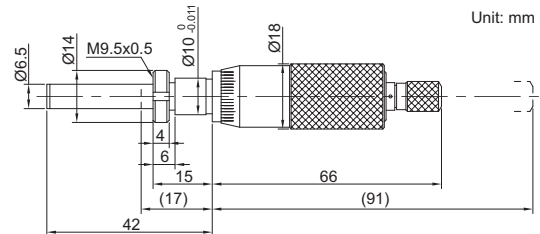
6387-15WS

MICROMETER HEAD

Unit: mm



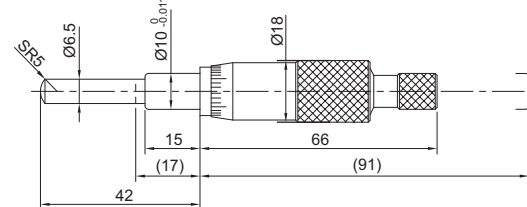
6381-25



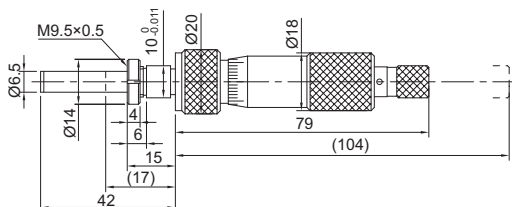
6381-25



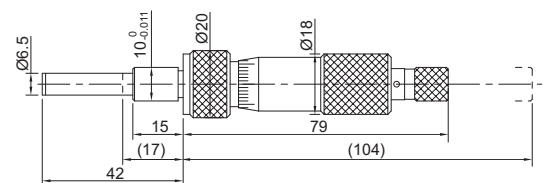
6381-25P



6381-25WS



6381-25P



6381-25WP

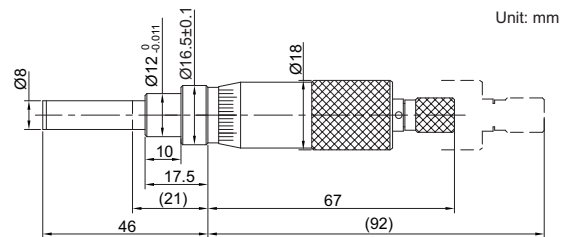
Code	Range	Stem	Spindle tip	Remark	Accuracy
6381-25	0-25mm	with clamp nut	flat (carbide)		3μm
6381-25W	0-25mm	plain	flat (carbide)		3μm
6381-25S	0-25mm	with clamp nut	spherical (SR5)		3μm
6381-25WS	0-25mm	plain	spherical (SR5)		3μm
6381-25P	0-25mm	with clamp nut	flat (carbide)	with spindle lock	3μm
6381-25WP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

- Graduation 0.01mm
- Ratchet stop

NON ROTATING SPINDLE MICROMETER HEAD



6377-25W



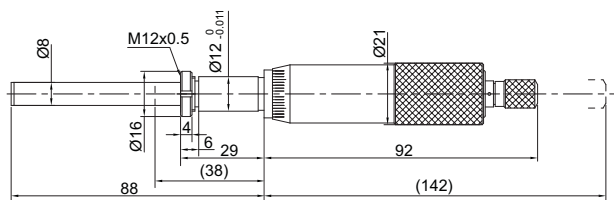
- Graduation 0.01mm
- Ratchet stop
- Non rotating spindle

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

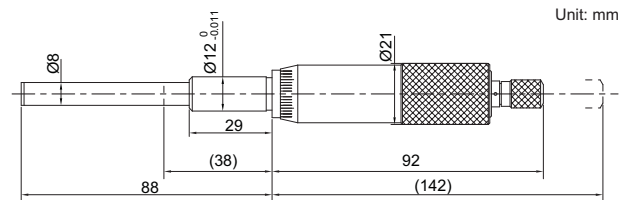
LARGE MICROMETER HEAD



6388-50W



6388-50



6388-50W

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

- Graduation 0.01mm
- Ratchet stop

QUICK SPINDLE FEEDING MICROMETER HEAD



6375-15W

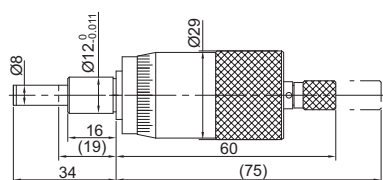


6375-25W

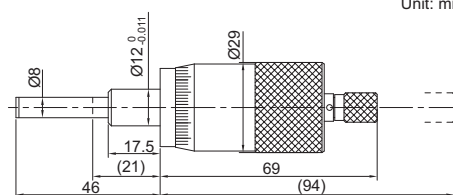


6375-50W

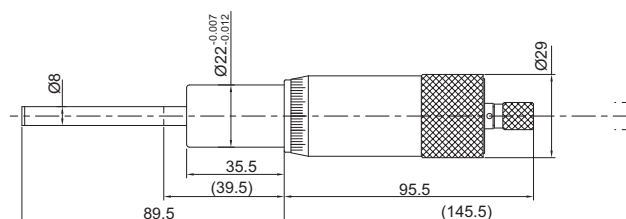
Unit: mm



6375-15W



6375-25W



6375-50W

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

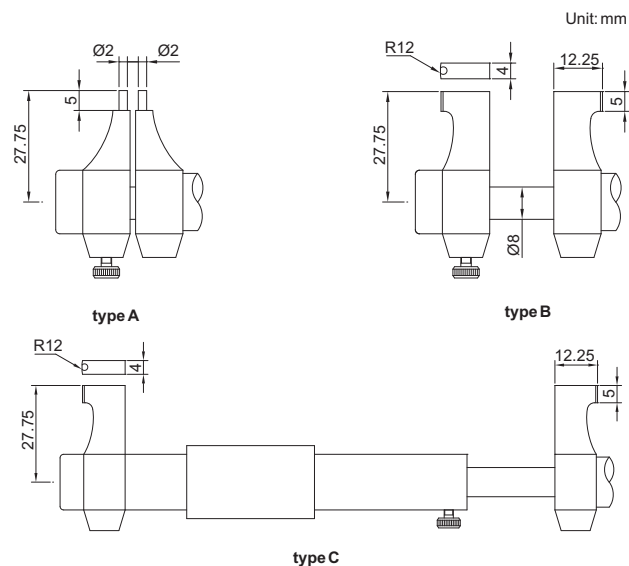
- Graduation 0.01mm
- Quick spindle feed of 1mm/rev.
- Ratchet stop

INSIDE MICROMETER



3220-50

Code	Range	Type	Setting ring	Accuracy
3220-30	5-30mm	A	5mm	5μm
3220-50	25-50mm	B	25mm	6μm
3220-75	50-75mm	B	—	7μm
3220-100	75-100mm	C	—	8μm
3220-125	100-125mm	C	—	9μm
3220-150	125-150mm	C	—	9μm
3220-175	150-175mm	C	—	10μm
3220-200	175-200mm	C	—	10μm
3220-225	200-225mm	C	—	11μm
3220-250	225-250mm	C	—	11μm
3220-275	250-275mm	C	—	12μm
3220-300	275-300mm	C	—	12μm



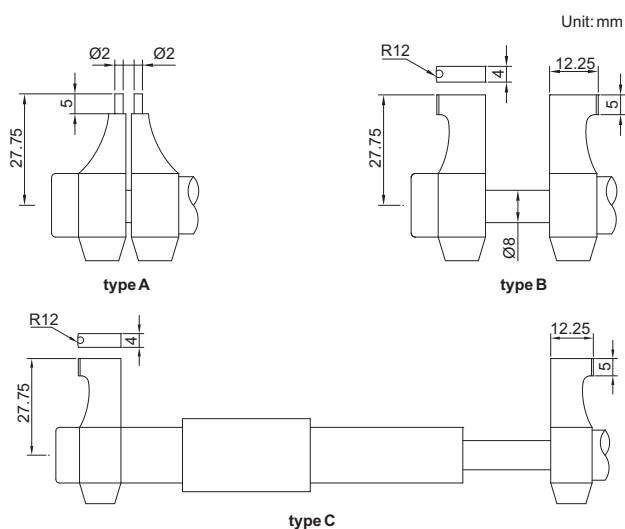
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting ring (code **6312**)

DIGITAL INSIDE MICROMETER



3520-30

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



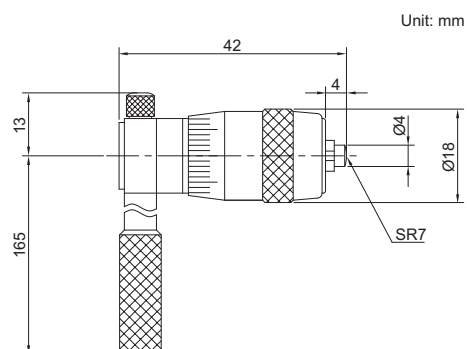
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC, data output
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: SPC cable (page A1-A2), setting ring (code **6312**)

TUBULAR INSIDE MICROMETER



3221-200

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



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

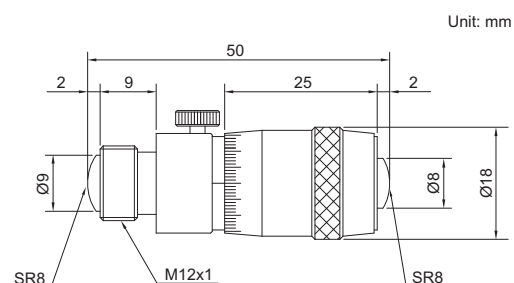
TUBULAR INSIDE MICROMETER



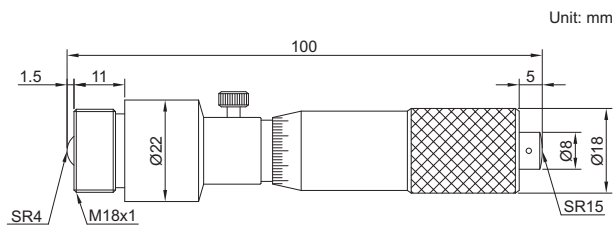
3222-150

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

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



TUBULAR INSIDE MICROMETER



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



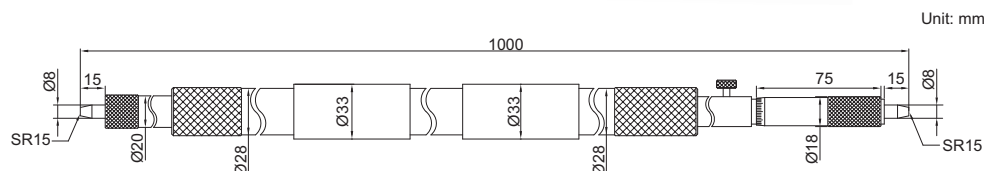
3225-500

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

TUBULAR INSIDE MICROMETER



3224-2000



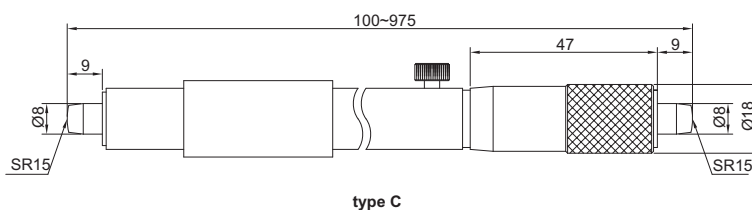
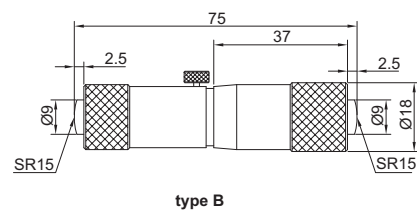
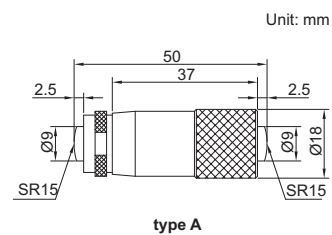
- Graduation 0.01mm
- Accuracy: $(7+n+L/50)\mu\text{m}$
n=number of rods, L=maximum measuring length(mm)
- Carbide measuring faces

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

TUBULAR INSIDE MICROMETER



3229-225

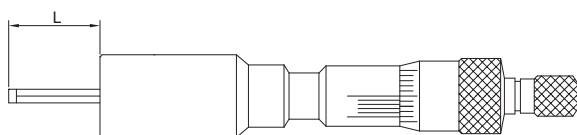


- Graduation 0.01mm
- Carbide measuring faces

Code	Range	Type	Accuracy
3229-75	50-75mm	A	5μm
3229-100	75-100mm	B	5μm
3229-125	100-125mm	C	6μm
3229-150	125-150mm	C	6μm
3229-175	150-175mm	C	7μm
3229-200	175-200mm	C	7μm
3229-225	200-225mm	C	8μm
3229-250	225-250mm	C	8μm
3229-275	250-275mm	C	9μm
3229-300	275-300mm	C	9μm
3229-325	300-325mm	C	9μm
3229-350	325-350mm	C	9μm
3229-375	350-375mm	C	10μm
3229-400	375-400mm	C	10μm
3229-425	400-425mm	C	10μm
3229-450	425-450mm	C	10μm
3229-475	450-475mm	C	11μm
3229-500	475-500mm	C	11μm
3229-525	500-525mm	C	11μm

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

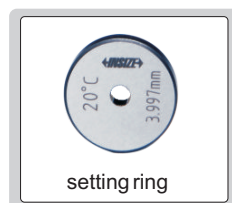
THREE POINTS INTERNAL MICROMETER



- Graduation 0.001mm
- Carbide measuring faces
- Ratchet stop
- Supplied with setting rings

Individual

Code	Range	Accuracy	Setting ring	L
3227-2	2-2.5mm	4μm	Ø2.5mm	12.5mm
3227-3	2.5-3mm	4μm	Ø2.5mm	12.5mm
3227-4	3-4mm	4μm	Ø4mm	22.5mm
3227-5	4-5mm	4μm	Ø5mm	22.5mm
3227-6	5-6mm	4μm	Ø6mm	22.5mm

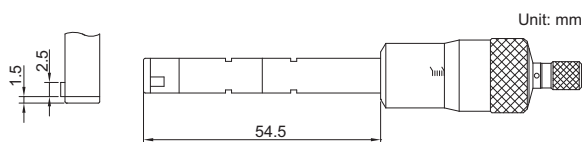


3227-4

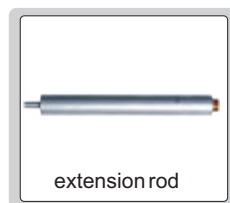
Set

Code	Range	Micrometers included	Setting ring
3227-232	2-3mm	2-2.5mm, 2.5-3mm	Ø2.5mm
3227-363	3-6mm	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm

THREE POINTS INTERNAL MICROMETER



- Graduation 0.001mm
- Ratchet stop
- Supplied with setting rings and extension rods



Individual

Code	Range	Accuracy	Setting ring	Extension rod
3227-8	6-8mm	4μm	Ø6mm	100mm
3227-10	8-10mm	4μm	Ø8mm	100mm
3227-12	10-12mm	4μm	Ø10mm	100mm

Set

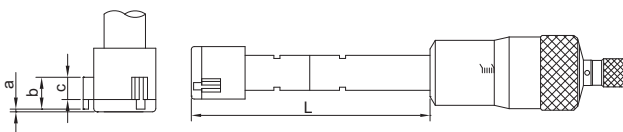
Code	Range	Micrometers included	Setting ring	Extension rod
3227-123	6-12mm	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm



3227-8

THREE POINTS INTERNAL MICROMETER

- Graduation 0.005mm
- Carbide measuring faces
- Ratchet stop
- Supplied with setting rings and extension rods



Individual

Code	Range	Accuracy	Setting ring	Extension rod	L	a	b	c
3227-16	12-16mm	4μm	Ø16mm	150mm	80	0.5	6	4.5
3227-20	16-20mm	4μm	Ø16mm	150mm	80	0.5	6	4.5
3227-25	20-25mm	4μm	Ø25mm	150mm	90	0.5	8	6
3227-30	25-30mm	4μm	Ø25mm	150mm	90	0.5	8	6
3227-40	30-40mm	4μm	Ø40mm	150mm	97	0.5	14	12
3227-50	40-50mm	5μm	Ø40mm	150mm	97	0.5	14	12
3227-63	50-63mm	5μm	Ø62mm	150mm	114	0.5	17.5	14.5
3227-75	62-75mm	5μm	Ø62mm	150mm	114	0.5	17.5	14.5
3227-88	75-88mm	5μm	Ø87mm	150mm	114	0.5	17.5	14.5
3227-100	87-100mm	5μm	Ø87mm	150mm	114	0.5	17.5	14.5

3227-16

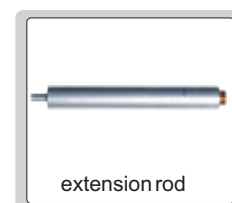


Set

Code	Range	Micrometers included	Setting ring	Extension rod
3227-202	12-20mm	12-16mm, 16-20mm	Ø16mm	150mm
3227-504	20-50mm	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3227-1004	50-100mm	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm



setting ring

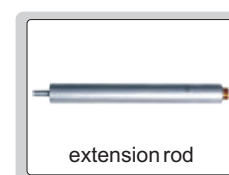


extension rod

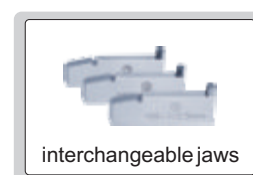
THREE POINTS INTERNAL MICROMETER

- Graduation 0.005mm
- Each micrometer has two sets of interchangeable jaw for different measuring ranges
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Optional accessory: setting ring (code 6312)

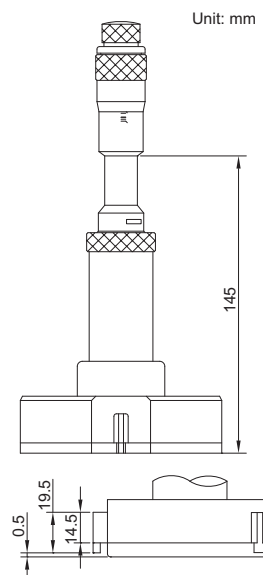
Code	Range	Accuracy	Extension rod
3227-125	100-125mm	5μm	150mm
3227-150	125-150mm	5μm	150mm
3227-175	150-175mm	5μm	150mm
3227-200	175-200mm	5μm	150mm
3227-225	200-225mm	7μm	150mm
3227-250	225-250mm	7μm	150mm
3227-275	250-275mm	7μm	150mm
3227-300	275-300mm	7μm	150mm



extension rod



interchangeable jaws



Unit: mm

3227-125



DIGITAL THREE POINTS INTERNAL MICROMETER

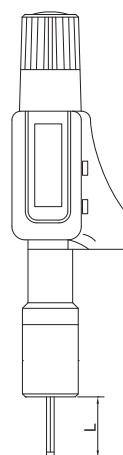
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with setting rings
- Optional accessory: SPC cable (page A1-A2)

Individual

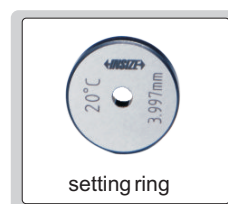
Code	Range	Accuracy	Setting ring	L
3127-2	2-2.5mm/0.08-0.10"	4μm	Ø2.5mm	12.5mm
3127-3	2.5-3mm/0.10-0.12"	4μm	Ø2.5mm	12.5mm
3127-4	3-4mm/0.12-0.16"	4μm	Ø4mm	22.5mm
3127-5	4-5mm/0.16-0.20"	4μm	Ø5mm	22.5mm
3127-6	5-6mm/0.20-0.24"	4μm	Ø6mm	22.5mm

Set

Code	Range	Micrometers included	Setting ring
3127-232	2-3mm/0.08-0.12"	2-2.5mm, 2.5-3mm	Ø2.5mm
3127-363	3-6mm/0.12-0.24"	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm



3127-4



DIGITAL THREE POINTS INTERNAL MICROMETER

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting rings and extension rods
- Optional accessory: SPC cable (page A1-A2)

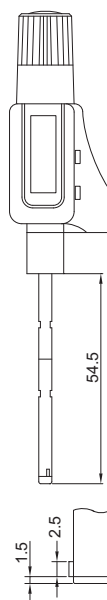
Individual

Code	Range	Accuracy	Setting ring	Extension rod
3127-8	6-8mm/0.24-0.31"	4μm	Ø6mm	100mm
3127-10	8-10mm/0.31-0.39"	4μm	Ø8mm	100mm
3127-12	10-12mm/0.39-0.47"	4μm	Ø10mm	100mm

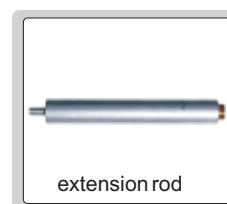
Set

Code	Range	Micrometers included	Setting ring	Extension rod
3127-123	6-12mm/ 0.24-0.47"	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm

Unit: mm

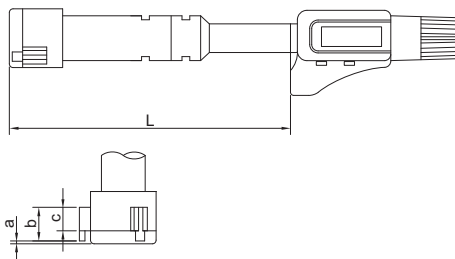


3127-12



DIGITAL THREE POINTS INTERNAL MICROMETER

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with setting rings and extension rods
- Optional accessory: SPC cable (page A1-A2)



3127-40

Individual (mm)								
Code	Range	Accuracy	Setting ring	Extension rod	L	a	b	c
3127-16	12-16mm/0.47-0.63"	4μm	Ø16mm	150mm	80	0.5	6	4.5
3127-20	16-20mm/0.63-0.79"	4μm	Ø16mm	150mm	80	0.5	6	4.5
3127-25	20-25mm/0.79-0.98"	4μm	Ø25mm	150mm	90	0.5	8	6
3127-30	25-30mm/0.98-1.18"	4μm	Ø25mm	150mm	90	0.5	8	6
3127-40	30-40mm/1.18-1.57"	4μm	Ø40mm	150mm	97	0.5	14	12
3127-50	40-50mm/1.57-1.97"	5μm	Ø40mm	150mm	97	0.5	14	12
3127-63	50-63mm/1.97-2.48"	5μm	Ø62mm	150mm	114	0.5	17.5	14.5
3127-75	62-75mm/2.44-2.95"	5μm	Ø62mm	150mm	114	0.5	17.5	14.5
3127-88	75-88mm/2.95-3.46"	5μm	Ø87mm	150mm	114	0.5	17.5	14.5
3127-100	87-100mm/3.43-3.94"	5μm	Ø87mm	150mm	114	0.5	17.5	14.5



setting ring

Set

Code	Range	Micrometers included	Setting ring	Extension rod
3127-202	12-20mm/0.47-0.79"	12-16mm, 16-20mm	Ø16mm	150mm
3127-504	20-50mm/0.79-1.97"	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3127-1004	50-100mm/1.97-3.94"	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

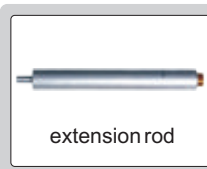


extension rod

DIGITAL THREE POINTS INTERNAL MICROMETER

- Resolution 0.001mm/0.00005"
- Each micrometer has two sets of interchangeable jaw for different measuring ranges
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Optional accessory: SPC cable (page A1-A2), setting ring (code 6312)

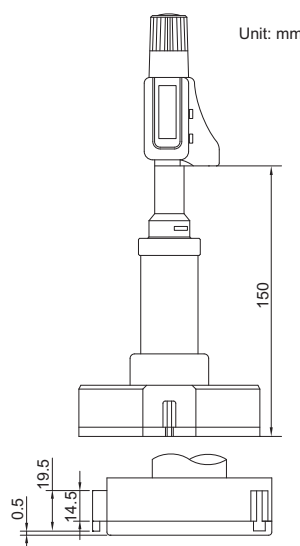
Code	Range	Accuracy	Extension rod
3127-125	100-125mm/3.94-4.92"	5μm	150mm
3127-150	125-150mm/4.92-5.91"	5μm	150mm
3127-175	150-175mm/5.91-6.89"	5μm	150mm
3127-200	175-200mm/6.89-7.87"	5μm	150mm
3127-225	200-225mm/7.87-8.86"	7μm	150mm
3127-250	225-250mm/8.86-9.84"	7μm	150mm
3127-275	250-275mm/9.84-10.83"	7μm	150mm
3127-300	275-300mm/10.83-11.81"	7μm	150mm



extension rod



interchangeable jaws



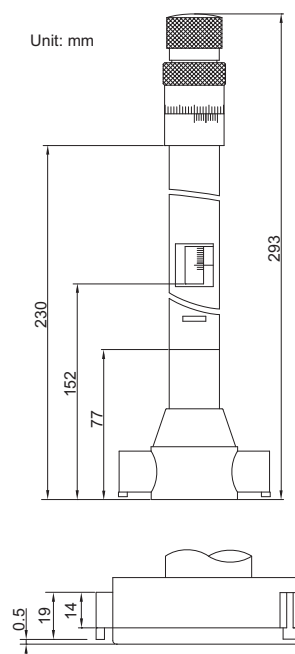
3127-125

WIDE RANGE THREE POINTS INTERNAL MICROMETER



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

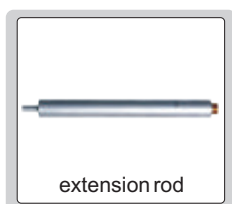
Code	Range	Accuracy	Setting ring
3228-70	50-70mm	5μm	Ø50mm
3228-100	70-100mm	5μm	Ø70mm
3228-150	100-150mm	6μm	Ø100mm
3228-250	150-250mm	8μm	Ø150mm
3228-300	200-300mm	9μm	—



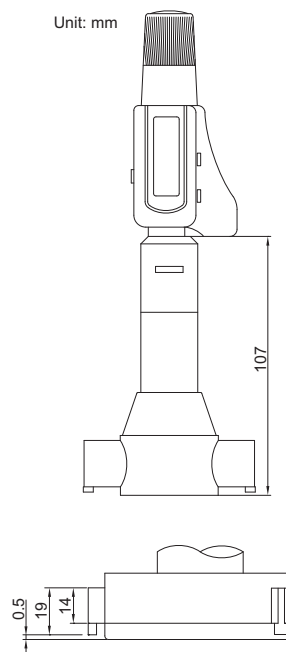
3228-70

DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETER

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- RS232 data output
- SR44 or LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Setting rings are included(except 200-300mm)
- Optional accessory: SPC cable (page A1-A2)



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



3128-70

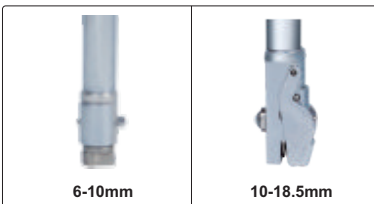
BORE GAUGE FOR SMALL HOLES



2852-10

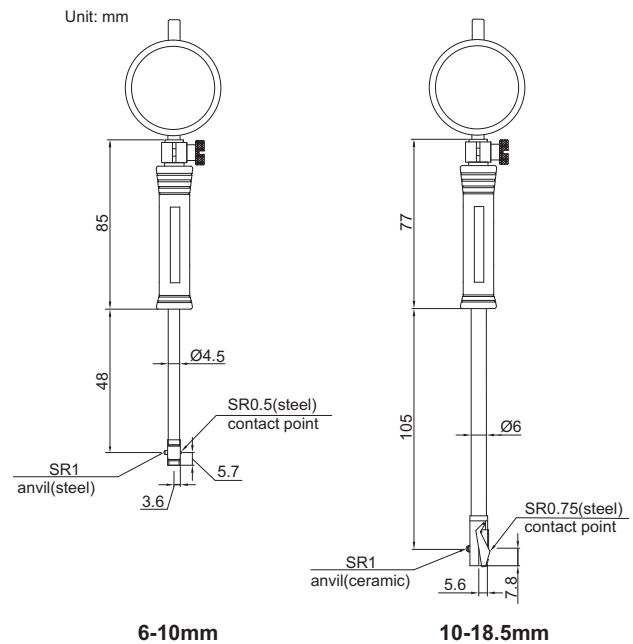


2152-18



6-10mm

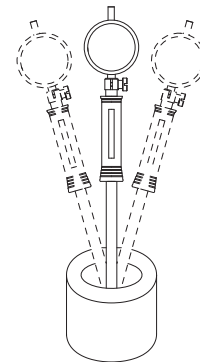
10-18.5mm



Read the diameter directly, after inputting the size of setting ring.



The minimum value tracking function can find the diameter automatically.



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

Code	Range	Indicator	Accuracy	Repeatability
2852-10	6-10mm	dial indicator, range 3mm, graduation 0.01mm (code 2311-3F)	$\pm 0.012\text{mm}$	0.003mm
2852-18	10-18.5mm		$\pm 0.012\text{mm}$	0.003mm

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

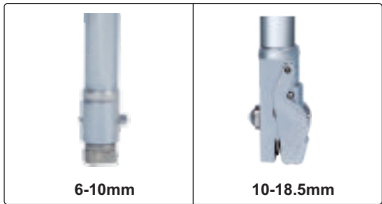
PRECISION BORE GAUGE FOR SMALL HOLES



2853-10

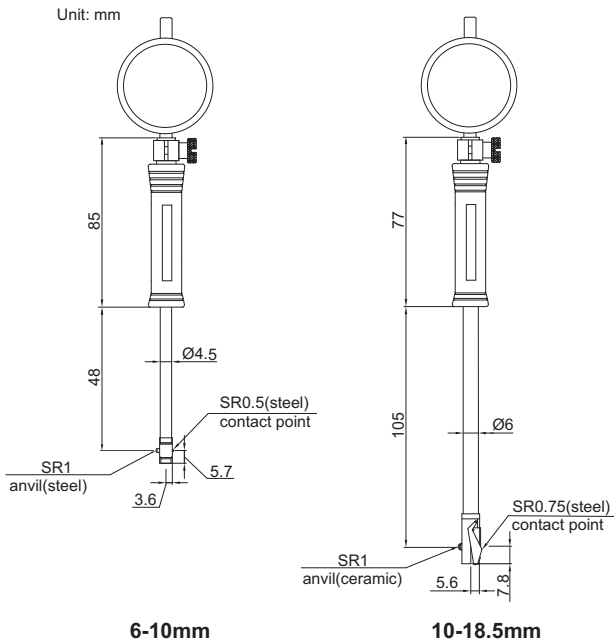


2153-18



6-10mm

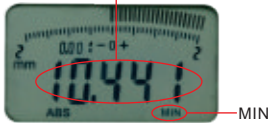
10-18.5mm



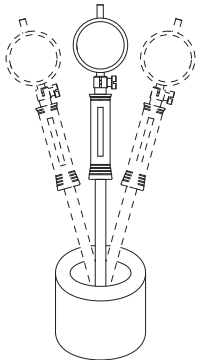
6-10mm

10-18.5mm

Read the diameter directly, after inputting the size of setting ring.



The minimum value tracking function can find the diameter automatically.



Optional accessory: setting ring (code 6312)

Code	Range	Indicator	Accuracy	Repeatability
2853-10	6-10mm	dial indicator, range 1mm, graduation 0.001mm (code 2313-1FA)	±0.005mm	0.002mm
2853-18	10-18.5mm		±0.005mm	0.002mm

Code	Range	Indicator	Accuracy	Repeatability
2153-10	6-10mm	digital indicator, range 12.7mm/0.5", resolution 0.001mm/0.00005" (code 2108-101F)	±0.005mm	0.002mm
2153-18	10-18.5mm		±0.005mm	0.002mm

BORE GAUGE



2322-160A

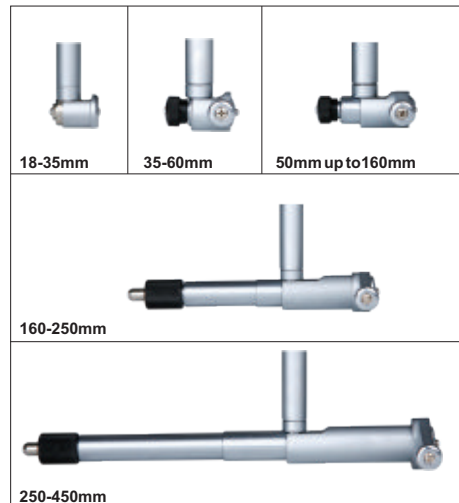


2122-35A

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

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

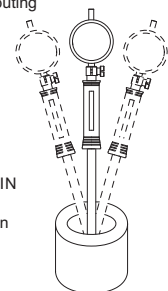
Code	Range	Indicator	Accuracy	Repeatability
2122-35A	18-35mm	digital indicator, range 12.7mm/0.5", resolution 0.002mm/0.0001" (code 2108-10F)	±0.015mm	0.003mm
2122-60A	35-60mm		±0.018mm	0.003mm
2122-100A	50-100mm		±0.018mm	0.003mm
2122-160A	50-160mm		±0.018mm	0.003mm
2122-161A	100-160mm		±0.018mm	0.003mm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



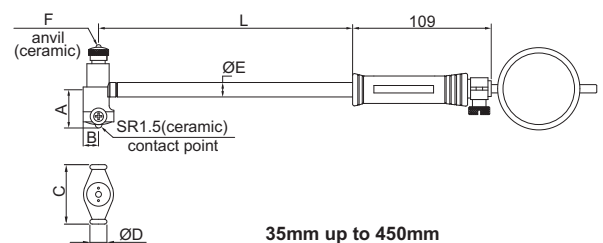
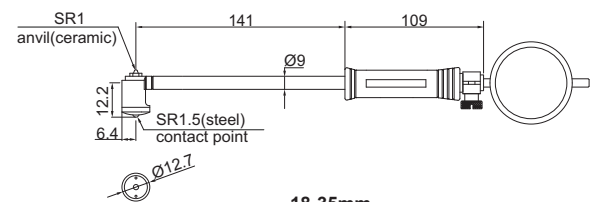
Read the diameter directly, after inputting the size of setting ring.



The minimum value tracking function can find the diameter automatically.



Unit: mm



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

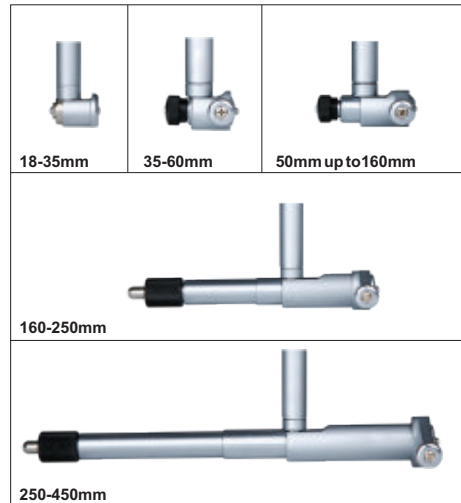
PRECISION BORE GAUGE



2825-160A



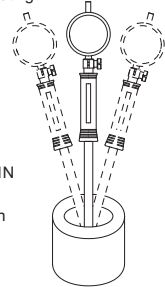
2126-35



Read the diameter directly, after inputting the size of setting ring.



The minimum value tracking function can find the diameter automatically.

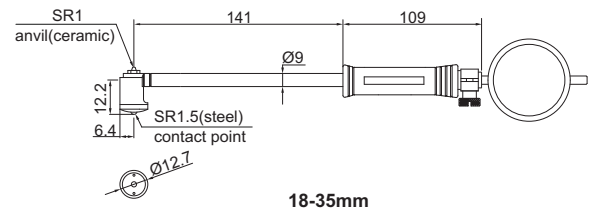


Optional accessory: setting ring (code 6312)

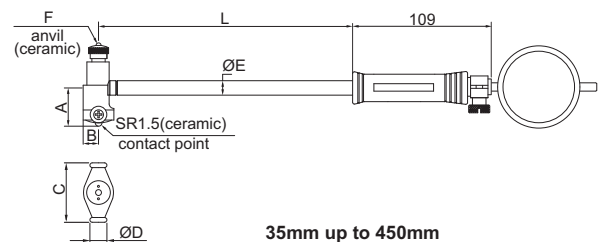
Code	Range	Indicator	Accuracy	Repeatability
2825-35A	18-35mm	dial indicator, range 1mm, graduation 0.001mm (code 2313-1FA)	±0.006mm	0.002mm
2825-60A	35-60mm		±0.007mm	0.002mm
2825-100A	50-100mm		±0.007mm	0.002mm
2825-160A	50-160mm		±0.007mm	0.002mm
2825-161A	100-160mm		±0.007mm	0.002mm
2825-250A	160-250mm		±0.007mm	0.002mm
2825-450A	250-450mm		±0.007mm	0.002mm

Code	Range	Indicator	Accuracy	Repeatability
2126-35	18-35mm	digital indicator, range 12.7mm/0.5", resolution 0.001mm/0.00005" (code 2108-101F)	±0.006mm	0.002mm
2126-60	35-60mm		±0.007mm	0.002mm
2126-100	50-100mm		±0.007mm	0.002mm
2126-160	50-160mm		±0.007mm	0.002mm
2126-161	100-160mm		±0.007mm	0.002mm
2126-250	160-250mm		±0.007mm	0.002mm
2126-450	250-450mm		±0.007mm	0.002mm

Unit: mm



18-35mm

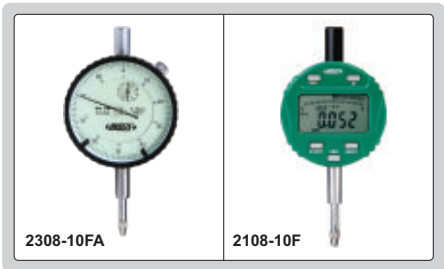


35mm up to 450mm

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

(mm)

BORE GAUGE SET

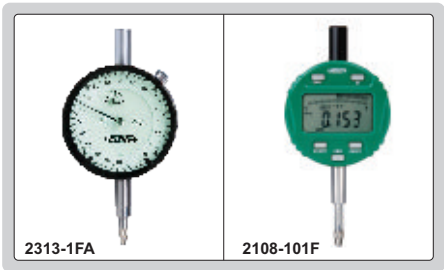


2824-S3

▪ Optional accessory: setting ring (code 6312)

Code	Range	Indicator	Bore gauges included	Accuracy	Repeatability
2824-S3	18-160mm	dial indicator code 2308-10FA range 10mm, graduation 0.01mm	18-35mm	18-35mm $\pm 0.015\text{mm}$	0.003mm
			35-60mm	35-60mm $\pm 0.018\text{mm}$	
2125-S3	18-160mm	digital indicator code 2108-10F range 12.7mm/0.5", resolution 0.002mm/0.0001"	50-160mm	50-160mm $\pm 0.018\text{mm}$	

PRECISION BORE GAUGE SET



2129-S3

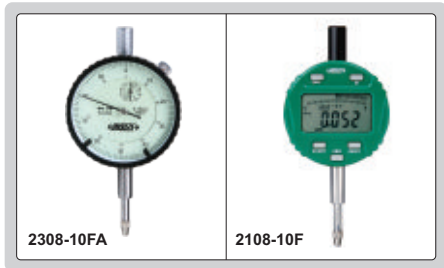
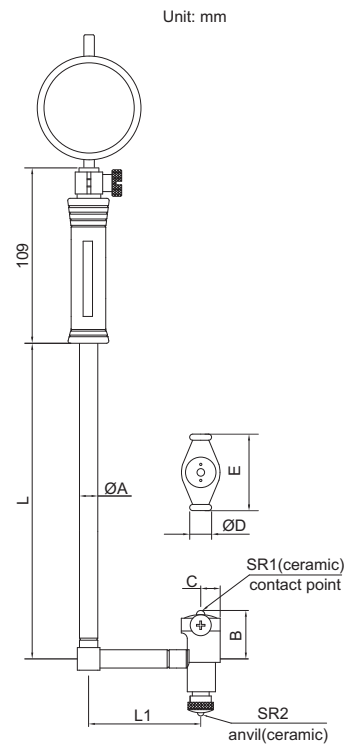
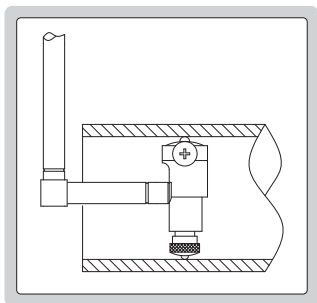
▪ Optional accessory: setting ring (code 6312)

Code	Range	Indicator	Bore gauges included	Accuracy	Repeatability
2829-S3	18-160mm	dial indicator code 2313-1FA range 1mm, graduation 0.001mm	18-35mm	18-35mm $\pm 0.006\text{mm}$	0.002mm
			35-60mm	35-60mm $\pm 0.007\text{mm}$	
2129-S3	18-160mm	digital indicator, code 2108-101F range 12.7mm/0.5", resolution 0.001mm/0.00005"	50-160mm	50-160mm $\pm 0.007\text{mm}$	

BORE GAUGE



2827-160A

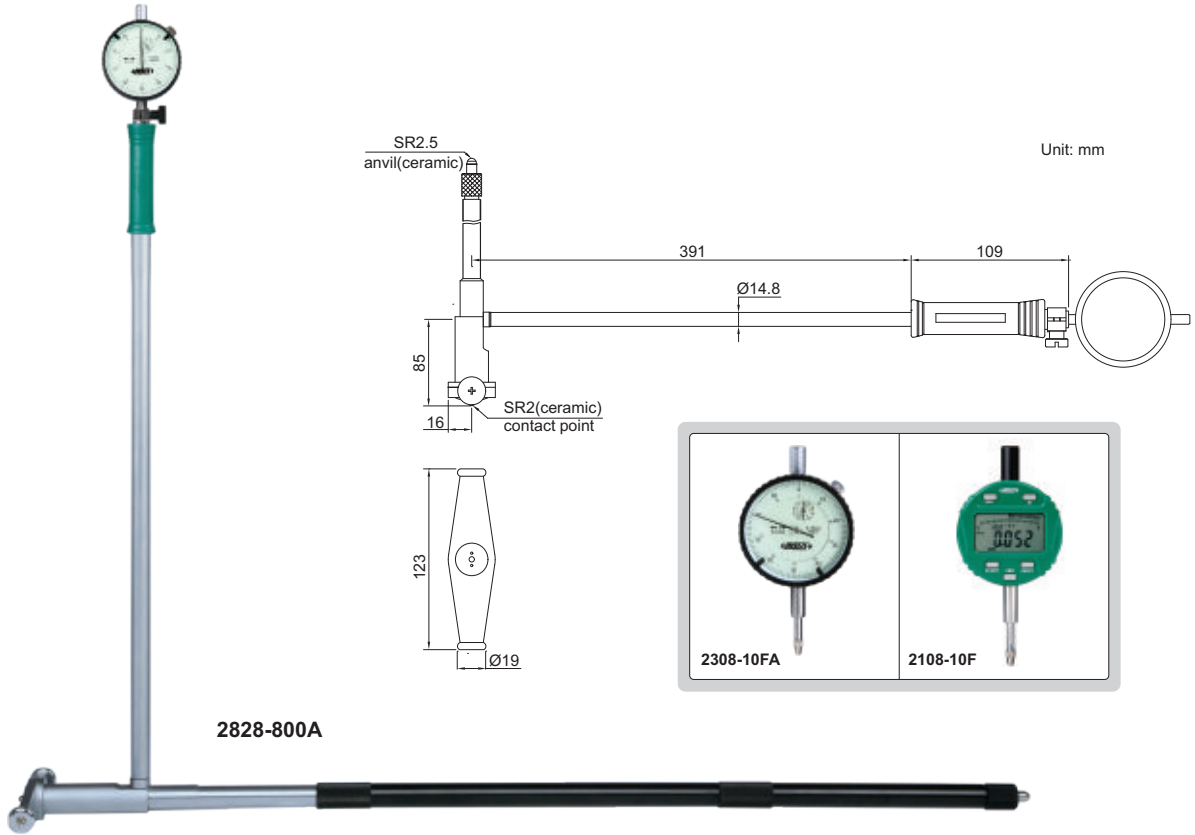


■ Optional accessory: setting ring (code 6312)

(mm)												
Code	Range	Indicator	Accuracy	Repeatability	ØA	B	C	ØD	E	L	L1	
2827-160A	50-160mm	dial indicator code 2308-10FA range 10mm, graduation 0.01mm	±0.018mm	0.003mm	12.8	28.5	9.2	13	35	141	76.2	
2827-250A	160-250mm		±0.018mm	0.003mm	14.5	62.0	12.7	13	74.5	391	100	
2827-450A	250-450mm		±0.018mm	0.003mm	14.5	91.5	15.0	15	101.5	391	100	

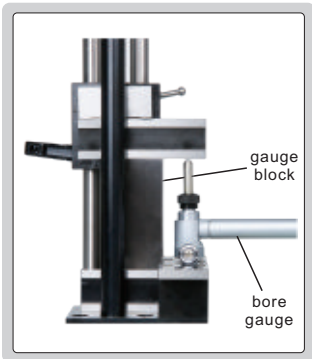
(mm)												
Code	Range	Indicator	Accuracy	Repeatability	ØA	B	C	ØD	E	L	L1	
2127-160	50-160mm	digital indicator code 2108-10F range 12.7mm/0.5", resolution 0.002mm/0.0001"	±0.018mm	0.003mm	12.8	28.5	9.2	13	35	141	76.2	
2127-250	160-250mm		±0.018mm	0.003mm	14.5	62.0	12.7	13	74.5	391	100	
2127-450	250-450mm		±0.018mm	0.003mm	14.5	91.5	15.0	15	101.5	391	100	

BORE GAUGE



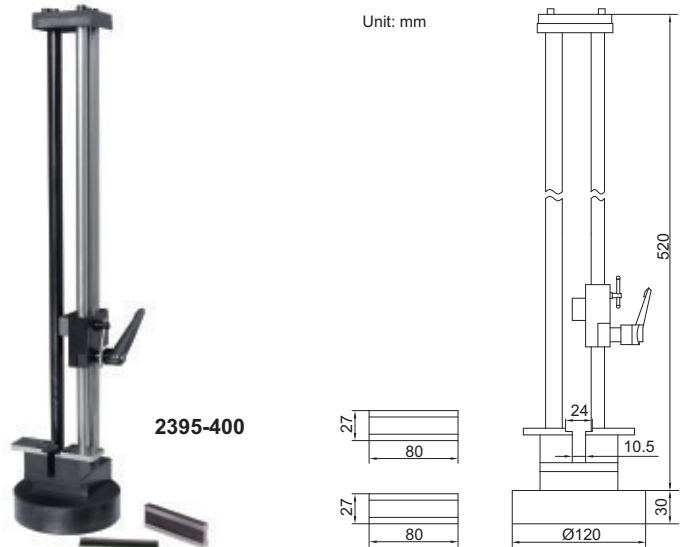
Code	Range	Indicator	Accuracy	Repeatability
2828-800A	400-800mm	dial indicator code 2308-10FA range 10mm, graduation 0.01mm	±0.025mm	0.003mm
2128-800A	400-800mm	digital indicator code 2108-10F range 12.7mm/0.5", resolution 0.002mm/0.0001"	±0.025mm	0.003mm

BORE GAUGE CHECKER



- Used together with gauge blocks to set bore gauges

Code	Setting range
2395-400	18-400mm



ANVIL FOR BORE GAUGES



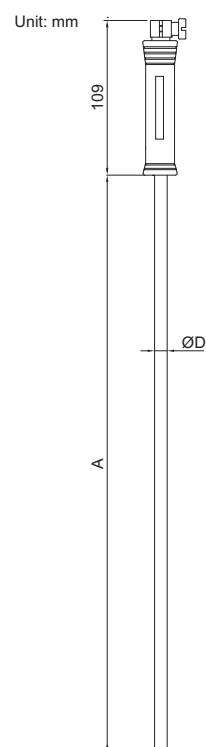
7350-160

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

LONG HANDLE



7351-EX11



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

Code	Applicable bore gauges	(mm)	
		A	ØD
7351-EX11	35-60mm, 50-100mm, 50-160mm, 100-160mm	475	13
7351-EX12		980	13
7351-EX21	160-250mm, 250-450mm	480	14.5
7351-EX22		980	14.5

SETTING RING

- For zero setting of inside micrometers, three points internal micrometers and bore gauges
- Deviation (difference between the nominal size and the size marked on the setting ring when supplied): $\pm 3\mu\text{m}$ for $\varnothing 3\text{--}100\text{mm}$, $\pm 5\mu\text{m}$ for $\varnothing 100\text{--}300\text{mm}$
- Cylindricity: $1\mu\text{m}$ for $\varnothing 3\text{--}100\text{mm}$, $2\mu\text{m}$ for $\varnothing 100\text{--}250\text{mm}$, $2.5\mu\text{m}$ for $\varnothing 250\text{--}300\text{mm}$



6312-20

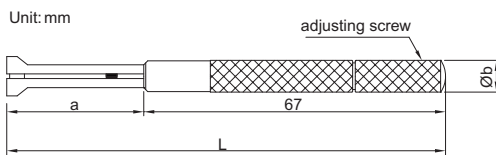
WE CAN SUPPLY ANY SIZES FROM $\varnothing 3\text{mm}$ TO $\varnothing 300\text{mm}$ ON REQUEST,
FOR EXAMPLE, $\varnothing 17\text{mm}$, $\varnothing 17.1\text{mm}$, $\varnothing 17.12\text{mm}$, $\varnothing 17.123\text{mm}$

Code	Nominal Size	Code	Nominal Size	Code	Nominal Size	Code	Nominal Size	Code	Nominal Size
6312-3	$\varnothing 3\text{mm}$	6312-17	$\varnothing 17\text{mm}$	6312-31	$\varnothing 31\text{mm}$	6312-45	$\varnothing 45\text{mm}$	6312-87	$\varnothing 87\text{mm}$
6312-4	$\varnothing 4\text{mm}$	6312-18	$\varnothing 18\text{mm}$	6312-32	$\varnothing 32\text{mm}$	6312-46	$\varnothing 46\text{mm}$	6312-90	$\varnothing 90\text{mm}$
6312-5	$\varnothing 5\text{mm}$	6312-19	$\varnothing 19\text{mm}$	6312-33	$\varnothing 33\text{mm}$	6312-47	$\varnothing 47\text{mm}$	6312-95	$\varnothing 95\text{mm}$
6312-6	$\varnothing 6\text{mm}$	6312-20	$\varnothing 20\text{mm}$	6312-34	$\varnothing 34\text{mm}$	6312-48	$\varnothing 48\text{mm}$	6312-100	$\varnothing 100\text{mm}$
6312-7	$\varnothing 7\text{mm}$	6312-21	$\varnothing 21\text{mm}$	6312-35	$\varnothing 35\text{mm}$	6312-49	$\varnothing 49\text{mm}$	6312-125	$\varnothing 125\text{mm}$
6312-8	$\varnothing 8\text{mm}$	6312-22	$\varnothing 22\text{mm}$	6312-36	$\varnothing 36\text{mm}$	6312-50	$\varnothing 50\text{mm}$	6312-150	$\varnothing 150\text{mm}$
6312-9	$\varnothing 9\text{mm}$	6312-23	$\varnothing 23\text{mm}$	6312-37	$\varnothing 37\text{mm}$	6312-55	$\varnothing 55\text{mm}$	6312-175	$\varnothing 175\text{mm}$
6312-10	$\varnothing 10\text{mm}$	6312-24	$\varnothing 24\text{mm}$	6312-38	$\varnothing 38\text{mm}$	6312-60	$\varnothing 60\text{mm}$	6312-200	$\varnothing 200\text{mm}$
6312-11	$\varnothing 11\text{mm}$	6312-25	$\varnothing 25\text{mm}$	6312-39	$\varnothing 39\text{mm}$	6312-62	$\varnothing 62\text{mm}$	6312-225	$\varnothing 225\text{mm}$
6312-12	$\varnothing 12\text{mm}$	6312-26	$\varnothing 26\text{mm}$	6312-40	$\varnothing 40\text{mm}$	6312-65	$\varnothing 65\text{mm}$	6312-250	$\varnothing 250\text{mm}$
6312-13	$\varnothing 13\text{mm}$	6312-27	$\varnothing 27\text{mm}$	6312-41	$\varnothing 41\text{mm}$	6312-70	$\varnothing 70\text{mm}$	6312-275	$\varnothing 275\text{mm}$
6312-14	$\varnothing 14\text{mm}$	6312-28	$\varnothing 28\text{mm}$	6312-42	$\varnothing 42\text{mm}$	6312-75	$\varnothing 75\text{mm}$	6312-300	$\varnothing 300\text{mm}$
6312-15	$\varnothing 15\text{mm}$	6312-29	$\varnothing 29\text{mm}$	6312-43	$\varnothing 43\text{mm}$	6312-80	$\varnothing 80\text{mm}$		
6312-16	$\varnothing 16\text{mm}$	6312-30	$\varnothing 30\text{mm}$	6312-44	$\varnothing 44\text{mm}$	6312-85	$\varnothing 85\text{mm}$		

SMALL HOLE GAUGE SET

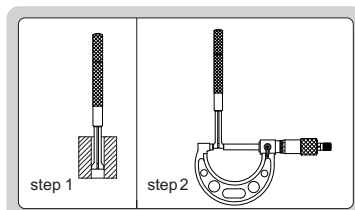


4208-1



(mm)

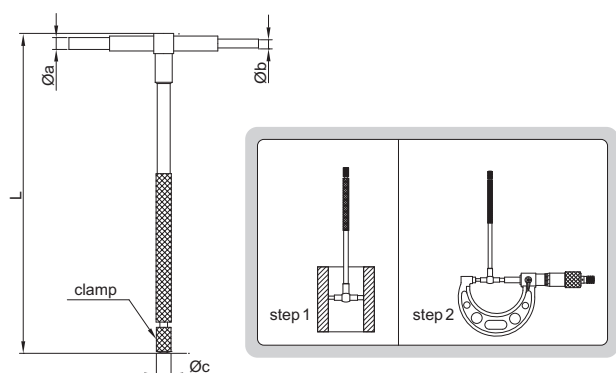
Range	L	a	Øb
3-5mm	90	22.5	5.5
5-7.5mm	97.6	30	5.5
7.5-10mm	102.8	35	8.5
10-13mm	108	40	8.5



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

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

TELESCOPING GAUGE SET



(mm)

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

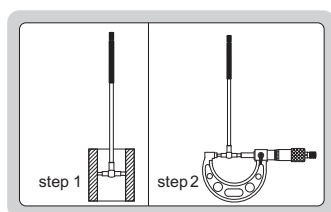
Code	Total range	Gauges included
4206-1	8-150mm	8-12.7mm, 12.7-19mm 19-32mm, 32-54mm 54-90mm, 90-150mm



4206-1

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

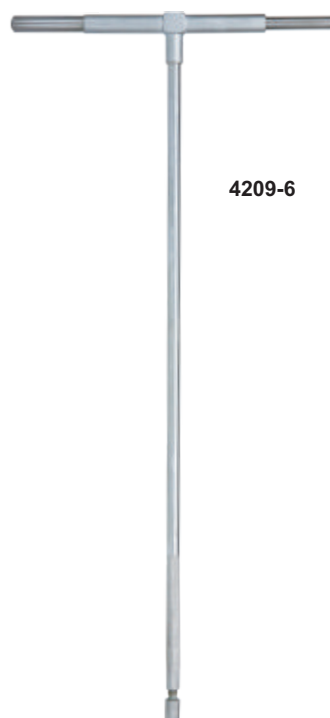
LONG HANDLE TELESCOPING GAUGE



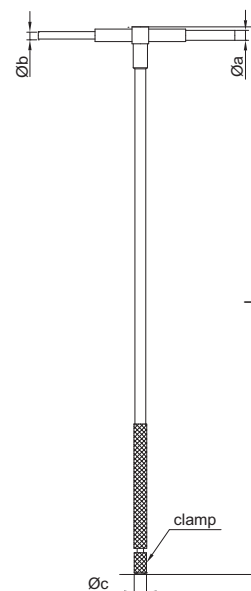
- For quick measurement of inside diameter of deep holes and width of slots
- Satin chrome finish

(mm)

Code	Range	L	Øa	Øb	Øc
4209-1	8-12.7mm	250	3.9	2.9	6.2
4209-2	12.7-19mm	250	5.3	3.8	6.2
4209-3	19-32mm	250	5.3	3.8	6.2
4209-4	32-54mm	300	7.6	6.1	7.2
4209-5	54-90mm	300	7.6	6.1	7.2
4209-6	90-150mm	300	7.6	6.1	7.2
4209-7	120-200mm	300	7.6	6.1	7.2



4209-6



DIGITAL INDICATOR



2103-10

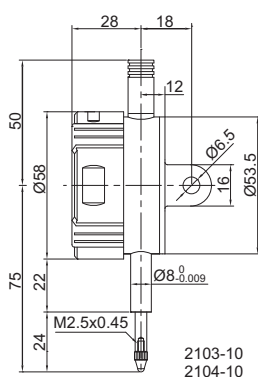


2104-25

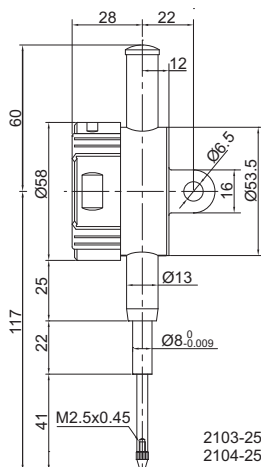


2103-50

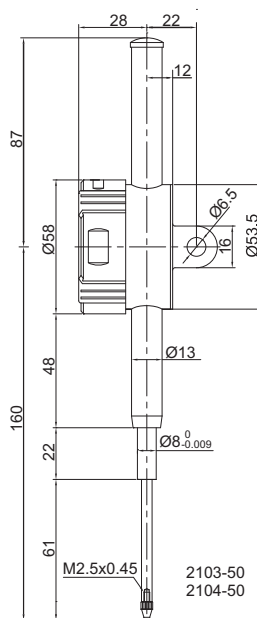
Unit: mm



2103-10
2104-10



2103-25
2104-25



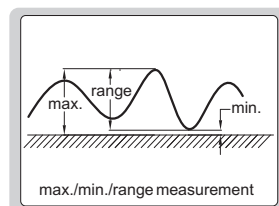
2103-50
2104-50

Resolution 0.001mm/0.00005"

Code	Range	Accuracy(f_{ges})	Hysteresis(f_u)	Remark
2103-10	12.7mm/0.5"	5 μ m	2 μ m	lug back
2103-25	25.4mm/1"	5 μ m	3 μ m	lug back
2103-50	50.8mm/2"	6 μ m	3 μ m	lug back
2103-10F	12.7mm/0.5"	5 μ m	2 μ m	flat back
2103-25F	25.4mm/1"	5 μ m	3 μ m	flat back
2103-50F	50.8mm/2"	6 μ m	3 μ m	flat back

Resolution 0.01mm/0.0005"

Code	Range	Accuracy(f_{ges})	Hysteresis(f_u)	Remark
2104-10	12.7mm/0.5"	20 μ m	10 μ m	lug back
2104-25	25.4mm/1"	20 μ m	10 μ m	lug back
2104-50	50.8mm/2"	30 μ m	10 μ m	lug back
2104-10F	12.7mm/0.5"	20 μ m	10 μ m	flat back
2104-25F	25.4mm/1"	20 μ m	10 μ m	flat back
2104-50F	50.8mm/2"	30 μ m	10 μ m	flat back



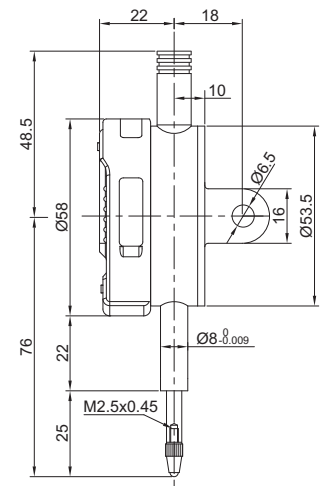
display can be rotated by 320°

- Reading in digit and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./range measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- USB data output
- Optional accessory: SPC cable (page A1-A2), backs (page F15), contact points (page F11-F14)

DIGITAL INDICATOR



Unit: mm



2112-10

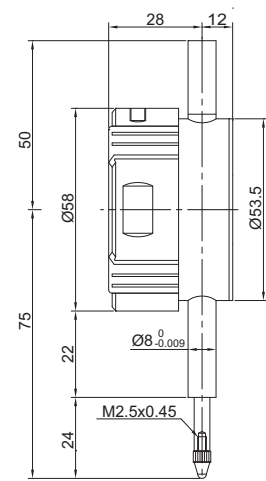
- Economic model
- Button function: on/off, inch/mm, zero
- CR2032 battery, automatic power off
- USB data output
- Optional accessory: SPC cable (page A1-A2), backs (page F15), contact points (page F11-F14)

Code	Range	Resolution	Accuracy(f_{ges})	Hysteresis(f_u)	Remark
2112-10	12.7mm/0.5"	0.01mm/0.0005"	20 μ m	10 μ m	lug back
2112-101	12.7mm/0.5"	0.001mm/0.00005"	5 μ m	2 μ m	lug back
2112-10F	12.7mm/0.5"	0.01mm/0.0005"	20 μ m	10 μ m	flat back
2112-101F	12.7mm/0.5"	0.001mm/0.00005"	5 μ m	2 μ m	flat back

DIGITAL INDICATOR FOR BORE GAUGES



Unit: mm



2108-10F

- Specially designed for bore gauges
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after inputting the size of setting ring
- Reading in digit and analog
- Display can be rotated by 320°
- Button function: minimum value tracking, calibration, data preset, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- USB data output
- Optional accessory: SPC cable (page A1-A2), backs (page F15), contact points (page F11-F14)

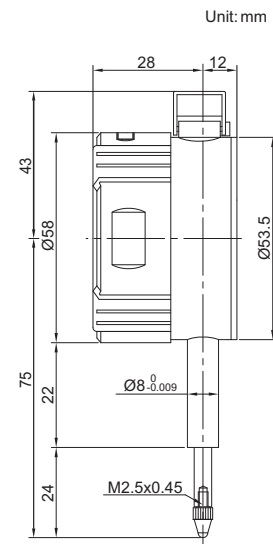
Code	Range	Resolution	Accuracy(f_{ges})	Hysteresis(f_u)	Remark
2108-10F	12.7mm/0.5"	0.002mm/0.0001"	20 μ m	10 μ m	flatback
2108-101F	12.7mm/0.5"	0.001mm/0.00005"	5 μ m	2 μ m	flatback

DIGITAL INDICATOR WITH LIFTING LEVER



2109-10

- Reading in digit and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./range measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- USB data output
- Optional accessory: SPC cable (page A1-A2), backs (page F15), contact points (page F11-F14)



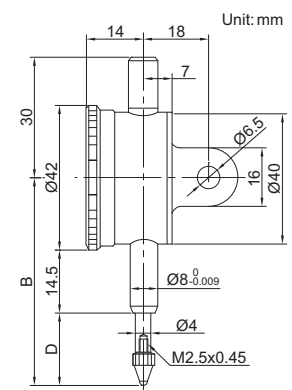
Code	Range	Resolution	Accuracy(f_{ges})	Hysteresis(f_u)	Remark
2109-10	10mm/0.4"	0.01mm/0.0005"	20 μ m	10 μ m	flat back
2109-101	10mm/0.4"	0.001mm/0.00005"	5 μ m	2 μ m	flat back

DIAL INDICATOR



2311-5

- Jeweled bearing
- Supplied with limit hands
- Optional accessory: backs (page F15), contact points (page F11-F14)



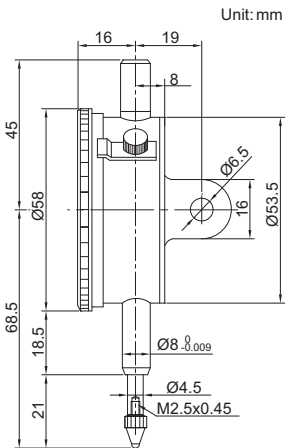
Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark	B	D
2311-3	3mm	0.01mm	14 μ m	3 μ m	0.5mm	0-50	lug back	46mm	10.5mm
2311-5	5mm	0.01mm	16 μ m	3 μ m	0.5mm	0-50	lug back	48mm	12.5mm
2311-3F	3mm	0.01mm	14 μ m	3 μ m	0.5mm	0-50	flat back	46mm	10.5mm
2311-5F	5mm	0.01mm	16 μ m	3 μ m	0.5mm	0-50	flat back	48mm	12.5mm

DIAL INDICATOR



2308-10A

- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Optional accessory: backs(page F15), contact points(page F11-F14)



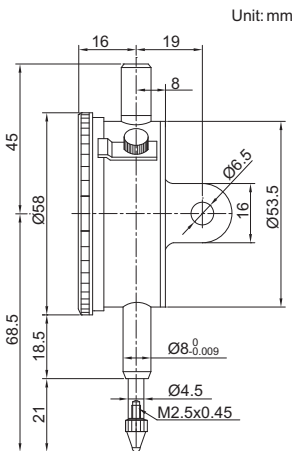
Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark
2308-3A	3mm	0.01mm	14 μ m	3 μ m	1mm	0-100	lug back
2308-5A	5mm	0.01mm	16 μ m	3 μ m	1mm	0-100	lug back
2308-10A	10mm	0.01mm	17 μ m	3 μ m	1mm	0-100	lug back
2308-3FA	3mm	0.01mm	14 μ m	3 μ m	1mm	0-100	flat back
2308-5FA	5mm	0.01mm	16 μ m	3 μ m	1mm	0-100	flat back
2308-10FA	10mm	0.01mm	17 μ m	3 μ m	1mm	0-100	flat back

REVERSE READING DIAL INDICATOR



2801-10

- Suitable for depth and step measurements
- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Optional accessory: backs(page F15), contact points(page F11-F14)

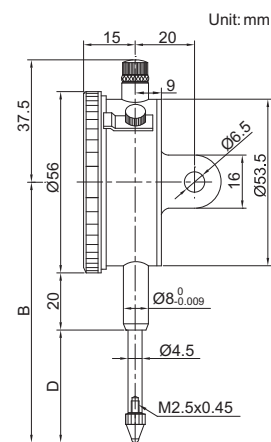


Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark
2801-10	10mm	0.01mm	20 μ m	3 μ m	1mm	100-0	lug back
2801-10F	10mm	0.01mm	20 μ m	3 μ m	1mm	100-0	flat back

DIAL INDICATOR



2310-30A



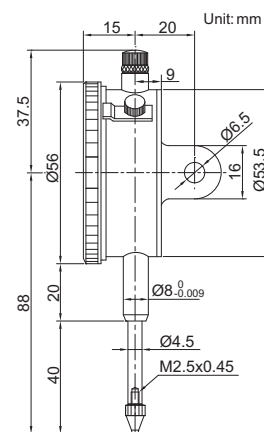
- Supplied with limit hands and bezel clamp
- Optional accessory: backs (page F15), contact points (page F11-F14)

Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark	B	D
2310-20A	20mm	0.01mm	25 μ m	5 μ m	1mm	0-100	lug back	83mm	35mm
2310-30A	30mm	0.01mm	35 μ m	7 μ m	1mm	0-100	lug back	88mm	40mm
2310-20FA	20mm	0.01mm	25 μ m	5 μ m	1mm	0-100	flat back	83mm	35mm
2310-30FA	30mm	0.01mm	35 μ m	7 μ m	1mm	0-100	flat back	88mm	40mm

REVERSE READING DIAL INDICATOR



2802-30



- Suitable for depth and step measurement
- Supplied with limit hands and bezel clamp
- Optional accessory: backs (page F15), contact points (page F11-F14)

Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark
2802-30	30mm	0.01mm	35 μ m	7 μ m	1mm	100-0	lug back
2802-30F	30mm	0.01mm	35 μ m	7 μ m	1mm	100-0	flat back

DIAL INDICATOR



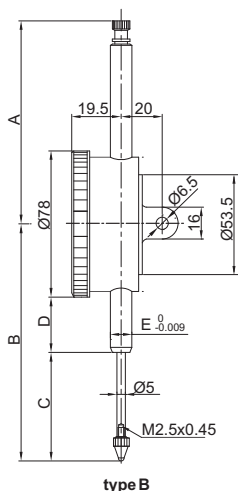
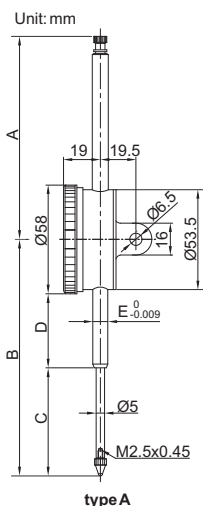
2309-50

- Shockproof
- Jeweled bearing
- Supplied with limit hands
- Optional accessory: backs (page F15), contact points (page F11-F14)

back of type B



stem clamp Ø10mm for 2309-100D



(mm)

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

Code	Range	Graduation	Type	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark
2309-30	30mm	0.01mm	A	35 μ m	7 μ m	1mm	0-100	lug back
2309-30F	30mm	0.01mm	A	35 μ m	7 μ m	1mm	0-100	flat back
2309-50	50mm	0.01mm	A	40 μ m	8 μ m	1mm	0-100	flat back with spare lug back
2309-50D	50mm	0.01mm	B	40 μ m	8 μ m	1mm	0-100	flat back with spare lug back
2309-80	80mm	0.01mm	A	50 μ m	9 μ m	1mm	0-100	flat back with spare lug back
2309-80D	80mm	0.01mm	B	50 μ m	9 μ m	1mm	0-100	flat back with spare lug back
2309-100D	100mm	0.01mm	B	50 μ m	9 μ m	1mm	0-100	flat back with spare lug back

Note: 1) 2309-80, 2309-80D and 2309-100D can only be used vertically

2) 2309-100D is supplied with stem clamp Ø10mm for magnetic stands (code 6200-60, 6201-60, 6202-80, 6202-100)

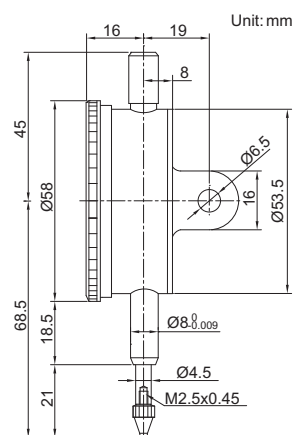
3) 2309-30 and 2309-30F can not accept optional backs (page F15)

SHOCKPROOF DIAL INDICATOR



2314-10A

- Shockproof
- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Optional accessory: backs (page F15), contact points (page F11-F14)



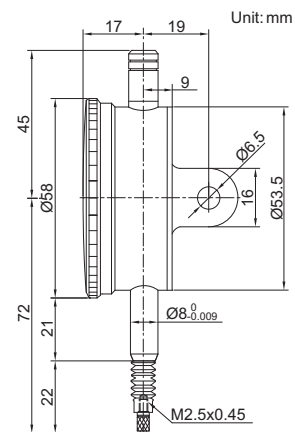
Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark
2314-3A	3mm	0.01mm	14 μ m	3 μ m	1mm	0-100	lug back
2314-5A	5mm	0.01mm	16 μ m	3 μ m	1mm	0-100	lug back
2314-10A	10mm	0.01mm	20 μ m	3 μ m	1mm	0-100	lug back
2314-3FA	3mm	0.01mm	14 μ m	3 μ m	1mm	0-100	flat back
2314-5FA	5mm	0.01mm	16 μ m	3 μ m	1mm	0-100	flat back
2314-10FA	10mm	0.01mm	20 μ m	3 μ m	1mm	0-100	flat back

WATERPROOF DIAL INDICATOR



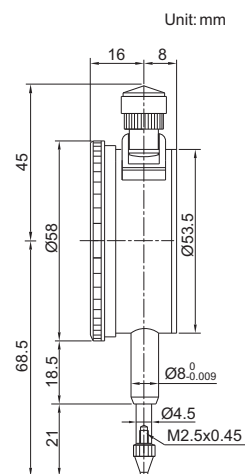
2324-10

- IP54 dust/waterproof
- Jeweled bearing



Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark
2324-10	10mm	0.01mm	17 μ m	3 μ m	1mm	0-100	lug back
2324-10F	10mm	0.01mm	17 μ m	3 μ m	1mm	0-100	flat back

DIAL INDICATOR WITH LIFTING LEVER



- Jeweled bearing
- Supplied with limit hands
- Optional accessory: backs(page F15), contact points(page F11-F14)

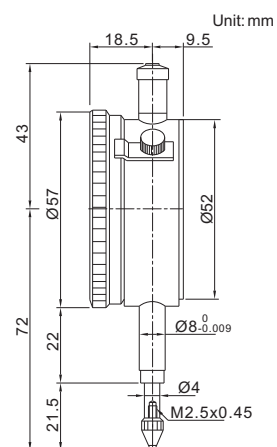
2329-10

Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark
2329-10	10mm	0.01mm	20 μ m	3 μ m	1mm	0-100	flat back

ONE REVOLUTION DIAL INDICATOR



2306-1F



- Eliminate the possibility of reading errors due to miscounting multiple revolutions
- Shockproof
- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Optional accessory: contact points(page F11-F14)

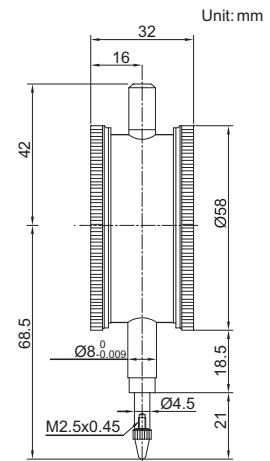
Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark
2306-1F	0.8mm	0.01mm	9 μ m	3 μ m	1mm	40-0-40	flatback

DOUBLE FACE DIAL INDICATOR



2328-10

- Read from both sides
- Jeweled bearing
- Supplied with limit hands
- Optional accessory: contact points (page F11-F14)



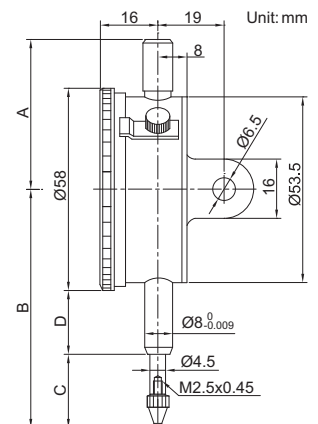
Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading
2328-10	10mm	0.01mm	20 μ m	3 μ m	1mm	0-100

PRECISION DIAL INDICATOR



2313-1A

- Jeweled bearing
- Supplied with limit hands
- 1mm and 2mm are supplied with bezel clamp, 3mm and 5mm are not supplied with bezel clamp
- Optional accessory: backs (page F15), contact points (page F11-F14)

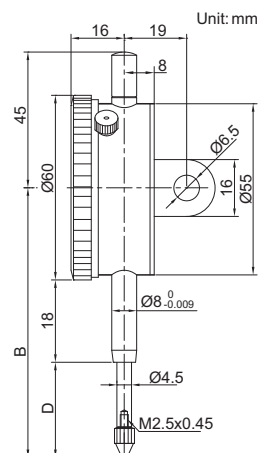


Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark	A	B	C	D
2313-1A	1mm	0.001mm	5 μ m	2 μ m	0.2mm	0-100-0	lug back	45	62.5	19.5	15
2313-2A	2mm	0.001mm	8 μ m	2.5 μ m	0.2mm	0-100-0	lug back	45	62.5	19.5	15
2313-3A	3mm	0.001mm	10 μ m	4 μ m	0.2mm	0-100-0	lug back	41.5	59.5	21.5	10
2313-5A	5mm	0.001mm	10 μ m	4 μ m	0.2mm	0-100-0	lug back	41.5	59.5	21.5	10
2313-1FA	1mm	0.001mm	5 μ m	2 μ m	0.2mm	0-100-0	flat back	45	62.5	19.5	15
2313-2FA	2mm	0.001mm	8 μ m	2.5 μ m	0.2mm	0-100-0	flat back	45	62.5	19.5	15
2313-3FA	3mm	0.001mm	10 μ m	4 μ m	0.2mm	0-100-0	flat back	41.5	59.5	21.5	10
2313-5FA	5mm	0.001mm	10 μ m	4 μ m	0.2mm	0-100-0	flat back	41.5	59.5	21.5	10

DIAL INDICATOR



2318-30



- Supplied with limit hands and bezel clamp
- Optional accessory: backs(page F15), contact points(page F11-F14)

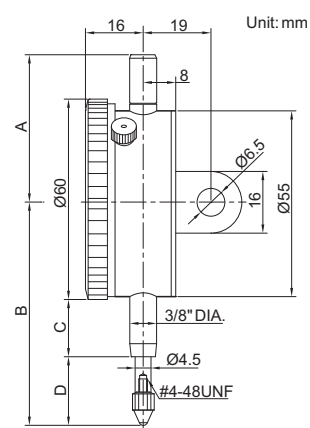
(mm)

Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark	B	D
2318-10	10mm	0.1mm	40 μ m	20 μ m	10mm	0-10	lug back	70	20
2318-20	20mm	0.1mm	50 μ m	20 μ m	10mm	0-10	lug back	85	35
2318-25	25mm	0.1mm	60 μ m	20 μ m	10mm	0-10	lug back	85	35
2318-30	30mm	0.1mm	60 μ m	20 μ m	10mm	0-10	lug back	90	40
2318-10F	10mm	0.1mm	40 μ m	20 μ m	10mm	0-10	flat back	70	20
2318-20F	20mm	0.1mm	50 μ m	20 μ m	10mm	0-10	flat back	85	35
2318-25F	25mm	0.1mm	60 μ m	20 μ m	10mm	0-10	flat back	85	35
2318-30F	30mm	0.1mm	60 μ m	20 μ m	10mm	0-10	flat back	90	40

INCH DIAL INDICATOR



2307-1



- Supplied with limit hands and bezel clamp
- Optional accessory: backs(page F15)

(mm)

Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Range/rev	Dial reading	Remark	A	B	C	D
2307-025	0.25"	0.001"	0.004"	0.00033"	0.1"	0-100	lug back	46	75	20	25
2307-05	0.5"	0.001"	0.004"	0.00033"	0.1"	0-100	lug back	46	75	20	25
2307-1	1"	0.001"	0.004"	0.00033"	0.1"	0-100	lug back	46	85	20	35
2307-2	2"	0.001"	0.008"	0.00033"	0.1"	0-100	lug back	111	139	50	59

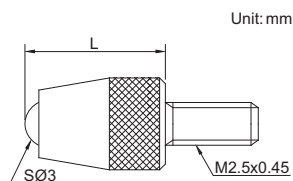
CONTACT POINT



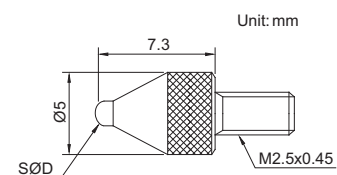
- For dial indicators and digital indicators



BALL POINT

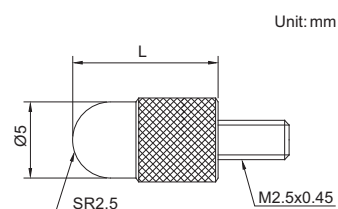


Code	Material of measuring face	L(mm)
6282-0101	carbide	7.3
6282-0103	ceramic	7.3
6282-0104	carbide	8.3
6282-0106	carbide	12.1
6282-0107	carbide	14
6282-0108	carbide	15
6282-0109	ceramic	15
6282-0110	carbide	17
6282-0111	carbide	19.3
6282-0112	carbide	20
6282-0113	ceramic	20
6282-0114	carbide	22
6282-0115	carbide	25
6282-0116	ceramic	25
6282-0117	carbide	30
6282-0118	ceramic	30



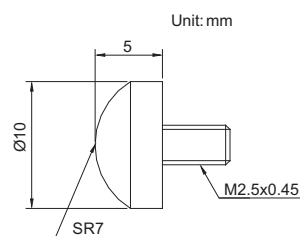
Code	Material of measuring face	SØD(mm)
6282-0301	steel	1
6282-0302	carbide	1.5
6282-0303	carbide	1.8
6282-0304	carbide	2.5
6282-0305	carbide	4

SHELL TYPE POINT



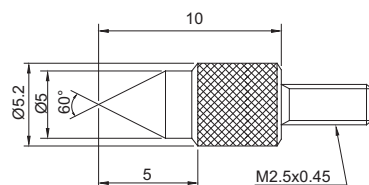
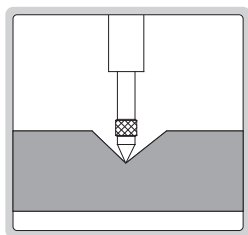
Code	Material of measuring face	L(mm)
6282-0202	steel	5
6282-0203	steel	10
6282-0205	steel	15
6282-0207	steel	20
6282-0208	steel	25
6282-0210	steel	30

SPHERICAL POINT

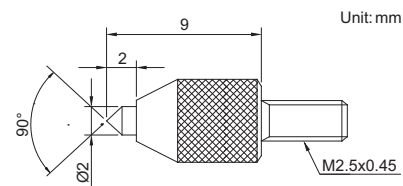


Code	Material of measuring face
6282-0401	steel

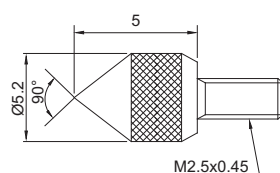
CONICAL POINT



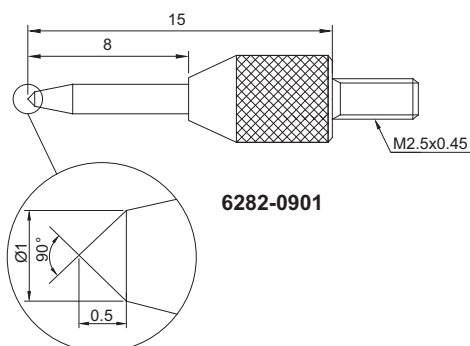
6282-0601



6282-0801



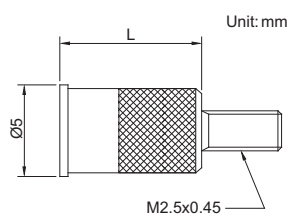
6282-0701



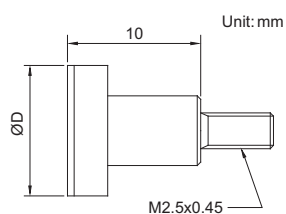
6282-0901

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

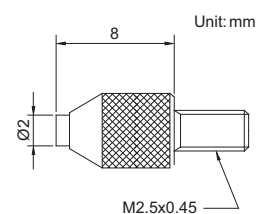
FLAT POINT



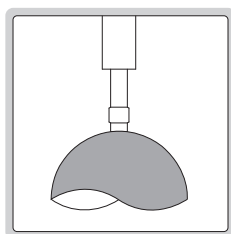
Code	Material of measuring face	L(mm)
6282-1101	steel	8
6282-1102	steel	10



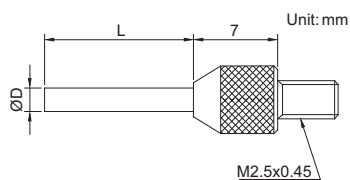
Code	Material of measuring face	ØD(mm)
6282-1201	steel	10
6282-1202	steel	15
6282-1203	steel	20
6282-1204	steel	25
6282-1205	steel	30



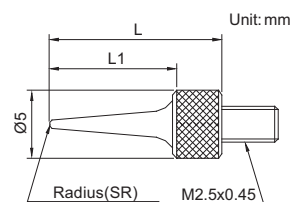
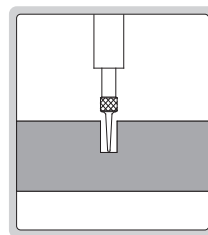
Code	Material of measuring face
6282-1301	carbide



NEEDLE POINT

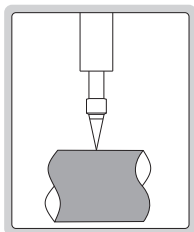
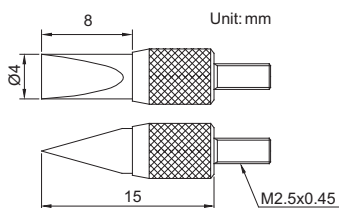


(mm)			
Code	Material of measuring face	ØD	L
6282-1701	steel	0.45	3
6282-1702	steel	0.45	5
6282-1703	carbide	1	3
6282-1704	carbide	1	5
6282-1705	carbide	1	8
6282-1706	carbide	1	10
6282-1707	carbide	1	20
6282-1708	carbide	1	40
6282-1709	carbide	1.5	5
6282-1710	carbide	1.5	10
6282-1711	carbide	1.5	13
6282-1712	carbide	1.5	20
6282-1713	carbide	1.5	40
6282-1714	carbide	2	8
6282-1715	carbide	2	18
6282-1716	carbide	2	28
6282-1717	carbide	2	40



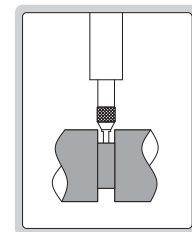
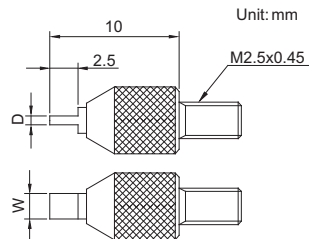
(mm)				
Code	Material of measuring face	L1	L	SR
6282-1601	steel	11	15	0.4
6282-1602	steel	13	17	0.2
6282-1603	steel	21	25	0.4
6282-1604	steel	31	35	0.4

KNIFE EDGE POINT



Code	Material of measuring face
6282-1001	steel

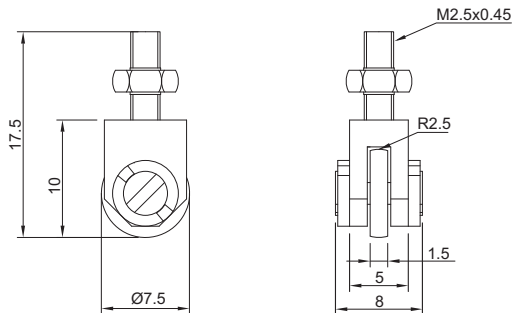
BLADE POINT



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

ROLLER POINT

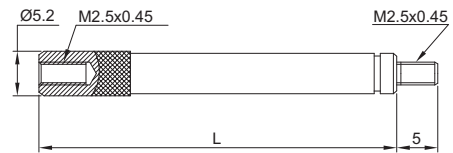
Unit: mm



Code	Material of measuring face
6282-1901	steel

EXTENSION ROD

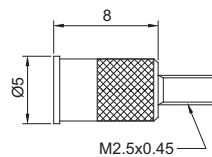
Unit: mm



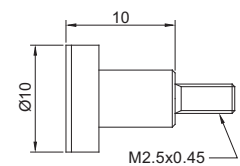
(mm)			(mm)		
Code	Material	L	Code	Material	L
6282-2001	steel	10	6282-2010	steel	55
6282-2002	steel	15	6282-2011	steel	60
6282-2003	steel	20	6282-2012	steel	65
6282-2004	steel	25	6282-2013	steel	70
6282-2005	steel	30	6282-2014	steel	75
6282-2006	steel	35	6282-2015	steel	80
6282-2007	steel	40	6282-2016	steel	90
6282-2008	steel	45	6282-2017	steel	100
6282-2009	steel	50			

POINT SET

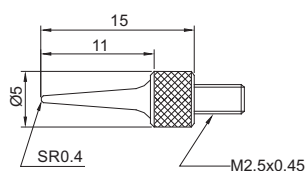
Unit: mm



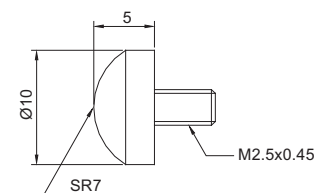
Flat Point



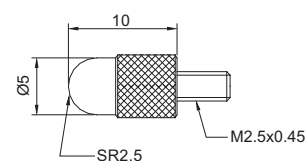
Flat Point



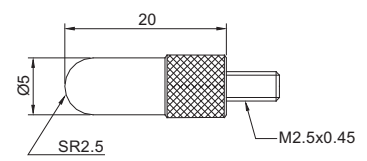
Needle Point



Spherical Point



Shell Type Point



Shell Type Point

Code	Material of measuring face
6282-S6	steel

LUG BACK

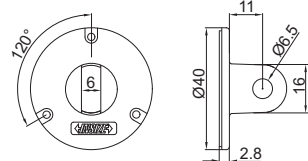
■ Made of aluminum

Code	For digital/dial indicators	Page
7330-L1	2311	F4
7330-L2	2308	F4
	2309 (except 2309-30, 2309-30F)	F6
	2310	F5
	2313-1A, 2313-1FA	F9
	2313-2A, 2313-2FA	F9
	2314	F7
	2329-10	F8
	2801	F4
	2802	F5
7330-L5	2103	F1
	2104	F1
	2108	F2
	2109	F3
	2112	F2
7330-L6	2307	F10
	2318	F10

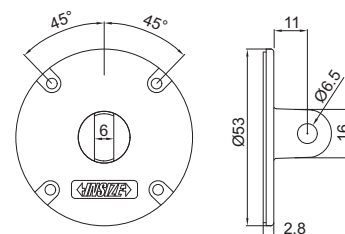


7330-L2

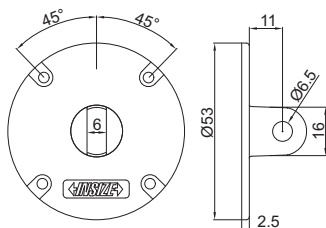
Unit: mm



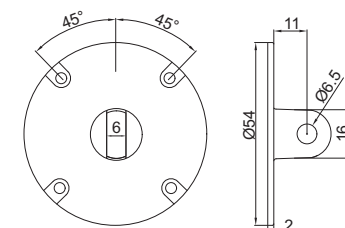
7330-L1



7330-L2



7330-L5



7330-L6

FLAT BACK

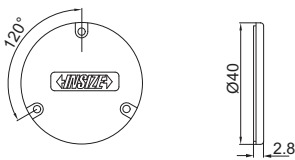
■ Made of aluminum

Code	For digital/dial indicators	Page
7330-F1	2311	F4
7330-F2	2308	F4
	2309 (except 2309-30, 2309-30F)	F6
	2310	F5
	2313-1A, 2313-1FA	F9
	2313-2A, 2313-2FA	F9
	2314	F7
	2329-10	F8
	2801	F4
	2802	F5
7330-F5	2103	F1
	2104	F1
	2108	F2
	2109	F3
	2112	F2
7330-F6	2307	F10
	2318	F10

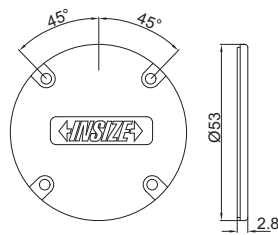


7330-F2

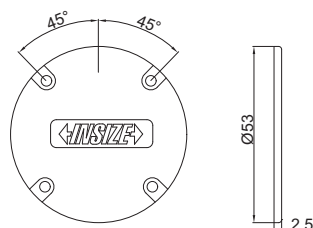
Unit: mm



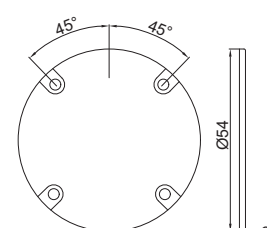
7330-F1



7330-F2



7330-F5



7330-F6

DIAL TEST INDICATOR

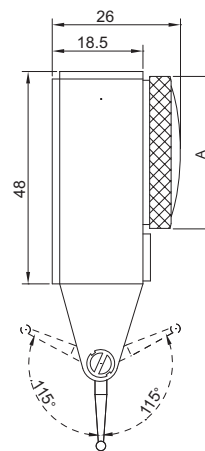
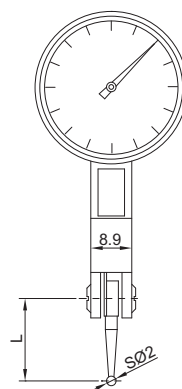


2380-08

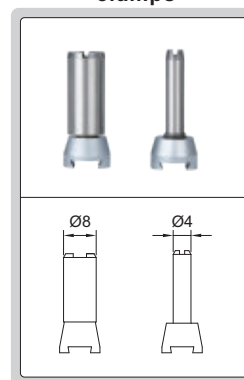
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page F18)

Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Dial reading	A	L
2380-08	0.8mm	0.01mm	13 μ m	3 μ m	0-40-0	Ø30mm	16.5mm
2381-08	0.8mm	0.01mm	13 μ m	3 μ m	0-40-0	Ø37.5mm	16.5mm
2380-02	0.2mm	0.002mm	6 μ m	2 μ m	0-100-0	Ø30mm	16mm
2381-02	0.2mm	0.002mm	6 μ m	2 μ m	0-100-0	Ø37.5mm	16mm

Unit: mm



clamps



LONG STYLI DIAL TEST INDICATOR

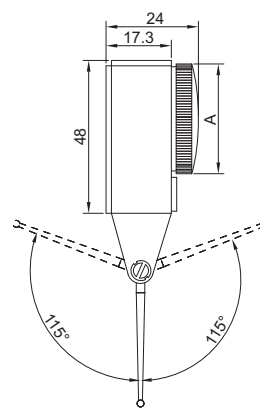
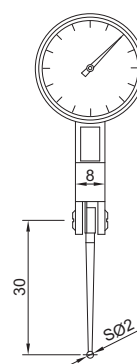


2390-081

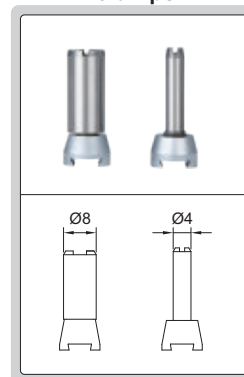
- Jeweled bearing
- Ruby contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm

Code	Range	Graduation	Accuracy(f_{ges})	Hysteresis(f_u)	Dial reading	A
2390-081	0.8mm	0.01mm	13 μ m	5 μ m	0-40-0	Ø31mm
2390-082	0.8mm	0.01mm	13 μ m	5 μ m	0-40-0	Ø38.4mm

Unit: mm



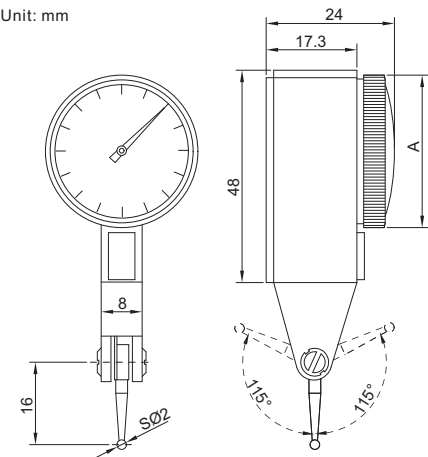
clamps



PRECISION DIAL TEST INDICATOR

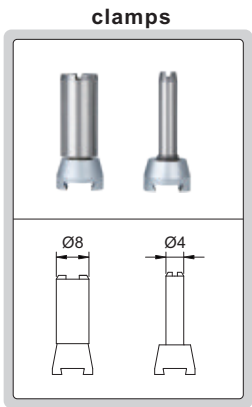


2384-012



- Jeweled bearing
- Ruby contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm

Code	Range	Graduation	Accuracy(f _{ges})	Hysteresis(f _u)	Dial reading	A
2384-012	0.12mm	0.001mm	5µm	3µm	0-60-0	Ø31mm
2388-012	0.12mm	0.001mm	5µm	3µm	0-60-0	Ø38.4mm



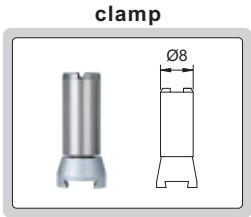
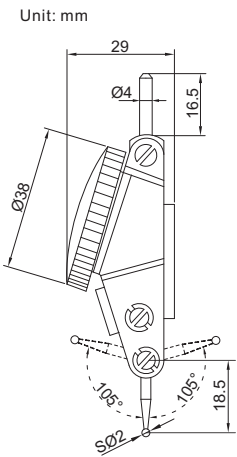
LARGE RANGE DIAL TEST INDICATOR



2386-16

- Jeweled bearing
- Steel contact point
- Two measuring directions
- Anti magnetic body
- Supplied with one clamp: diameter Ø8mm

Code	Range	Graduation	Accuracy(f _{ges})	Hysteresis(f _u)	Dial reading
2386-16	1.6mm	0.01mm	26µm	6µm	0-40-0



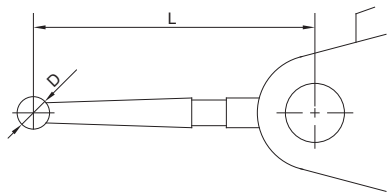
STYLI FOR DIAL TEST INDICATORS

(mm)

Code	For dial test indicator	Material of contact point	L	D
6284-1	2380-08 2381-08	Steel	16.5	SØ1
6284-3		Carbide	16.5	SØ2
6284-8		Carbide	16.5	SØ3
6284-21	2380-02 2381-02	Steel	16	SØ1
6284-22		Carbide	16	SØ2
6284-23		Carbide	16	SØ3



6284-3



SPANNER FOR STYLI

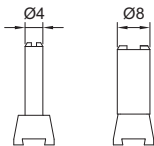


6288

Code
6288

CLAMP

Unit: mm



6298-1



6298-2

Code	Size
6298-1	Ø4mm
6298-2	Ø8mm

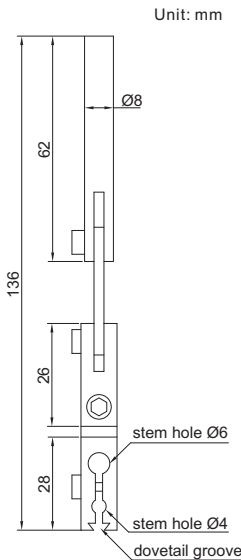
DIAL TEST INDICATOR HOLDER



6296-1

■ Supplied with fixing spanner

Code
6296-1



DIAL TEST INDICATOR HOLDER

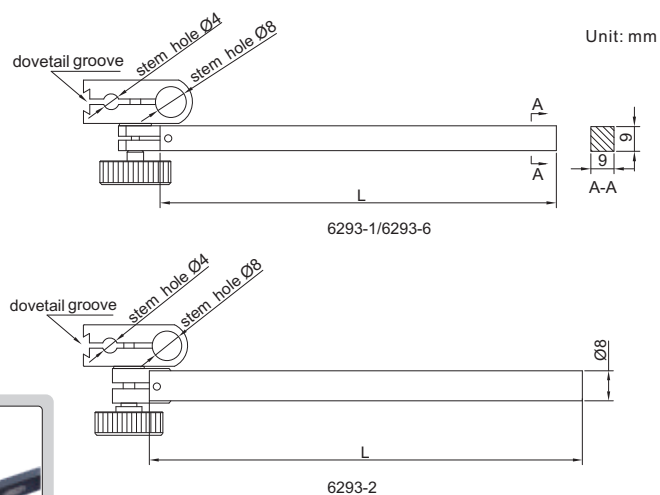


6293-1



6293-2

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

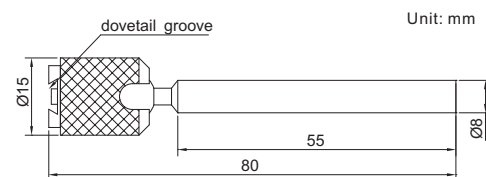


DIAL TEST INDICATOR UNIVERSAL HOLDER



6297-1

Code	
6297-1	Set the indicators at the desired attitude to the workpiece



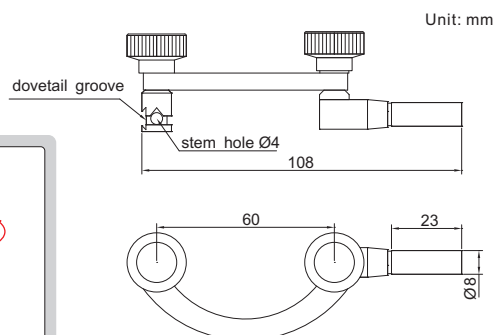
DIAL TEST INDICATOR CENTERING HOLDER



6291-1

Code
6291-1

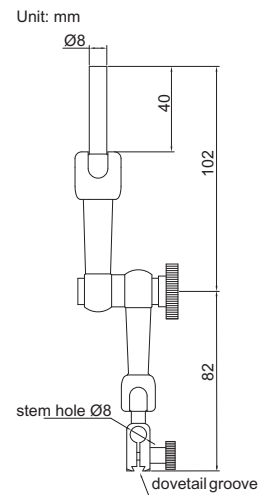
- Center cylinders or holes on a machine tool



DIAL TEST INDICATOR CENTERING HOLDER



6295-1A



Code

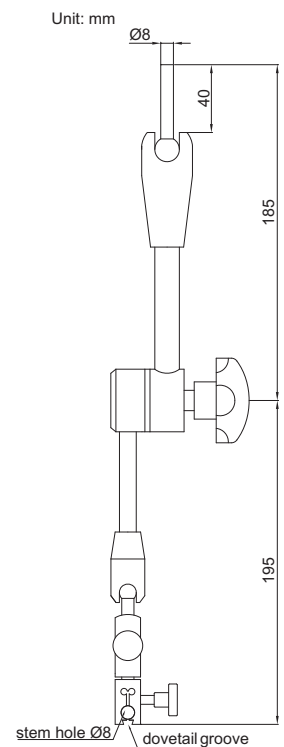
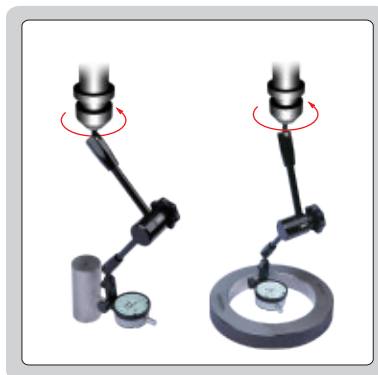
6295-1A

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

INDICATOR CENTERING HOLDER



6294-1A



Code

6294-1A

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

MAGNETIC STAND



6200-60



6201-60

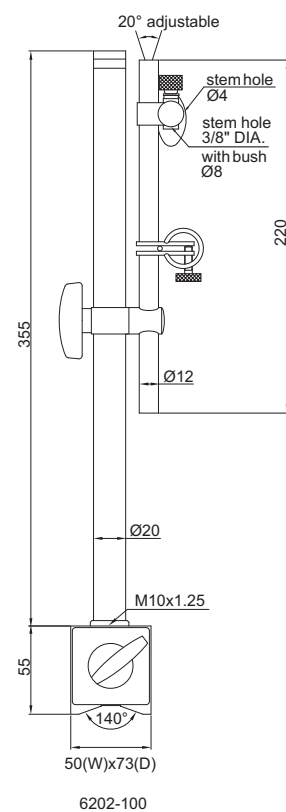
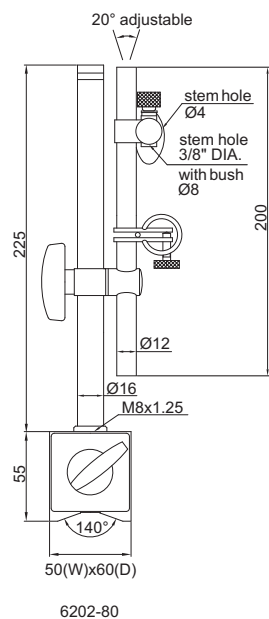
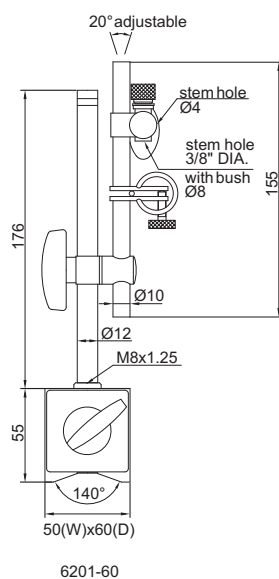
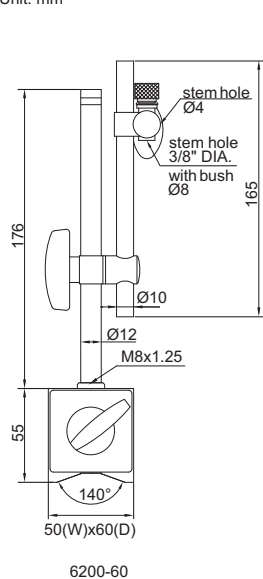


6202-80



6202-100

Unit: mm



- For digital/dial indicators and dial test indicators

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

UNIVERSAL MAGNETIC STAND



6210-81

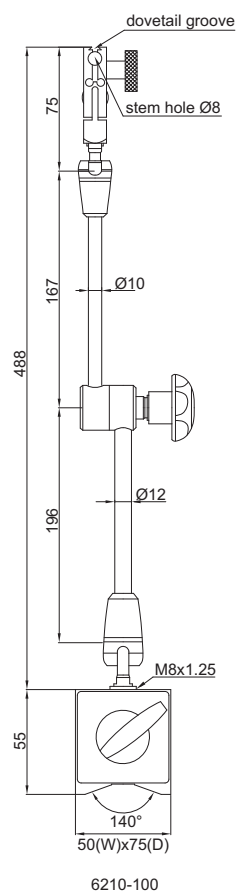
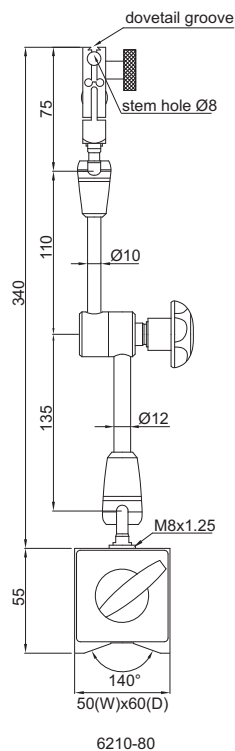
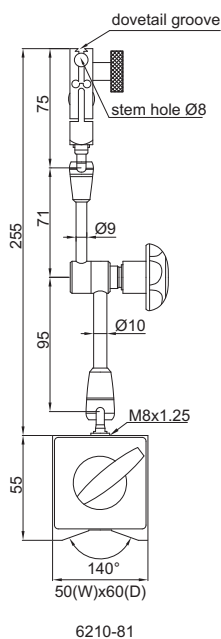


6210-80



6210-100

Unit: mm



■ For digital/dial indicators and dial test indicators

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

UNIVERSAL MAGNETIC STAND

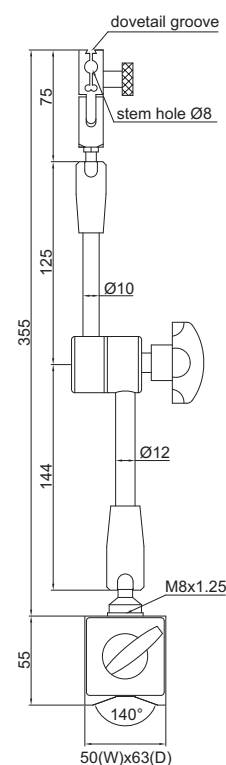


6208-80A

- Economic model
- For digital/dial indicators and dial test indicators

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

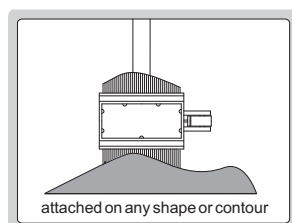
Unit: mm



MAGNETIC STAND FOR UNEVEN SURFACE



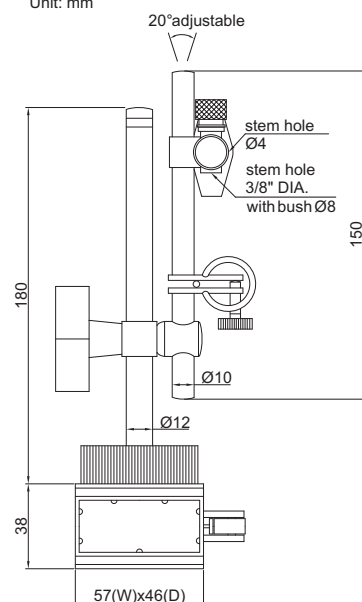
6215-60



- For digital/dial indicators and dial test indicators

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

Unit: mm



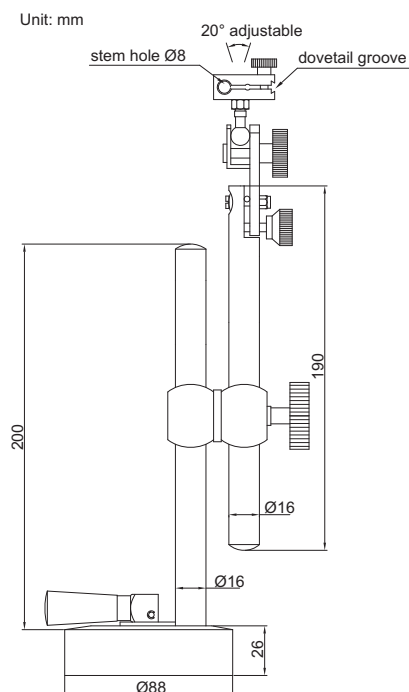
VACUUM STAND



6217-A

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

Code	Applicable holding stem	Remark
6217-A	Ø8mm	with fine adjustment and dovetail groove



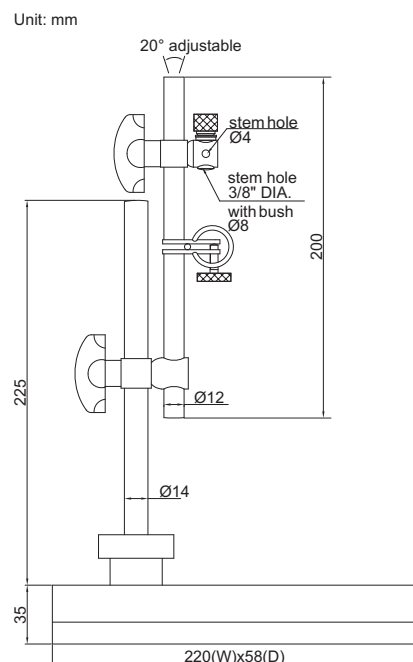
UNIVERSAL STAND



6214-A

- For digital/dial indicators and dial test indicators

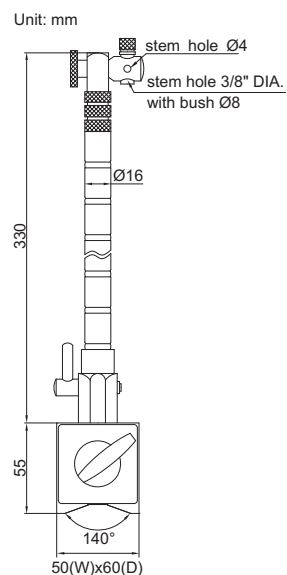
Code	Applicable holding stem	Remark
6214-A	Ø8mm, Ø4mm, 3/8" DIA.	with fine adjustment



FLEX ARM MAGNETIC STAND



6207-80A



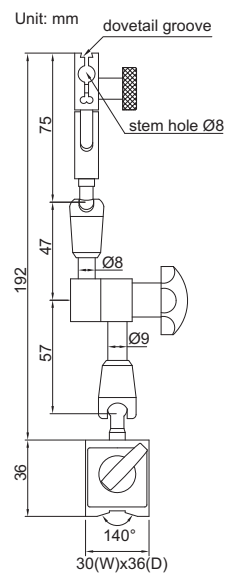
- For dial test indicators

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

MINI MAGNETIC STAND



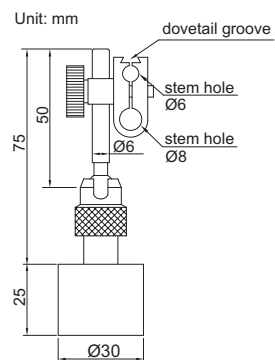
6224-40



- For dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6224-40	40kgf	Ø8mm	with fine adjustment and dovetail groove

MINI MAGNETIC STAND



- For dial test indicators

6211-10

Code	Magnetic force	Applicable holding stem	Remark
6211-10	10kgf	Ø6mm, Ø8mm	with dovetail groove

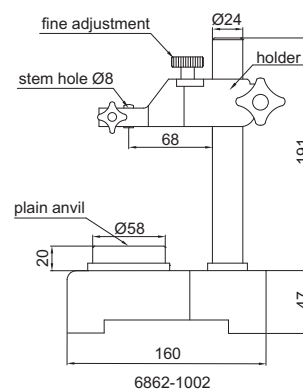
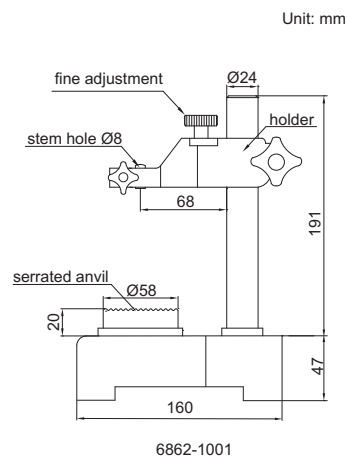
DIAL GAUGE STAND



6862-1001



6862-1002



- Vertical travel of holder: 100mm
- Fine adjustment range: 2mm

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

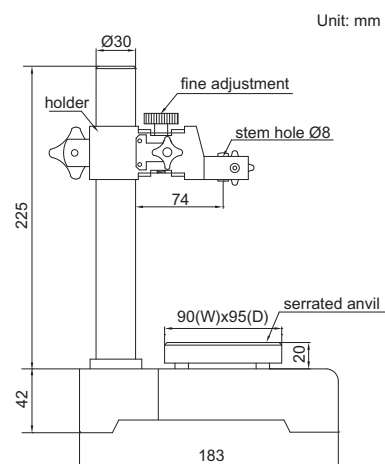
DIAL GAUGE STAND



6863-150

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm

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



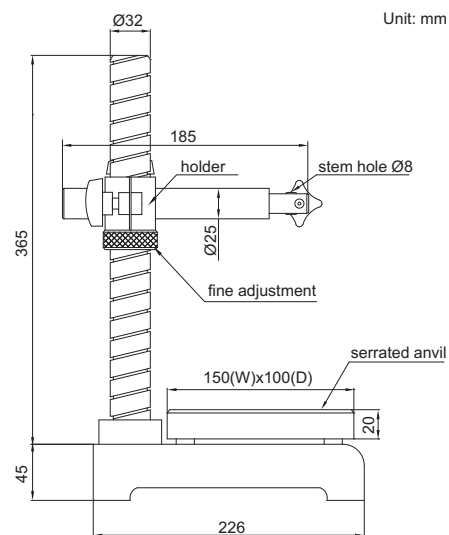
COMPARATOR STAND



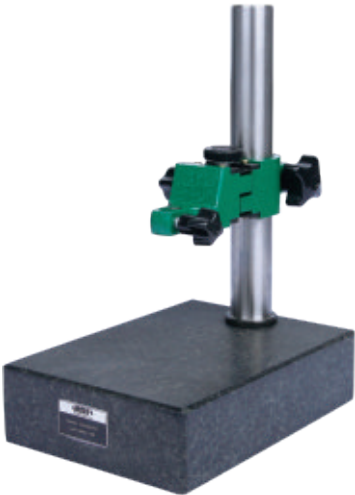
6864-250

- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke

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



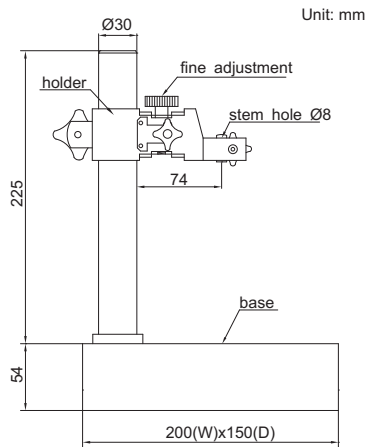
GRANITE COMPARATOR STAND



6866-150

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm

Code	Applicable holding stem	Base
6866-150	Ø8mm	flatness 3.2µm



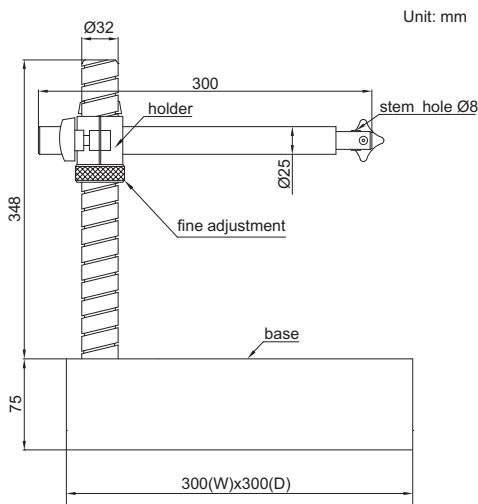
GRANITE COMPARATOR STAND



6867-250

- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke

Code	Applicable holding stem	Base
6867-250	Ø8mm	flatness 3.7µm

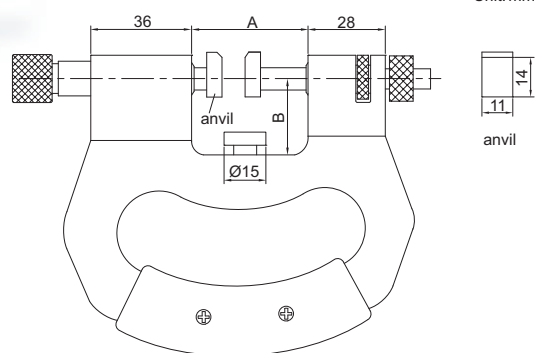


DIAL SNAP GAUGE



dial indicator is
not included

2185-25W



Unit: mm

anvil

- For quick Go/No-Go judgment of diameter of cylinders and shafts
- Anvil retracting stroke: 3mm
- Measuring force: 6-9N
- Carbide measuring faces
- Front edges of anvils are chamfered for easy workpiece insertion
- Optional indicators:
 - dial indicator, range 10mm, graduation 0.01mm
(code **2308-10FA**)
 - digital indicator, range 12.7mm/0.5", resolution 0.001mm/0.00005"
(code **2103-10F**)
 - digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005"
(code **2104-10F**)

optional indicators



2308-10FA

2103-10F

2104-10F

(mm)			
Code	Range	A	B
2185-25W	0-25mm	42	20
2185-50W	25-50mm	69	32.5
2185-75W	50-75mm	94	45
2185-100W	75-100mm	119	57.5
2185-125W	100-125mm	144	70
2185-150W	125-150mm	169	82.5
2185-175W	150-175mm	194	95
2185-200W	175-200mm	219	107
2185-225W	200-225mm	244	120
2185-250W	225-250mm	269	132
2185-275W	250-275mm	294	145
2185-300W	275-300mm	319	157

DIAL SNAP GAUGE



dial indicator
is not included

2184-50W

optional indicators

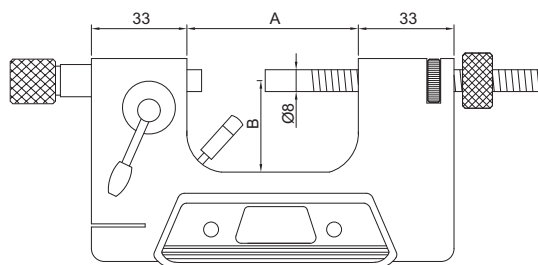


2308-10FA

2103-10F

2104-10F

Unit: mm



(mm)

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

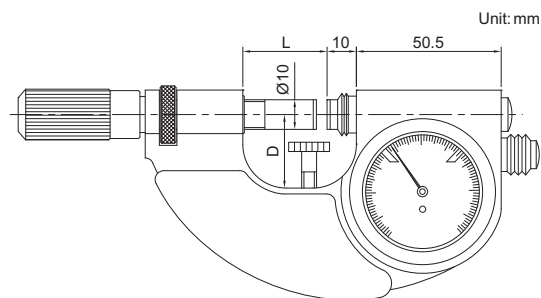
- For quick Go/No-Go judgment of diameter of cylinders and shafts
- Anvil retracting stroke: 3mm
- Measuring force: 6-9N
- Carbide measuring faces
- Optional indicators:
 - dial indicator, range 10mm, graduation 0.01mm
(code 2308-10FA)
 - digital indicator, range 12.7mm/0.5", resolution 0.001mm/0.00005"
(code 2103-10F)
 - digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005"
(code 2104-10F)

DIAL SNAP GAUGE



3334-25
(mm)

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



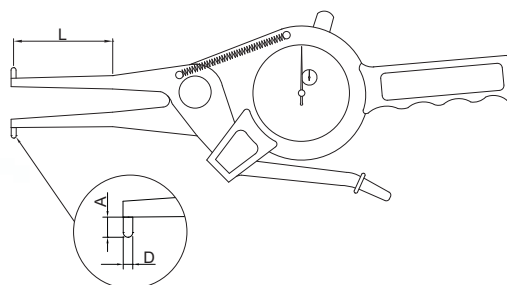
Unit: mm

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

INTERNAL DIAL CALIPER GAUGE

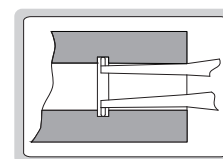


2321-35



(mm)

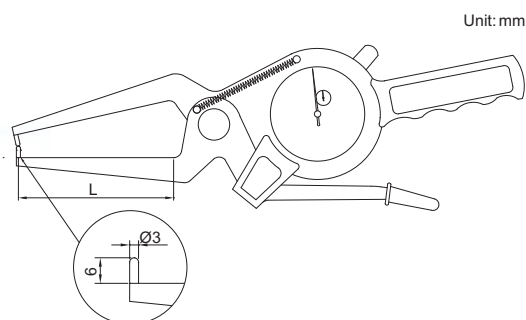
Code	Range	Graduation	Accuracy	L	A	D
2321-35	15-35mm	0.01mm	±0.04mm	50	3	Ø3
2321-AL35	15-35mm	0.01mm	±0.04mm	200	3	Ø3
2321-55	35-55mm	0.01mm	±0.04mm	80	6	Ø3
2321-AL55	35-55mm	0.01mm	±0.04mm	250	8	Ø3
2321-75	55-75mm	0.01mm	±0.04mm	90	8	Ø3
2321-AL75	55-75mm	0.01mm	±0.04mm	250	8	Ø3
2321-95	75-95mm	0.01mm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



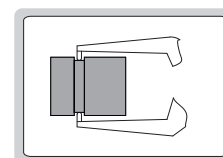
EXTERNAL DIAL CALIPER GAUGE



2332-20



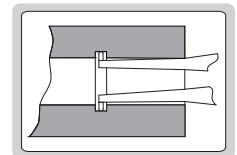
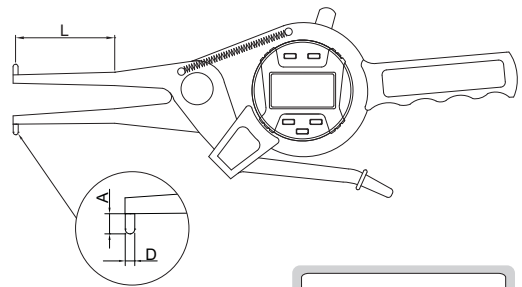
Code	Range	Graduation	Accuracy	L(mm)
2332-20	0-20mm	0.01mm	±0.04mm	60
2332-40	20-40mm	0.01mm	±0.04mm	60
2332-60	40-60mm	0.01mm	±0.04mm	55
2332-80	60-80mm	0.01mm	±0.04mm	55
2332-100	80-100mm	0.01mm	±0.04mm	55



DIGITAL INTERNAL CALIPER GAUGE



2151-35



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

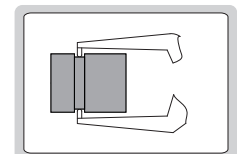
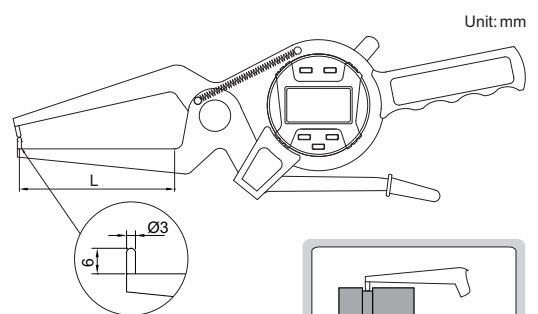
(mm)

- Reading in digit and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./range measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- USB data output
- Optional accessory: SPC cable (page A1-A2)

DIGITAL EXTERNAL CALIPER GAUGE



2132-20



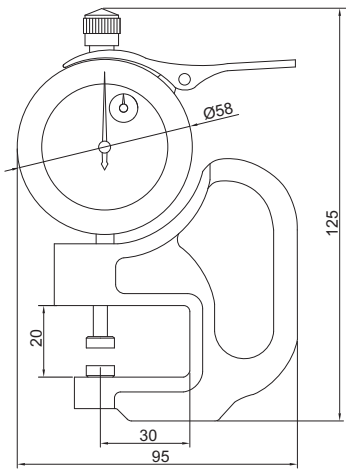
Code	Range	Resolution	Accuracy	L(mm)
2132-20	0-20mm/0-0.8"	0.01mm/0.0005"	±0.04mm	60
2132-40	20-40mm/0.8-1.6"	0.01mm/0.0005"	±0.04mm	60
2132-60	40-60mm/1.6-2.4"	0.01mm/0.0005"	±0.04mm	55
2132-80	60-80mm/2.4-3.2"	0.01mm/0.0005"	±0.04mm	55
2132-100	80-100mm/3.2-4"	0.01mm/0.0005"	±0.04mm	55

- Reading in digit and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./range measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- USB data output
- Optional accessory: SPC cable (page A1-A2)

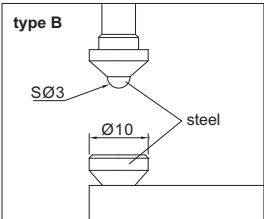
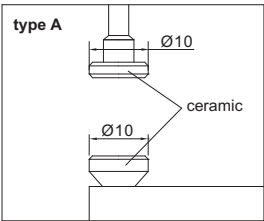
THICKNESS GAUGE



2364-10



Unit: mm

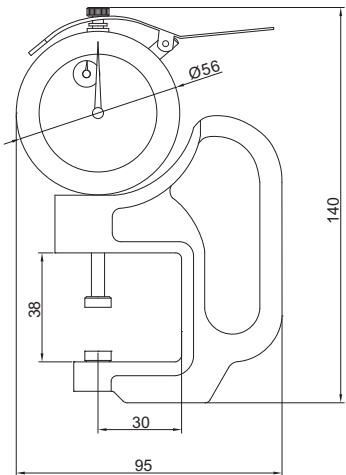


Code	Range	Graduation	Accuracy	Type
2364-10	0-10mm	0.01mm	±0.02mm	A
2364-10B	0-10mm	0.01mm	±0.02mm	B

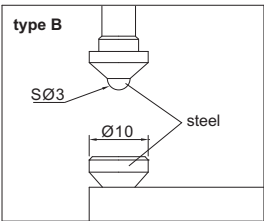
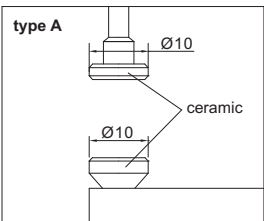
THICKNESS GAUGE



2366-30

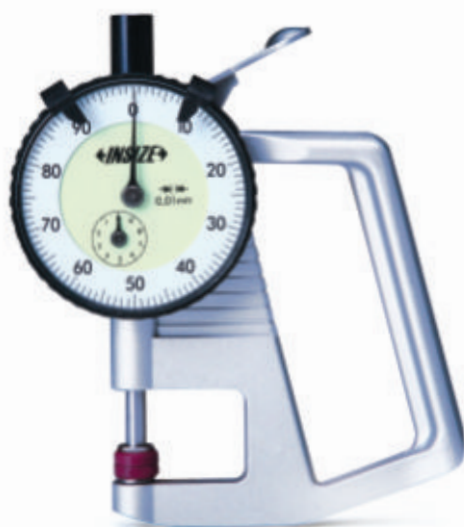


Unit: mm



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

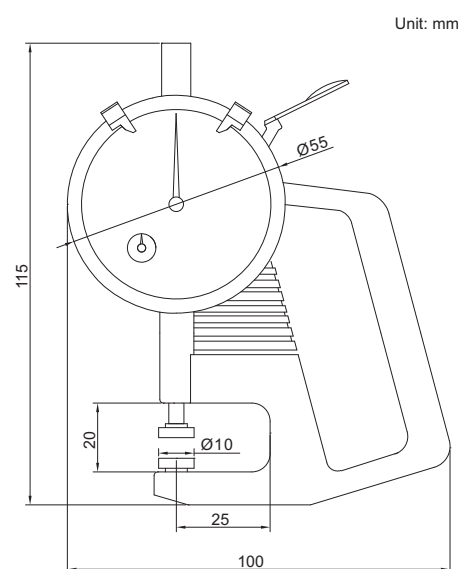
THICKNESS GAUGE



2861-10

- Ceramic spindle tip and anvil

Code	Range	Graduation	Accuracy
2861-10	0-10mm	0.01mm	±0.02mm



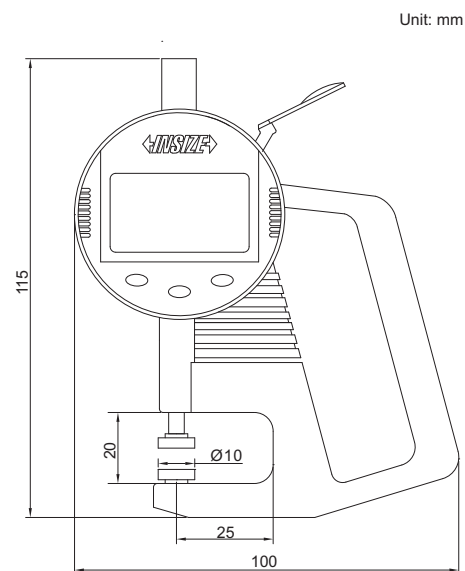
DIGITAL THICKNESS GAUGE



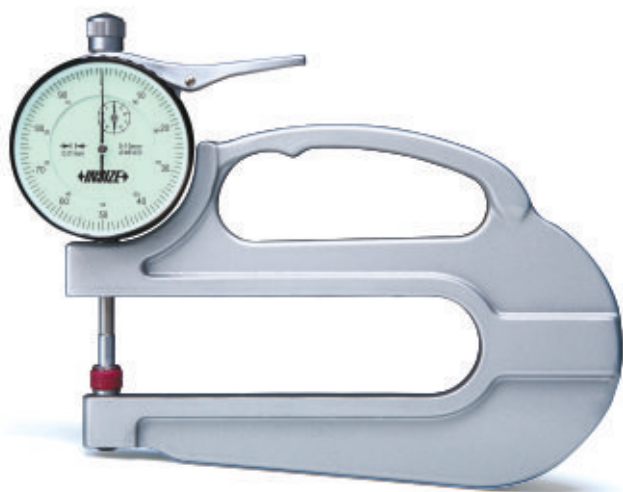
2867-10

- Ceramic spindle tip and anvil
- CR2032 battery

Code	Range	Resolution	Accuracy
2867-10	0-10mm/0.4"	0.01mm/0.0005"	±0.02mm

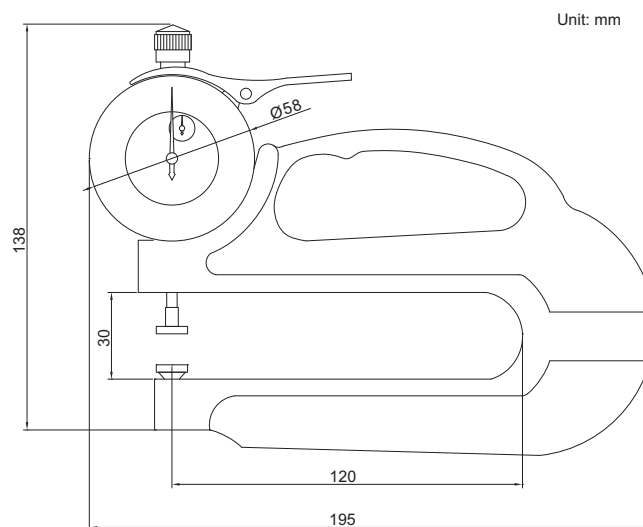


THICKNESS GAUGE

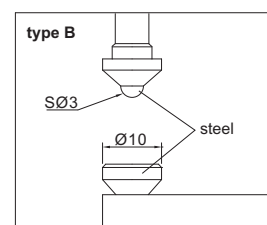
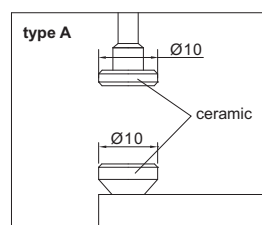


2365-10

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



Unit: mm



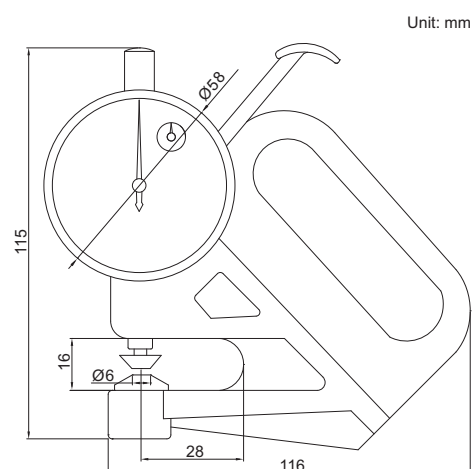
PRECISION THICKNESS GAUGE



2360-1

- Stainless steel spindle tip and anvil

Code	Range	Graduation	Accuracy
2360-1	0-1mm	0.001mm	±0.005mm



Unit: mm

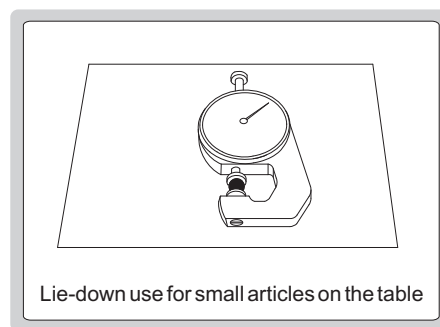
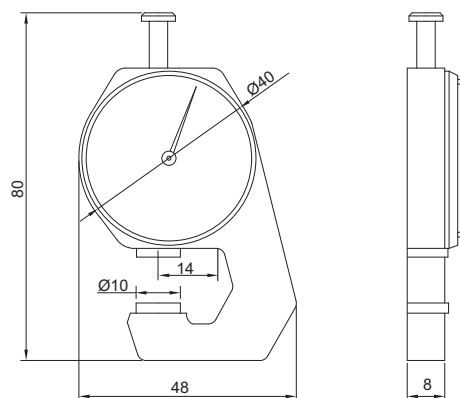
THICKNESS GAUGE



2361-10

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

Unit: mm



THICKNESS GAUGE

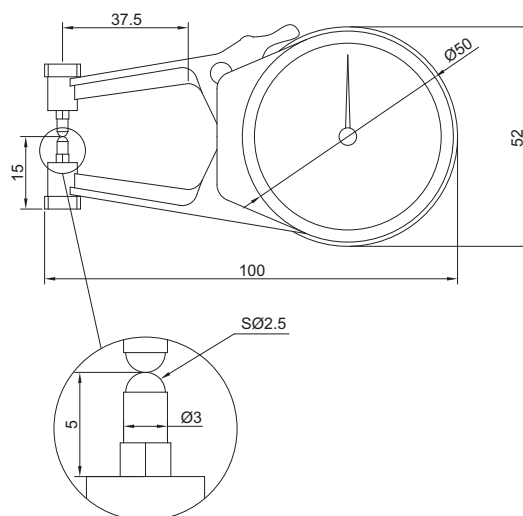


2870-10

- Made of hard plastic

Code	Range	Graduation	Accuracy
2870-10	0-10mm	0.1mm	±0.1mm

Unit: mm



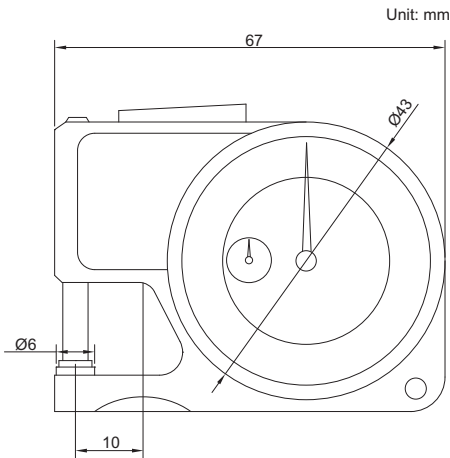
THICKNESS GAUGE



2363-10

- Stainless steel spindle tip and anvil

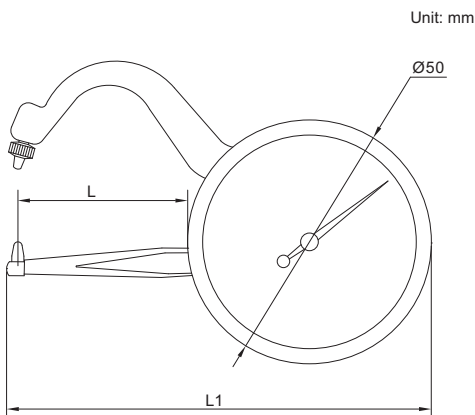
Code	Range	Graduation	Accuracy
2363-10	0-10mm	0.01mm	±0.02mm



THICKNESS GAUGE



2862-101



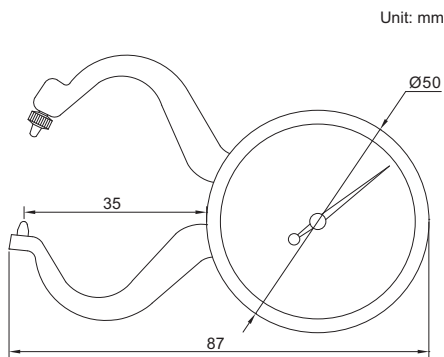
(mm)					
Code	Range	Graduation	Accuracy	L	L1
2862-101	0-10mm	0.05mm	±0.1mm	35	85
2862-102	0-10mm	0.05mm	±0.1mm	60	110

THICKNESS GAUGE



2863-10

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



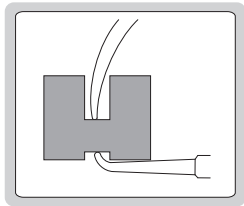
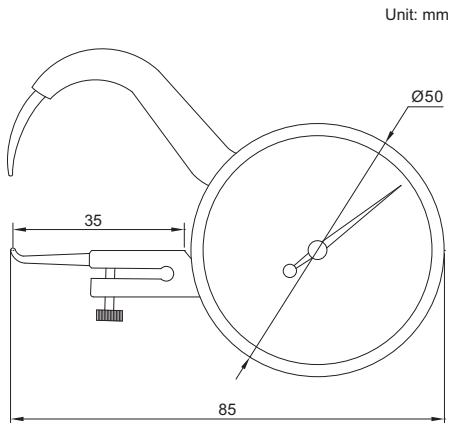
THICKNESS GAUGE WITH POINTED TIPS



2866-10

- Pointed tips fit into small grooves and recesses

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



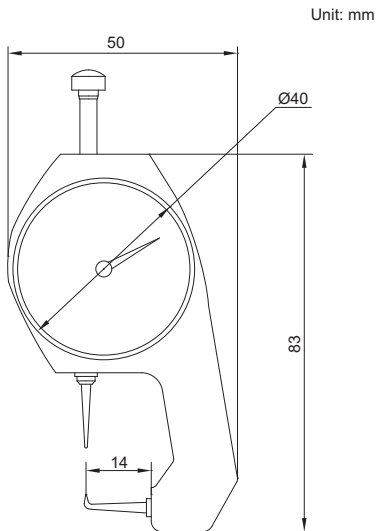
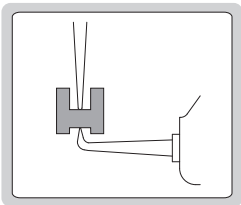
THICKNESS GAUGE WITH POINTED TIPS



2864-10

- Pointed tips fit into small grooves and recesses

Code	Range	Graduation	Accuracy
2864-10	0-10mm	0.1mm	±0.1mm



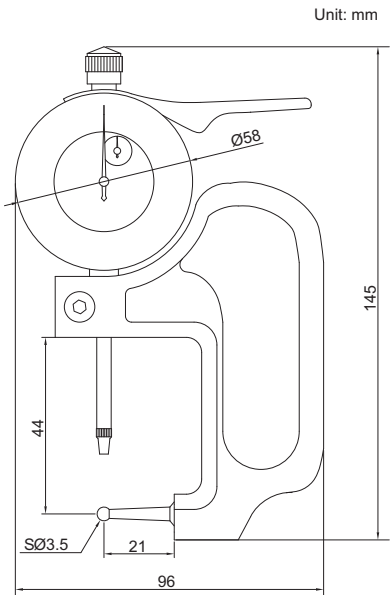
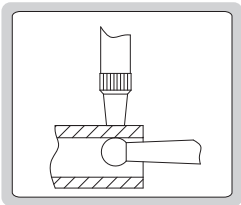
TUBE THICKNESS GAUGE



2367-10A

- Measure tube wall thickness

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

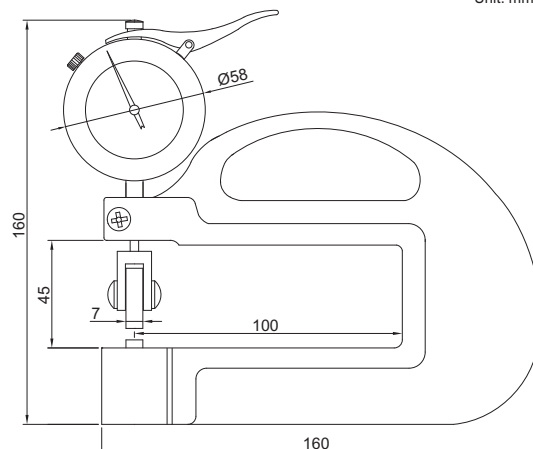


THICKNESS GAUGE WITH ROLLING WHEEL



2368-10

Unit: mm



- For continuous measurement

Code	Range	Graduation	Accuracy
2368-10	0-10mm	0.01mm	±0.025mm

SAW SETTING DIAL GAUGE



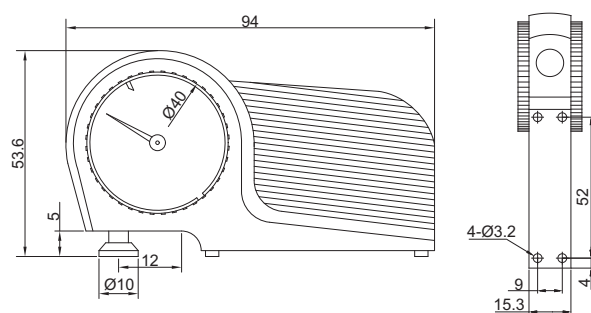
front



back

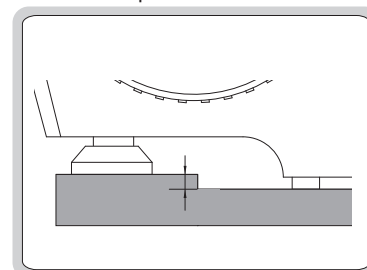
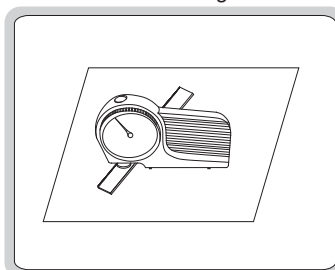
2869-2

Unit: mm



saw setting

step measurement



- For saw setting and step measurement
- Dial on both sides
- With limit hand

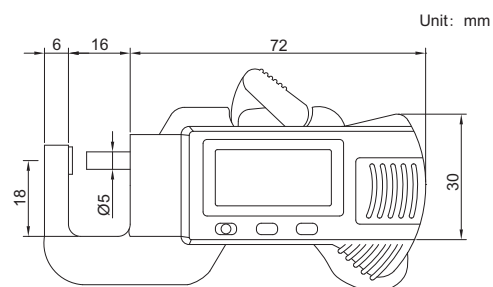
Code	Range	Graduation	Accuracy
2869-2	0-2mm	0.02mm	±0.02mm

DIGITAL SNAP GAUGE



2166-12

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

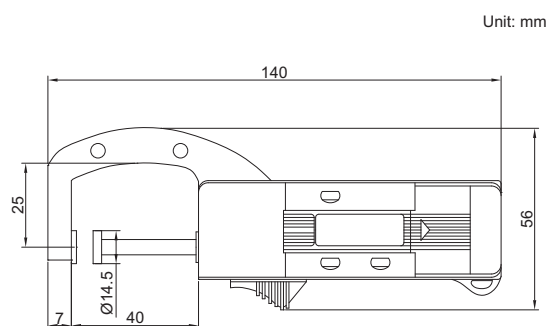


DIGITAL SNAP GAUGE



2167-25

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



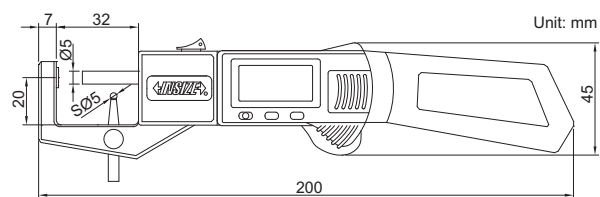
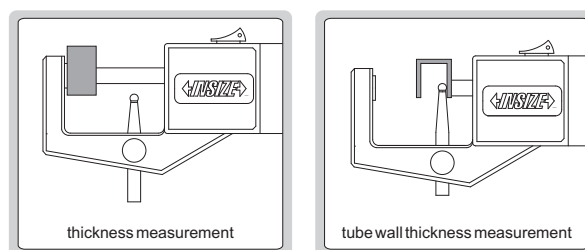
DIGITAL SNAP GAUGE



2163-25

- For thickness and tube wall thickness measurement

Code	Thickness range	Tube wall thickness range	Resolution	Accuracy
2163-25	0-25mm/0-1"	0-2mm/0.08"	0.01mm/0.0005"	±0.04mm



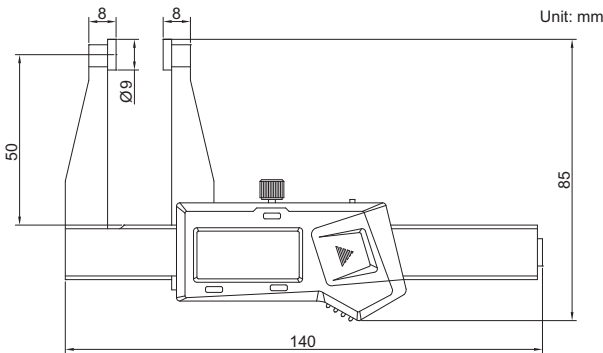
DIGITAL SNAP GAUGE



1163-50A

- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Optional accessory: SPC cable (page A1-A2)

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



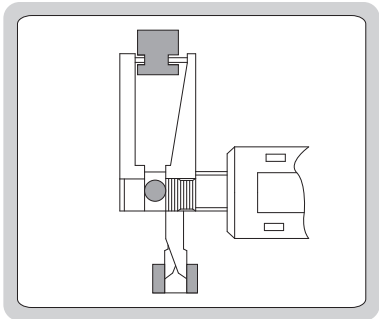
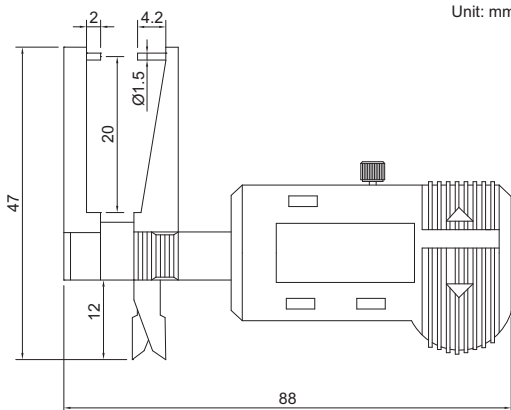
DIGITAL 3-PURPOSE SNAP GAUGE



2164-25

- Buttons: zero, mm/inch, on/off
- Battery SR44 or LR44
- Made of stainless steel

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

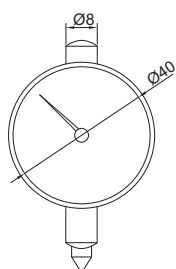


CRANKSHAFT TESTER

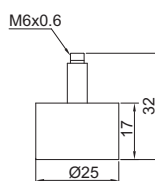
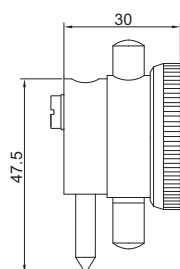


2841-500

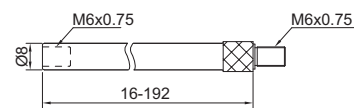
Unit: mm



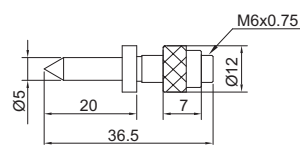
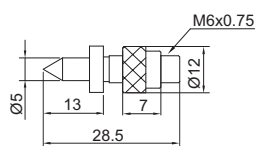
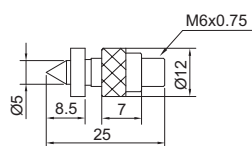
dial indicator



balance block

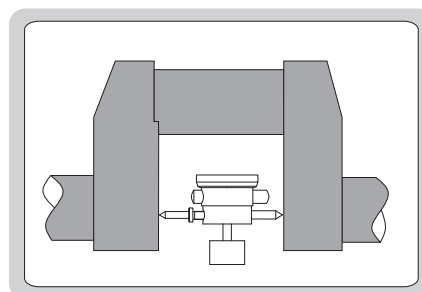


extension rods



anvils

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



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

DIGITAL RADIUS GAUGE



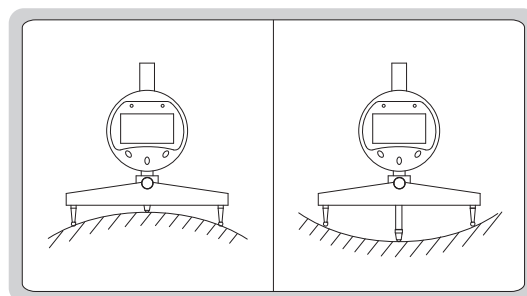
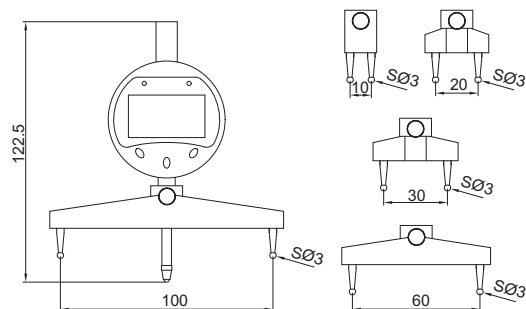
2183

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

Code	Range of radius (R)	Resolution	Accuracy(mm)
2183	5-700mm/0.2-27.5"	0.01mm/0.001"	±0.01R*

*R is the radius to be measured

Unit: mm



SPHERE RADIUS GAUGE



2392-100



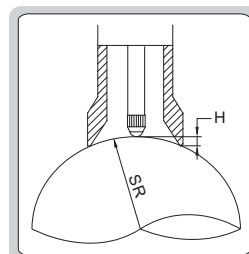
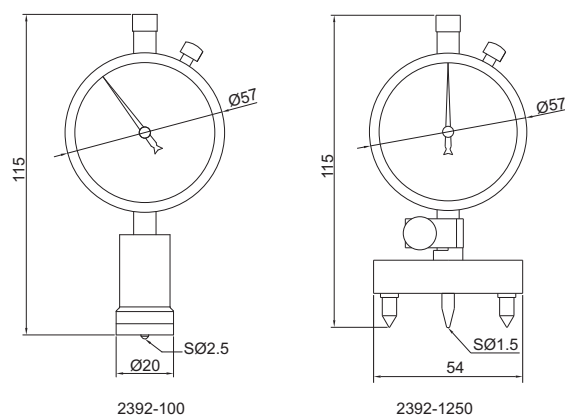
2392-1250

- Measure radius of sphere

Code	Range of radius (SR)	SR(mm)	Graduation	Accuracy(mm)
2392-100	15-100mm	$SR = 50/H + H/2$	0.01mm	$\pm 0.01SR(0.02SR + 1.1)^*$
2392-1250	325-1250mm	$SR = 312.5/H + H/2$	0.01mm	$\pm 0.01SR(0.001SR + 0.7)^*$

*SR is the radius to be measured

Unit: mm



GAUGE BLOCKS

Accuracy according to ISO3650

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

Grade and application

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

Inspection certificate



CERTIFICATE OF INSPECTION

CODE: 4193-32
GRADE: 0

GAUGE BLOCKS

Nominal Size (mm)	Identification No.	Deviation (µm)	Nominal Size (mm)	Identification No.	Deviation (µm)	Nominal Size (mm)	Identification No.	Deviation (µm)
1.005	118455	+0.04	1.20	108953	+0.08	4	115718	+0.08
1.01	119495	0.00	1.30	091140	+0.03	5	114033	-0.02
1.02	101529	+0.08	1.40	112170	-0.02	6	111940	+0.07
1.03	112955	+0.06	1.5	116887	-0.02	7	116970	0.00
1.04	112140	0.00	1.6	102449	+0.05	8	119266	+0.05
1.05	106748	0.00	1.7	114998	+0.07	9	114947	+0.02
1.06	113999	-0.03	1.8	101023	+0.02	10	111705	+0.08
1.07	092053	+0.03	1.9	111542	+0.05	20	115586	+0.02
1.08	111782	0.00	1	115273	0.00	30	101817	+0.09
1.09	108008	-0.02	2	114741	+0.05	50	115454	0.00
1.10	110489	+0.07	3	116618	+0.05			

Set Serial No.: 110019
Standard ISO3650

Material: Steel
Standard reference temperature: 20°C

Date: Jun. 08. 2011
Inspector: 

CERAMIC GAUGE BLOCK SET



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

4105-87

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

Blocks per set	Blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
47	1.005		1	4105-47A	4105-147A
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
	25-100	25	4		
47	1.005		1	4105-47	4105-147
	1.01-1.19	0.01	19		
	1.2-1.9	0.1	8		
	1-9	1	9		
	10-100	10	10		
46	1.001-1.009	0.001	9	4105-46	4105-146
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-100	10	10		
34	1.0005		1	4105-34	4105-134
	1.001-1.009	0.001	9		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-5	1	5		
32	1.005		1	4105-32	4105-132
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-30	10	3		
8	60		1	4105-8	4105-18
	125-175	25	3		
	200-250	50	2		
	300-500	100	3		

INDIVIDUAL CERAMIC GAUGE BLOCK



4106-A80

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

Code explanation:

4106-X□□□□□
 → A for grade 0
 → B for grade 1

Code examples:

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

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

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

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

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

STEEL GAUGE BLOCK SET



4100-87

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

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

To be continued

Continued from page H4

Blocks per set	Blocks included in set			Code		
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1	Grade 2
76	1.005		1	4100-76	4100-176	4100-276
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19			
	10-40	10	4			
	50-100	25	3			
56	0.5		1	4100-56	4100-156	4100-256
	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-24	1	24			
	25-100	25	4			
47	1.005		1	4100-47A	4100-147A	4100-247A
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-24	1	24			
	25-100	25	4			
47	1.005		1	4100-47	4100-147	4100-247
	1.01-1.19	0.01	19			
	1.2-1.9	0.1	8			
	1-9	1	9			
	10-100	10	10			
46	1.001-1.009	0.001	9	4100-46	4100-146	4100-246
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-9	1	9			
	10-100	10	10			
34	1.0005		1	4100-34	4100-134	4100-234
	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-5	1	5			
	10		1			
32	1.005		1	4100-32	4100-132	4100-232
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-9	1	9			
	10-30	10	3			
	60		1			
9	1.001-1.009	0.001	9	4100-9	4100-19	4100-29
9	0.991-0.999	0.001	9	4100-9A	4100-19A	4100-29A
8	125-175	25	3	4100-8	4100-18	4100-28
	200-250	50	2			
	300-500	100	3			

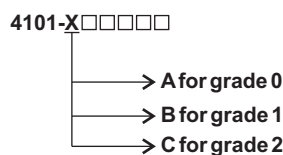
INDIVIDUAL STEEL GAUGE BLOCK



4101-A70

- Made of alloy steel
- Meet ISO3650
- Supplied with inspection certificate
- Grade 0 is not available from 0.25mm to 0.49mm

Code explanation:



Code examples:

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

Size	Code
0.25mm	4101- <u>XD</u> 25
0.26mm	4101- <u>XD</u> 26
0.27mm	4101- <u>XD</u> 27
0.28mm	4101- <u>XD</u> 28
0.29mm	4101- <u>XD</u> 29
0.3mm	4101- <u>XD</u> 3
0.31mm	4101- <u>XD</u> 31
0.32mm	4101- <u>XD</u> 32
0.33mm	4101- <u>XD</u> 33
0.34mm	4101- <u>XD</u> 34
0.35mm	4101- <u>XD</u> 35
0.36mm	4101- <u>XD</u> 36
0.37mm	4101- <u>XD</u> 37
0.38mm	4101- <u>XD</u> 38
0.39mm	4101- <u>XD</u> 39
0.4mm	4101- <u>XD</u> 4
0.41mm	4101- <u>XD</u> 41
0.42mm	4101- <u>XD</u> 42
0.43mm	4101- <u>XD</u> 43
0.44mm	4101- <u>XD</u> 44
0.45mm	4101- <u>XD</u> 45
0.46mm	4101- <u>XD</u> 46
0.47mm	4101- <u>XD</u> 47
0.48mm	4101- <u>XD</u> 48
0.49mm	4101- <u>XD</u> 49
0.5mm	4101- <u>XD</u> 5
0.51mm	4101- <u>XD</u> 51
0.52mm	4101- <u>XD</u> 52
0.53mm	4101- <u>XD</u> 53
0.54mm	4101- <u>XD</u> 54

Size	Code
0.55mm	4101- <u>XD</u> 55
0.56mm	4101- <u>XD</u> 56
0.57mm	4101- <u>XD</u> 57
0.58mm	4101- <u>XD</u> 58
0.59mm	4101- <u>XD</u> 59
0.6mm	4101- <u>XD</u> 6
0.61mm	4101- <u>XD</u> 61
0.62mm	4101- <u>XD</u> 62
0.63mm	4101- <u>XD</u> 63
0.64mm	4101- <u>XD</u> 64
0.65mm	4101- <u>XD</u> 65
0.66mm	4101- <u>XD</u> 66
0.67mm	4101- <u>XD</u> 67
0.68mm	4101- <u>XD</u> 68
0.69mm	4101- <u>XD</u> 69
0.7mm	4101- <u>XD</u> 7
0.71mm	4101- <u>XD</u> 71
0.72mm	4101- <u>XD</u> 72
0.73mm	4101- <u>XD</u> 73
0.74mm	4101- <u>XD</u> 74
0.75mm	4101- <u>XD</u> 75
0.76mm	4101- <u>XD</u> 76
0.77mm	4101- <u>XD</u> 77
0.78mm	4101- <u>XD</u> 78
0.79mm	4101- <u>XD</u> 79
0.8mm	4101- <u>XD</u> 8
0.81mm	4101- <u>XD</u> 81
0.82mm	4101- <u>XD</u> 82
0.83mm	4101- <u>XD</u> 83
0.84mm	4101- <u>XD</u> 84

Size	Code
0.85mm	4101- <u>XD</u> 85
0.86mm	4101- <u>XD</u> 86
0.87mm	4101- <u>XD</u> 87
0.88mm	4101- <u>XD</u> 88
0.89mm	4101- <u>XD</u> 89
0.9mm	4101- <u>XD</u> 9
0.91mm	4101- <u>XD</u> 91
0.92mm	4101- <u>XD</u> 92
0.93mm	4101- <u>XD</u> 93
0.94mm	4101- <u>XD</u> 94
0.95mm	4101- <u>XD</u> 95
0.96mm	4101- <u>XD</u> 96
0.97mm	4101- <u>XD</u> 97
0.98mm	4101- <u>XD</u> 98
0.99mm	4101- <u>XD</u> 99
0.991mm	4101- <u>XD</u> 991
0.992mm	4101- <u>XD</u> 992
0.993mm	4101- <u>XD</u> 993
0.994mm	4101- <u>XD</u> 994
0.995mm	4101- <u>XD</u> 995
0.996mm	4101- <u>XD</u> 996
0.997mm	4101- <u>XD</u> 997
0.998mm	4101- <u>XD</u> 998
0.999mm	4101- <u>XD</u> 999
1mm	4101- <u>X</u> 1
1.0005mm	4101- <u>X</u> 1D0005
1.001mm	4101- <u>X</u> 1D001
1.002mm	4101- <u>X</u> 1D002
1.003mm	4101- <u>X</u> 1D003
1.004mm	4101- <u>X</u> 1D004

Size	Code
1.005mm	4101- <u>X</u> 1D005
1.006mm	4101- <u>X</u> 1D006
1.007mm	4101- <u>X</u> 1D007
1.008mm	4101- <u>X</u> 1D008
1.009mm	4101- <u>X</u> 1D009
1.01mm	4101- <u>X</u> 1D01
1.02mm	4101- <u>X</u> 1D02
1.03mm	4101- <u>X</u> 1D03
1.04mm	4101- <u>X</u> 1D04
1.05mm	4101- <u>X</u> 1D05
1.06mm	4101- <u>X</u> 1D06
1.07mm	4101- <u>X</u> 1D07
1.08mm	4101- <u>X</u> 1D08
1.09mm	4101- <u>X</u> 1D09
1.1mm	4101- <u>X</u> 1D1
1.11mm	4101- <u>X</u> 1D11
1.12mm	4101- <u>X</u> 1D12
1.13mm	4101- <u>X</u> 1D13
1.14mm	4101- <u>X</u> 1D14
1.15mm	4101- <u>X</u> 1D15
1.16mm	4101- <u>X</u> 1D16
1.17mm	4101- <u>X</u> 1D17
1.18mm	4101- <u>X</u> 1D18
1.19mm	4101- <u>X</u> 1D19
1.2mm	4101- <u>X</u> 1D2
1.21mm	4101- <u>X</u> 1D21
1.22mm	4101- <u>X</u> 1D22
1.23mm	4101- <u>X</u> 1D23
1.24mm	4101- <u>X</u> 1D24
1.25mm	4101- <u>X</u> 1D25

To be continued

Continued from page H6

Size	Code
1.26mm	4101-X1D26
1.27mm	4101-X1D27
1.28mm	4101-X1D28
1.29mm	4101-X1D29
1.3mm	4101-X1D3
1.31mm	4101-X1D31
1.32mm	4101-X1D32
1.33mm	4101-X1D33
1.34mm	4101-X1D34
1.35mm	4101-X1D35
1.36mm	4101-X1D36
1.37mm	4101-X1D37
1.38mm	4101-X1D38
1.39mm	4101-X1D39
1.4mm	4101-X1D4
1.41mm	4101-X1D41
1.42mm	4101-X1D42
1.43mm	4101-X1D43
1.44mm	4101-X1D44
1.45mm	4101-X1D45
1.46mm	4101-X1D46
1.47mm	4101-X1D47
1.48mm	4101-X1D48
1.49mm	4101-X1D49
1.5mm	4101-X1D5
1.6mm	4101-X1D6
1.7mm	4101-X1D7
1.8mm	4101-X1D8
1.9mm	4101-X1D9
2mm	4101-X2
2.0005mm	4101-X2D0005
2.001mm	4101-X2D001
2.002mm	4101-X2D002
2.003mm	4101-X2D003
2.004mm	4101-X2D004
2.005mm	4101-X2D005
2.006mm	4101-X2D006
2.007mm	4101-X2D007
2.008mm	4101-X2D008
2.009mm	4101-X2D009
2.01mm	4101-X2D01
2.02mm	4101-X2D02
2.03mm	4101-X2D03
2.04mm	4101-X2D04

Size	Code
2.05mm	4101-X2D05
2.06mm	4101-X2D06
2.07mm	4101-X2D07
2.08mm	4101-X2D08
2.09mm	4101-X2D09
2.1mm	4101-X2D1
2.11mm	4101-X2D11
2.12mm	4101-X2D12
2.13mm	4101-X2D13
2.14mm	4101-X2D14
2.15mm	4101-X2D15
2.16mm	4101-X2D16
2.17mm	4101-X2D17
2.18mm	4101-X2D18
2.19mm	4101-X2D19
2.2mm	4101-X2D2
2.21mm	4101-X2D21
2.22mm	4101-X2D22
2.23mm	4101-X2D23
2.24mm	4101-X2D24
2.25mm	4101-X2D25
2.26mm	4101-X2D26
2.27mm	4101-X2D27
2.28mm	4101-X2D28
2.29mm	4101-X2D29
2.3mm	4101-X2D3
2.31mm	4101-X2D31
2.32mm	4101-X2D32
2.33mm	4101-X2D33
2.34mm	4101-X2D34
2.35mm	4101-X2D35
2.36mm	4101-X2D36
2.37mm	4101-X2D37
2.38mm	4101-X2D38
2.39mm	4101-X2D39
2.4mm	4101-X2D4
2.41mm	4101-X2D41
2.42mm	4101-X2D42
2.43mm	4101-X2D43
2.44mm	4101-X2D44
2.45mm	4101-X2D45
2.46mm	4101-X2D46
2.47mm	4101-X2D47
2.48mm	4101-X2D48

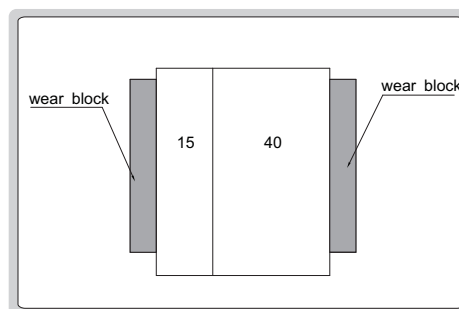
Size	Code
2.49mm	4101-X2D49
2.5mm	4101-X2D5
2.6mm	4101-X2D6
2.7mm	4101-X2D7
2.8mm	4101-X2D8
2.9mm	4101-X2D9
3mm	4101-X3
3.5mm	4101-X3D5
4mm	4101-X4
4.5mm	4101-X4D5
5mm	4101-X5
5.1mm	4101-X5D1
5.5mm	4101-X5D5
6mm	4101-X6
6.5mm	4101-X6D5
7mm	4101-X7
7.5mm	4101-X7D5
7.7mm	4101-X7D7
8mm	4101-X8
8.5mm	4101-X8D5
9mm	4101-X9
9.5mm	4101-X9D5
10mm	4101-X10
10.3mm	4101-X10D3
10.5mm	4101-X10D5
11mm	4101-X11
11.5mm	4101-X11D5
12mm	4101-X12
12.5mm	4101-X12D5
12.9mm	4101-X12D9
13mm	4101-X13
13.5mm	4101-X13D5
14mm	4101-X14
14.5mm	4101-X14D5
15mm	4101-X15
15.5mm	4101-X15D5
16mm	4101-X16
16.5mm	4101-X16D5
17mm	4101-X17
17.5mm	4101-X17D5
17.6mm	4101-X17D6
18mm	4101-X18
18.5mm	4101-X18D5
19mm	4101-X19

Size	Code
19.5mm	4101-X19D5
20mm	4101-X20
20.2mm	4101-X20D2
20.5mm	4101-X20D5
21mm	4101-X21
21.5mm	4101-X21D5
22mm	4101-X22
22.5mm	4101-X22D5
22.8mm	4101-X22D8
23mm	4101-X23
23.5mm	4101-X23D5
24mm	4101-X24
24.5mm	4101-X24D5
25mm	4101-X25
25.25mm	4101-X25D25
30mm	4101-X30
35mm	4101-X35
40mm	4101-X40
41.3mm	4101-X41D3
45mm	4101-X45
50mm	4101-X50
60mm	4101-X60
70mm	4101-X70
75mm	4101-X75
80mm	4101-X80
90mm	4101-X90
100mm	4101-X100
125mm	4101-X125
131.4mm	4101-X131D4
150mm	4101-X150
175mm	4101-X175
200mm	4101-X200
250mm	4101-X250
300mm	4101-X300
400mm	4101-X400
500mm	4101-X500
600mm	4101-X600
700mm	4101-X700
750mm	4101-X750
800mm	4101-X800
900mm	4101-X900
1000mm	4101-X1000

WEAR BLOCK SET



4111-2



Blocks per set	Size	Material	Code	
			Grade 0	Grade 1
2	1.0mm	ceramic	4111-1	4111-11
2	1.0mm	alloy steel	4111-1A	4111-11A
2	2.0mm	ceramic	4111-2	4111-12
2	2.0mm	alloy steel	4111-2A	4111-12A

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

MICROMETER INSPECTION GAUGE BLOCK SET



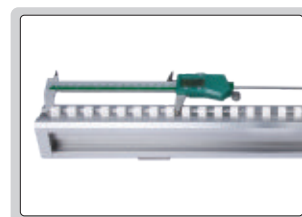
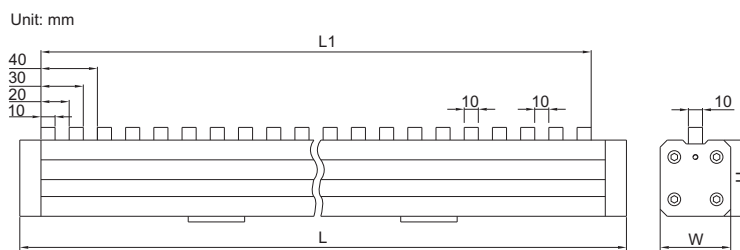
4107-10

- One piece of optical parallel in each set
- Meet ISO3650/grade 0

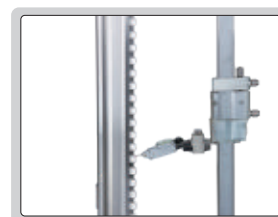
Code	Material	Blocks and parallel included in set	Applicable micrometer
4107-10	ceramic	2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm, optical parallel	0-25mm
4107-101	alloy steel	2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm, optical parallel	0-25mm

CHECK MASTER

6882-600A



horizontal orientation



vertical orientation

- To check the accuracy of table movement of machine tools, to calibrate height gauges and CMMs
- Ceramic gauge blocks
- Can be used in either vertical and horizontal orientation
- Supplied with inspection certificate

(mm)

Code	Range	Step	Accuracy	Parallelism of blocks	L	L1	H	W
6882-300A	300mm	10mm	±2.5µm	1.2µm	350	310	49	45
6882-450A	450mm	10mm	±3.5µm	1.5µm	510	470	54	50
6882-600A	600mm	10mm	±3.5µm	1.5µm	650	610	54	50

ANGLE GAUGE BLOCK SET

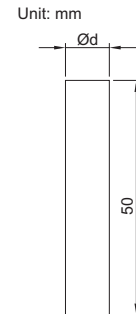
Code	Blocks per set	Angle	Step	Quantity
4109-7A	7	15°10'		1
		30°20'		1
		45°30'		1
		50°		1
		60°40'		1
		75°50'		1
		90°/90°/90°/90°		1
4109-36A	36	10° - 20°	1°	11
		30° - 70°	10°	5
		45°		1
		15°10' - 15°50'	10'	5
		15°1' - 15°9'	1'	9
		10°00'30"		1
		80°/81°/100°/99°		1
		89°10'/89°20'/90°50'/90°40'		1
		89°30'/89°40'/90°30'/90°20'		1
		90°/90°/90°/90°		1



4109-7A

- Standard for angle measurement
- Accuracy ±10"

PIN GAUGE SET



4166-6D

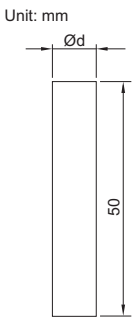
- Made of alloy steel
- Hardness HRC62-65

Code	Diameter Ød(mm)	Step	Pin gauges per set	Diameter accuracy
4166-0D	0.20, 0.21, 0.22, ..., 0.50	0.01mm	31	±1µm
4166-1	0.50, 0.51, 0.52, ..., 1.00	0.01mm	51	±1µm
4166-1D	1.00, 1.01, 1.02, ..., 1.50	0.01mm	51	±1µm
4166-2	1.50, 1.51, 1.52, ..., 2.00	0.01mm	51	±1µm
4166-2D	2.00, 2.01, 2.02, ..., 2.50	0.01mm	51	±1µm
4166-3	2.50, 2.51, 2.52, ..., 3.00	0.01mm	51	±1µm
4166-3D	3.00, 3.01, 3.02, ..., 3.50	0.01mm	51	±1µm
4166-4	3.50, 3.51, 3.52, ..., 4.00	0.01mm	51	±1µm
4166-4D	4.00, 4.01, 4.02, ..., 4.50	0.01mm	51	±1µm
4166-5	4.50, 4.51, 4.52, ..., 5.00	0.01mm	51	±1µm
4166-5D	5.00, 5.01, 5.02, ..., 5.50	0.01mm	51	±1µm
4166-6	5.50, 5.51, 5.52, ..., 6.00	0.01mm	51	±1µm
4166-6D	6.00, 6.01, 6.02, ..., 6.50	0.01mm	51	±1µm
4166-7	6.50, 6.51, 6.52, ..., 7.00	0.01mm	51	±1µm
4166-7D	7.00, 7.01, 7.02, ..., 7.50	0.01mm	51	±1µm
4166-8	7.50, 7.51, 7.52, ..., 8.00	0.01mm	51	±1µm
4166-8D	8.00, 8.01, 8.02, ..., 8.50	0.01mm	51	±1µm
4166-9	8.50, 8.51, 8.52, ..., 9.00	0.01mm	51	±1µm
4166-9D	9.00, 9.01, 9.02, ..., 9.50	0.01mm	51	±1µm
4166-10	9.50, 9.51, 9.52, ..., 10.00	0.01mm	51	±1µm
4166-411	1.0, 1.1, 1.2, ..., 5.0	0.1mm	41	±1µm
4166-511	5.0, 5.1, 5.2, ..., 10.0	0.1mm	51	±1µm

INDIVIDUAL PIN GAUGE



4110-9D98



- Diameter range: $\varnothing 0.20 - \varnothing 10.00$ mm
- Diameter accuracy: $\pm 1\mu\text{m}$
- Made of alloy steel
- Hardness HRC62-65
- Optional accessory: wooden box (code **7340**)

Code
4110-xxxx

Ordering examples:

Diameter	Code
0.21mm	4110-0D21
5.56mm	4110-5D56
8.00mm	4110-8D00

Note: "D" stands for "."

Diameter $\varnothing d$ (mm)	
0.20, 0.21, 0.22, 0.23, ...	1.00
1.01, 1.02, 1.03, 1.04, ...	2.00
2.01, 2.02, 2.03, 2.04, ...	3.00
3.01, 3.02, 3.03, 3.04, ...	4.00
4.01, 4.02, 4.03, 4.04, ...	5.00
5.01, 5.02, 5.03, 5.04, ...	6.00
6.01, 6.02, 6.03, 6.04, ...	7.00
7.01, 7.02, 7.03, 7.04, ...	8.00
8.01, 8.02, 8.03, 8.04, ...	9.00
9.01, 9.02, 9.03, 9.04, ...	10.00

BOX FOR PIN GAUGES



7340

- Accept maximum 51 individual pin gauges(series **4110**)

Code
7340

PLAIN PLUG GAUGE

- Supplied with Go and No-Go gauges together
- Class H7
- Hardness HRC 60±2

Code	Size	Code	Size
4124-2	2mm	4124-24	24mm
4124-3	3mm	4124-27	27mm
4124-4	4mm	4124-30	30mm
4124-5	5mm	4124-32	32mm
4124-6	6mm	4124-35	35mm
4124-8	8mm	4124-40	40mm
4124-10	10mm	4124-42	42mm
4124-12	12mm	4124-45	45mm
4124-14	14mm	4124-50	50mm
4124-15	15mm	4124-55	55mm
4124-18	18mm	4124-60	60mm
4124-20	20mm		



4124-10

THREAD PLUG GAUGE



4130-10

- Supplied with Go and No-Go gauges together
- Class 6H
- Standard ISO1502

Individual

Code	Size(mm)
4130-2	M2x0.4
4130-2D2	M2.2x0.45
4130-2D5	M2.5x0.45
4130-3	M3x0.5
4130-3D5	M3.5x0.6
4130-4	M4x0.7
4130-5	M5x0.8
4130-6	M6x1

Code	Size(mm)
4130-7	M7x1
4130-8	M8x1.25
4130-9	M9x1.25
4130-10	M10x1.5
4130-11	M11x1.5
4130-12	M12x1.75
4130-14	M14x2
4130-16	M16x2

Code	Size(mm)
4130-18	M18x2.5
4130-20	M20x2.5
4130-22	M22x2.5
4130-24	M24x3
4130-27	M27x3
4130-30	M30x3.5
4130-33	M33x3.5
4130-36	M36x4

Code	Size(mm)
4130-39	M39x4
4130-42	M42x4.5
4130-45	M45x4.5
4130-48	M48x5
4130-52	M52x5
4130-56	M56x5.5
4130-60	M60x5.5

Set

Code	Thread plug gauges included
4130-S7	M3x0.5(4130-3), M4x0.7(4130-4), M5x0.8(4130-5), M6x1(4130-6), M8x1.25(4130-8), M10x1.5(4130-10), M12x1.75(4130-12)

FINE THREAD PLUG GAUGE



4139-20R

- Supplied with Go and No-Go gauges together
- Class 6H
- Standard ISO1502

Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)
4139-2B	M2x0.25	4139-11L	M11x0.75	4139-20L	M20x0.75	4139-33L	M33x0.75	4139-45X	M45x4
4139-2D2B	M2.2x0.25	4139-11P	M11x1	4139-20P	M20x1	4139-33P	M33x1	4139-48P	M48x1
4139-2D5D	M2.5x0.35	4139-12G	M12x0.5	4139-20R	M20x1.5	4139-33R	M33x1.5	4139-48R	M48x1.5
4139-3D	M3x0.35	4139-12L	M12x0.75	4139-20T	M20x2	4139-33T	M33x2	4139-48T	M48x2
4139-3D5D	M3.5x0.35	4139-12P	M12x1	4139-22G	M22x0.5	4139-33V	M33x3	4139-48V	M48x3
4139-4G	M4x0.5	4139-12Q	M12x1.25	4139-22L	M22x0.75	4139-36P	M36x1	4139-48X	M48x4
4139-5G	M5x0.5	4139-12R	M12x1.5	4139-22P	M22x1	4139-36R	M36x1.5	4139-52P	M52x1
4139-6G	M6x0.5	4139-14G	M14x0.5	4139-22R	M22x1.5	4139-36T	M36x2	4139-52R	M52x1.5
4139-6L	M6x0.75	4139-14L	M14x0.75	4139-22T	M22x2	4139-36V	M36x3	4139-52T	M52x2
4139-7G	M7x0.5	4139-14P	M14x1	4139-24L	M24x0.75	4139-39P	M39x1	4139-52V	M52x3
4139-7L	M7x0.75	4139-14Q	M14x1.25	4139-24P	M24x1	4139-39R	M39x1.5	4139-52X	M52x4
4139-8G	M8x0.5	4139-14R	M14x1.5	4139-24R	M24x1.5	4139-39T	M39x2	4139-56P	M56x1
4139-8L	M8x0.75	4139-16G	M16x0.5	4139-24T	M24x2	4139-39V	M39x3	4139-56R	M56x1.5
4139-8P	M8x1	4139-16L	M16x0.75	4139-27L	M27x0.75	4139-42P	M42x1	4139-56T	M56x2
4139-9G	M9x0.5	4139-16P	M16x1	4139-27P	M27x1	4139-42R	M42x1.5	4139-56V	M56x3
4139-9L	M9x0.75	4139-16R	M16x1.5	4139-27R	M27x1.5	4139-42T	M42x2	4139-56X	M56x4
4139-9P	M9x1	4139-18G	M18x0.5	4139-27T	M27x2	4139-42V	M42x3	4139-60P	M60x1
4139-10G	M10x0.5	4139-18L	M18x0.75	4139-30L	M30x0.75	4139-42X	M42x4	4139-60R	M60x1.5
4139-10L	M10x0.75	4139-18P	M18x1	4139-30P	M30x1	4139-45P	M45x1	4139-60T	M60x2
4139-10P	M10x1	4139-18R	M18x1.5	4139-30R	M30x1.5	4139-45R	M45x1.5	4139-60V	M60x3
4139-10Q	M10x1.25	4139-18T	M18x2	4139-30T	M30x2	4139-45T	M45x2	4139-60X	M60x4
4139-11G	M11x0.5	4139-20G	M20x0.5	4139-30V	M30x3	4139-45V	M45x3		

THREAD RING GAUGE



4120-20



4120-20N

- Go and No-Go gauges are supplied separately
- Class 6g
- Standard ISO1502

Individual

Code Go	Code No Go	Size(mm)
4120-2	4120-2N	M2x0.4
4120-2D2	4120-2D2N	M2.2x0.45
4120-2D5	4120-2D5N	M2.5x0.45
4120-3	4120-3N	M3x0.5
4120-3D5	4120-3D5N	M3.5x0.6
4120-4	4120-4N	M4x0.7
4120-5	4120-5N	M5x0.8
4120-6	4120-6N	M6x1
4120-7	4120-7N	M7x1
4120-8	4120-8N	M8x1.25
4120-9	4120-9N	M9x1.25

Code Go	Code No Go	Size(mm)
4120-10	4120-10N	M10x1.5
4120-11	4120-11N	M11x1.5
4120-12	4120-12N	M12x1.75
4120-14	4120-14N	M14x2
4120-16	4120-16N	M16x2
4120-18	4120-18N	M18x2.5
4120-20	4120-20N	M20x2.5
4120-22	4120-22N	M22x2.5
4120-24	4120-24N	M24x3
4120-27	4120-27N	M27x3
4120-30	4120-30N	M30x3.5

Code Go	Code No Go	Size(mm)
4120-33	4120-33N	M33x3.5
4120-36	4120-36N	M36x4
4120-39	4120-39N	M39x4
4120-42	4120-42N	M42x4.5
4120-45	4120-45N	M45x4.5
4120-48	4120-48N	M48x5
4120-52	4120-52N	M52x5
4120-56	4120-56N	M56x5.5
4120-60	4120-60N	M60x5.5

Go ring gauge set

Code	Thread ring gauges included
4120-S7	M3x0.5(4120-3), M4x0.7(4120-4), M5x0.8(4120-5), M6x1(4120-6), M8x1.25(4120-8), M10x1.5(4120-10), M12x1.75(4120-12)

No Go ring gauge set

Code	Thread ring gauges included
4120-S7N	M3x0.5(4120-3N), M4x0.7(4120-4N), M5x0.8(4120-5N), M6x1(4120-6N), M8x1.25(4120-8N), M10x1.5(4120-10N), M12x1.75(4120-12N)

FINE THREAD RING GAUGE



4129-20R

4129-20RN

- Go and No-Go gauges are supplied separately
- Class 6g
- Standard ISO1502

Code Go	Code No Go	Size(mm)
4129-2B	4129-2BN	M2x0.25
4129-2D2B	4129-2D2BN	M2.2x0.25
4129-2D5D	4129-2D5DN	M2.5x0.35
4129-3D	4129-3DN	M3x0.35
4129-3D5D	4129-3D5DN	M3.5x0.35
4129-4G	4129-4GN	M4x0.5
4129-5G	4129-5GN	M5x0.5
4129-6G	4129-6GN	M6x0.5
4129-6L	4129-6LN	M6x0.75
4129-7G	4129-7GN	M7x0.5
4129-7L	4129-7LN	M7x0.75
4129-8G	4129-8GN	M8x0.5
4129-8L	4129-8LN	M8x0.75
4129-8P	4129-8PN	M8x1
4129-9G	4129-9GN	M9x0.5
4129-9L	4129-9LN	M9x0.75
4129-9P	4129-9PN	M9x1
4129-10G	4129-10GN	M10x0.5
4129-10L	4129-10LN	M10x0.75
4129-10P	4129-10PN	M10x1
4129-10Q	4129-10QN	M10x1.25
4129-11G	4129-11GN	M11x0.5
4129-11L	4129-11LN	M11x0.75
4129-11P	4129-11PN	M11x1
4129-12G	4129-12GN	M12x0.5
4129-12L	4129-12LN	M12x0.75
4129-12P	4129-12PN	M12x1
4129-12Q	4129-12QN	M12x1.25
4129-12R	4129-12RN	M12x1.5
4129-14G	4129-14GN	M14x0.5
4129-14L	4129-14LN	M14x0.75
4129-14P	4129-14PN	M14x1
4129-14Q	4129-14QN	M14x1.25
4129-14R	4129-14RN	M14x1.5
4129-16G	4129-16GN	M16x0.5
4129-16L	4129-16LN	M16x0.75
4129-16P	4129-16PN	M16x1

Code Go	Code No Go	Size(mm)
4129-16R	4129-16RN	M16x1.5
4129-18G	4129-18GN	M18x0.5
4129-18L	4129-18LN	M18x0.75
4129-18P	4129-18PN	M18x1
4129-18R	4129-18RN	M18x1.5
4129-18T	4129-18TN	M18x2
4129-20G	4129-20GN	M20x0.5
4129-20L	4129-20LN	M20x0.75
4129-20P	4129-20PN	M20x1
4129-20R	4129-20RN	M20x1.5
4129-20T	4129-20TN	M20x2
4129-22G	4129-22GN	M22x0.5
4129-22L	4129-22LN	M22x0.75
4129-22P	4129-22PN	M22x1
4129-22R	4129-22RN	M22x1.5
4129-22T	4129-22TN	M22x2
4129-24L	4129-24LN	M24x0.75
4129-24P	4129-24PN	M24x1
4129-24R	4129-24RN	M24x1.5
4129-24T	4129-24TN	M24x2
4129-27L	4129-27LN	M27x0.75
4129-27P	4129-27PN	M27x1
4129-27R	4129-27RN	M27x1.5
4129-27T	4129-27TN	M27x2
4129-30L	4129-30LN	M30x0.75
4129-30P	4129-30PN	M30x1
4129-30R	4129-30RN	M30x1.5
4129-30T	4129-30TN	M30x2
4129-30V	4129-30VN	M30x3
4129-33L	4129-33LN	M33x0.75
4129-33P	4129-33PN	M33x1
4129-33R	4129-33RN	M33x1.5
4129-33T	4129-33TN	M33x2
4129-33V	4129-33VN	M33x3
4129-36P	4129-36PN	M36x1
4129-36R	4129-36RN	M36x1.5
4129-36T	4129-36TN	M36x2

Code Go	Code No Go	Size(mm)
4129-36V	4129-36VN	M36x3
4129-39P	4129-39PN	M39x1
4129-39R	4129-39RN	M39x1.5
4129-39T	4129-39TN	M39x2
4129-39V	4129-39VN	M39x3
4129-42P	4129-42PN	M42x1
4129-42R	4129-42RN	M42x1.5
4129-42T	4129-42TN	M42x2
4129-42V	4129-42VN	M42x3
4129-42X	4129-42XN	M42x4
4129-45P	4129-45PN	M45x1
4129-45R	4129-45RN	M45x1.5
4129-45T	4129-45TN	M45x2
4129-45V	4129-45VN	M45x3
4129-45X	4129-45XN	M45x4
4129-48P	4129-48PN	M48x1
4129-48R	4129-48RN	M48x1.5
4129-48T	4129-48TN	M48x2
4129-48V	4129-48VN	M48x3
4129-48X	4129-48XN	M48x4
4129-52P	4129-52PN	M52x1
4129-52R	4129-52RN	M52x1.5
4129-52T	4129-52TN	M52x2
4129-52V	4129-52VN	M52x3
4129-52X	4129-52XN	M52x4
4129-56P	4129-56PN	M56x1
4129-56R	4129-56RN	M56x1.5
4129-56T	4129-56TN	M56x2
4129-56V	4129-56VN	M56x3
4129-56X	4129-56XN	M56x4
4129-60P	4129-60PN	M60x1
4129-60R	4129-60RN	M60x1.5
4129-60T	4129-60TN	M60x2
4129-60V	4129-60VN	M60x3
4129-60X	4129-60XN	M60x4

BLOCK LEVEL



4903-200A

- V-groove on bottom for shafts
- With transverse vial
- Supplied with adjusting wrench

(mm)				
Code	Length(L)	Sensitivity	B	C
4903-150A	150mm	0.02mm/m	40	45
4903-200A	200mm	0.02mm/m	42	47
4903-300A	300mm	0.02mm/m	45	50

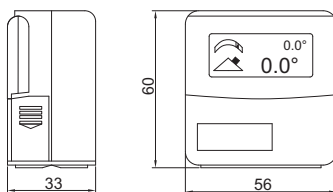


DIGITAL LEVEL AND PROTRACTOR



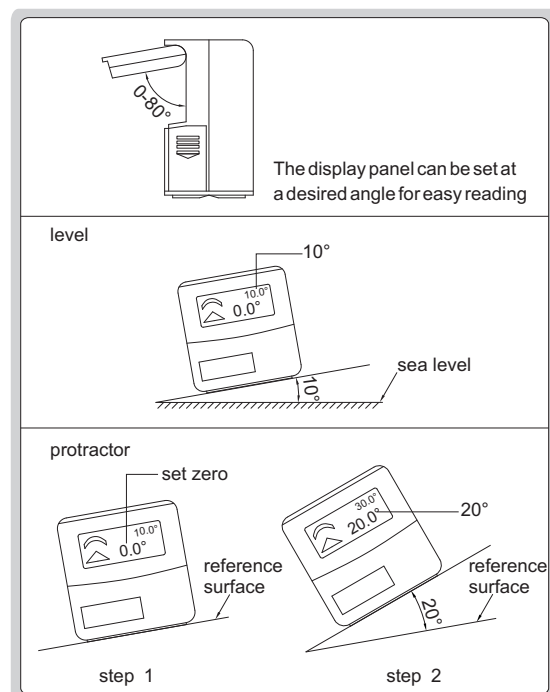
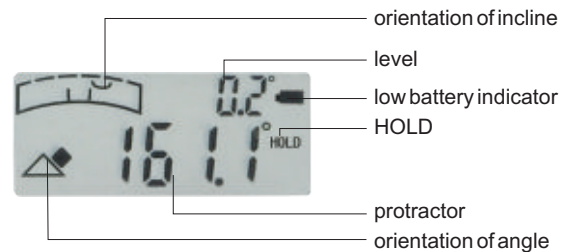
2178-1

Unit: mm



- Used as level and protractor
- The display panel can be set at a desired angle for easy reading
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/ZERO, HOLD(keep the reading)
- Two AAA batteries
- Automatic power off

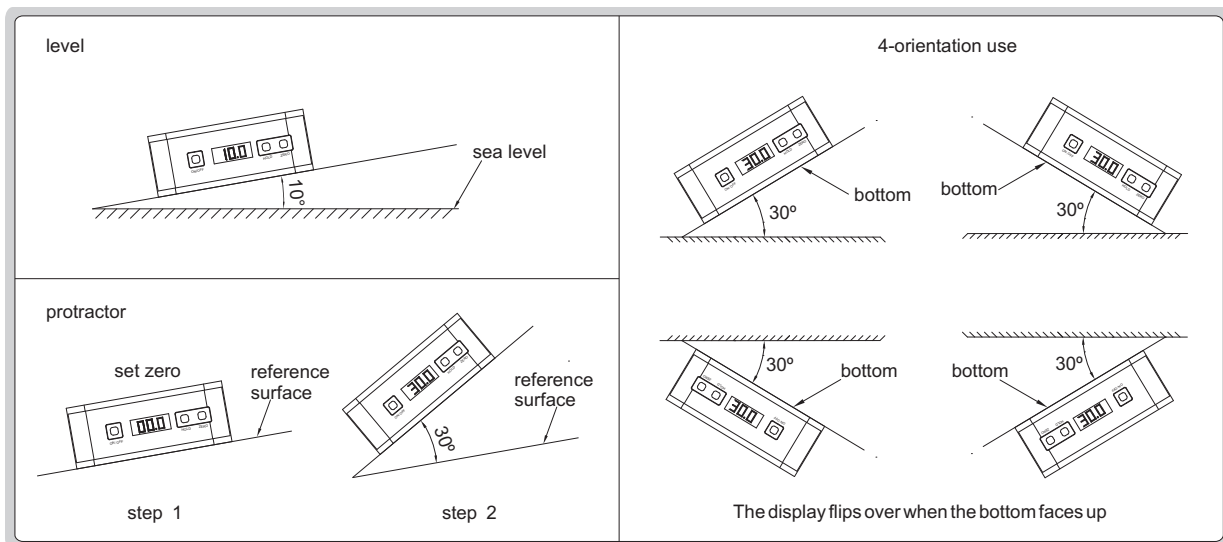
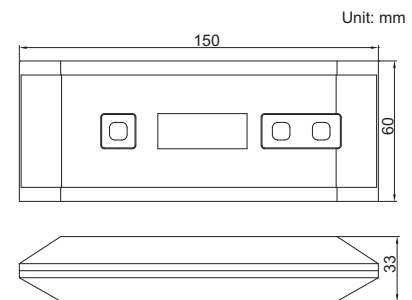
Code	Range	Resolution	Accuracy
2178-1	0 - 180°	0.1° (= 1.745 mm/m)	±0.1°



DIGITAL LEVEL AND PROTRACTOR



2173-360



- Used as level and protractor
- Aluminum frame
- Magnetic bottom with V-groove for shafts
- Zero setting can be made on any plain surfaces
- Buttons: ON/OFF, ZERO, HOLD(keep the reading)
- CR2032 battery
- Automatic power off

Code	Range	Resolution	Accuracy
2173-360	0 - 360° (90°x4)	0.1° (= 1.745 mm/m)	±0.2°

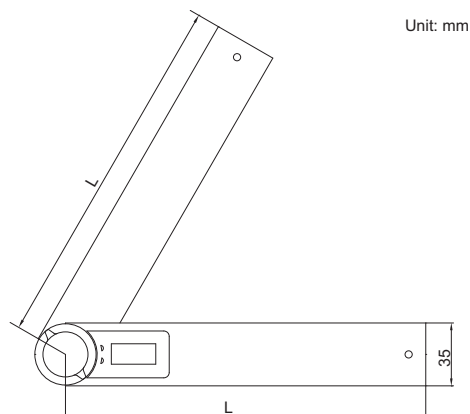
DIGITAL PROTRACTOR



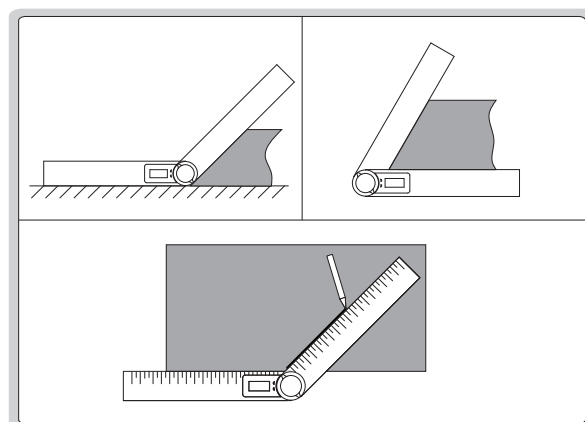
2176-300

- Buttons: ON/OFF, ZERO
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- CR2032 battery
- Automatic power off

Code	Size(L)	Range	Resolution	Accuracy
2176-200	200mm	0 - 360°	0.1°	±0.3°
2176-300	300mm	0 - 360°	0.1°	±0.3°



Unit: mm



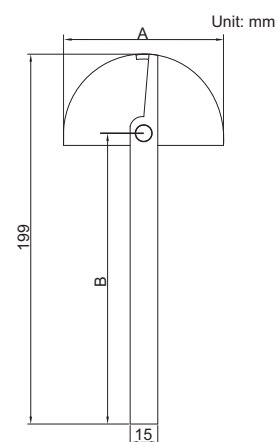
PROTRACTOR



4780-85

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw

Code	Size(AxB)	Range	Graduation	Accuracy
4780-85	85x150mm	0 - 180°	1°	±0.3°



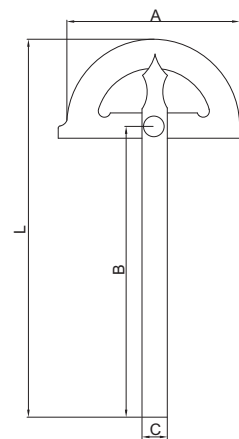
Unit: mm

PROTRACTOR



4799-180

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw



(mm)

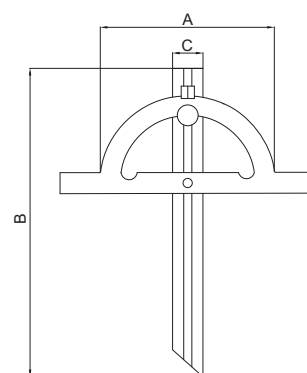
Code	Size(AxB)	Range	Graduation	Accuracy	L	C
4799-180	80x120mm	0 - 180°	1°	±0.3°	168	11
4799-1120	120x150mm	0 - 180°	1°	±0.3°	220	14
4799-1150	150x200mm	0 - 180°	1°	±0.3°	285	16
4799-1200	200x300mm	0 - 180°	1°	±0.3°	413	20
4799-1300	300x500mm	0 - 180°	1°	±0.3°	675	30

PROTRACTOR



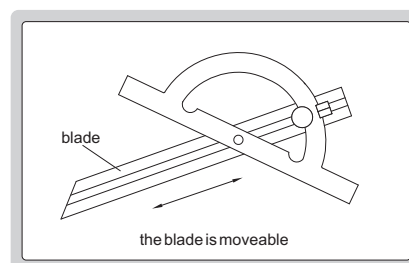
4797-100

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw
- The blade is moveable

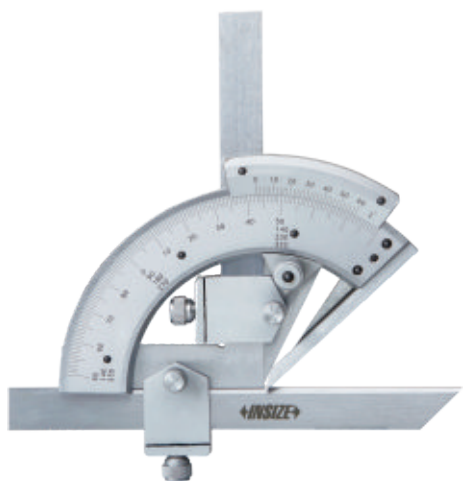


(mm)

Code	Size(AxB)	Range	Graduation	Accuracy	C
4797-100	100x150mm	10 - 170°	1°	±0.3°	18
4797-150	150x300mm	10 - 170°	1°	±0.3°	18
4797-200	200x400mm	10 - 170°	1°	±0.3°	20
4797-250	250x500mm	10 - 170°	1°	±0.3°	20
4797-300	300x600mm	10 - 170°	1°	±0.3°	20



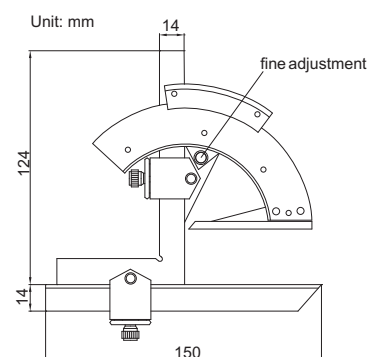
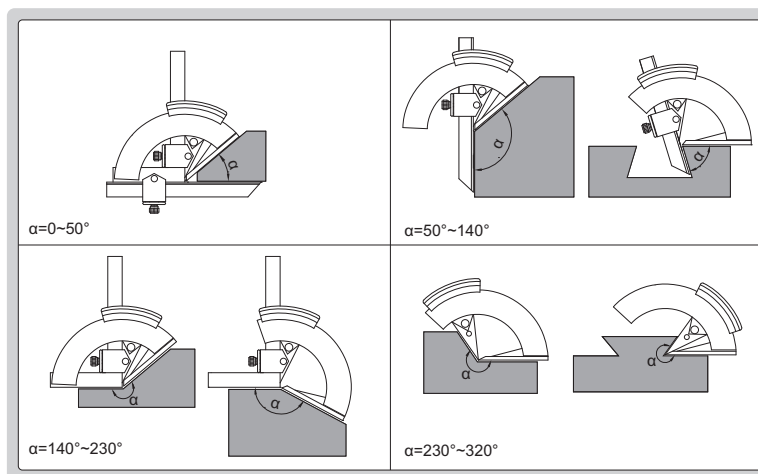
PROTRACTOR



2374-320

- Made of carbon steel
- Satin chrome plated

Code	Range	Graduation	Accuracy
2374-320	0 - 320°	2'	±2'



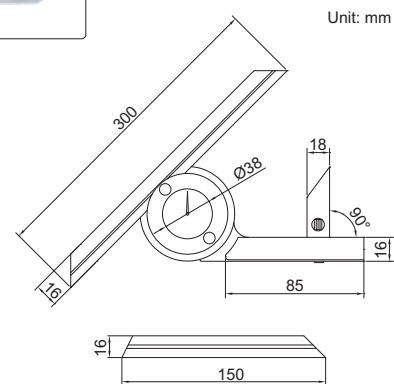
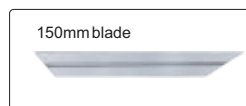
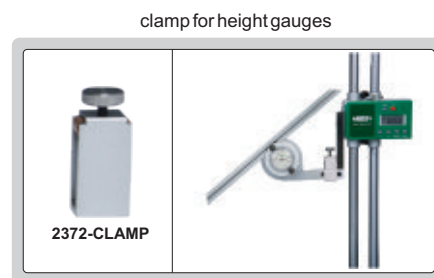
DIAL PROTRACTOR



2373-360

- Supplied with 150mm blade
- Made of carbon steel
- Optional accessory: clamp (code **2372-CLAMP**) suitable for height gauges **1151** and **1351**

Code	Range	Graduation	Accuracy
2373-360	0 - 360°	5'	±5'



UNIVERSAL PROTRACTOR

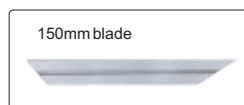


2372-360

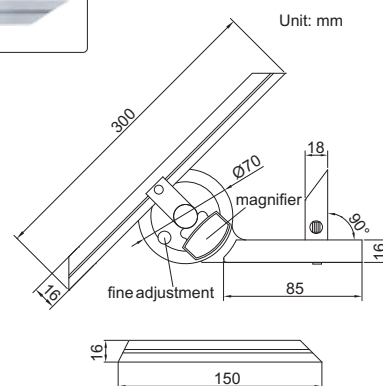
- Parallax-free reading
- Supplied with 150mm blade
- Made of carbon steel
- Optional accessory: clamp (code **2372-CLAMP**) suitable for height gauges **1151** and **1351**

Code	Range	Graduation	Accuracy
2372-360	0-360°	5'	±5'

clamp for height gauges



150mm blade

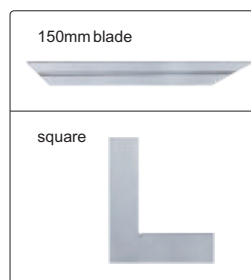


DIGITAL PROTRACTOR



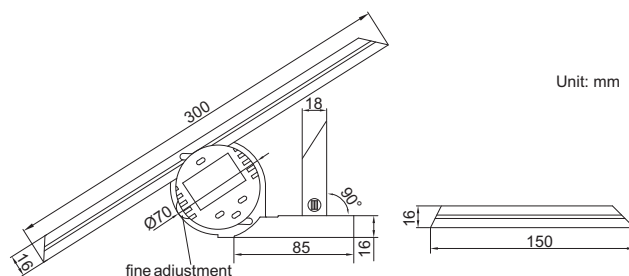
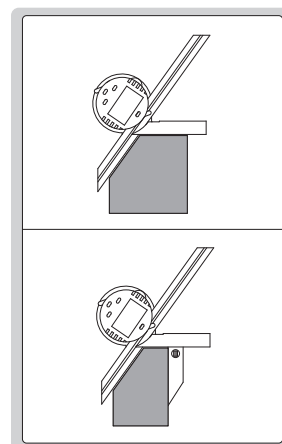
2172-360

- Display in degree (for example 32.658°) and degree/minute/second (for example 32°39'30")
- PRESET button: preset the reading
- MODE button: choose 0-90°, 0-180° or 0-360° display
- ZERO/ON button: zero and power on
- +/- button: change measuring direction
- Battery CR2032, automatic power off
- Supplied with 150mm blade and square to set 90°
- Made of stainless steel



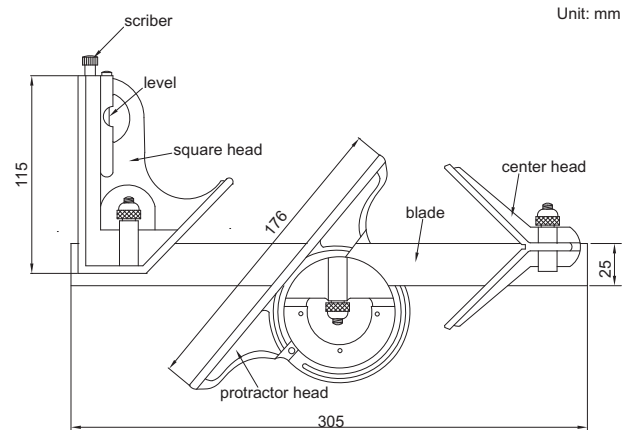
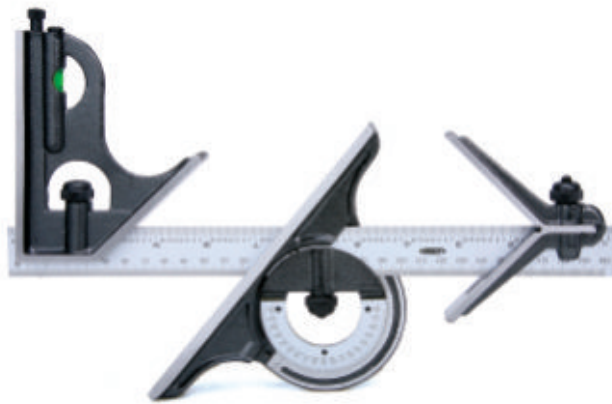
150mm blade

square



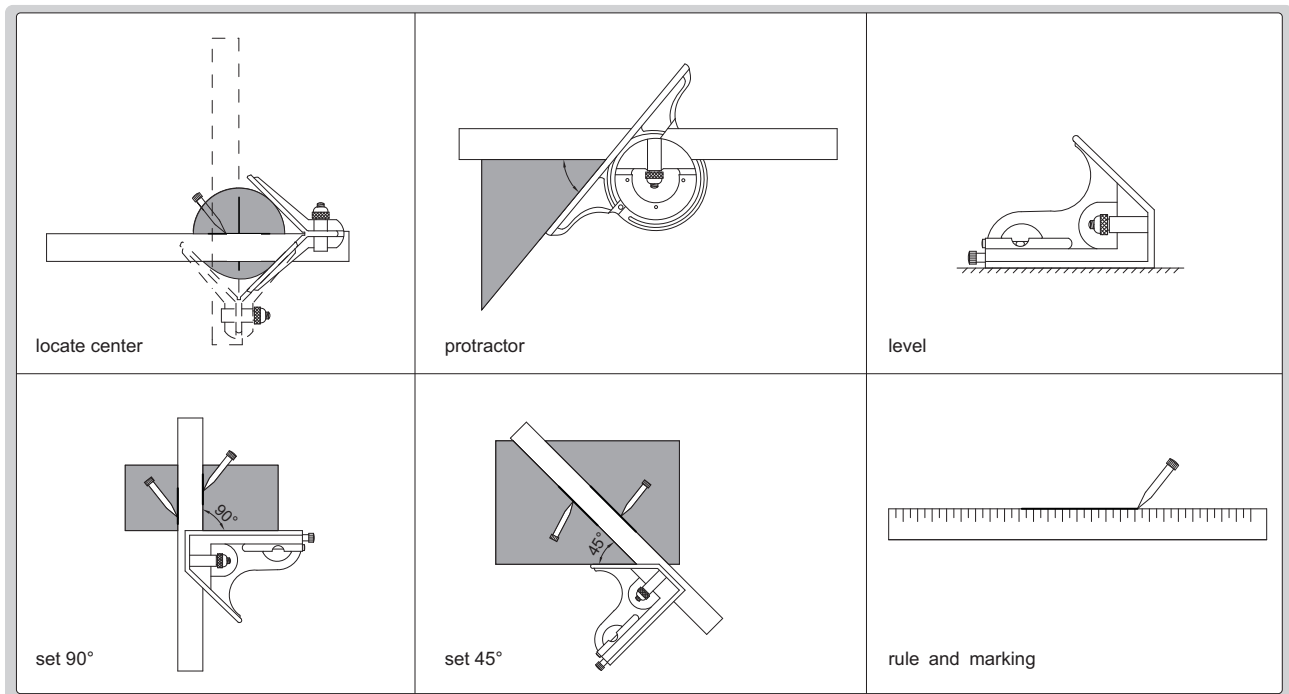
Code	Range	Resolution	Accuracy
2172-360	0-360°	30"/0.001°	±5'

COMBINATION SQUARE SET



Unit: mm

2278-180



Code

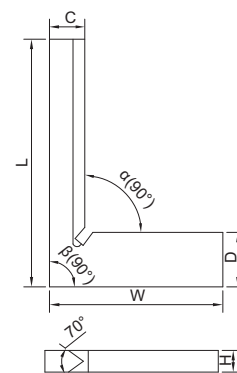
2278-180

- Center head:
To locate center of round workpieces
Accuracy: $\pm 0.15\text{mm}$
- Protractor head:
To set the blade at desired angle to an edge of a workpiece, and can be used to measure angles
Range: 0-180°
Accuracy: $\pm 7\text{min.}$
- Square head:
To set the blade at 90° or 45° to an edge of a workpiece
Accuracy: $\pm 8\text{min}$ for 90° square, $\pm 10\text{min}$ for 45° square
- Blade:
Range: 300mm/12",
Graduation: 0.5mm and 1/32" on front face, 1mm and 1/64" on back face
- Optional accessory: rigid rule (code 7113)

90° TOOL MAKER SQUARE



4794-040



Code	Size(LxW)	Squareness		C	D	H
		Inside(α)	Outside(β)			
4794-025	25x20mm	2.2 μ m	2.3 μ m	4	6.5	3.5
4794-040	40x28mm	2.3 μ m	2.4 μ m	5.5	8.5	3.5

(mm)

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

90° BEVELED EDGE SQUARE

- Satin chrome plating
- Beveled edges for inside and outside measurement
- Made of hardened stainless steel

DIN875 grade 00

Code	Size(LxW)	Squareness		C	D	H
		Inside(α)	Outside(β)			
4790-050	50x40mm	2.4 μ m	2.5 μ m	13	13	4
4790-075	75x50mm	2.6 μ m	2.8 μ m	15	15	4
4790-0100	100x70mm	2.8 μ m	3.0 μ m	20	20	5
4790-0150	150x100mm	3.2 μ m	3.5 μ m	30	30	6
4790-0200	200x130mm	3.7 μ m	4.0 μ m	34	34	7
4790-0250	250x165mm	4.2 μ m	4.5 μ m	35	35	7
4790-0300	300x200mm	4.6 μ m	5.0 μ m	40	40	8

(mm)

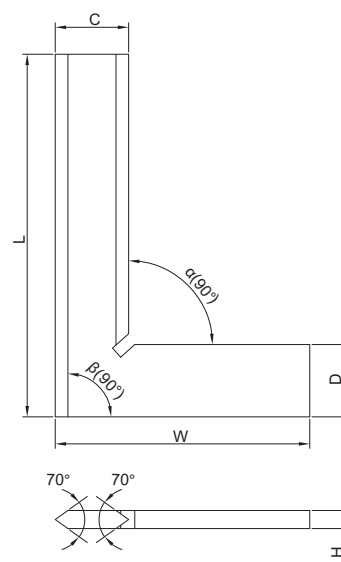
DIN875 grade 0

Code	Size(LxW)	Squareness		C	D	H
		Inside(α)	Outside(β)			
4790-500	50x40mm	6 μ m	6 μ m	13	13	4
4790-750	75x50mm	6 μ m	7 μ m	15	15	4
4790-1000	100x70mm	7 μ m	7 μ m	20	20	5
4790-1500	150x100mm	7 μ m	8 μ m	30	30	6
4790-2000	200x130mm	8 μ m	9 μ m	34	34	7
4790-2500	250x165mm	9 μ m	10 μ m	35	35	7
4790-3000	300x200mm	10 μ m	11 μ m	40	40	8

(mm)



4790-0100



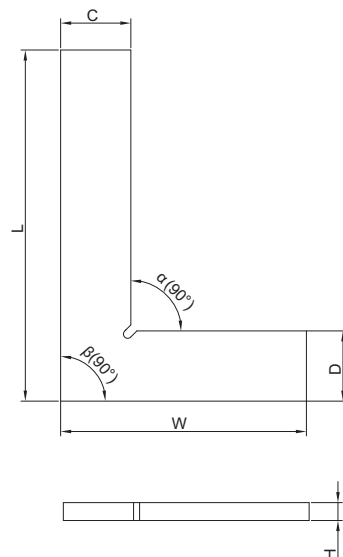
90° FLAT EDGE SQUARE



4791-100

(mm)

Code	Size(LxW)	Squareness		C	D	H
		Inside(α)	Outside(β)			
4791-50	50x40mm	6 μ m	6 μ m	13	13	4
4791-75	75x50mm	6 μ m	7 μ m	15	15	4
4791-100	100x70mm	7 μ m	7 μ m	20	20	5
4791-150	150x100mm	7 μ m	8 μ m	30	30	6
4791-200	200x130mm	8 μ m	9 μ m	30	30	7
4791-250	250x165mm	9 μ m	10 μ m	35	35	7
4791-300	300x200mm	10 μ m	11 μ m	40	40	8



- DIN875 grade 0
- Made of hardened stainless steel

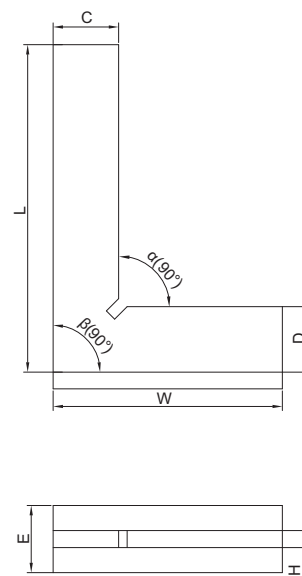
90° FLAT EDGE SQUARE WITH WIDE BASE



4793-100

(mm)

Code	Size(LxW)	Squareness		C	D	H	E
		Inside(α)	Outside(β)				
4793-50	50x40mm	6 μ m	6 μ m	13	13	4	13
4793-75	75x50mm	6 μ m	7 μ m	15	15	4	15
4793-100	100x70mm	7 μ m	7 μ m	20	20	5	20
4793-150	150x100mm	7 μ m	8 μ m	30	30	6	30
4793-200	200x130mm	8 μ m	9 μ m	30	30	7	30
4793-250	250x165mm	9 μ m	10 μ m	35	35	7	35
4793-300	300x200mm	10 μ m	11 μ m	40	40	8	40

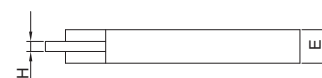
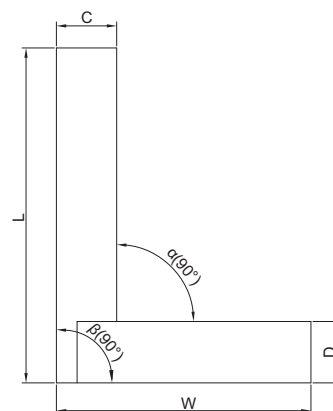


- DIN875 grade 0
- Made of hardened stainless steel

90° FLAT EDGE SQUARE WITH WIDE BASE



4792-100



(mm)

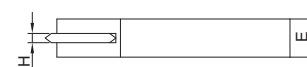
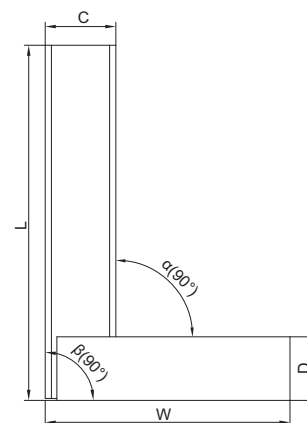
Code	Size(LxW)	Squareness		C	D	H	E
		Inside(α)	Outside(β)				
4792-50	50x40mm	6 μ m	6 μ m	12	12	3	10
4792-75	75x50mm	6 μ m	7 μ m	14	14	3	10
4792-100	100x70mm	7 μ m	7 μ m	18	18	3	10
4792-150	150x100mm	8 μ m	8 μ m	22	22	4	12
4792-200	200x130mm	9 μ m	9 μ m	25	25	4	12

- DIN875 grade 0
- Made of hardened stainless steel

90° BEVELED EDGE SQUARE WITH WIDE BASE



4795-100



(mm)

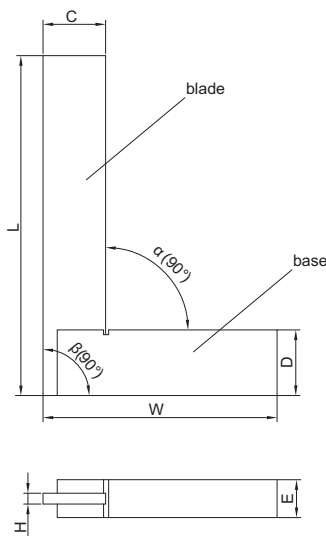
Code	Size(LxW)	Squareness		C	D	H	E
		Inside(α)	Outside(β)				
4795-50	50x40mm	6 μ m	6 μ m	12	12	3	10
4795-75	75x50mm	6 μ m	7 μ m	14	14	3	10
4795-100	100x70mm	7 μ m	7 μ m	18	18	3	10
4795-150	150x100mm	8 μ m	8 μ m	22	22	4	12
4795-200	200x130mm	9 μ m	9 μ m	25	25	4	12

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

MACHINIST SQUARE WITH WIDE BASE



4707-100



(mm)				
Size(LxW)	C	D	H	E
50x40mm	16	12	3	9
75x50mm	16	16	3	9
100x70mm	19	19	3	12
150x100mm	25	25	3	16
200x130mm	30	32	4	16
250x165mm	30	32	4	19
300x200mm	32	32	4	19
400x250mm	38	38	5	22
500x300mm	45	50	6	25
600x350mm	50	50	6	30
750x400mm	55	55	6	50
900x500mm	65	75	9	50
1000x550mm	65	75	9	50

- Made of carbon steel
- Base is not hardened

DIN875 grade 1, blade is hardened

Individual

Code	Size(LxW)	Squareness	
		Inside(α)	Outside(β)
4707-151	50x40mm	12μm	13μm
4707-175	75x50mm	13μm	14μm
4707-1100	100x70mm	14μm	15μm
4707-1150	150x100mm	16μm	18μm
4707-1200	200x130mm	18μm	20μm
4707-1250	250x165mm	21μm	23μm
4707-1300	300x200mm	23μm	25μm
4707-1400	400x250mm	28μm	30μm
4707-1500	500x300mm	33μm	35μm
4707-1600	600x350mm	38μm	40μm
4707-1750	750x400mm	45μm	48μm
4707-1900	900x500mm	51μm	55μm
4707-11000	1000x550mm	56μm	60μm

Set

Code	Squares included
4707-1S2	50x40mm (4707-151), 75x50mm (4707-175), 100x70mm (4707-1100), 150x100mm (4707-1150)
4707-1S3	100x70mm (4707-1100), 150x100mm (4707-1150), 200x130mm (4707-1200), 300x200mm (4707-1300)

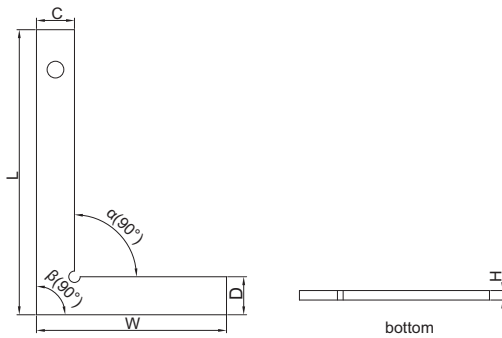
DIN875 grade 2, blade is not hardened

Individual

Code	Size(LxW)	Squareness	
		Inside(α)	Outside(β)
4707-50	50x40mm	24μm	25μm
4707-75	75x50mm	26μm	28μm
4707-100	100x70mm	28μm	30μm
4707-150	150x100mm	33μm	35μm
4707-200	200x130mm	37μm	40μm
4707-250	250x165mm	42μm	45μm
4707-300	300x200mm	47μm	50μm
4707-400	400x250mm	56μm	60μm
4707-500	500x300mm	65μm	70μm
4707-600	600x350mm	75μm	80μm
4707-750	750x400mm	90μm	95μm
4707-900	900x500mm	103μm	110μm
4707-1000	1000x550mm	113μm	120μm

Set

Code	Squares included
4707-2S2	50x40mm (4707-50), 75x50mm (4707-75), 100x70mm (4707-100), 150x100mm (4707-150)
4707-2S3	100x70mm (4707-100), 150x100mm (4707-150), 200x130mm (4707-200), 300x200mm (4707-300)



MACHINIST SQUARE

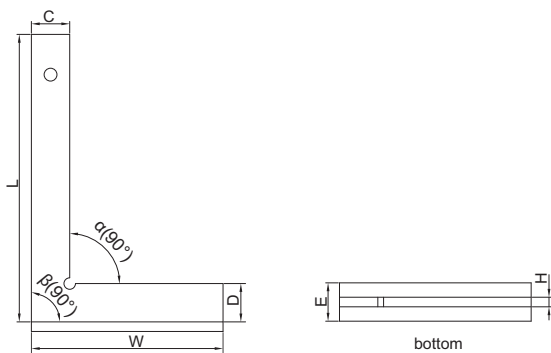


4703-150

- Made of carbon steel
- Galvanized

(mm)

Code	Size(LxW)	Squareness		C	D	H
		Inside(α)	Outside(β)			
4703-100	100x70mm	0.15mm	0.15mm	20	20	5
4703-150	150x100mm	0.20mm	0.20mm	20	20	5
4703-200	200x130mm	0.25mm	0.25mm	20	20	5
4703-250	250x160mm	0.30mm	0.30mm	25	25	5
4703-300	300x180mm	0.30mm	0.30mm	25	25	5
4703-400	400x230mm	0.35mm	0.35mm	30	30	6
4703-500	500x280mm	0.35mm	0.35mm	30	30	6
4703-600	600x330mm	0.40mm	0.40mm	30	30	6
4703-750	750x375mm	0.45mm	0.45mm	30	30	6
4703-1000	1000x500mm	0.50mm	0.50mm	30	30	6



MACHINIST SQUARE WITH WIDE BASE



4704-150

- Made of carbon steel
- Galvanized

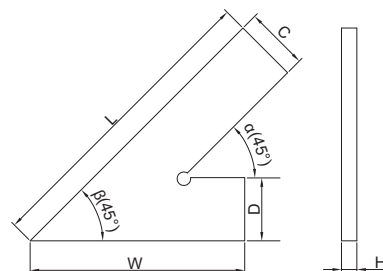
(mm)

Code	Size(LxW)	Squareness		C	D	H	E
		Inside(α)	Outside(β)				
4704-100	100x70mm	0.15mm	0.15mm	20	20	5	20
4704-150	150x100mm	0.20mm	0.20mm	20	20	5	20
4704-200	200x130mm	0.25mm	0.25mm	20	20	5	25
4704-250	250x160mm	0.30mm	0.30mm	25	25	5	25
4704-300	300x180mm	0.30mm	0.30mm	25	25	5	30
4704-400	400x230mm	0.35mm	0.35mm	30	30	6	30
4704-500	500x280mm	0.35mm	0.35mm	30	30	6	30
4704-600	600x330mm	0.40mm	0.40mm	30	30	6	30
4704-750	750x375mm	0.45mm	0.45mm	30	30	6	30
4704-1000	1000x500mm	0.50mm	0.50mm	30	30	6	30

45° SQUARE



4745-1100



(mm)

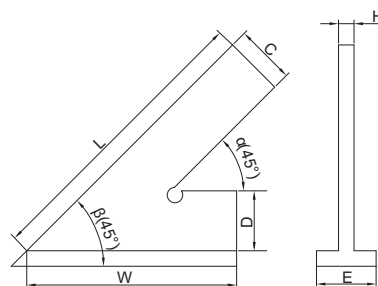
Code	Size(LxW)	Accuracy		C	D	H
		Inside(α)	Outside(β)			
4745-1100	100x70mm	27 μ m	30 μ m	20	20	5
4745-1120	120x80mm	29 μ m	32 μ m	20	20	5
4745-1150	150x100mm	32 μ m	35 μ m	20	20	5
4745-1200	200x130mm	36 μ m	40 μ m	25	25	5

- Made of hardened stainless steel

45° SQUARE WITH WIDE BASE



4747-100



(mm)

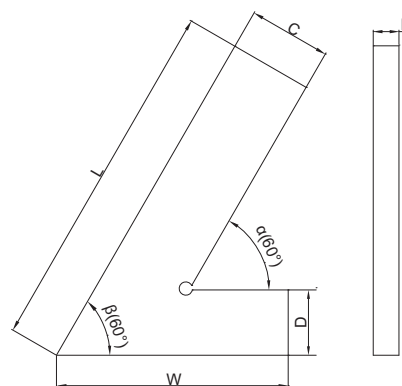
Code	Size(LxW)	Accuracy		C	D	H	E
		Inside(α)	Outside(β)				
4747-100	100x70mm	27 μ m	31 μ m	20	20	5	20
4747-120	120x80mm	29 μ m	33 μ m	20	20	5	20
4747-150	150x100mm	32 μ m	36 μ m	20	20	5	20
4747-200	200x130mm	36 μ m	41 μ m	25	25	5	25

- Made of hardened stainless steel

60° SQUARE



4760-1100



Code	Size(LxW)	Accuracy		C	D	H
		Inside(α)	Outside(β)			
4760-1100	100x70mm	28 μ m	30 μ m	20	20	5
4760-1120	120x80mm	30 μ m	32 μ m	20	20	5
4760-1150	150x100mm	32 μ m	35 μ m	20	20	5
4760-1200	200x130mm	37 μ m	40 μ m	25	25	5

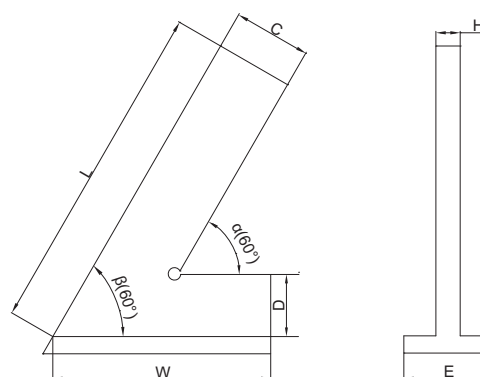
(mm)

■ Made of hardened stainless steel

60° SQUARE WITH WIDE BASE



4762-100

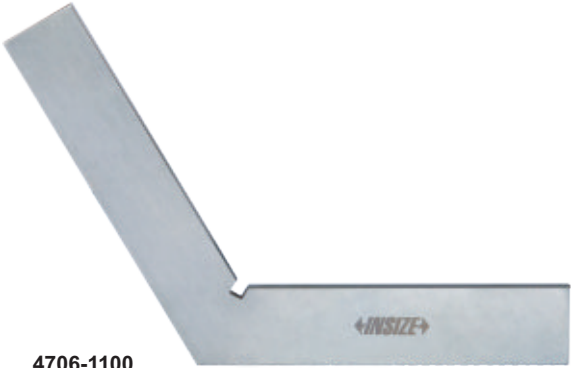


Code	Size(LxW)	Accuracy		C	D	H	E
		Inside(α)	Outside(β)				
4762-100	100x70mm	28 μ m	31 μ m	20	20	5	20
4762-120	120x80mm	30 μ m	33 μ m	20	20	5	20
4762-150	150x100mm	33 μ m	36 μ m	20	20	5	20
4762-200	200x130mm	37 μ m	41 μ m	25	25	5	25

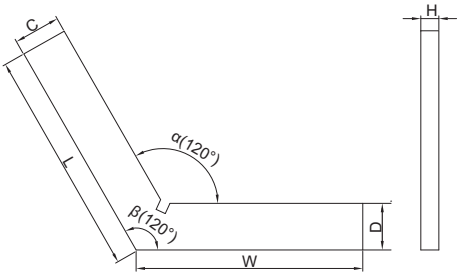
(mm)

■ Made of hardened stainless steel

120° SQUARE



4706-1100



(mm)

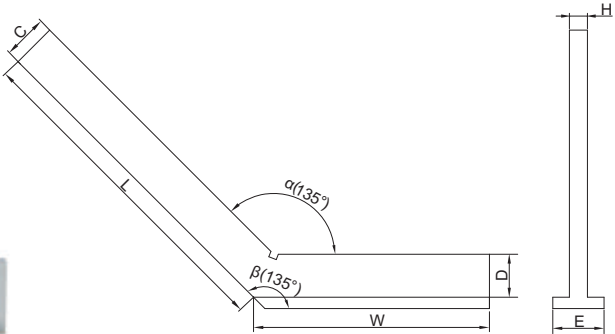
Code	Size(LxW)	Accuracy		C	D	H
		Inside(α)	Outside(β)			
4706-150	50x50mm	24 μ m	25 μ m	15	15	5
4706-175	75x75mm	26 μ m	28 μ m	20	20	5
4706-1100	100x100mm	29 μ m	30 μ m	20	20	5
4706-1150	150x150mm	34 μ m	35 μ m	25	25	5
4706-1200	200x200mm	38 μ m	40 μ m	30	30	7

■ Made of hardened stainless steel

135° SQUARE WITH WIDE BASE



4754-3120



(mm)

Code	Size(LxW)	Accuracy		C	D	H	E
		Inside(α)	Outside(β)				
4754-3100	100x70mm	29 μ m	31 μ m	20	20	5	20
4754-3120	120x80mm	31 μ m	33 μ m	20	20	5	20
4754-3150	150x100mm	34 μ m	36 μ m	20	20	5	20
4754-3200	200x130mm	39 μ m	41 μ m	30	30	7	30
4754-3250	250x165mm	44 μ m	46 μ m	30	30	7	30
4754-3300	300x175mm	49 μ m	51 μ m	35	35	7	35

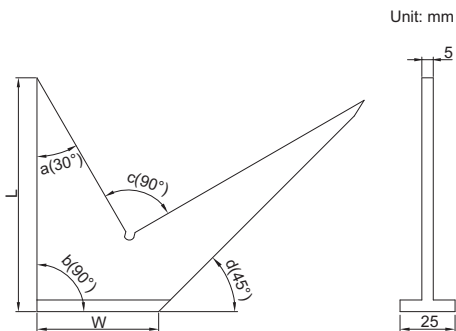
■ Made of hardened stainless steel

SPECIAL SQUARE



- Made of hardened carbon steel

Code	Size(LxW)	Accuracy			
		a	b	c	d
4709-92	92x47mm	27µm	29µm	29µm	30µm
4709-110	110x59mm	29µm	31µm	31µm	33µm
4709-130	130x70mm	30µm	33µm	33µm	35µm
4709-175	175x94mm	34µm	38µm	38µm	40µm



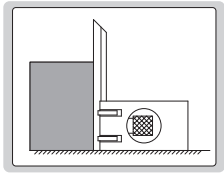
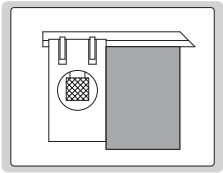
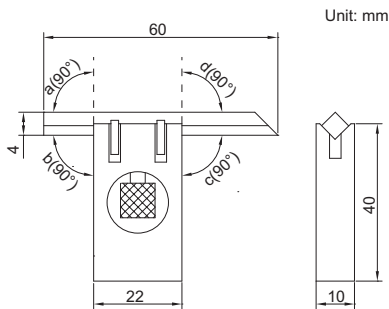
ADJUSTABLE SQUARE



4701-1

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

Code	Squareness(a, b, c, d)
4701-1	7µm



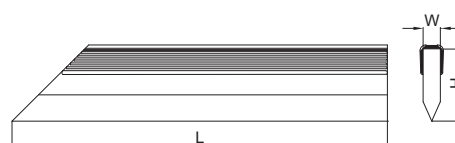
STRAIGHT EDGE

- DIN874
- Satin chrome plating
- Beveled edge
- Made of hardened stainless steel

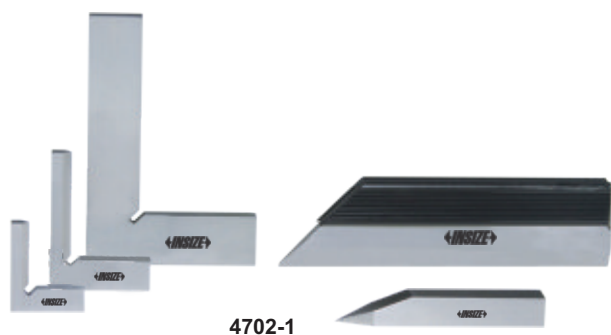
(mm)				
Code	Size (L)	Straightness	W	H
4700-50	50mm	2.2µm	5	20
4700-75	75mm	2.3µm	5	25
4700-100	100mm	2.4µm	5	25
4700-125	125mm	2.5µm	5	25
4700-150	150mm	2.6µm	6	30
4700-200	200mm	2.8µm	6	30
4700-250	250mm	3.0µm	8	40
4700-300	300mm	3.2µm	8	40
4700-400	400mm	3.6µm	10	50
4700-500	500mm	4.0µm	10	50



4700-100

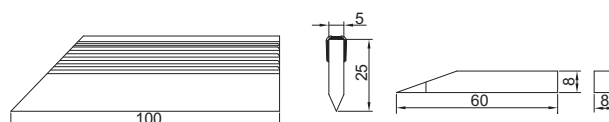
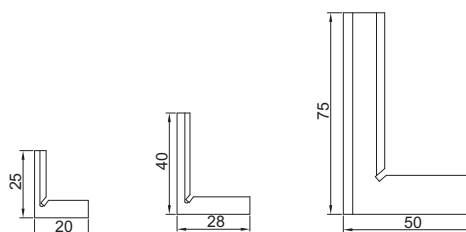


SQUARE SET



4702-1

Unit: mm

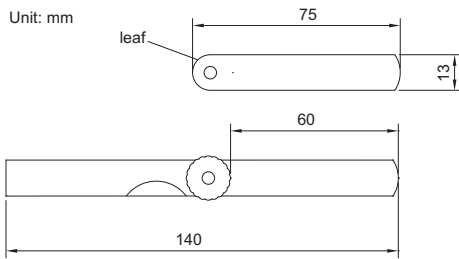


- Includes:
 - 90° tool maker square 25x20mm DIN875 grade 00 (code **4794-025**)
 - 90° tool maker square 40x28mm DIN875 grade 00 (code **4794-040**)
 - 90° beveled edge square 75x50mm DIN875 grade 00 (code **4790-075**)
 - straight edge 100mm DIN874 (code **4700-100**)
 - scriber
- Made of hardened stainless steel

Code

4702-1

FEELER GAUGE

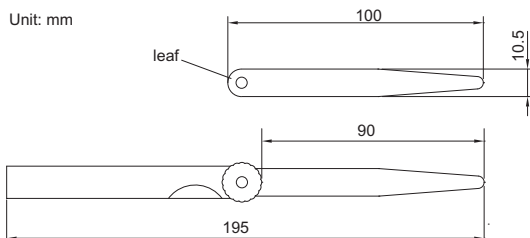


4601-25

- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80)$ μm , 'T' is the thickness of leaves in μm

Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4601-25	0.04 - 1.00mm	0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	25

FEELER GAUGE



4602-20

- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80)$ μm , 'T' is the thickness of leaves in μm

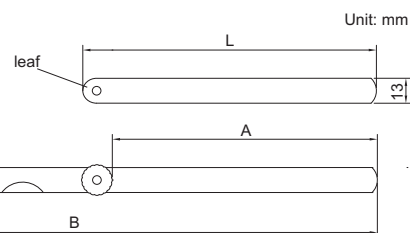
Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4602-13A	0.03 - 0.50mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	13
4602-13	0.05 - 1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13
4602-17	0.02 - 1.00mm	0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.75, 1.00	17
4602-20	0.05 - 1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20
4602-28	0.05 - 1.00mm	0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.11, 0.12, 0.13, 0.14, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	28
4602-32	0.03 - 1.00mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.13, 0.15, 0.18, 0.20, 0.23, 0.25, 0.28, 0.30, 0.33, 0.35, 0.38, 0.40, 0.45, 0.50, 0.55, 0.60, 0.63, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 1.00	32

LONG FEELER GAUGE



4605-20

- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80)\mu\text{m}$, 'T' is the thickness of leaves in μm



(mm)

Code	Range	Thickness of leaves included (mm)	Quantity of leaves	L	A	B
4605-13	0.05 - 1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13	150	135	295
4605-131	0.05 - 1.00mm		13	200	185	395
4605-132	0.05 - 1.00mm		13	300	285	590
4605-20	0.05 - 1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20	150	135	295
4605-201	0.05 - 1.00mm		20	200	185	395
4605-202	0.05 - 1.00mm		20	300	285	590

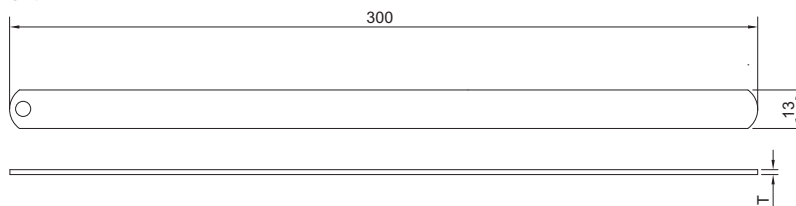
FEELER GAUGE STOCK

Code	Thickness (T)	Accuracy
4622-02	0.02mm	$\pm 3\mu\text{m}$
4622-03	0.03mm	$\pm 3\mu\text{m}$
4622-04	0.04mm	$\pm 3\mu\text{m}$
4622-05	0.05mm	$\pm 3\mu\text{m}$
4622-06	0.06mm	$\pm 3\mu\text{m}$
4622-07	0.07mm	$\pm 4\mu\text{m}$
4622-08	0.08mm	$\pm 4\mu\text{m}$
4622-09	0.09mm	$\pm 4\mu\text{m}$
4622-10	0.10mm	$\pm 4\mu\text{m}$
4622-12	0.12mm	$\pm 5\mu\text{m}$
4622-15	0.15mm	$\pm 5\mu\text{m}$
4622-18	0.18mm	$\pm 6\mu\text{m}$
4622-20	0.20mm	$\pm 6\mu\text{m}$
4622-25	0.25mm	$\pm 6\mu\text{m}$
4622-30	0.30mm	$\pm 7\mu\text{m}$
4622-35	0.35mm	$\pm 7\mu\text{m}$
4622-40	0.40mm	$\pm 8\mu\text{m}$
4622-45	0.45mm	$\pm 8\mu\text{m}$
4622-50	0.50mm	$\pm 9\mu\text{m}$



4622-10

Unit: mm



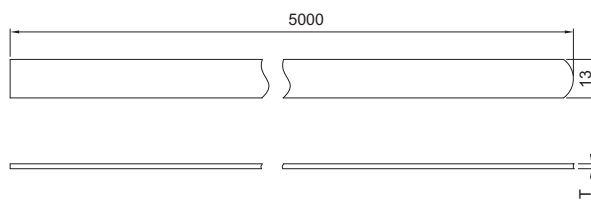
- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 300mm
- Width 13mm

FEELER GAUGE TAPE



4621-30

Unit: mm



- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 5m
- Width 13mm

Code	Thickness (T)	Accuracy
4621-02	0.02mm	±4µm
4621-03	0.03mm	±4µm
4621-04	0.04mm	±4µm
4621-05	0.05mm	±4µm
4621-06	0.06mm	±4µm
4621-07	0.07mm	±5µm
4621-08	0.08mm	±5µm
4621-09	0.09mm	±5µm
4621-10	0.10mm	±5µm
4621-12	0.12mm	±5µm
4621-15	0.15mm	±6µm
4621-18	0.18mm	±7µm
4621-20	0.20mm	±8µm
4621-25	0.25mm	±9µm
4621-30	0.30mm	±9µm

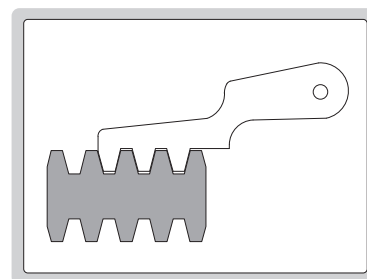
Code	Thickness (T)	Accuracy
4621-35	0.35mm	±11µm
4621-40	0.40mm	±12µm
4621-45	0.45mm	±12µm
4621-50	0.50mm	±14µm
4621-55	0.55mm	±14µm
4621-60	0.60mm	±14µm
4621-65	0.65mm	±14µm
4621-70	0.70mm	±17µm
4621-75	0.75mm	±17µm
4621-80	0.80mm	±19µm
4621-85	0.85mm	±19µm
4621-90	0.90mm	±22µm
4621-95	0.95mm	±22µm
4621-100	1.00mm	±24µm

PITCH GAUGE



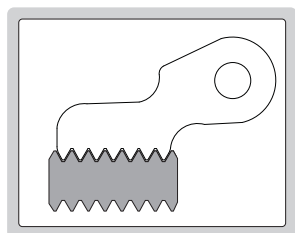
4824-12

- Check the pitch of screw thread
- Accuracy: ±0.07mm



Code	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-12	2-20mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12
4824-16	1-12TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI	16

PITCH GAUGE



- Check the pitch of screw thread
- Accuracy: $\pm 0.07\text{mm}$

4820-122

Metric 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-122	0.4 - 7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	22
4820-124	0.25 - 7.0mm	0.25, 0.3, 0.35, 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	24
4820-1241	0.25 - 6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm	24

Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-230	4 - 42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30

Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-330	4 - 42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30
4820-328	4 - 62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	28

Metric 60° and Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-452	0.25 - 6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm	52
	4 - 62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	
4820-450	0.4 - 7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	50
	4 - 62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	

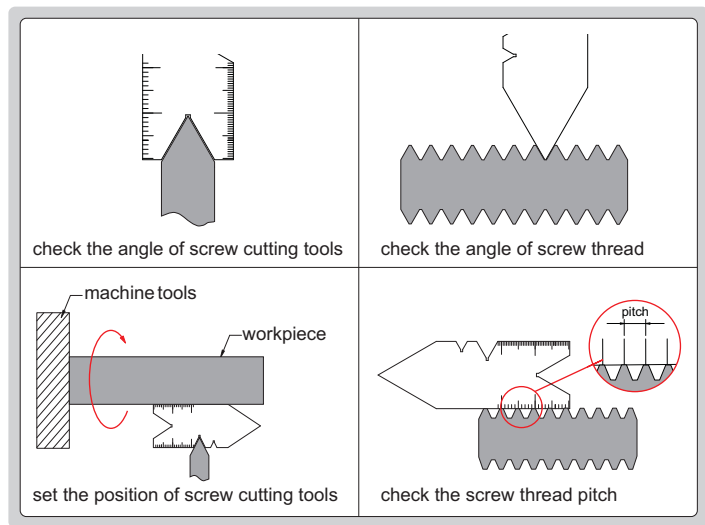
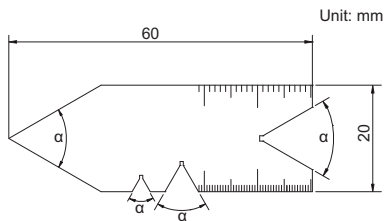
Metric 60° and Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-552	0.4 - 7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	52
	4 - 42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	

CENTER GAUGE



4810-55



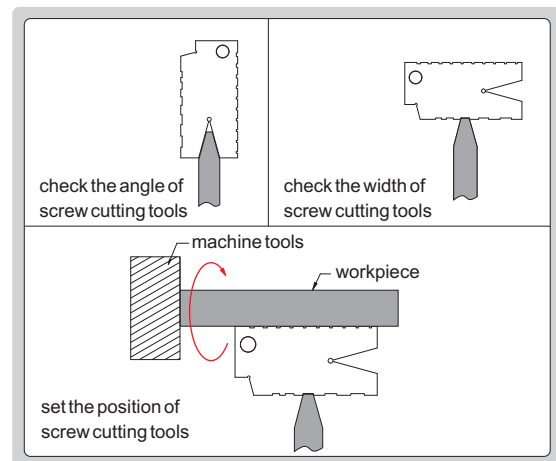
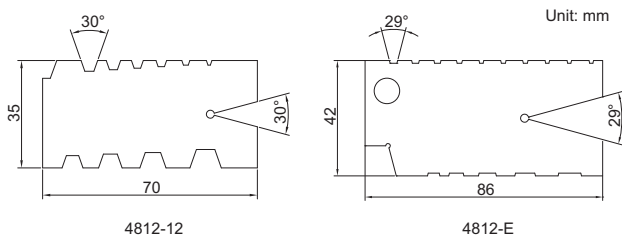
- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: $\pm 10\text{min}$.

Code	Thread type	Angle (α)	Graduation
4810-601	METRIC 60°	60°	0.5mm and 1mm
4810-602	UNIFIED 60°	60°	14ths and 20ths on front side, 24ths and 32ths on back side
4810-55	WHITWORTH 55°	55°	14ths and 20ths

THREAD GAUGE



4812-E



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

Code	Range	Thread type	Pitch
4812-12	2 - 12mm	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm
4812-E	1 - 10TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI

ANGLE GAUGE SET

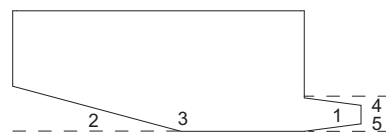


4807

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

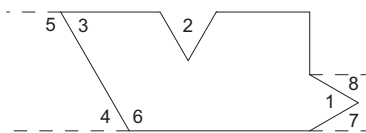
Code	Quantity of leaves	Accuracy
4807	18	$\pm 10'$

Primary angle	1/2 primary angle	Complementary angle	Type
5°	2°30'	175°	A
10°	5°	170°	A
15°	7°30'	165°	A
20°	10°	160°	B
25°	12°30'	155°	B
30°	15°	150°	B
35°	17°30'	145°	B
40°	20°	140°	B
45°	22°30'	135°	B
50°	25°	130°	B
55°	27°30'	125°	B
60°	30°	120°	B
65°	32°30'	115°	B
70°	35°	110°	B
75°	37°30'	105°	B
80°	40°	100°	B
85°	42°30'	95°	B
90°	45°	90°	B



Angle 1, 2 are primary angle
Angle 3 is complementary angle
Angle 4, 5 are 1/2 primary angle

type A



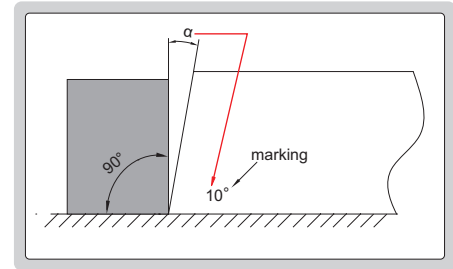
Angle 1, 2, 3, 4 are primary angle
Angle 5, 6 are complementary angle
Angle 7, 8 are 1/2 primary angle

type B

ANGLE GAUGE



4806-20

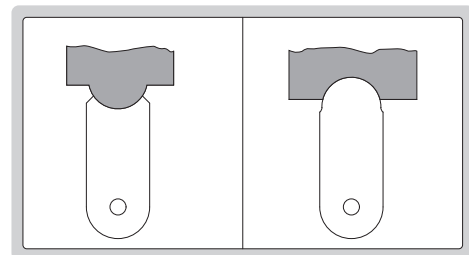


Code	Range	Angle of leaves included	Quantity of leaves	Accuracy
4806-20	1° - 45°	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°	20	±30'

RADIUS GAUGE

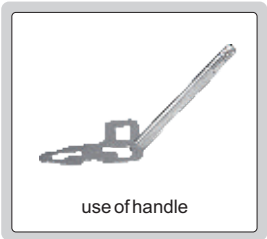
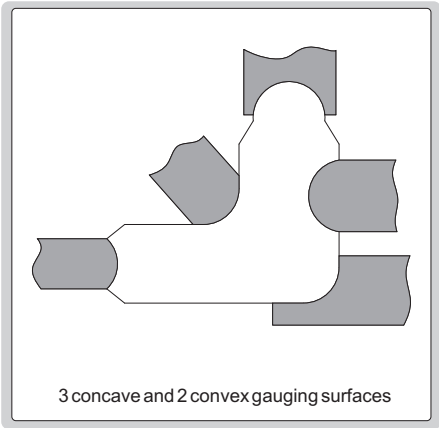


4801-17



Code	Range	Radius of leaves included (mm)	Quantity of leaves (internal + external)	Accuracy
4801-17	1 - 7mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	17+17	±0.03mm
4801-16	7.5 - 15mm	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15	16+16	±0.035mm
4801-15	15.5 - 25mm	15.5, 16, 16.5, 17, 17.5, 18, 18.5, 19, 19.5, 20, 21, 22, 23, 24, 25	15+15	±0.042mm

RADIUS GAUGE SET

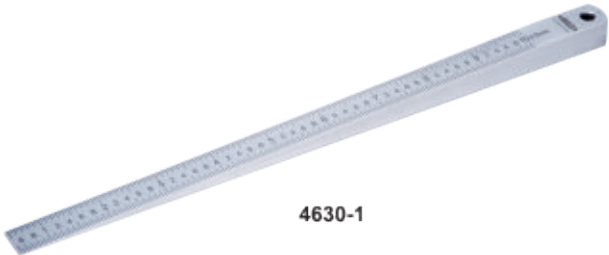
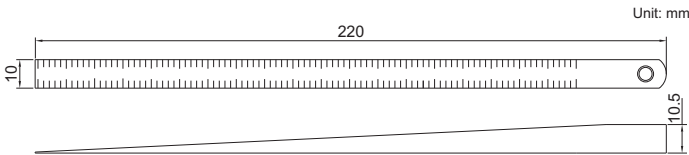
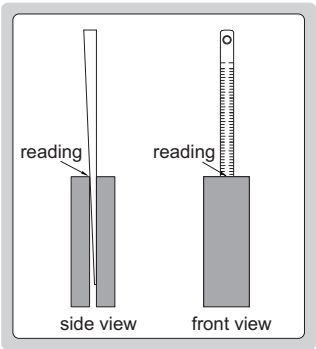


4804-26

- Each piece has 3 concave and 2 convex gauging surfaces
- Supplied with handle

Code	Range	Radius of leaves included (mm)	Quantity of leaves	Accuracy
4804-26	0.5 - 13mm	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13	26	±0.05mm

TAPER GAUGE

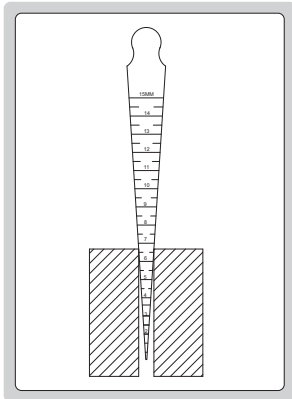


4630-1

Code	Range	Graduation	Accuracy
4630-1	0.5 - 10mm	0.05mm	±0.07mm

- For quick measurement of gap width
- Stain chrome plated reading surface
- Made of stainless steel

TAPER GAUGE



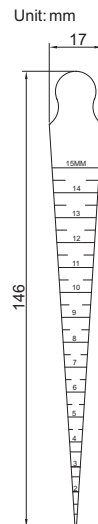
- Measure opening, slot width, hole size, etc.
- Made of stainless steel



front



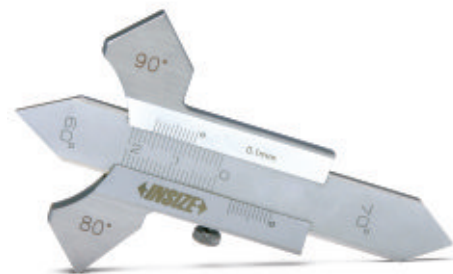
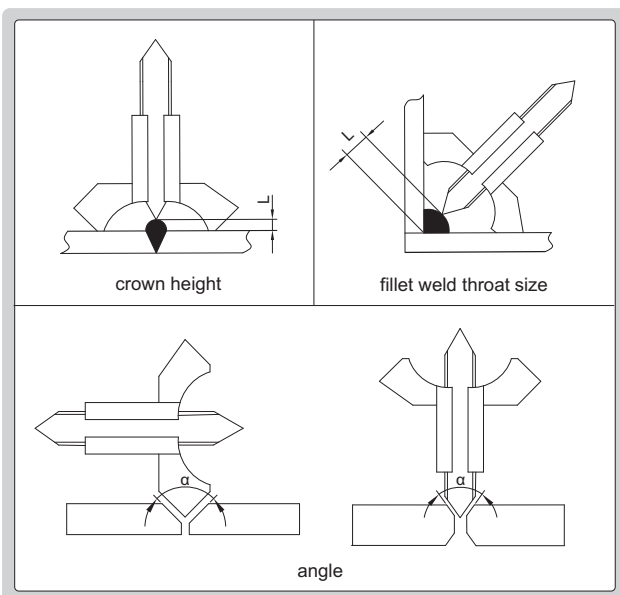
back



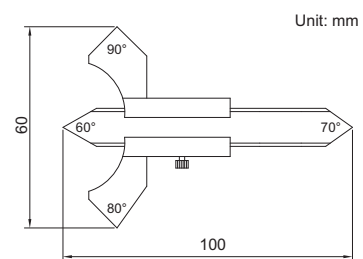
4833-1

Code	Range	Graduation	Accuracy
4833-1	0.8 - 15mm (1/32" - 5/8")	0.1mm (1/64")	±0.1mm

WELDING GAUGE



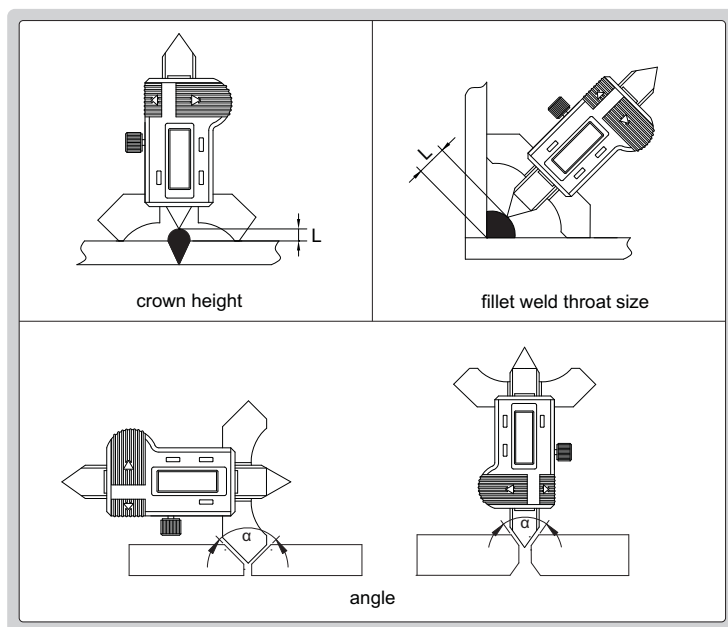
4830



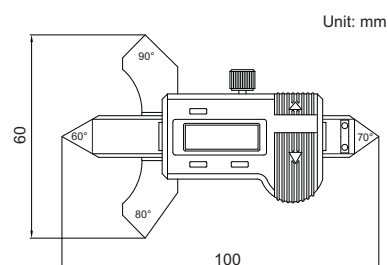
Code	Measurement	Range	Graduation	Accuracy
4830	crown height	0 - 8mm	0.1mm	±0.1mm
	fillet weld throat size	0 - 20mm	0.1mm	±0.3mm
	angle	60°, 70°, 80°, 90°	—	±1°

- Made of stainless steel
- Stain chrome plated reading surface

DIGITAL WELDING GAUGE



4831-20



Unit: mm

Code	Measurement	Range	Resolution	Accuracy
4831-20	crown height	0 - 10mm	0.01mm/0.0005"	±0.03mm
	fillet weld throatsize	0 - 20mm	0.01mm/0.0005"	±0.1mm
	angle	60°, 70°, 80°, 90°	—	±1°

- Buttons: zero, mm/inch, on/off
- Battery SR44 or LR44
- Made of stainless steel

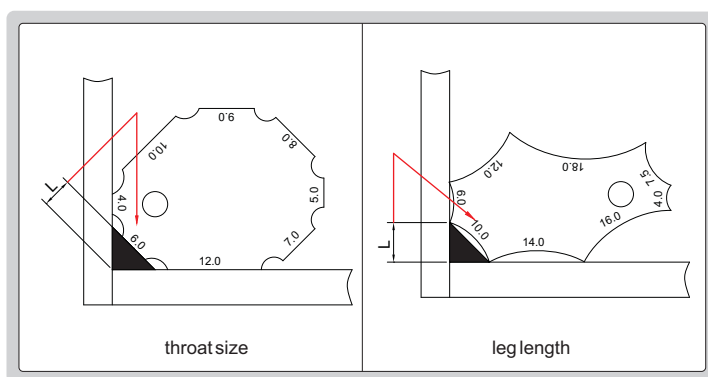
FILLET WELD GAUGE



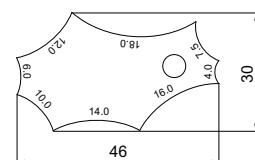
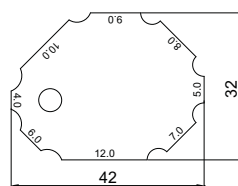
4832-1

- Made of stainless steel
- Sizes marked on both faces

Code	Throat size (mm)	Leg length (mm)	Accuracy
4832-1	4, 5, 6, 7, 8, 9, 10, 12	4, 6, 7.5, 10, 12, 14, 16, 18	±0.5mm



Unit: mm



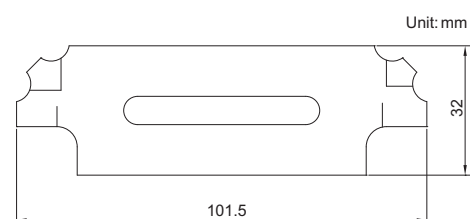
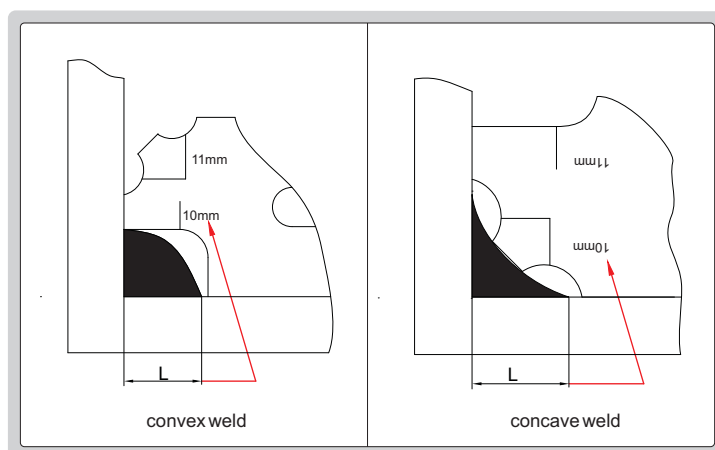
FILLET WELD GAUGE



4836-1

- 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	Size (mm)	Accuracy
4836-1	3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 19, 22, 25	±0.5mm



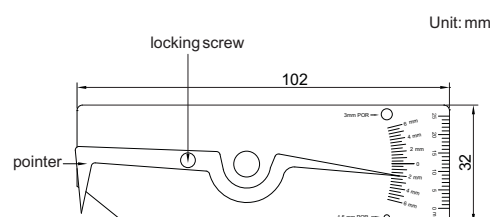
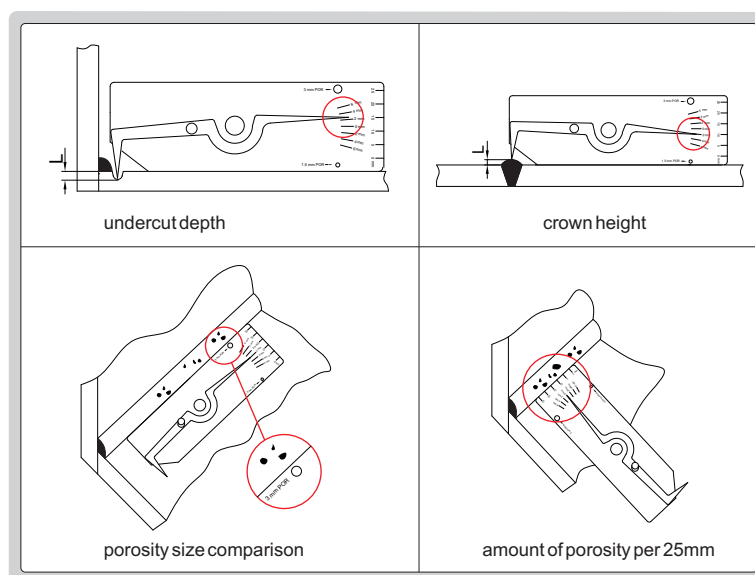
WELDING GAUGE



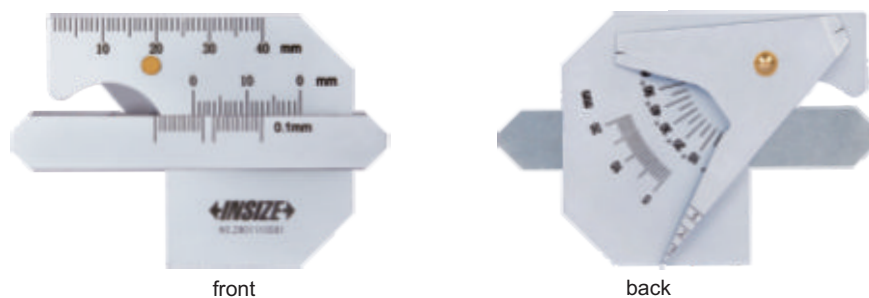
4834-1

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

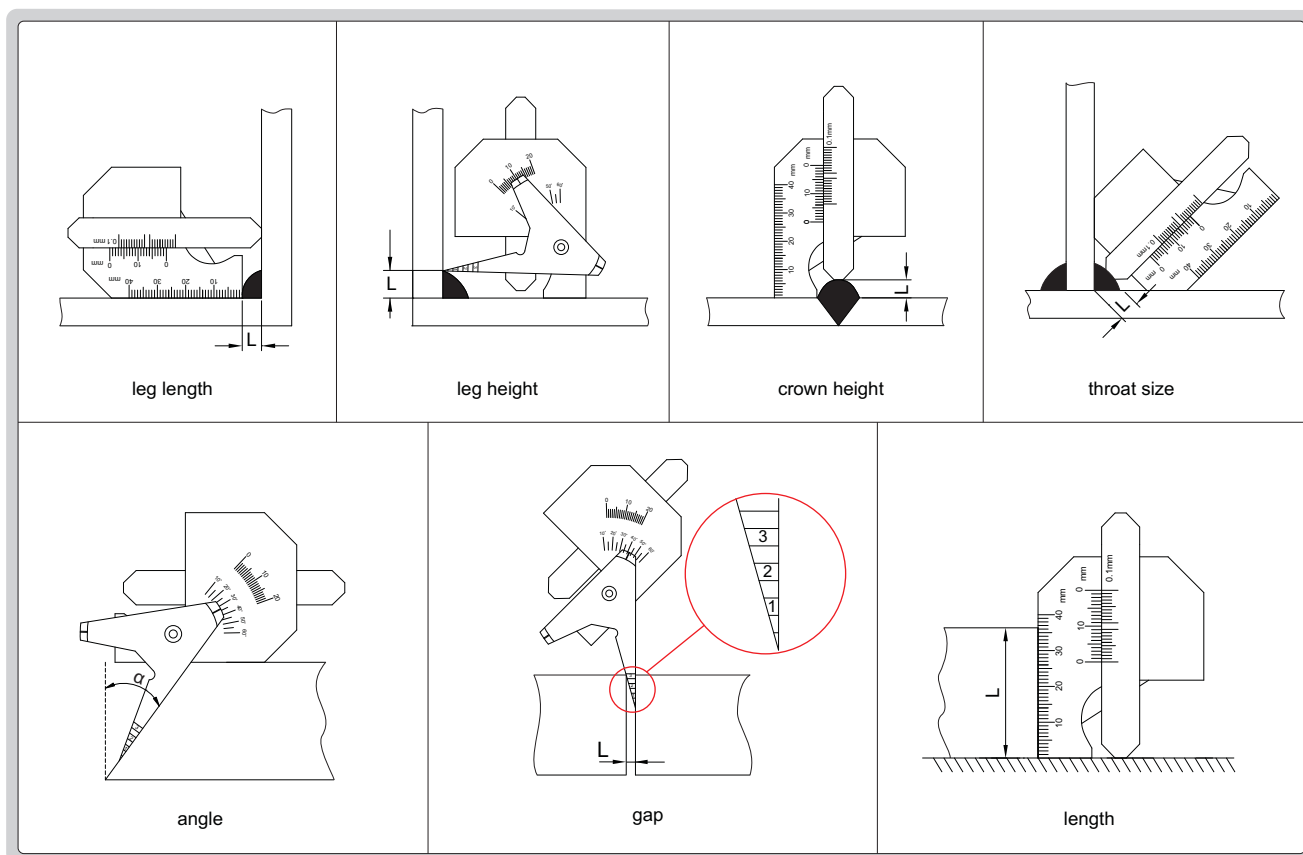
Code	Measurement	Range	Graduation	Accuracy
4834-1	undercut depth	0 - 6mm	0.5mm	±0.5mm
	crown height	0 - 6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—



WELDING GAUGE

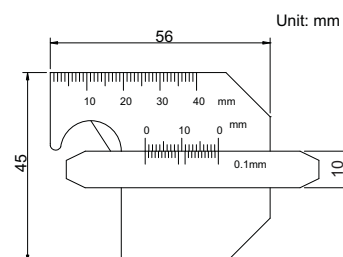


6832-1



- Made of stainless steel
- Stain chrome plated surface

Code	Measurement	Range	Graduation	Accuracy
6832-1	leg length	0 - 10mm	0.1mm	±0.1mm
	leg height	0 - 20mm	1mm	±0.5mm
	crown height	0 - 10mm	0.1mm	±0.1mm
	throat size	0 - 10mm	0.1mm	±0.1mm
	angle	0° - 60°	5°	±1°
	gap	1 - 3.5mm	0.5mm	±0.5mm
	length	0 - 40mm	1mm	±0.5mm



WELDING GAUGE

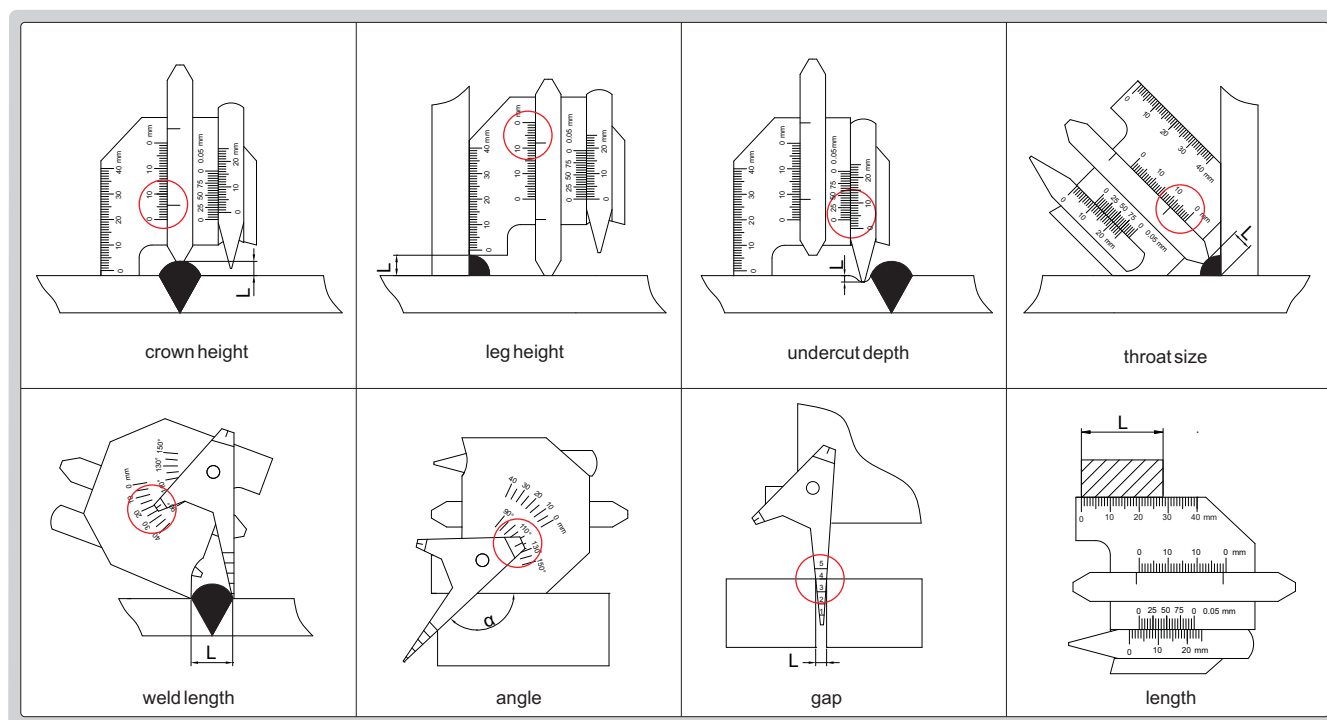


front



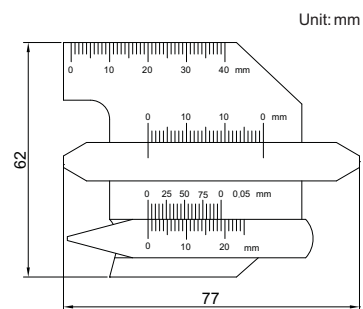
back

4838-1



■ Made of stainless steel

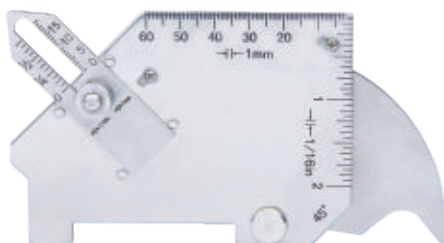
Code	Measurement	Range	Graduation	Accuracy
4838-1	crown height	0 - 10mm	1mm	±0.5mm
	leg height	0 - 14mm	1mm	±0.5mm
	undercut depth	0 - 5mm	0.05mm	±0.05mm
	throat size	0 - 13mm	1mm	±0.5mm
	weld length	0 - 40mm	1mm	±1mm
	angle	90° - 150°	5°	±1°
	gap	0.5 - 5mm	1mm	±0.5mm
	length	0 - 40mm	1mm	±0.5mm



WELDING GAUGE

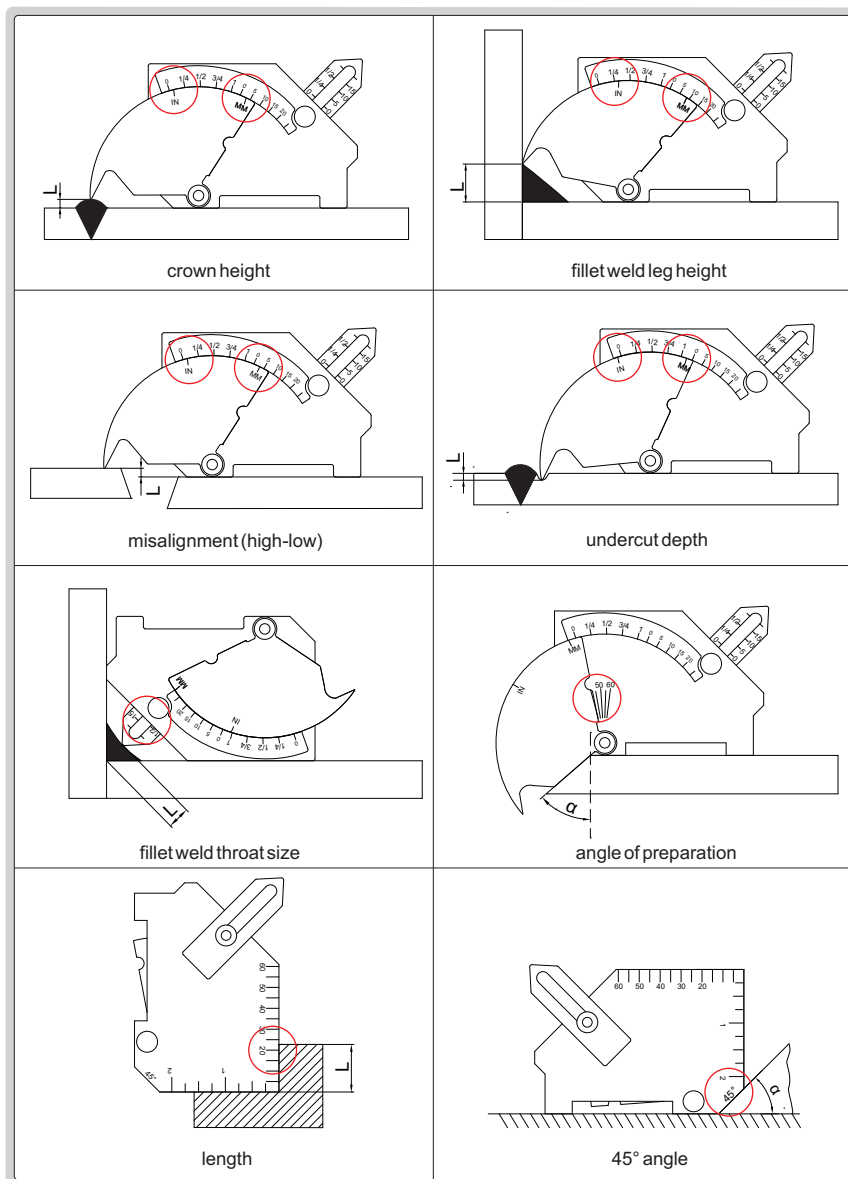


front



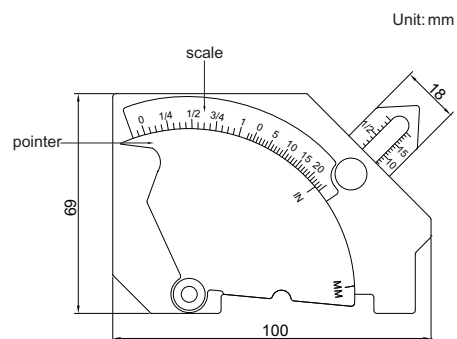
back

4835-1

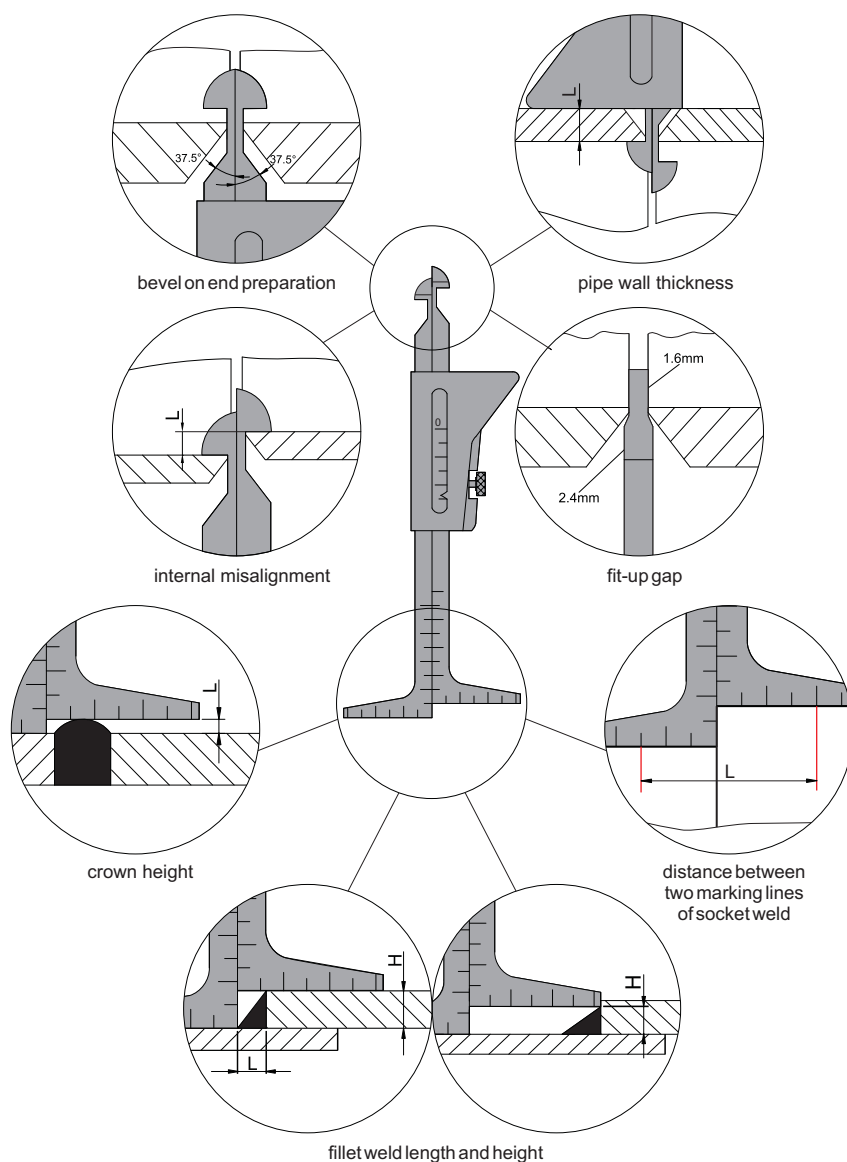


- Adjustable scale to compensate pointer wear
- Made of stainless steel

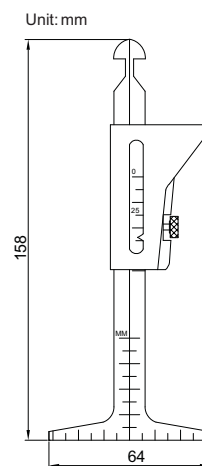
Code	Measurement	Range	Graduation	Accuracy
4835-1	crown height	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	fillet weld leg height	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	misalignment (high-low)	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	undercut depth	0 - 2mm (0 - 1/8")	1mm (1/16")	±0.5mm
	fillet weld throat size	0 - 20mm (0 - 3/4")	1mm (1/16")	±0.5mm
	angle of preparation	0 - 60°	5°	±1°
	length	0 - 60mm (0 - 2")	1mm (1/16")	±0.5mm
	45° angle	—	—	±1°



PIPE WELDING GAUGE



4839-1



■ Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4839-1	bevel on end preparation	37.5°	—	±1°
	pipe wall thickness	0 - 45mm (0 - 1-3/4")	1mm (1/16")	±0.5mm
	internal misalignment	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm
	fit-up gap	1.6mm, 2.4mm	—	±0.1mm
	crown height	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm
	distance between two marking lines of socket weld	0 - 60mm (0 - 2-3/8")	1mm (1/16")	±0.5mm
	fillet weld length	0 - 30mm (0 - 1-1/4")	1mm (1/16")	±0.5mm
	fillet weld height	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm

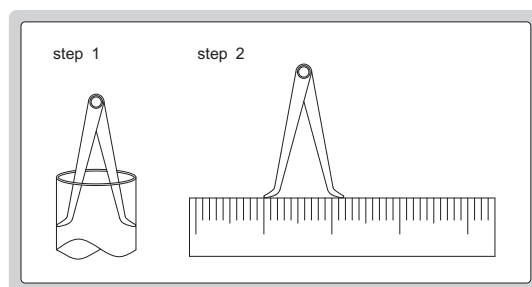
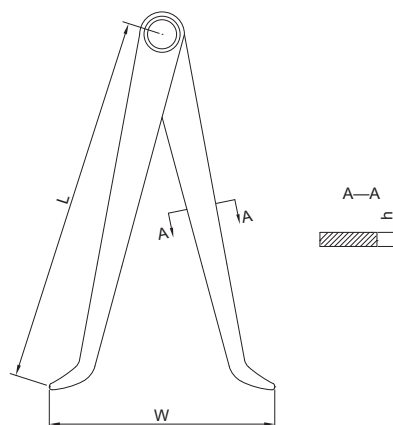
INSIDE CALIPER



7240-150

- Made of carbon steel

Code	Size(L)	Range(W)	h
7240-150	150mm	15 - 150mm	2mm
7240-200	200mm	15 - 200mm	2mm
7240-250	250mm	15 - 250mm	3mm
7240-300	300mm	15 - 300mm	3mm



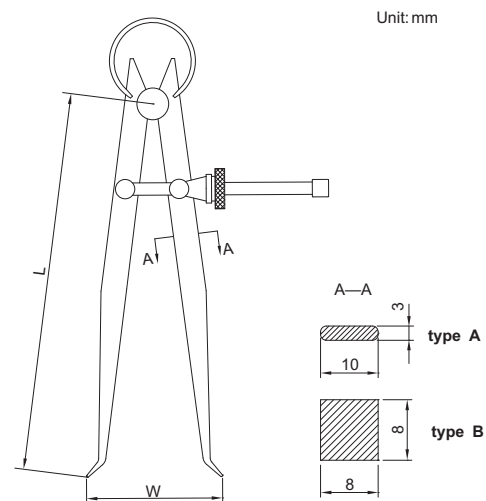
INSIDE SPRING CALIPER



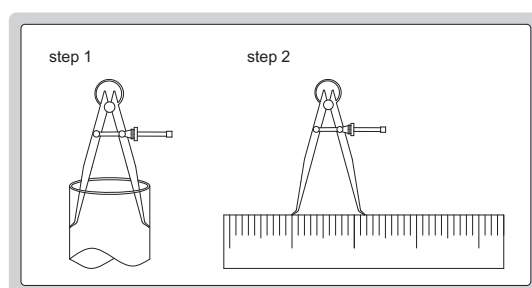
7249-125

- Made of carbon steel

Code	Size(L)	Type	Range(W)
7249-125	125mm	A	15 - 115mm
7249-150	150mm	A	15 - 140mm
7249-200	200mm	A	18 - 190mm
7249-250	250mm	A	20 - 240mm
7249-300	300mm	A	20 - 290mm
7249-400	400mm	B	20 - 390mm
7249-500	500mm	B	25 - 490mm
7249-600	600mm	B	25 - 590mm



Unit: mm



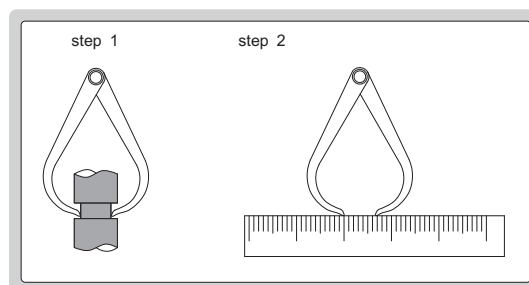
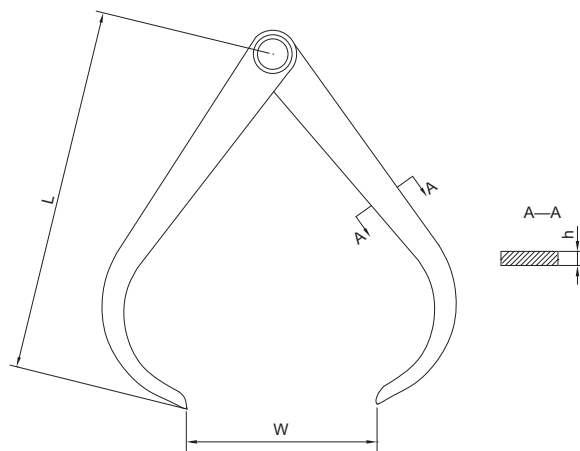
OUTSIDE CALIPER



7241-150

- Made of carbon steel

Code	Size(L)	Range(W)	h
7241-150	150mm	0 - 150mm	2mm
7241-200	200mm	0 - 200mm	2mm
7241-250	250mm	0 - 250mm	3mm
7241-300	300mm	0 - 300mm	3mm



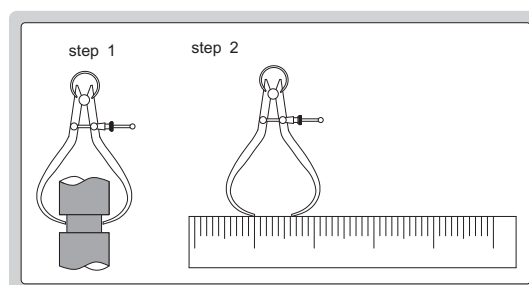
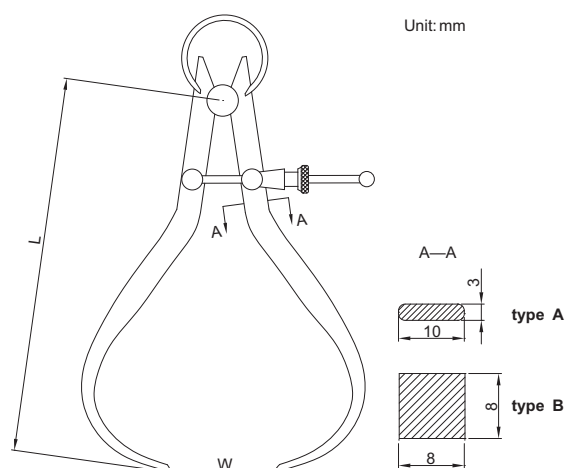
OUTSIDE SPRING CALIPER



7244-125

- Made of carbon steel

Code	Size(L)	Type	Range(W)
7244-125	125mm	A	0 - 115mm
7244-150	150mm	A	0 - 140mm
7244-200	200mm	A	0 - 190mm
7244-250	250mm	A	0 - 240mm
7244-300	300mm	A	0 - 290mm
7244-400	400mm	B	0 - 390mm
7244-500	500mm	B	0 - 490mm
7244-600	600mm	B	0 - 590mm



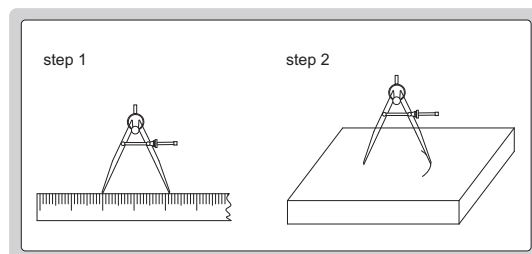
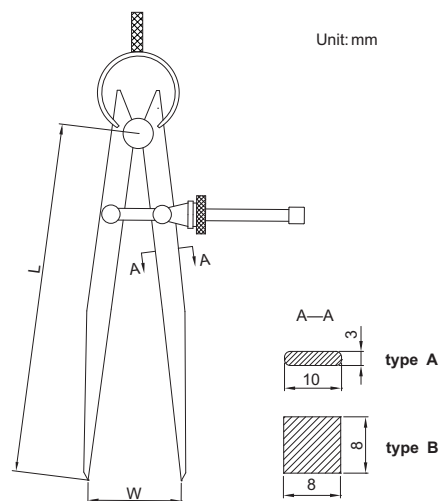
SPRING DIVIDER



7250-125

- Made of carbon steel
- Hardened points

Code	Size(L)	Type	Range(W)
7250-125	125mm	A	0 - 115mm
7250-150	150mm	A	0 - 140mm
7250-200	200mm	A	0 - 190mm
7250-250	250mm	A	0 - 240mm
7250-300	300mm	B	0 - 290mm
7250-400	400mm	B	0 - 390mm
7250-500	500mm	B	0 - 490mm
7250-600	600mm	B	0 - 590mm



DIVIDER

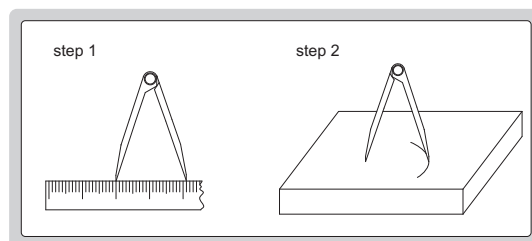
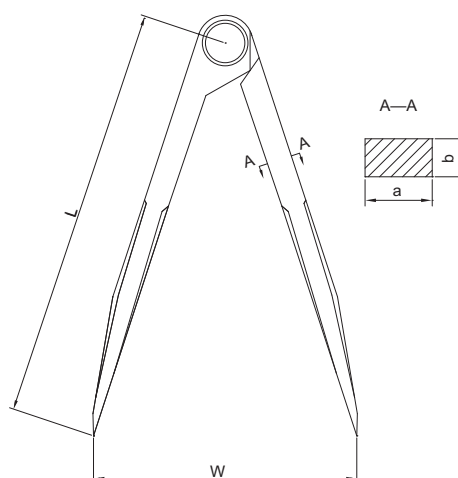


7245-125

- Made of carbon steel
- Hardened points

(mm)

Code	Size(L)	Range(W)	a	b
7245-125	125mm	0 - 125mm	8.5	7
7245-150	150mm	0 - 150mm	8.5	7
7245-200	200mm	0 - 200mm	10	7
7245-250	250mm	0 - 250mm	11	7
7245-300	300mm	0 - 300mm	12	7



DIVIDER

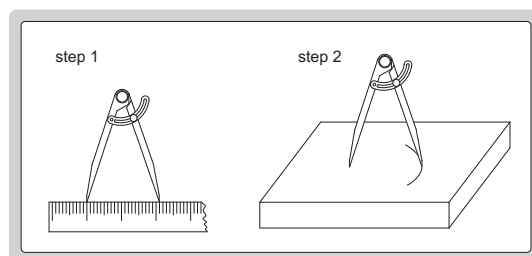
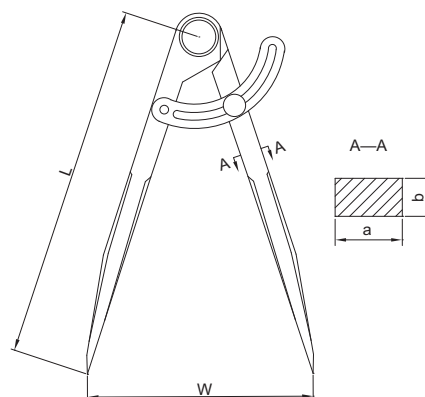


7247-125

- Made of carbon steel
- Hardened points

(mm)

Code	Size(L)	Range(W)	a	b
7247-125	125mm	0 - 115mm	8.5	7
7247-150	150mm	0 - 140mm	8.5	7
7247-200	200mm	0 - 190mm	10	7
7247-250	250mm	0 - 240mm	11	7
7247-300	300mm	0 - 290mm	12	7
7247-400	400mm	0 - 390mm	12	7
7247-500	500mm	0 - 490mm	12	7
7247-600	600mm	0 - 590mm	12	7
7247-800	800mm	0 - 790mm	16	11
7247-1000	1000mm	0 - 990mm	16	11



DIVIDER WITH PENCIL HOLDER

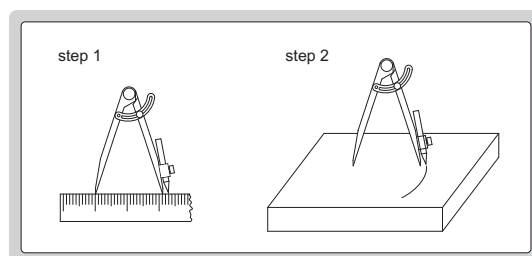
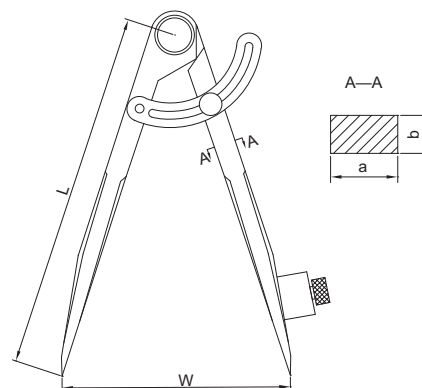


7248-125

- Made of carbon steel
- Hardened points

(mm)

Code	Size(L)	Range(W)	a	b
7248-125	125mm	0 - 115mm	8.5	7
7248-150	150mm	0 - 140mm	8.5	7
7248-200	200mm	0 - 190mm	10	7
7248-250	250mm	0 - 240mm	11	7
7248-300	300mm	0 - 290mm	12	7

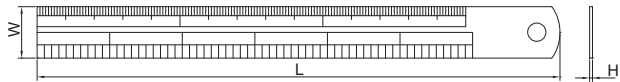


STEEL RULE



7110-300

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



(mm)

Code	Range	Accuracy	L	W	H	Remark
7110-150	150mm/6"	±0.08mm	170	18	1.0	graduation on front and back
7110-200	200mm/8"	±0.08mm	220	18	1.0	graduation on front and back
7110-300	300mm/12"	±0.11mm	330	25	1.0	graduation on front and back
7110-500	500mm/20"	±0.14mm	530	30	1.2	graduation on front and back
7110-600	600mm/24"	±0.15mm	630	30	1.2	graduation on front and back
7110-1000	1000mm/40"	±0.20mm	1040	32	1.5	graduation on front and back
7110-1200	1200mm/48"	±0.24mm	1240	35	1.8	graduation on front
7110-1500	1500mm/60"	±0.35mm	1550	38	1.8	graduation on front
7110-2000	2000mm/80"	±0.45mm	2065	40	2.0	graduation on front

RIGID RULE



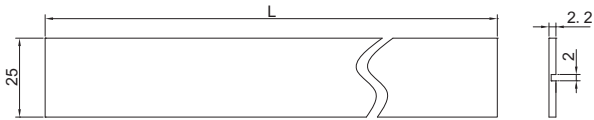
7113-300A



groove on the back

Unit: mm

- Rigid rules
- With groove on the back, suitable for combination square set (code **2278-180**)
- Satin chrome plated



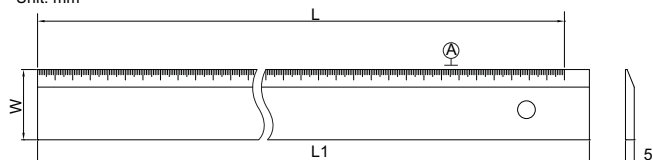
Code	Range	Graduation		Accuracy	L
		front	back		
7113-300A	300mm/12"	0.5mm and 1/32"	1mm and 1/64"	±0.15mm	300mm
7113-450A	450mm/18"	0.5mm and 1/32"	1mm and 1/64"	±0.20mm	450mm
7113-600A	600mm/24"	0.5mm and 1/32"	1mm and 1/64"	±0.25mm	600mm

STRAIGHT EDGE



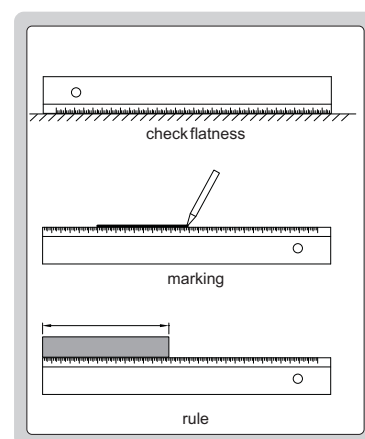
7111-300A

Unit: mm



- Check flatness and straightness, as well as for marking
- Graduation on the beveled edge
- Made of hardened tool steel
- Chrome plated

Code	Range(L)	Straightness of A	L1	W
7111-300A	300mm	0.02mm	320mm	40mm
7111-500A	500mm	0.03mm	520mm	40mm
7111-1000A	1000mm	0.04mm	1020mm	50mm

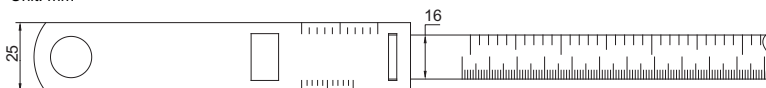


CIRCUMFERENCE TAPE



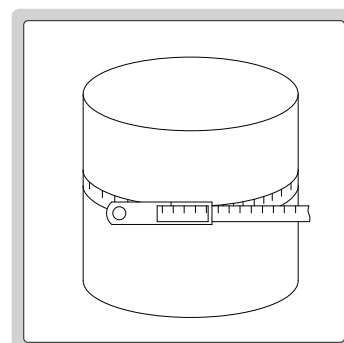
7114-950

Unit: mm



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

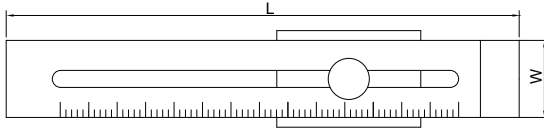
Code	Circumference range	Diameter range	Graduation	Accuracy	
				Circumference	Diameter
7114-950	60 - 950mm	20 - 300mm	0.1mm	±1.5mm	±0.5mm
7114-2200	940 - 2200mm	300 - 700mm	0.1mm	±1.5mm	±0.5mm
7114-3460	2190 - 3460mm	700 - 1100mm	0.1mm	±1.5mm	±0.5mm



MARKING GAUGE

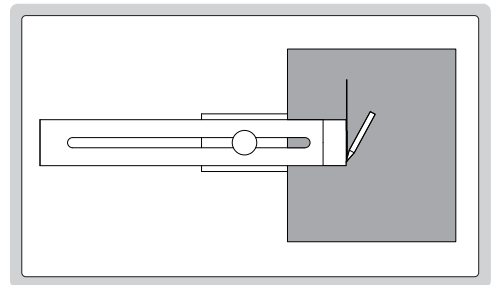


7120-200A

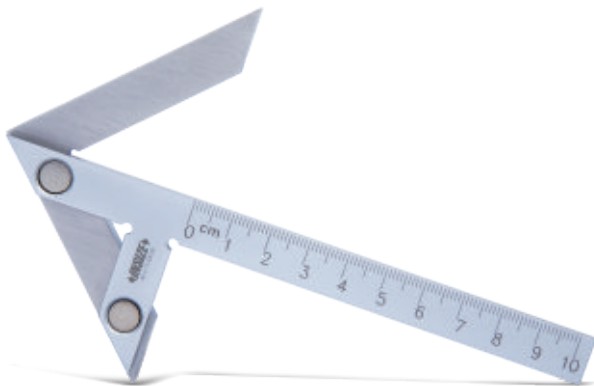


- Made of stainless steel
- Satin chrome finish

(mm)					
Code	Range	Graduation	Accuracy	L	W
7120-200A	0-200mm	0.1mm	±0.1mm	250	40
7120-250A	0-250mm	0.1mm	±0.1mm	300	40
7120-300A	0-300mm	0.1mm	±0.1mm	350	40



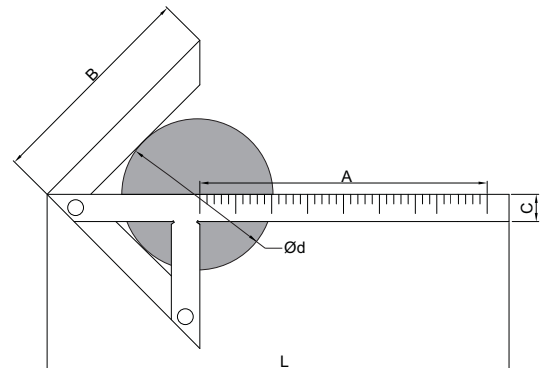
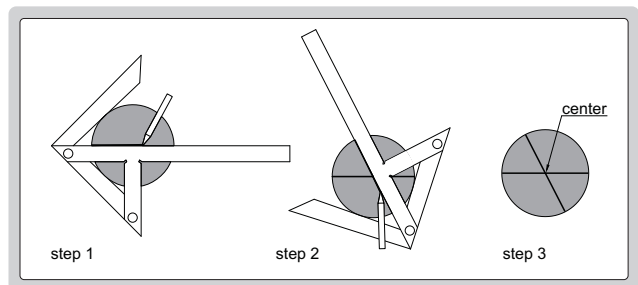
CENTER MARKING GAUGE



7205-100

- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

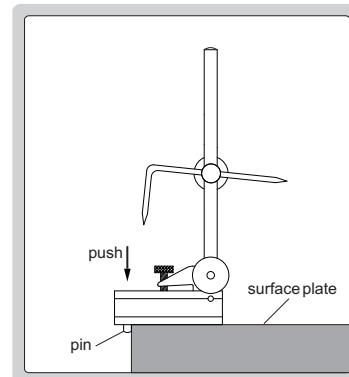
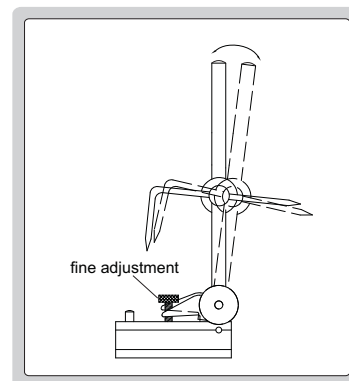
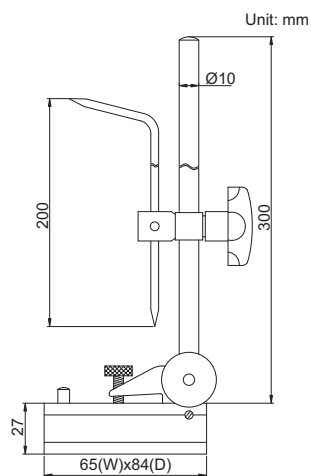
(mm)					
Code	Size(AxB)	Diameter of shafts(Ød)	Accuracy	C	L
7205-100	100X70mm	4-90mm	±0.15mm	12	153
7205-150	150x130mm	4-190mm	±0.15mm	15	245
7205-200	200x150mm	6-220mm	±0.15mm	15	310



HEIGHT SCRIBER



6990-300A



Code

6990-300A

- Grooved bottom for cylinder
- Two pins to be set against the edge of surface plate

SCRIBER



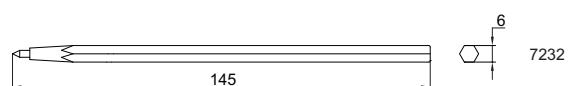
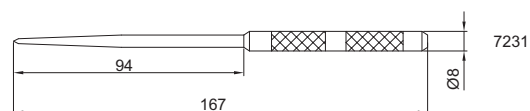
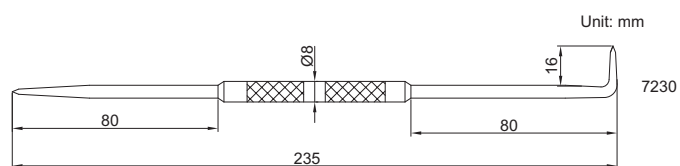
7230



7231



7232



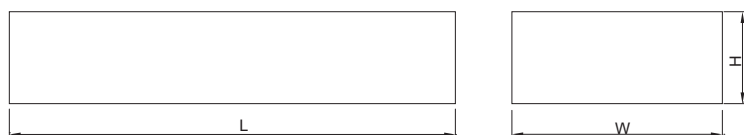
- Nickel plated

Code	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip

GRANITE SURFACE PLATE



6900-132



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

Grade 00

Code	Size(LxWxH)	Flatness	Weight(Kg)
6900-132	300x200x60mm	2.7µm	11
6900-142	400x250x60mm	2.9µm	18
6900-144	400x400x60mm	3.1µm	29
6900-153	500x315x70mm	3.2µm	33
6900-164	630x400x80mm	3.5µm	60
6900-166	630x630x100mm	3.8µm	119
6900-185	800x500x100mm	3.9µm	120
6900-1106	1000x630x140mm	4.4µm	265
6900-1101	1000x1000x150mm	4.8µm	450
6900-1128	1200x800x160mm	4.9µm	461
6900-1161	1600x1000x180mm	5.8µm	864
6900-1201	2000x1000x220mm	6.5µm	1320
6900-1202	2000x1500x250mm	7.0µm	2250
6900-1251	2500x1500x300mm	7.8µm	3375
6900-1302	3000x2000x400mm	9.2µm	7200

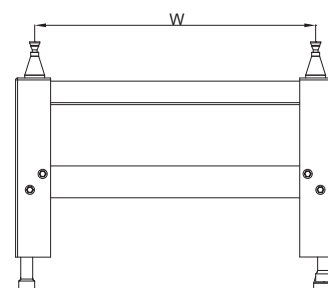
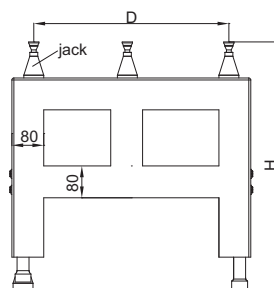
Grade 0

Code	Size(LxWxH)	Flatness	Weight(Kg)
6900-032	300x200x60mm	5.4µm	11
6900-042	400x250x60mm	5.9µm	18
6900-044	400x400x60mm	6.3µm	29
6900-053	500x315x70mm	6.4µm	33
6900-064	630x400x80mm	7.0µm	60
6900-066	630x630x100mm	7.6µm	119
6900-085	800x500x100mm	7.8µm	120
6900-0106	1000x630x140mm	8.7µm	265
6900-0101	1000x1000x150mm	9.7µm	450
6900-0128	1200x800x160mm	9.8µm	461
6900-0161	1600x1000x180mm	11.5µm	864
6900-0201	2000x1000x220mm	12.9µm	1320
6900-0202	2000x1500x250mm	14.0µm	2250
6900-0251	2500x1500x300mm	15.7µm	3375
6900-0302	3000x2000x400mm	18.4µm	7200

STAND FOR GRANITE SURFACE PLATE



6902-64A



Unit: mm

- For medium size granite surface plates
- Adjusting range of jacks: 25mm
- One foot on the bottom is adjustable

(mm)

Code	For granite surface plate	W	D	H
6902-64A	630x400x80mm(code 6900-064 and 6900-164)	440	280	755-780
6902-66A	630x630x100mm(code 6900-066 and 6900-166)	440	440	755-780
6902-85A	800x500x100mm(code 6900-085 and 6900-185)	560	350	755-780
6902-106A	1000x630x140mm(code 6900-0106 and 6900-1106)	700	440	735-760
6902-101A	1000x1000x150mm(code 6900-0101 and 6900-1101)	700	700	735-760
6902-128A	1200x800x160mm(code 6900-0128 and 6900-1128)	840	560	735-760
6902-161A	1600x1000x180mm(code 6900-0161 and 6900-1161)	1120	700	735-760

JACK SET FOR GRANITE SURFACE PLATE

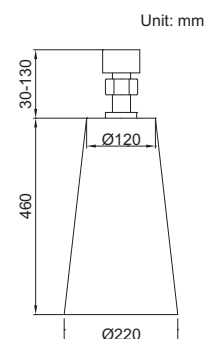


6903

Code

6903

- 5 jacks per set
- Adjustable height
- For large granite surface plates:
 - 2000x1000x220mm(code 6900-0201 and 6900-1201)
 - 2000x1500x250mm(code 6900-0202 and 6900-1202)
 - 2500x1500x300mm(code 6900-0251 and 6900-1251)
 - 3000x2000x400mm(code 6900-0302 and 6900-1302)



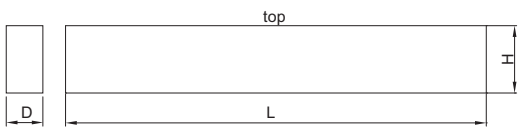
Unit: mm

GRANITE STRAIGHT EDGE



4147-500

(mm)				
Code	Length(L)	Flatness of top	D	H
4147-500	500mm	2.8µm	50	80
4147-1000	1000mm	3.3µm	60	120

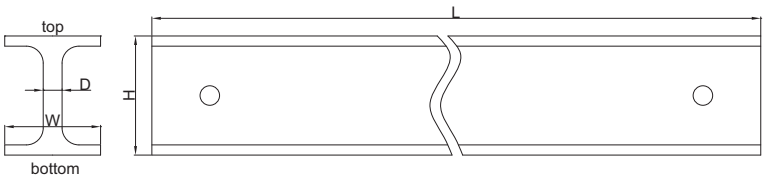


MAGNALIUM STRAIGHT EDGE



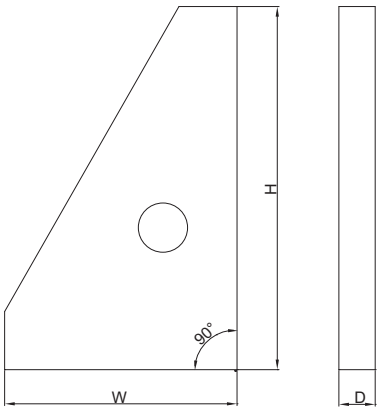
4180-500

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



(mm)						
Code	Length(L)	Flatness of top and bottom	Parallelism between top and bottom	H	W	D
4180-500	500mm	3µm	4µm	60	30	5
4180-1000	1000mm	5µm	8µm	60	30	5
4180-1500	1500mm	15µm	22µm	60	30	5
4180-2000	2000mm	18µm	27µm	100	40	8

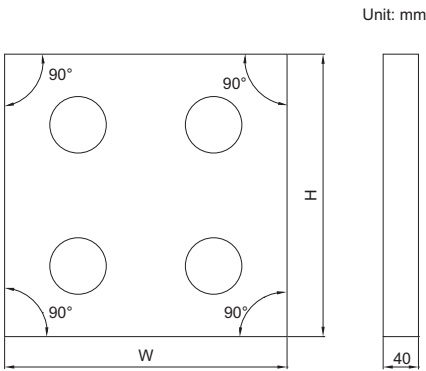
GRANITE SQUARE



4141-250

Code	Size(HxW)	Squareness	D
4141-250	250x160mm	2.5μm	25mm
4141-400	400x250mm	3.5μm	40mm
4141-630	630x400mm	4.5μm	63mm

GRANITE SQUARE



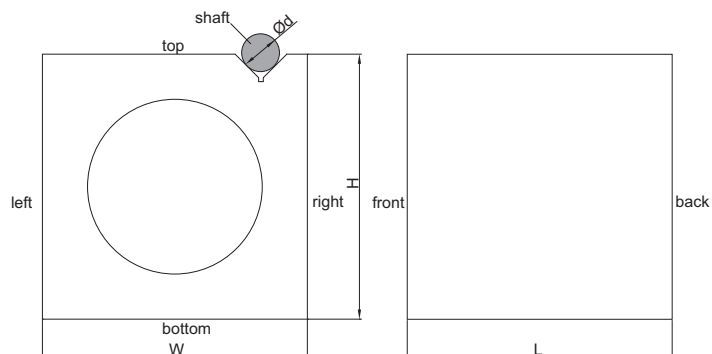
4144-315

Code	Size(HxW)	Squareness
4144-315	315x315mm	2.6μm

GRANITE SQUARE AND V-BLOCK



4142-160



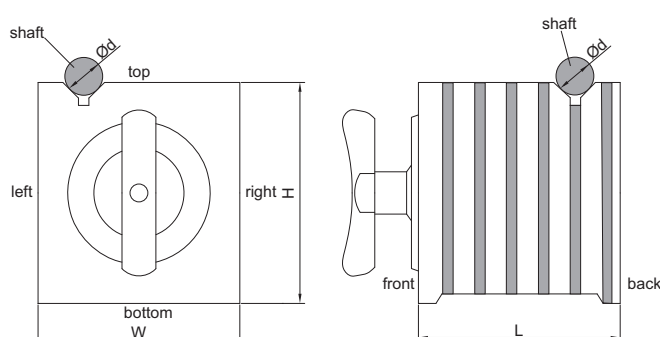
- Thread holes: M8

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
4142-160	160x160x160mm	6-42mm	8µm	8µm	8µm

MAGNETIC SQUARE AND V-BLOCK



6510-1A



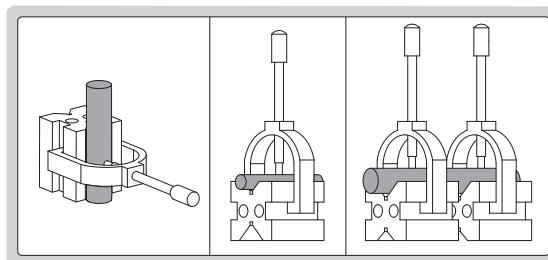
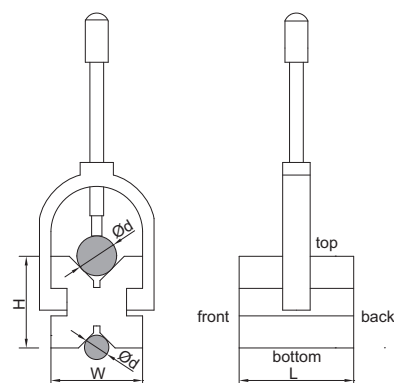
Code	Size(LxWxH)	Magnetic force	Range of shafts (Ød)	Parallelism or squareness between top, bottom, left, right and back sides	Parallelism or squareness of both V grooves to top, bottom, left, right and back sides
6510-1A	100x100x100mm	30kgf	6-36mm	10µm	10µm
6510-2A	150x150x150mm	30kgf	6-44mm	15µm	15µm

V-BLOCK SET



6896-11

- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts



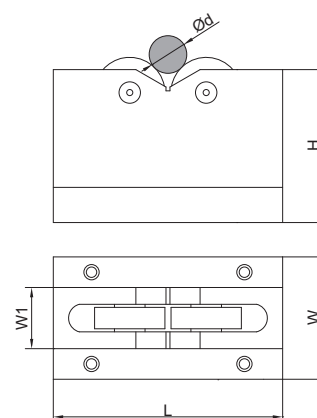
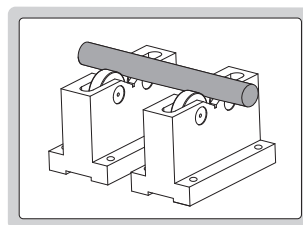
Code	Size(LxWxH)	Range of shafts (Ød)	Parallelism of both V grooves to top and bottom sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
6896-11	50x40x40mm	5 - 40mm	5µm	5µm	5µm
6896-12	80x63x63mm	7 - 63mm	5µm	5µm	5µm
6896-13	100x80x80mm	7 - 80mm	5µm	5µm	5µm

ROLLER BEARING V-BLOCK SET



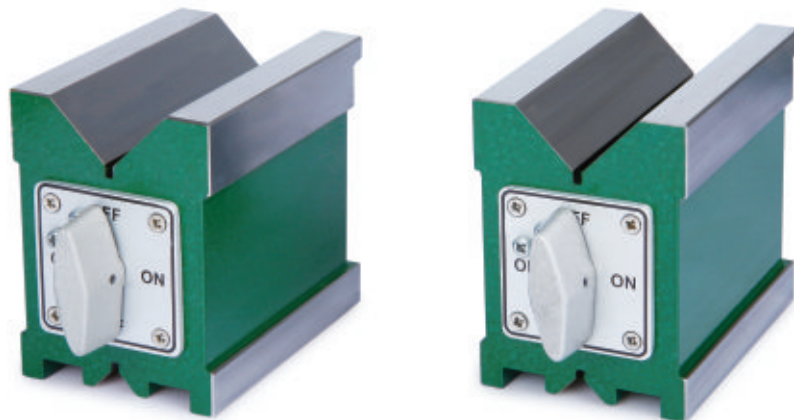
6888-1

- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces

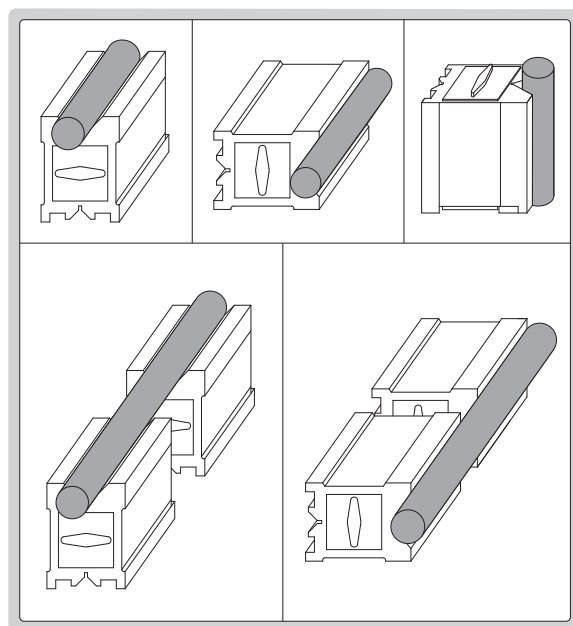
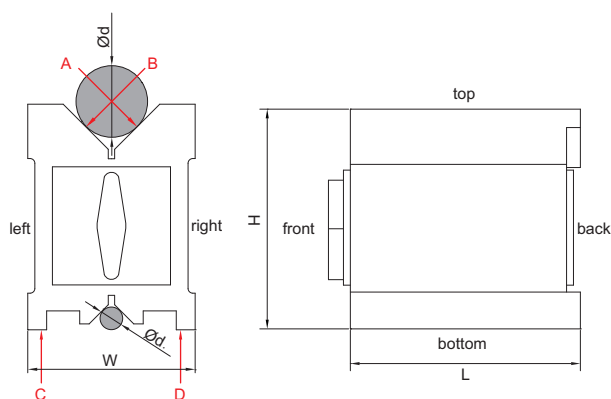


Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of bearings to bottom (when two V-blocks are closed)	Load capacity	W1
6888-1	150x60x100mm	25 - 70mm	5µm	500kg	22mm
6888-2	150x80x100mm	3 - 55mm	5µm	1000kg	40mm
6888-3	230x100x150mm	70 - 200mm	5µm	1000kg	60mm

MAGNETIC V-BLOCK SET



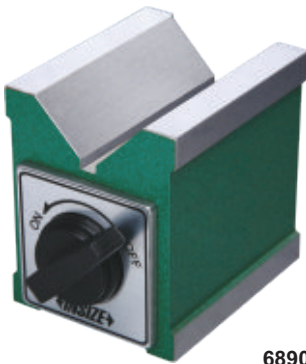
6889-1



- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Surface A, B, C, D are hardened to HRC60 $\pm$ 2
- Magnetic force on top, bottom and two V grooves
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Suitable for cast iron surface plates and granite surface plates

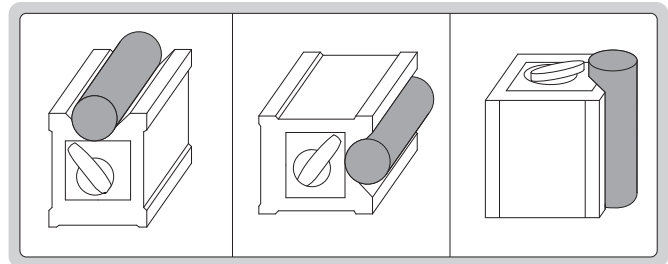
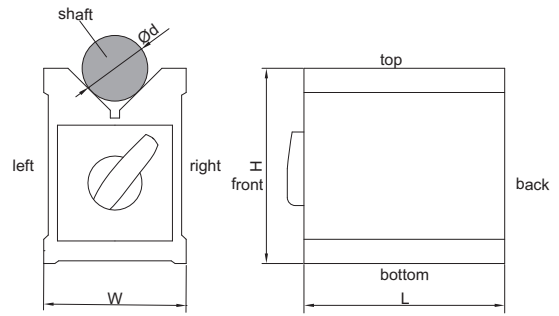
Code	Size (LxWxH)	Range of shafts ($\varnothing d$)	Magnetic force	Parallelism of both V grooves to top, bottom, left, right sides	Squareness of both V grooves to back side	Height difference of a matched pair
6889-1	75x56x75mm	5 - 40mm	75kgf	5 μ m	5 μ m	5 μ m
6889-2	100x70x95mm	5 - 65mm	100kgf	5 μ m	5 μ m	5 μ m
6889-3	150x75x100mm	5 - 70mm	125kgf	5 μ m	5 μ m	5 μ m

MAGNETIC V-BLOCK



6890-702

- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for cast iron surface plates



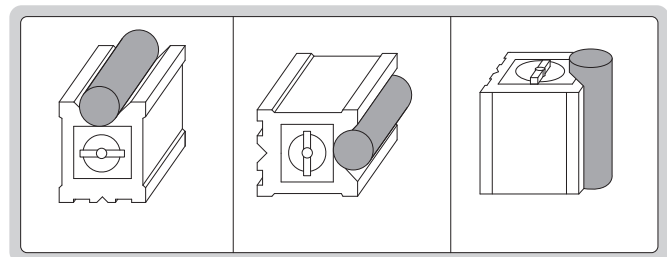
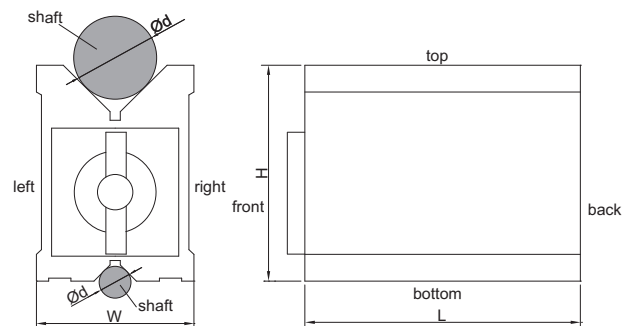
Code	Size(LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to top, bottom, left and right sides	Squareness of V groove to back side
6890-702	70x60x73mm	6 - 44mm	56kgf	10µm	10µm

MAGNETIC V-BLOCK



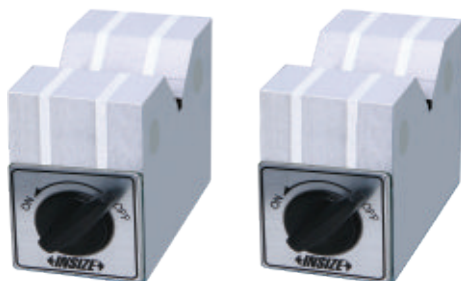
6801-1201

- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for cast iron surface plates



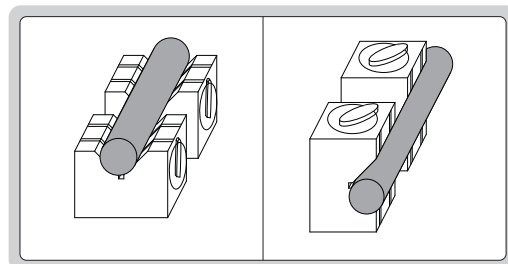
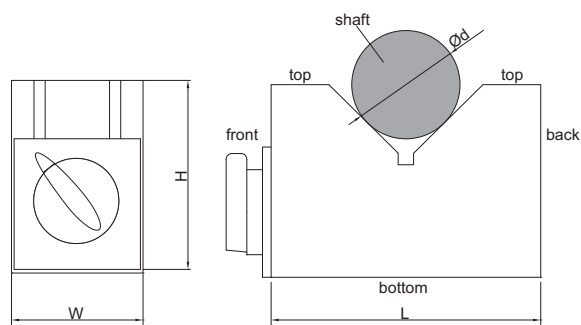
Code	Size(LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of both V grooves to top, bottom, left, right side	Squareness of both V grooves to back side
6801-1201	80x70x95mm	6 - 67mm	64kgf	10µm	10µm
6801-1202	100x70x95mm	6 - 67mm	80kgf	10µm	10µm
6801-1203	120x70x95mm	6 - 67mm	96kgf	10µm	10µm

MAGNETIC V-BLOCK SET



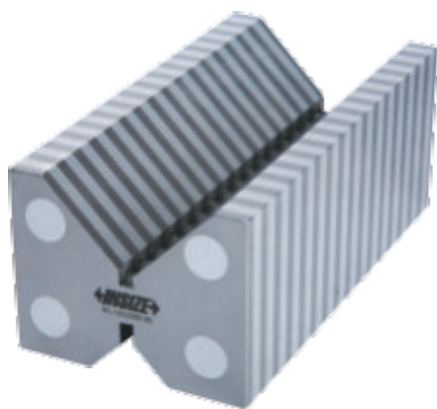
6891-1

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



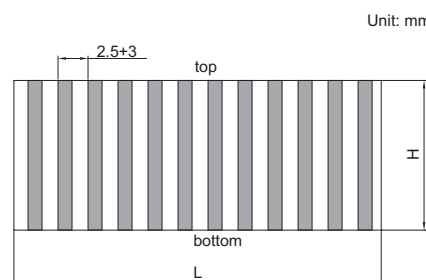
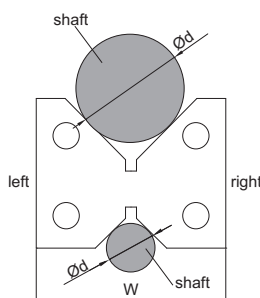
Code	Size(LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
6891-1	70x40x50mm	6 - 46mm	8kgf	10µm	10µm
6891-3	150x50x100mm	6 - 125mm	14kgf	10µm	10µm

MAGNETIC INDUCTION V-BLOCK

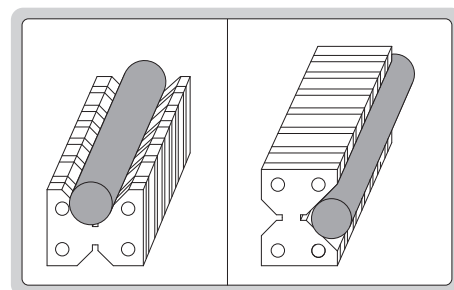


6892-1

- Hold cylindrical workpieces for inspection and machining
- To be used on magnetic chucks
- Supplied in single piece
- V groove on the top for large shafts
- V groove on the bottom for small shafts

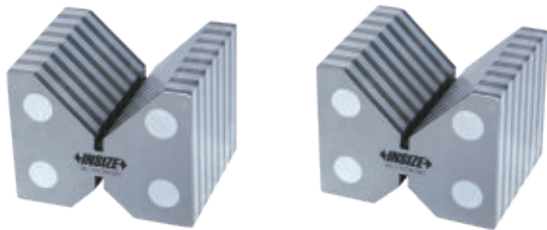


Unit: mm



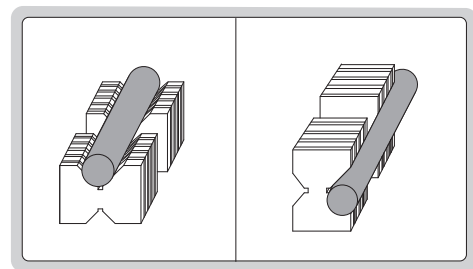
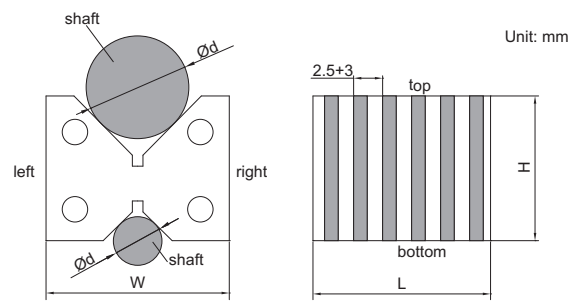
Code	Size(LxWxH)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top, bottom, left, right sides
6892-1	110x60x48mm	6 - 50mm	2.5+3mm	10µm

MAGNETIC INDUCTION V-BLOCK SET



6899-1

- Hold cylindrical workpieces for inspection and machining
- To be used on magnetic chucks
- Two V-blocks per set
- V groove on the top for large shafts
- V groove on the bottom for small shafts



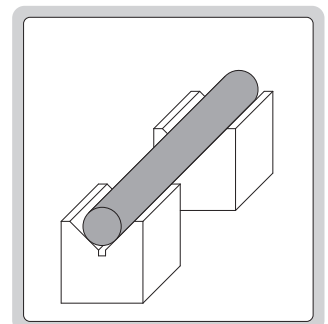
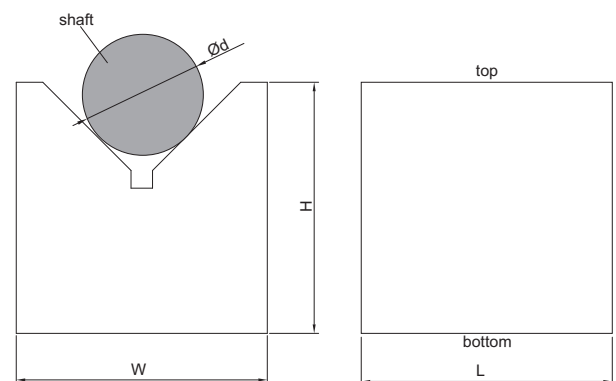
Code	Size(LxWxH)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top, bottom, left and right sides	Height difference of a matched pair
6899-1	50x60x48mm	6 - 50mm	2.5+3mm	10µm	10µm

GRANITE V-BLOCK SET



6897-1

- Two V-blocks per set

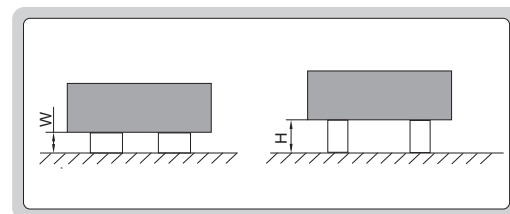
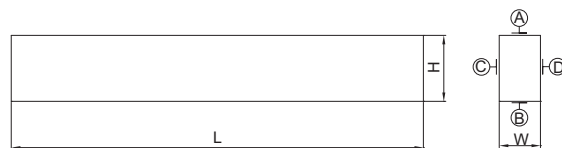


Code	Size(LxWxH)	Range of shafts (Ød)	Parallelism of V groove to bottom	Height difference of a matched pair
6897-1	70x70x50mm	6 - 75mm	5µm	5µm
6897-2	100x70x50mm	6 - 99mm	5µm	5µm

GRANITE PARALLEL SET



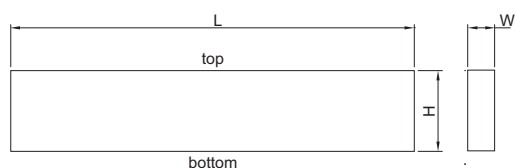
4143-250



Code	Size(LxWxH)	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
4143-250	250x25x40mm	5μm	5μm	5μm

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

PARALLEL SET

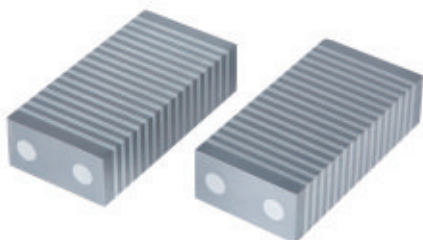


6533-144

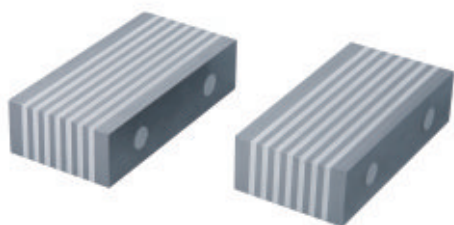
- Parallelism between top and bottom: 5μm
- Height difference of a matched pair: 5μm
- Hardened to HRC55-60

Code	Parallels per set	Length(L)	Thickness(W)	Height(H)
6533-20	20 pairs	100	2	5, 10, 15, 20
			3	6, 11, 16, 21
			4	7, 12, 17, 22
			5	8, 13, 18, 23
			6	9, 14, 19, 24
6533-242	24 pairs	125	8	11, 16, 21, 26, 31, 36
			10	13, 18, 23, 28, 33, 38
			12	15, 20, 25, 30, 35, 40
			14	17, 22, 27, 32, 37, 42
6533-143	14 pairs	150	5	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50
6533-144	14 pairs	150	10	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50
6533-241	24 pairs	150	8	11, 16, 21, 26, 31, 36
			10	13, 18, 23, 28, 33, 38
			12	15, 20, 25, 30, 35, 40
			14	17, 22, 27, 32, 37, 42

MAGNETIC INDUCTION PARALLEL SET



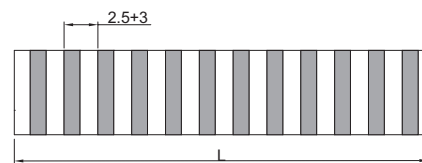
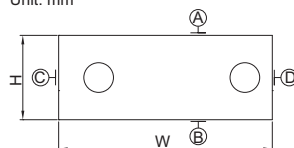
6894-1



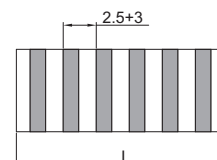
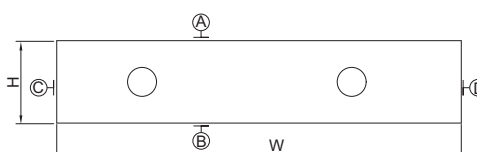
6894-2

- To be used on magnetic chucks
- Two parallels per set

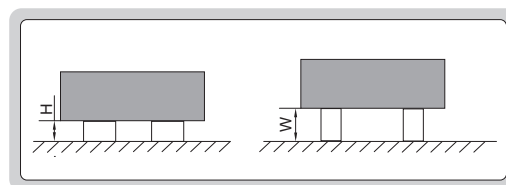
Unit: mm



6894-1



6894-2

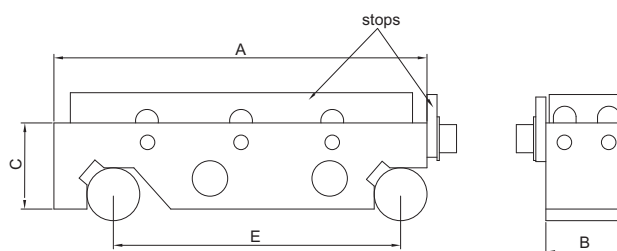


Code	Size(LxWxH)	Pole pitch	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
6894-1	100x50x25mm	2.5+3mm	10μm	10μm	10μm
6894-2	50x100x25mm	2.5+3mm	10μm	10μm	10μm

SINE BAR

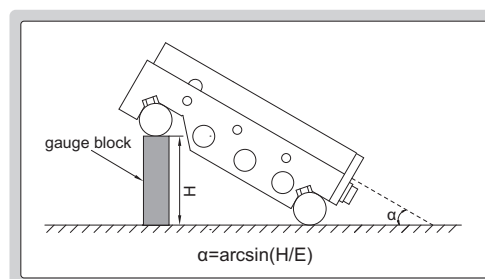


4150-130



- Made of hardened alloy steel

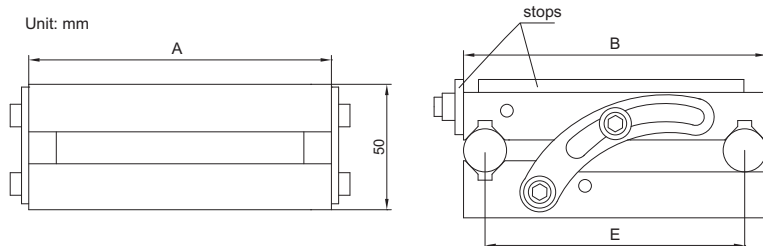
Code	Roller distance (E)	Table size (AxB)	Accuracy of α at 30°	C
4150-130	100mm	130x25mm	±8 seconds	25mm
4150-1301	100mm	130x83mm	±16 seconds	30mm
4150-250	200mm	250x40mm	±8 seconds	40mm
4150-2501	200mm	250x85mm	±16 seconds	40mm



SINE TABLE

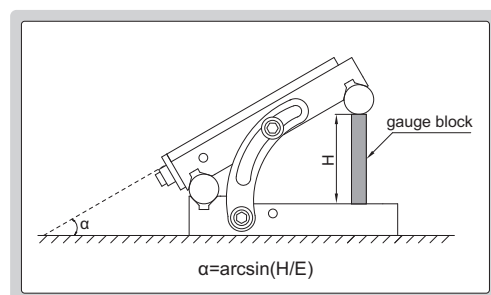


4151-150

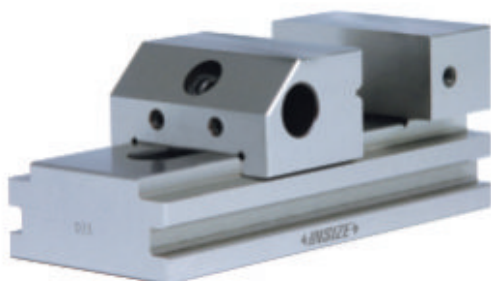


- Made of hardened alloy steel

Code	Roller distance(E)	Table size(AxB)	Accuracy of α at 30°
4151-150	100mm	150x150mm	± 25 seconds

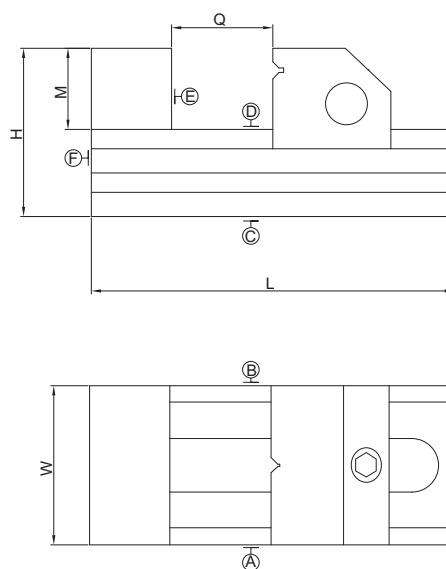


PRECISION VISE



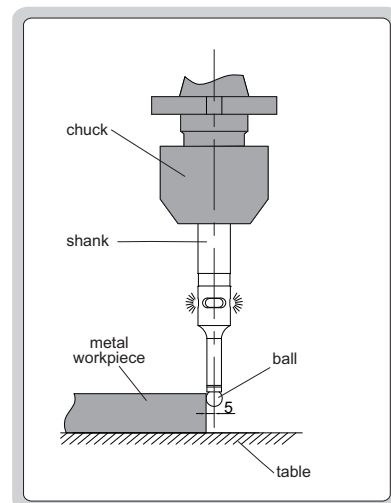
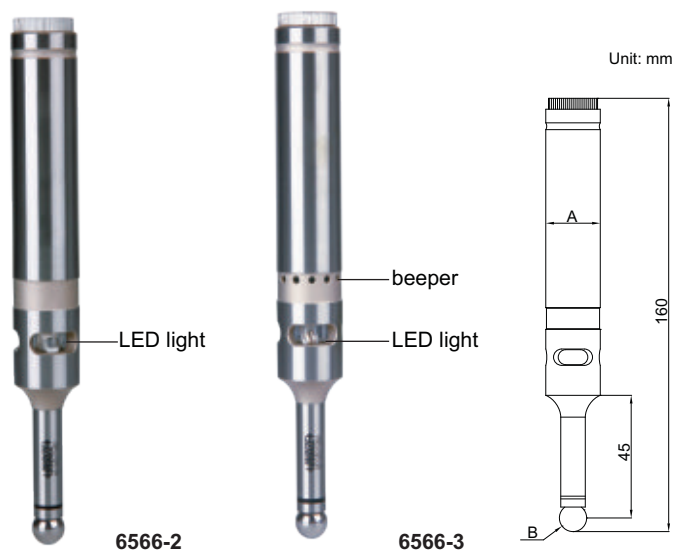
4153-70

- Made of hardened alloy steel
- Parallelism and squareness between A, B, C, D, E and F: $5\mu\text{m}/100\text{mm}$



Code	Jaw opening(Q)	Jaw width(W)	Overall length(L)	(mm)	
				H	M
4153-70	80mm	70mm	160mm	62	32
4153-90	115mm	90mm	210mm	80	40

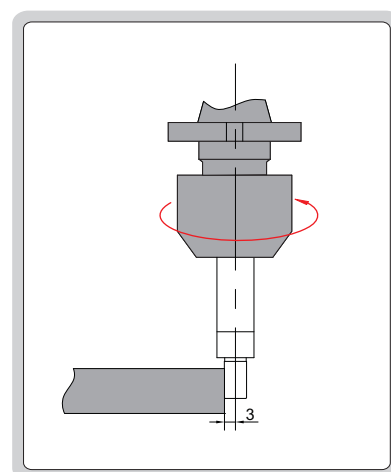
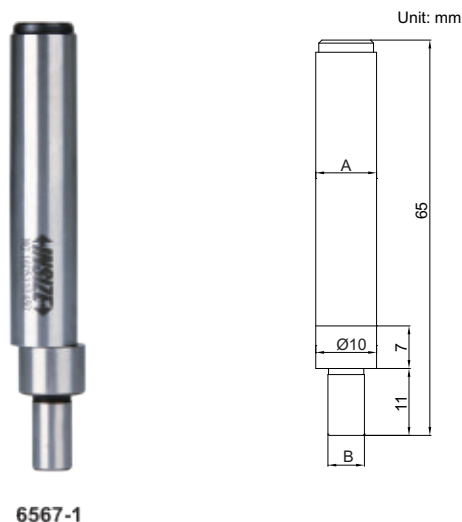
ELECTRONIC EDGE FINDER



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

Code	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6566-2	Ø20mm	SØ10mm	5µm	without	LR1, 1.5Vx2pcs
6566-3	Ø20mm	SØ10mm	5µm	with	23AE, 12Vx1pc

EDGE FINDER



- Hardened shank and contact point

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

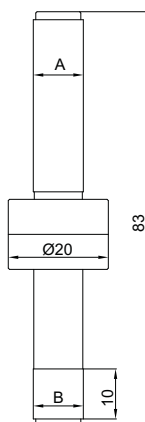
EDGE FINDER



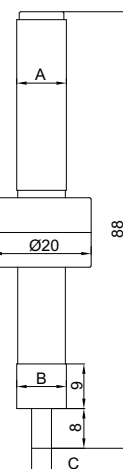
6562-3



6562-4

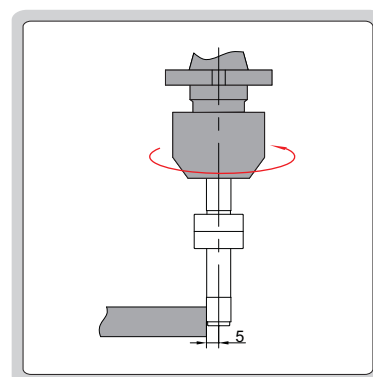


6562-3

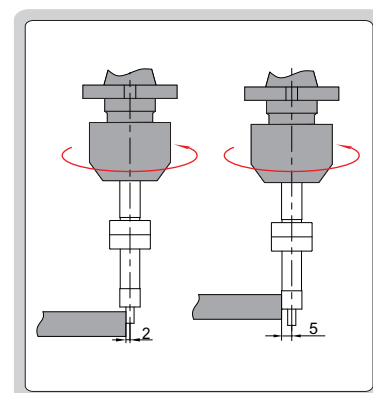


6562-4

Unit: mm



6562-3



6562-4

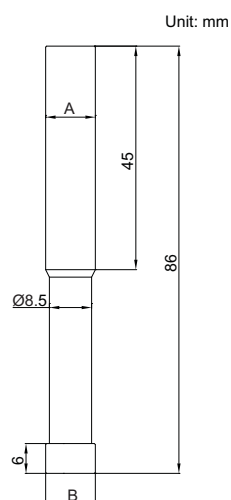
- Hardened shank and contact point

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

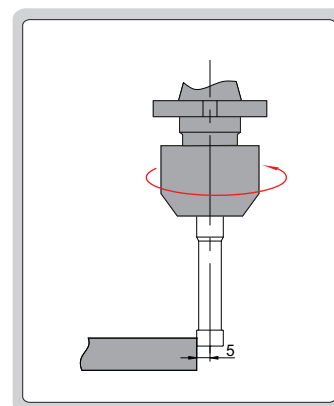
CERAMIC EDGE FINDER



6568-1



Unit: mm



- Ceramic contact point, non magnetic

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

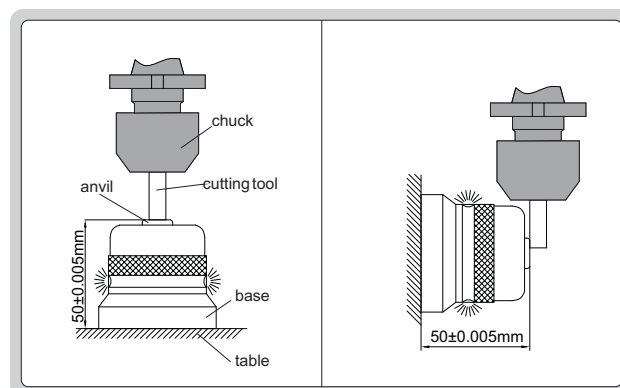
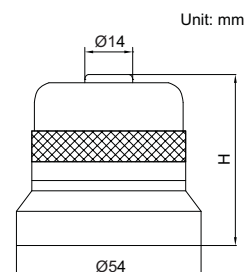
ELECTRONIC ZERO SETTER



6550-50A

- The base is electrically conducted to the cutting tools through the table and chuck, the LED lights up when the cutting tool touches the anvil
- Magnetic base
- Battery LR44 or SR44

Code	Height (H)	Accuracy
6550-50A	50mm	$\pm 5\mu\text{m}$



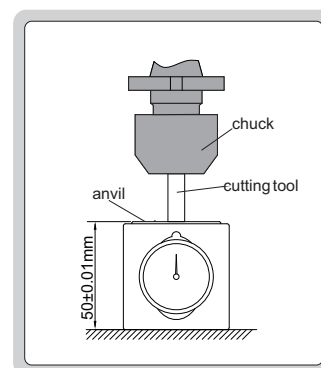
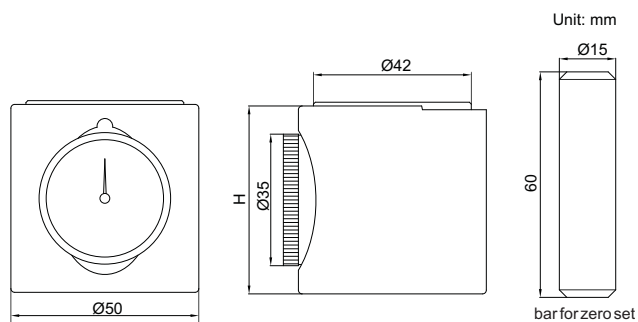
ZERO SETTER



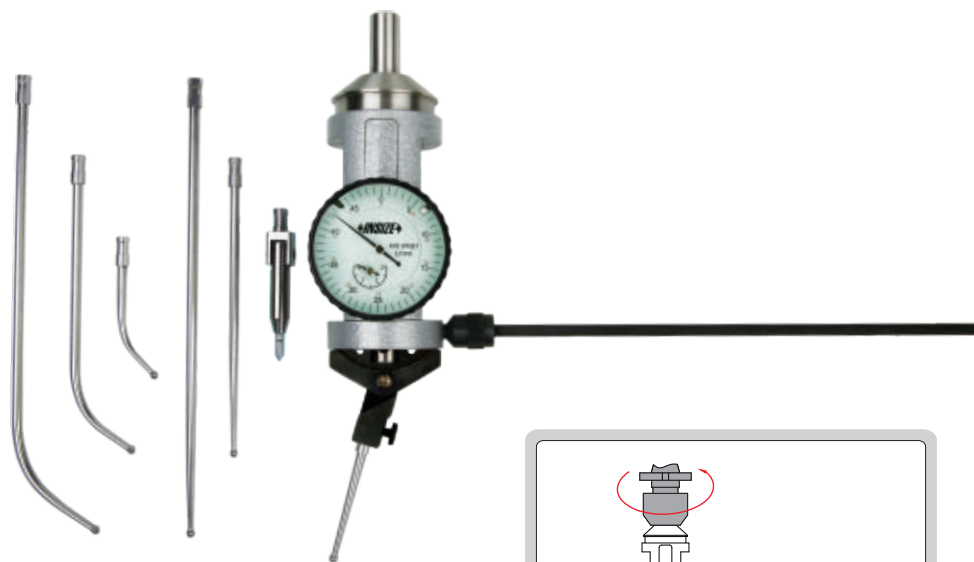
6552-50

- Supplied with bar for zero set
- Hardened anvil

Code	Height(H)	Accuracy
6552-50	50mm	$\pm 10\mu\text{m}$

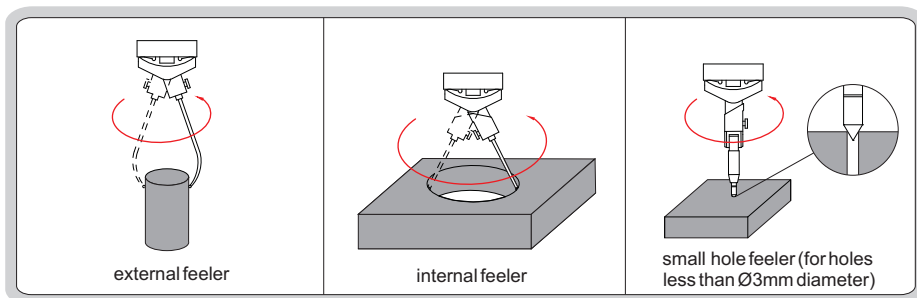
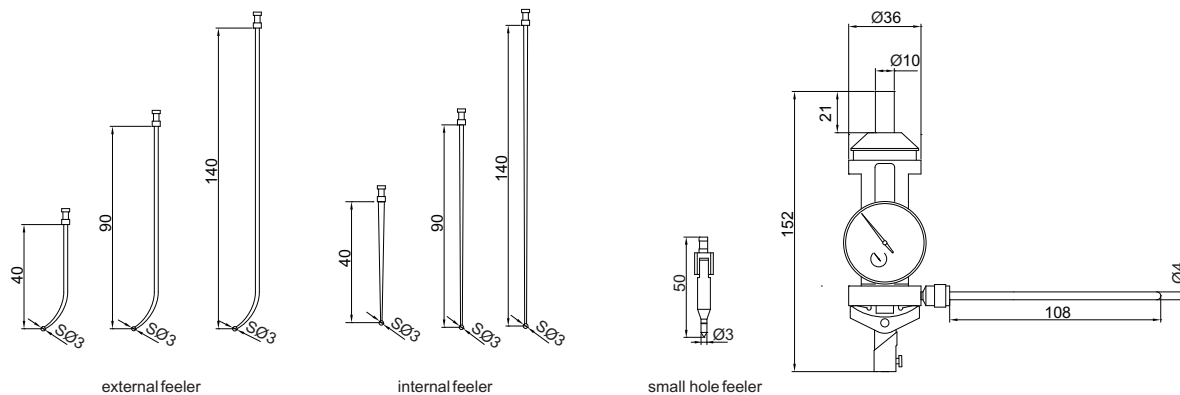


CENTERING INDICATOR



2385-3

Unit: mm



Code

2385-3

- Provides quick and accurate centering in boring and milling set-up

2-PIECE MEASURING TOOL SET



5021

■ Includes:

- 1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128"
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)

Code

5021

2-PIECE MEASURING TOOL SET



5022

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25A**)

Code

5022

2-PIECE MEASURING TOOL SET

■ Includes:

- 1) Dial test indicator, range 0.8mm, graduation 0.01mm (code **2380-08**)
- 2) Magnetic stand

Code

5023



5023

2-PIECE MEASURING TOOL SET

■ Includes:

- 1) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
- 2) Magnetic stand (code **6201-60**)

Code

5024



5024

3-PIECE MEASURING TOOL SET



■ Includes:

- 1) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
- 2) Flex arm
- 3) Locking pliers, adjustable jaw opening from 0 to 25mm

Code

5031



5031

4-PIECE MEASURING TOOL SET

■ Includes:

- 1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128"
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 4) Steel rule, 150mm/6" (code **7110-150**)

Code

5041



5041

4-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm, (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 4) Steel rule, 150mm/6" (code **7110-150**)

Code

5042



5042

5-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
- 4) Magnetic stand (code **6201-60**)
- 5) Micrometer stand (code **6300**)

Code

5051



5051

5-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25A**)
- 3) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
- 4) Magnetic stand (code **6201-60**)
- 5) Micrometer stand (code **6300**)

Code

5052



5052

6-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10FA**)
- 4) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 5) Scriber (code **7230**)
- 6) Steel rule, 150mm/6" (code **7110-150**)

Code

5061



5061

9-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005"
(code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Protractor, range 0-180°, graduation 1° (code **4799-180**)
- 4) Pitch gauge, range 0.25-7mm, 24pcs, metric 60° thread (code **4820-124**)
- 5) Radius gauge, range 1-7mm (code **4801-17**)
- 6) Feeler gauge, range 0.05-1.00mm, 20pcs (code **4602-20**)
- 7) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 8) Scriber (code **7230**)
- 9) Steel rule, 150mm/6" (code **7110-150**)

Code

5091



5091

13-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005",
(code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
- 4) Magnetic stand (code **6201-60**)
- 5) Protractor, range 0-180°, graduation 1° (code **4799-180**)
- 6) Pitch gauge, range 0.25-7mm, 24pcs, metric 60° thread (code **4820-124**)
- 7) Radius gauge, range 1-7mm (code **4801-17**)
- 8) Feeler gauge, range 0.05-1.00mm, 20pcs (code **4602-20**)
- 9) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 10) Scriber (code **7230**)
- 11) Steel rule, 150mm/6" (code **7110-150**)
- 12) Depth base attachment (code **6140**)
- 13) Zero setting bar

Code

5013



5013

DIGITAL MICROSCOPE CODE ISM-PM200SA



- Can take pictures and videos
- Supplied with measuring software (code **ISM-PRO**, page N4-N5)

SPECIFICATION

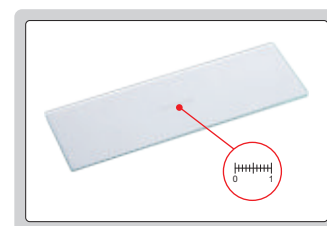
Magnification	10X - 200X
Pixel	1.3M (resolution: 1280x1024)
Illumination	built-in adjustable LED
Power supply	USB 2.0 cable (voltage required: 5±0.1V)

STANDARD DELIVERY

Digital microscope	1pc
Stand	1pc
White/black plate	1pc
Focus support ring for 80X/150X	1pc
Focus support ring for 60X/200X	1pc
Calibration rule (graduation 0.1mm)	1pc
Calibration rule (graduation 1mm)	1pc
ISM-PRO software disc	1pc



focus support ring

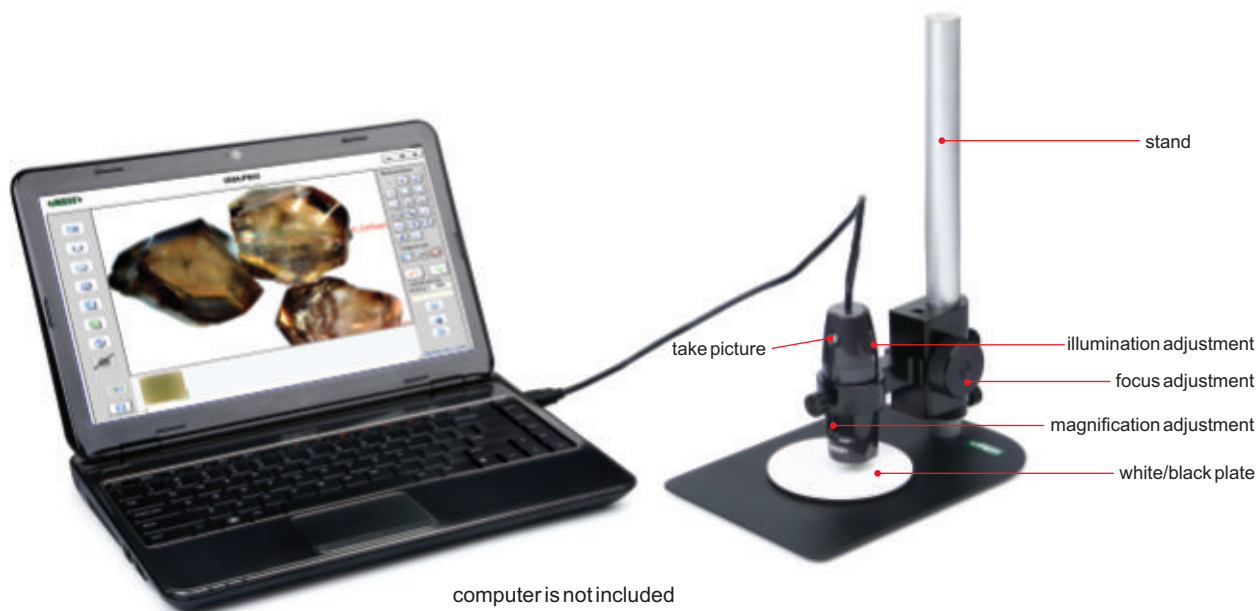


calibration rule

MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

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

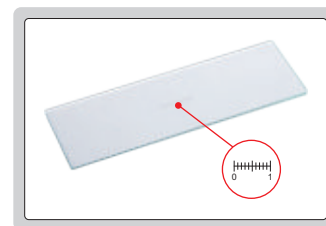
HIGH MAGNIFICATION DIGITAL MICROSCOPE CODE ISM-PM600SA



- Can take pictures and videos
- Supplied with measuring software (code **ISM-PRO**, page N4-N5)

SPECIFICATION

Magnification	450X - 600X
Pixel	1.3M(resolution: 1280x1024)
Illumination	built-in adjustable LED
Power supply	USB 2.0 cable (voltage required: 5±0.1V)



calibration rule (graduation 0.1mm)

STANDARD DELIVERY

Digital microscope	1pc
Stand	1pc
White/black plate	1pc
Calibration rule (graduation 0.1mm)	1pc
ISM-PRO software disc	1pc

MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
450X	1.4mm	0.85×0.67mm	6μm
500X	5.5mm	0.76×0.61mm	6μm
550X	8.6mm	0.69×0.55mm	5μm
600X	11.5mm	0.63×0.51mm	5μm

LONG FOCUS DISTANCE DIGITAL MICROSCOPE CODE ISM-PM160L



- Can take pictures and videos
- Supplied with measuring software (code **ISM-PRO**, page N4-N5)

SPECIFICATION

Magnification	35X - 160X
Pixel	1.3M(resolution: 1280x1024)
Illumination	built-in adjustable LED
Power supply	USB 2.0 cable (voltage required: 5±0.1V)

STANDARD DELIVERY

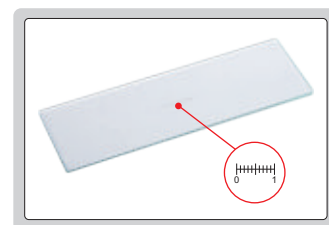
Digital microscope	1pc
Stand	1pc
White/black plate	1pc
Calibration rule (graduation 1mm)	1pc
Calibration rule (graduation 0.1mm)	1pc
ISM-PRO software disc	1pc

MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
50X	62mm	8.1×6.4mm	30μm
100X	45mm	3.9×3.1mm	15μm
160X	50mm	2.4×1.9mm	10μm

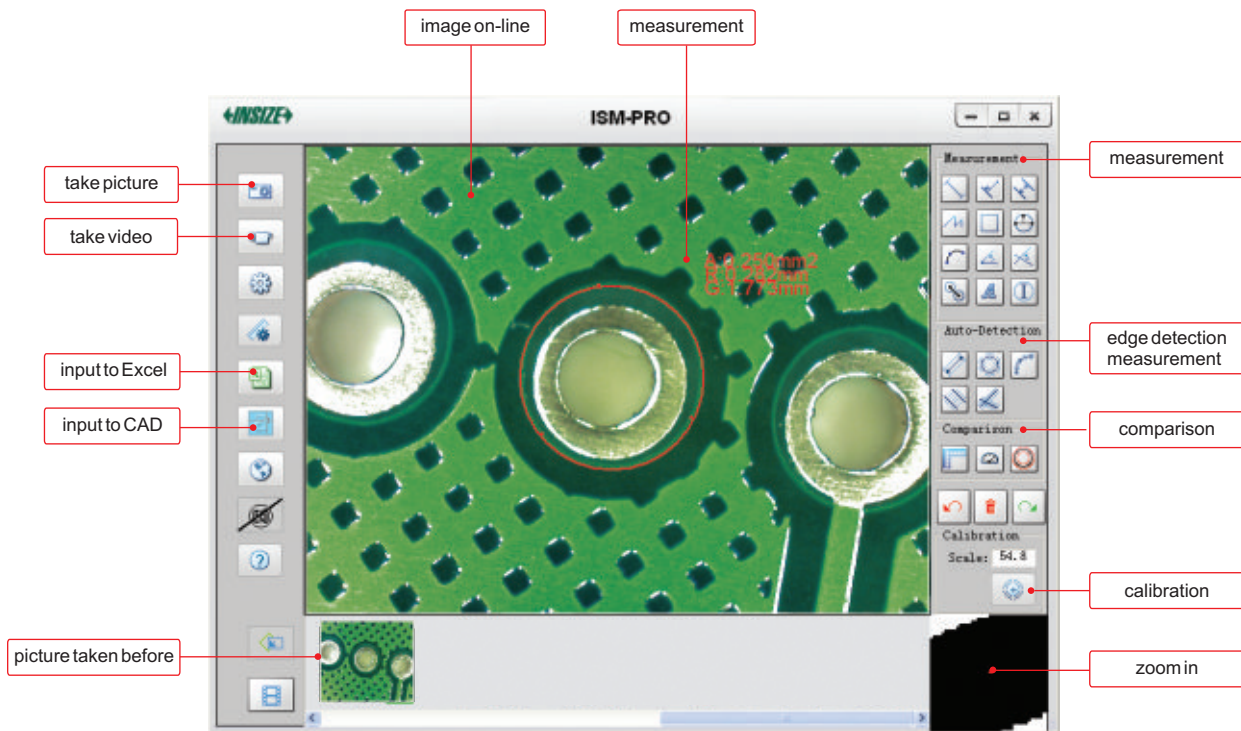


calibration rule (graduation 1mm)



calibration rule (graduation 0.1mm)

SOFTWARE FOR DIGITAL MICROSCOPE CODE ISM-PRO



- **Applicable digital microscope:** ISM-PM200SA, ISM-PM600SA, ISM-PM160L
- **Language:** English, Japanese, Korean, German, Turkey, Portuguese, Chinese
- **Operation system:** Windows 7/XP/Vista
- **Measurement:**

- measure length of line or distance between two points
- measure distance between point and line
- measure distance between two parallel lines
- measure length of continuous line
- measure area of rectangle
- measure radius, girth and area of circle

- measure radius, length and angle of arc
- measure angle with three points
- measure angle with two lines
- measure distance between two circles
- add text
- add number with circle

■ **Edge detection measurement:**

- detect line automatically, and calculate length
- detect arc automatically, and calculate radius, angle and arc length
- detect two lines automatically, and calculate angle

- detect circle automatically, and calculate radius, girth and area
- detect two parallel lines automatically, and calculate distance

■ **Calibration:**

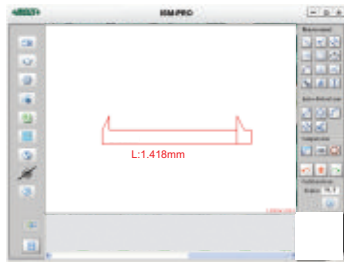
- calibration is needed when magnification is changed

■ Comparison:

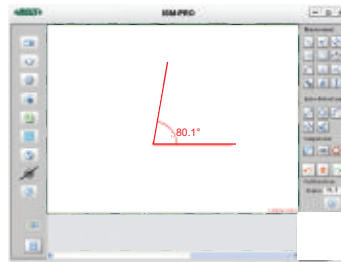
Create line, angle or circle with desired size, to compare with workpieces.



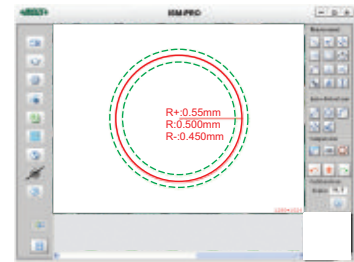
create line



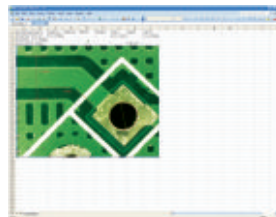
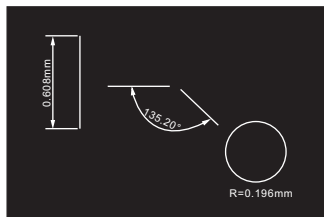
create angle



create circle with tolerance



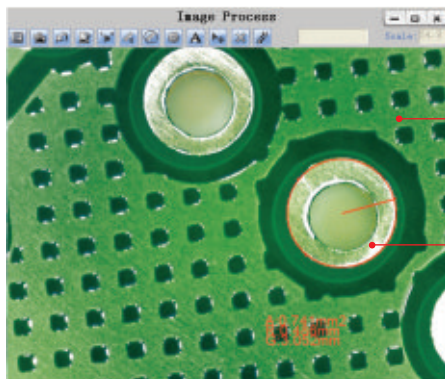
■ Data input to CAD or Excel:



■ Zoom in :

Zoom in the area where the mouse arrow is positioned

■ Picture measurement:



picture taken before

measurement



measurement: measure the picture taken before



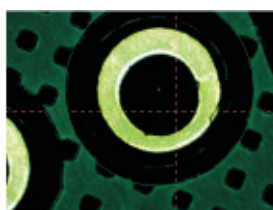
edge detection measurement



image process: image mirror, image negative, adjust brightness, filter



edge detection



WIRELESS DIGITAL MICROSCOPE CODE ISM-WM200*



computer is not included

- Can take pictures and videos
- Supplied with measuring software (simple version)

SPECIFICATION

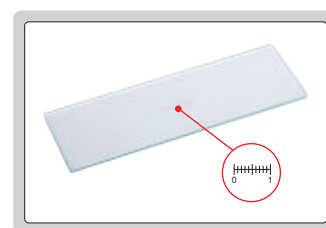
Magnification	10X - 200X
Pixel	0.35M(resolution: 720x480)
Illumination	built-in adjustable LED
Max. transmission distance (between digital microscope and receiver)	5m
Power supply	built-in rechargeable battery



focus support ring

STANDARD DELIVERY

Digital microscope	1pc
Receiver	1pc
Focus support ring for 80X/150X	1pc
Focus support ring for 60X/200X	1pc
Calibration rule graduation 0.1mm	1pc
Calibration rule graduation 1mm	1pc
Software disc (simple version)	1pc
AC/DC adapter	1pc



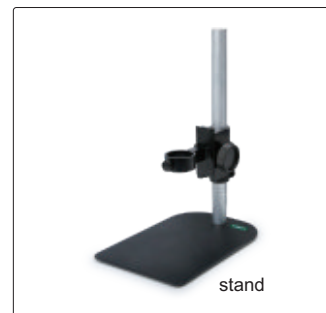
calibration rule

OPTIONAL ACCESSORY

Stand	ISM-WM200-STAND
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MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

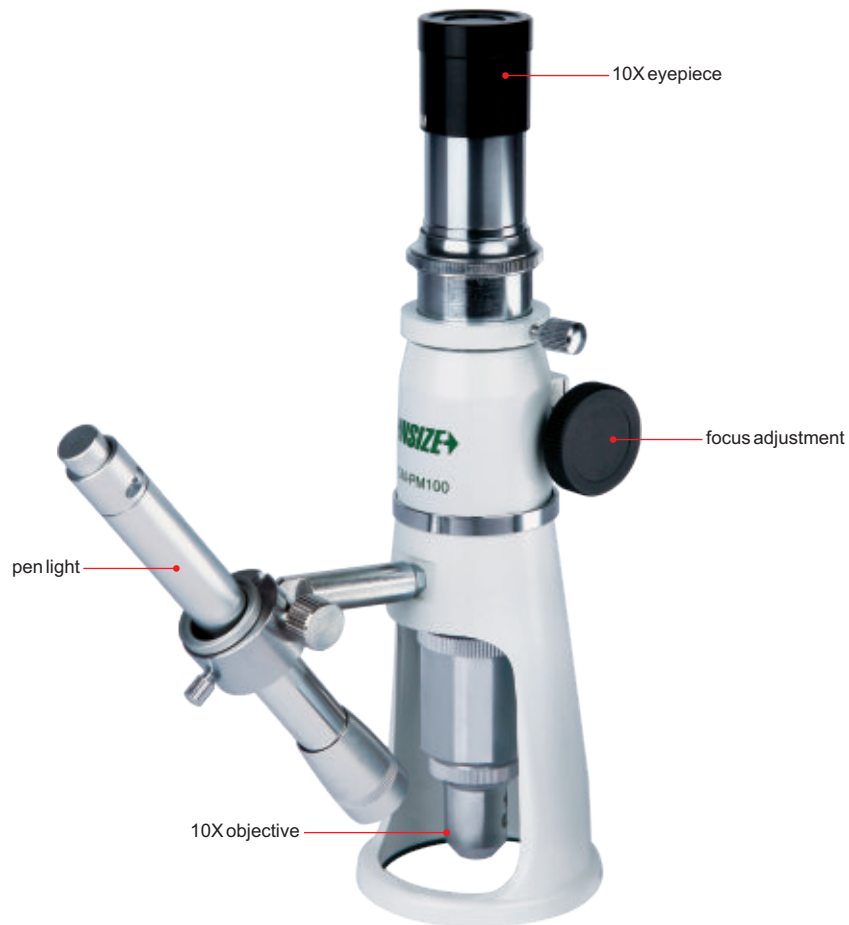
Magnification	Focus distance	View field	Accuracy
60X	19mm	6.9×5.2mm	40μm
80X	16mm	5.0×3.8mm	30μm
150X	16mm	2.6×2.1mm	20μm
200X	19mm	1.8×1.5mm	15μm



stand

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

PORTABLE MEASURING MICROSCOPE CODE ISM-PM100



SPECIFICATION

Total magnification	100X
Eyepiece	10X with graduation
Objective(achromatic)	10X(numerical aperture: 0.25)
Working distance	7mm
Focus range	30mm
Viewing field	Ø1.8mm
Graduation	0.01mm
Illumination	LED light
Diameter of base	Ø63mm
Height	210mm
Weight	650g

STANDARD DELIVERY

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

LCD MEASURING MICROSCOPE CODE ISM-DL120*



- Can take pictures and videos

SPECIFICATION

Total magnification		18.7X-120X
Objective		0.7X-4.5X
Camera pixel		5M
LCD display resolution		800×600
Output		video, USB, MMC/SD
Working distance		93mm
Working table	diameter	120mm
	rotation range	0-360°
	rotation resolution	0.2°

X-Y stage	travel range	25×25mm
	resolution	1μm
	accuracy	5μm
	load capacity	8kg
Illumination		reflected: four quarter LED
		transmitted: 45pcs LED
		brightness is adjustable
Dimension(L×W×H)		480×340×640mm
Weight		12.5kg

STANDARD DELIVERY

Main unit	1pc
Calibration rule(graduation 0.1mm)	1pc
2G SD card	1pc
USB cable and software disc	1pc of each
Video output cable	1pc
AC/DC adapter	1pc

Anti-dust cover	1pc
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OPTIONAL ACCESSORY

0.5X auxiliary objective	ISM-DL120-OB05X
0.75X auxiliary objective	ISM-DL120-OB075X
2X auxiliary objective	ISM-DL120-OB2X

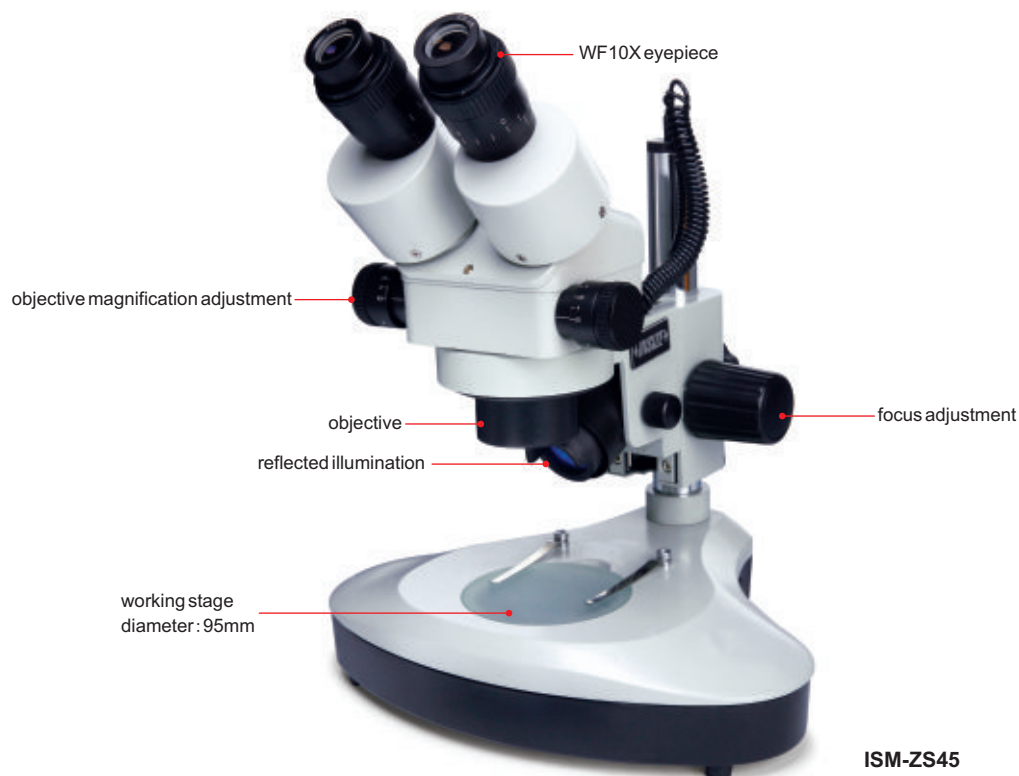
OBJECTIVE AND VIEW FIELD

Objective	View field
0.7X	8×6mm
1X	6×4.5mm
2X	2.5×1.9mm

Objective	View field
3X	2×1.5mm
4X	1.3×1mm
4.5X	1.2×0.9mm

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

ZOOM STEREO MICROSCOPE



SPECIFICATION

Code	ISM-ZS45*	ISM-ZS45T*
Optical tube	binocular	trinocular
Eyepiece(wide field)	10X (view field: Ø20mm)	
Objective	0.7X-4.5X (zoom)	
Pupil distance	55-75mm(adjustable)	
Diopter adjustment	±5 diopter(two eyepieces)	
Working distance of objective	55mm	
Max. workpiece height	145mm	
Illumination	selectable reflected and transmitted illumination (brightness is adjustable)	
Dimension(L×W×H)	310×250×420mm	
Weight	6kg	

STANDARD DELIVERY

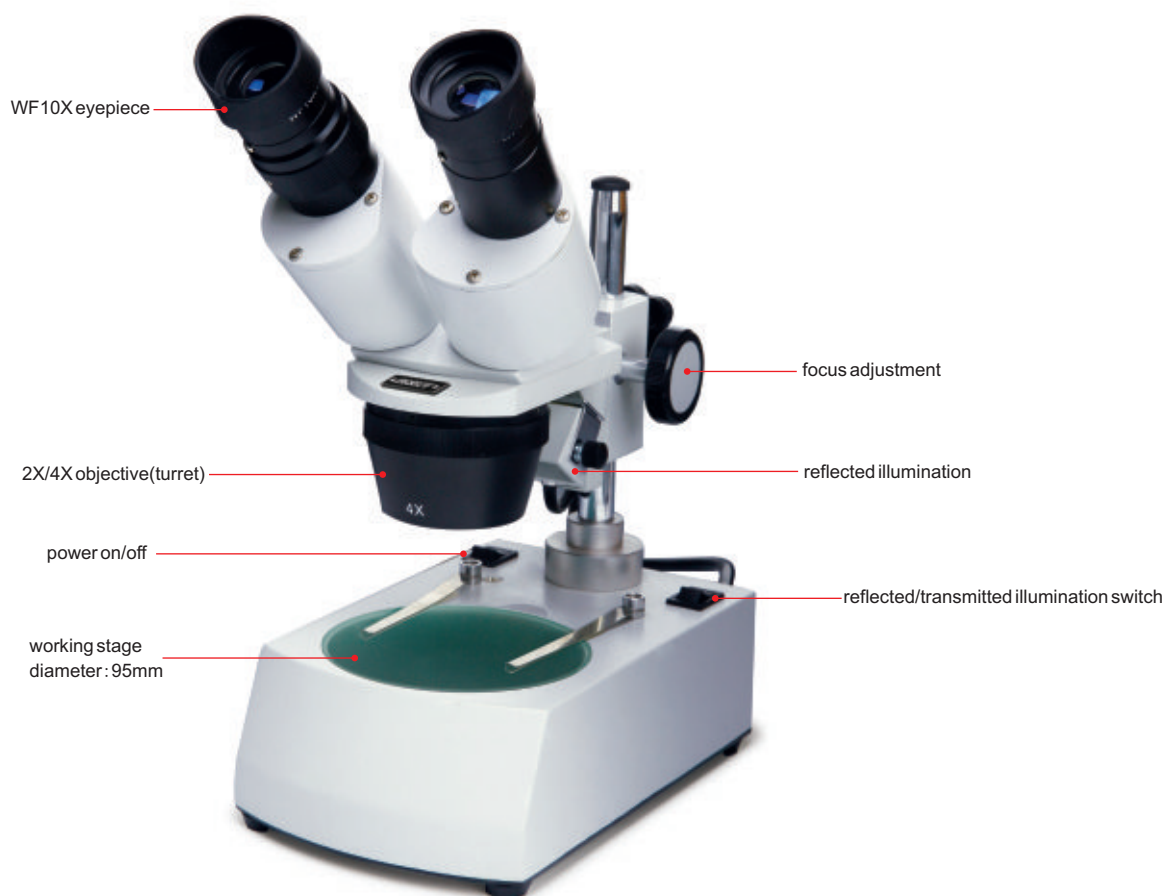
Main unit	1pc
WF10X eyepiece	2pcs
Eyepiece patch	2pcs
Ø95mm frosted glass plate	1pc
Ø42mm frosted glass plate	1pc
Ø80mm steel support ring	1pc
Ø95mm white/black plate	1pc
Spare transmitted lamp (6V, 20W)	1pc
Spare reflected lamp (6V, 15W)	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS45-OB05X
	0.75X	ISM-ZS45-OB075X
	1.5X	ISM-ZS45-OB1D5X
	2X	ISM-ZS45-OB2X
Eyepiece	WF5X (view field: Ø22mm)	ISM-ZS45-EP5X
	WF15X(view field: Ø16mm)	ISM-ZS45-EP15X
	WF20X(view field: Ø12mm)	ISM-ZS45-EP20X
	WF25X(view field: Ø9mm)	ISM-ZS45-EP25X
Digital camera		ISM-D300B
		ISM-D500

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

STEREO MICROSCOPE CODE ISM-S40*



SPECIFICATION

Eyepiece(wide field)	10X(view field: Ø20mm)
Objective	2X, 4X(turret)
Pupil distance	55-75mm(adjustable)
Diopter adjustment	±5 diopter(one eyepiece)
Working distance of objective	57mm
Max. workpiece height	68mm
Illumination	selectable reflected and transmitted illumination
Dimension(L×W×H)	120×200×300mm
Weight	3kg

STANDARD DELIVERY

Main unit	1pc
WF10X eyepiece	2pcs
Eyepiece patch	2pcs
Ø95mm frosted glass plate	1pc
Ø95mm white/black plate	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Eyepiece	WF5X(view field: Ø20mm)	ISM-S40-EP5X
	WF15X(view field: Ø15mm)	ISM-S40-EP15X
	WF20X(view field: Ø10mm)	ISM-S40-EP20X
Digital camera		ISM-D300B
		ISM-D500

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

METALLURGICAL MICROSCOPE

CODE ISM-M1000*



- For metallurgical analysis and high magnification observation
- Kohler illumination system provides uniform illumination field
- Objectives 20X, 40X, 100X are spring type

SPECIFICATION

Eyepiece(wide field)	10X(view field: Ø18mm)			
Objective(plan achromatic)	10X	20X	40X	100X(oil type)
Numerical aperture	0.25	0.40	0.60	1.25
Working distance	8.8mm	8.6mm	3.3mm	0.33mm
Stage	double layer			
	size: 180×150mm			
	travel: 15×15mm			
Pupil distance	53-75mm(adjustable)			
Diopter adjustment	±5 diopter(one eyepiece)			
Illumination	6V/20W halogen lamp			
Dimension(L×W×H)	385×300×440mm			
Weight	11kg			

STANDARD DELIVERY

Main unit	1pc
Oil for PL100X objective	1bottle
Anti-dust cover	1pc
Filter(blue/green/yellow)	1pc of each

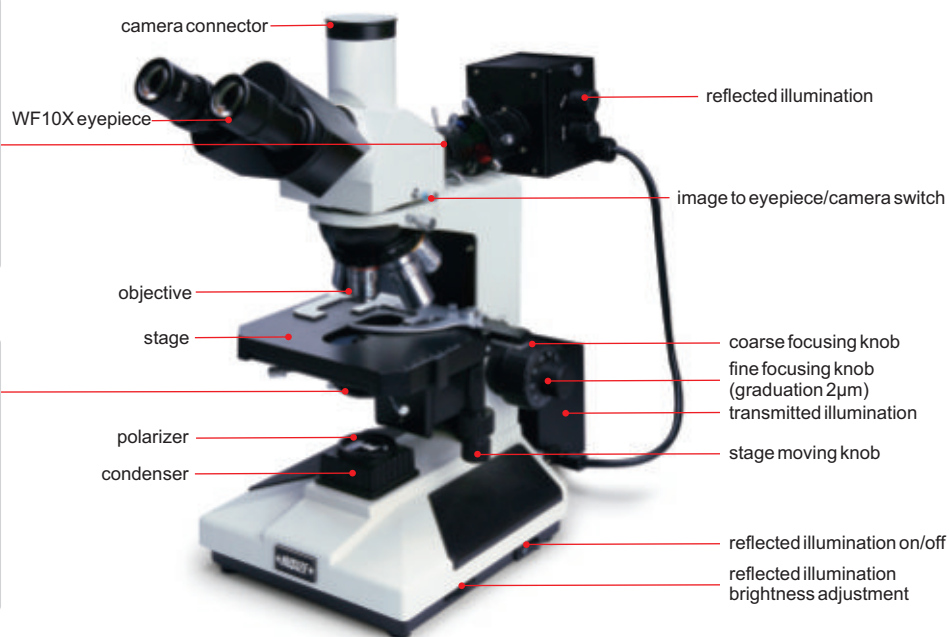
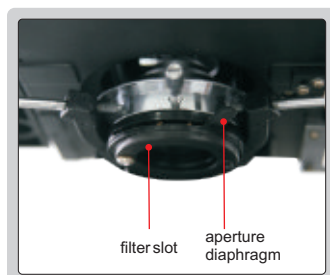
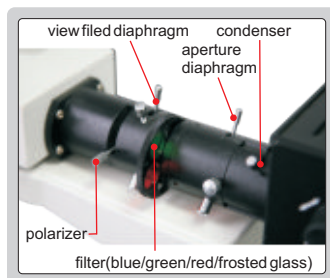
OPTIONAL ACCESSORY

10X dividing eyepiece(0.1mm/div.)	ISM-MTM-EPD10X	Objective	PL50X	ISM-MTM-OB50X
Camera adapter(1X)	ISM-MTM-ADAPTER		PL60X	ISM-MTM-OB60X
Digital camera	ISM-D300B		PL80X	ISM-MTM-OB80X
	ISM-D500		PL100X(dry type)	ISM-MTM-OB100X

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

METALLURGICAL MICROSCOPE

CODE ISM-M600*



- For metallurgical analysis and high magnification observation
- Reflected and transmitted illumination can work at the same time
- Objectives 40X, 60X are spring type

SPECIFICATION

Eyepiece(wide field)	10X(view field: Ø18mm)				
Objective(plan achromatic)	5X	10X	20X	40X	60X
Numerical aperture	0.12	0.25	0.40	0.60	0.75
Working distance	18.4mm	8.8mm	8.6mm	3.7mm	1.34mm
Stage	double layer with sample clamp				
	size: 160×140mm				
	travel: 75×50mm(graduation: 0.1mm)				
Pupil distance	53-75mm(adjustable)				
Diopter adjustment	±5 diopter(one eyepiece)				
Illumination	reflected and transmitted: 6V/20W halogen lamp, brightness is adjustable				
Dimension(L×W×H)	450×300×350mm				
Weight	11kg				

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

10X dividing eyepiece (0.1mm/div.)	ISM-MTM-EPD10X	Objective	PL80X	ISM-MTM-OB-80X
Digital camera	ISM-D300B ISM-D500		PL100X(dry type)	ISM-MTM-OB-100X
		Camera adapter(1X)		ISM-MTM-ADAPTER

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

DIGITAL CAMERA



- Insert into eyepiece tube or camera connector of microscopes
- Supplied with software (page P1)

SPECIFICATION

Code	ISM-D300B	ISM-D500
Sensor	1/2" CMOS	1/2.5" CMOS
Pixel	3M	5M
Resolution	2048×1536	2592×1944 or 1296×972
Frame rate	6fps	2592×1944 3fps 1296×972 12fps
Exposure	manual or auto, exposure time is adjustable	
SNR	43dB	41dB
Power supply	USB	
Weight	400g	

STANDARD DELIVERY

Main body	1pc
Adapter 0.45X	1pc
Calibration rule(graduation 0.1mm)	1pc
Connector Ø23.2/Ø30mm	1pc
USB cable	1pc
Software disc	1pc

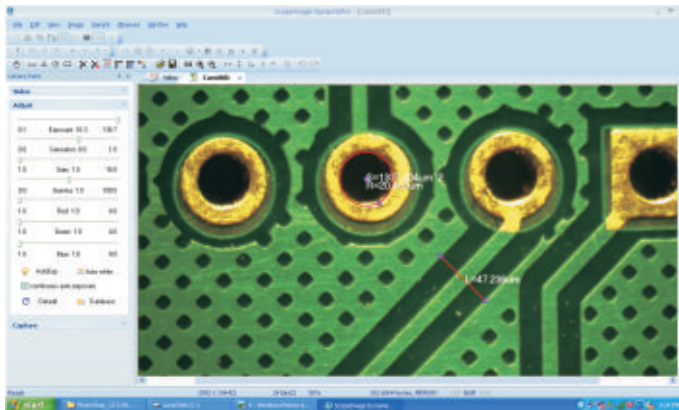
OPTIONAL ACCESSORY

Adapter 0.28X	ISM-DCA-AD28X
Connector Ø23.2/Ø30.5mm	ISM-DCA-CON

To be continued

Continued from page N13

SOFTWARE FOR DIGITAL CAMERA



Measuring Tools:

-  measure distance between two points
-  measure angle with three points
-  measure circle
-  measure rectangle
-  calibration

- Can take pictures and videos
- Exposure/gain/gamma/saturation/colour adjustment
- Image process feature: zoom in/out, image flip and so on
- Calibration tool to make measurement in high accuracy

SURFACE ROUGHNESS SPECIMEN CODE 4131



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

Machining method	Roughness (Ra)	Quantity
Flat lapping	0.1, 0.05 μ m	2
External grinding	0.2, 0.4, 0.8, 1.6 μ m	4
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 μ m	6
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μ m	6
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μ m	6
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μ m	6

ULTRASONIC THICKNESS GAUGE CODE ISU-250C



- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, rubber, ice
- Low and high limits with judgement
- Average calculation of maximum 9 readings
- Memory of maximum 5000 readings with location number



couplant



transducer ISU-T06(optional)



transducer ISU-T12(optional)



transducer ISU-T13(optional)

SPECIFICATION

Resolution	0.01mm(range<100mm)
	0.1mm(range≥100mm)
Repeatability	0.03mm(range<100mm)
	0.1mm(range≥100mm)
Accuracy	±0.04mm (range<10mm)
	±(0.04+H/1000)mm (range10~100mm)
	±H/333mm (range≥100mm)
	H is the thickness to be measured
Velocity	1000-9999m/s
Power supply	2×1.5V AAA batteries
Dimension	64×116×27mm
Weight	220g

STANDARD DELIVERY

Main unit	1pc
Transducer ISU-T08	1pc
Battery(AAA)	2pcs
Couplant (for ISU-T06, ISU-T08, ISU-T12)	1bottle
USB cable and software disc	1pc of each

OPTIONAL ACCESSORY

Transducer	ISU-T06, ISU-T12, ISU-T13
Couplant (for ISU-T13)	ISU-HT5-COUPPLANT

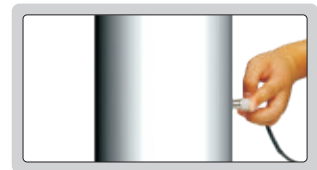
SPECIFICATION OF TRANSDUCERS

Code	Frequency	Diameter(Ød)	Measuring range	Minimum size of pipe for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T08	5.0MHz	10.8mm	0.8-300mm	20×1.2mm	<60°C	general use
ISU-T06	7.5MHz	8.5mm	0.7-50mm	15×1.2mm	<60°C	for thin material
ISU-T12	2.0MHz	16.3mm	3-350mm	30×4mm	<60°C	for casting steel
ISU-T13	5.0MHz	13mm	3-100mm	25×3mm	<350°C	for high temperature

ULTRASONIC THICKNESS GAUGE CODE ISU-200C



- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, rubber, ice



couplant



transducer ISU-P02(optional)



transducer ISU-P07(optional)



transducer ISU-HT5(optional)

SPECIFICATION

Resolution	0.1mm
Accuracy	±0.1mm (range < 10mm) ±(0.1+H/100)mm (range ≥ 10mm) H is the thickness to be measured
Repeatability	0.1mm
Velocity	1000-9999m/s
Power supply	2×1.5V AA batteries
Dimension	64×150×32mm
Weight	245g

STANDARD DELIVERY

Main unit	1pc
Transducer ISU-P05	1pc
Battery(AA)	2pcs
Couplant (for ISU-P05, ISU-P02, ISU-P07)	1 bottle

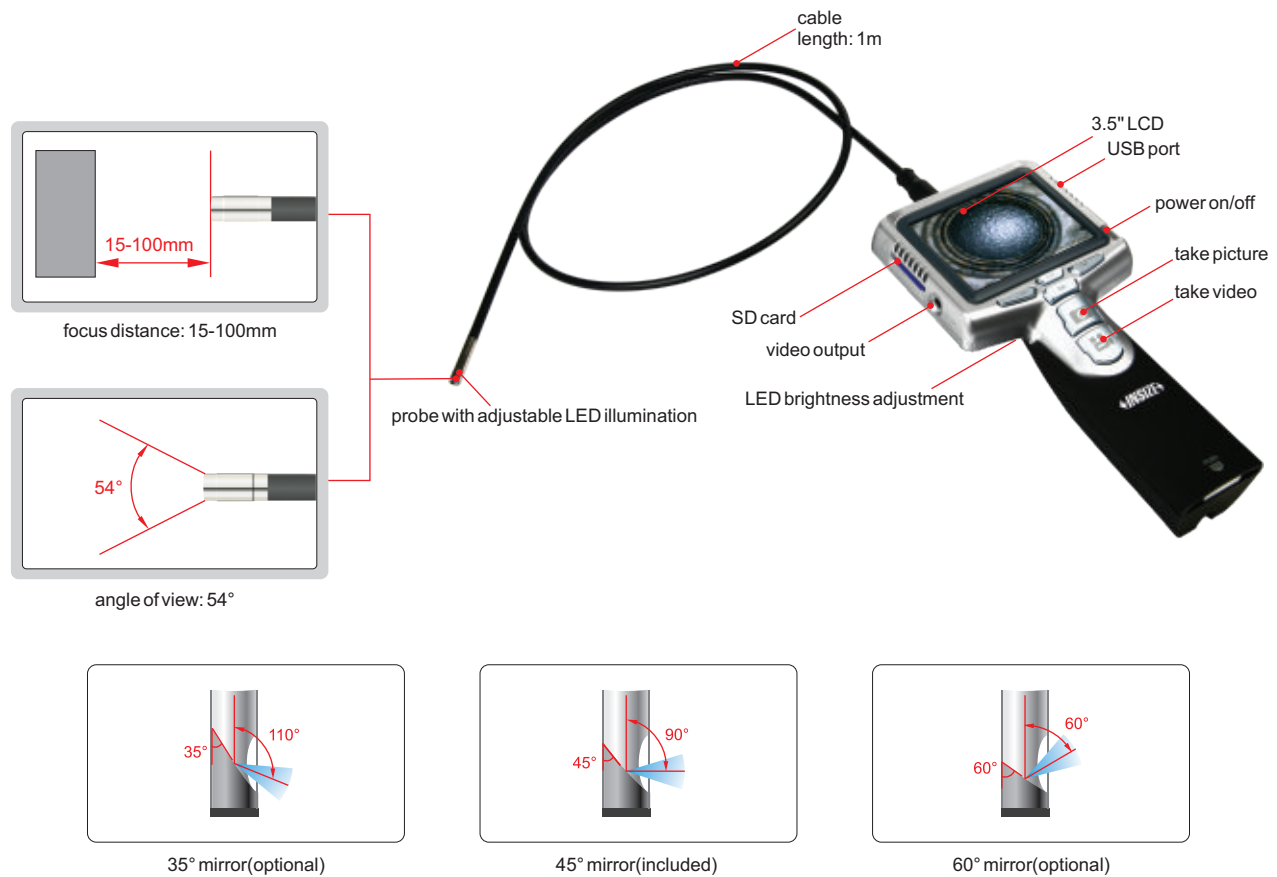
OPTIONAL ACCESSORY

Transducer	ISU-P02, ISU-P07, ISU-HT5
Couplant (for ISU-HT5)	ISU-HT5-COUPPLANT
RS232 cable and software	ISU-200B-CABLE

SPECIFICATION OF TRANSDUCERS

Code	Frequency	Diameter(Ød)	Measuring range	Minimum size of pipe for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-P05	5.0MHz	12mm	1.2-230mm	20×3mm	<60°C	general use
ISU-P02	2.0MHz	17mm	3-300mm	20×3mm	<60°C	for casting steel
ISU-P07	7.0MHz	8mm	0.8-80mm	15×2mm	<60°C	for thin material
ISU-HT5	5.0MHz	14mm	3-200mm	30×2mm	<300°C	for high temperature

ENDOSCOPE CODE ISV-E55*



SPECIFICATION

Probe diameter	5.5mm
Dust/waterproof probe	IP57
Pixel	0.3M
Resolution	640x480
Frame rate	30fps
Video format	PAL or NTSC
Memory	2G SD card (store 6000 pictures or 15 minutes video)
Power supply	rechargeable battery (for 3 hours working)
Weight	450g

STANDARD DELIVERY

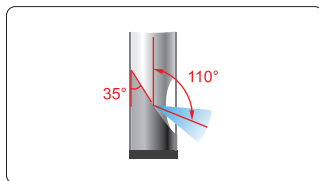
Main unit	1pc	Spare battery	1pc
Cable with probe	1pc	AC/DC adapter	1pc
SD card 2G	1pc	Video output cable	1pc
45° mirror	1pc	USB cable	1pc

OPTIONAL ACCESSORY

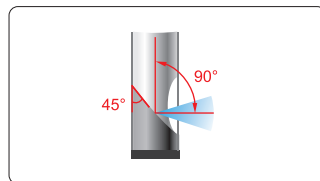
35° mirror	ISV-E55-M35
60° mirror	ISV-E55-M60
Cable	Page Q5

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

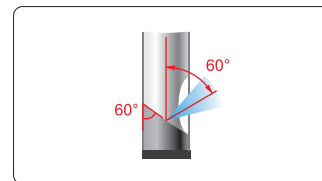
ENDOSCOPE CODE ISV-E55B*



35° mirror(optional)



45° mirror(optional)



60° mirror(optional)

SPECIFICATION

Probe diameter	5.5mm
Dust/waterproof probe	IP57
Pixel	0.3M
Resolution	640x480
Frame rate	30fps
Video format	PAL or NTSC
Power supply	rechargeable battery (for 3 hours working)
Weight	450g

STANDARD DELIVERY

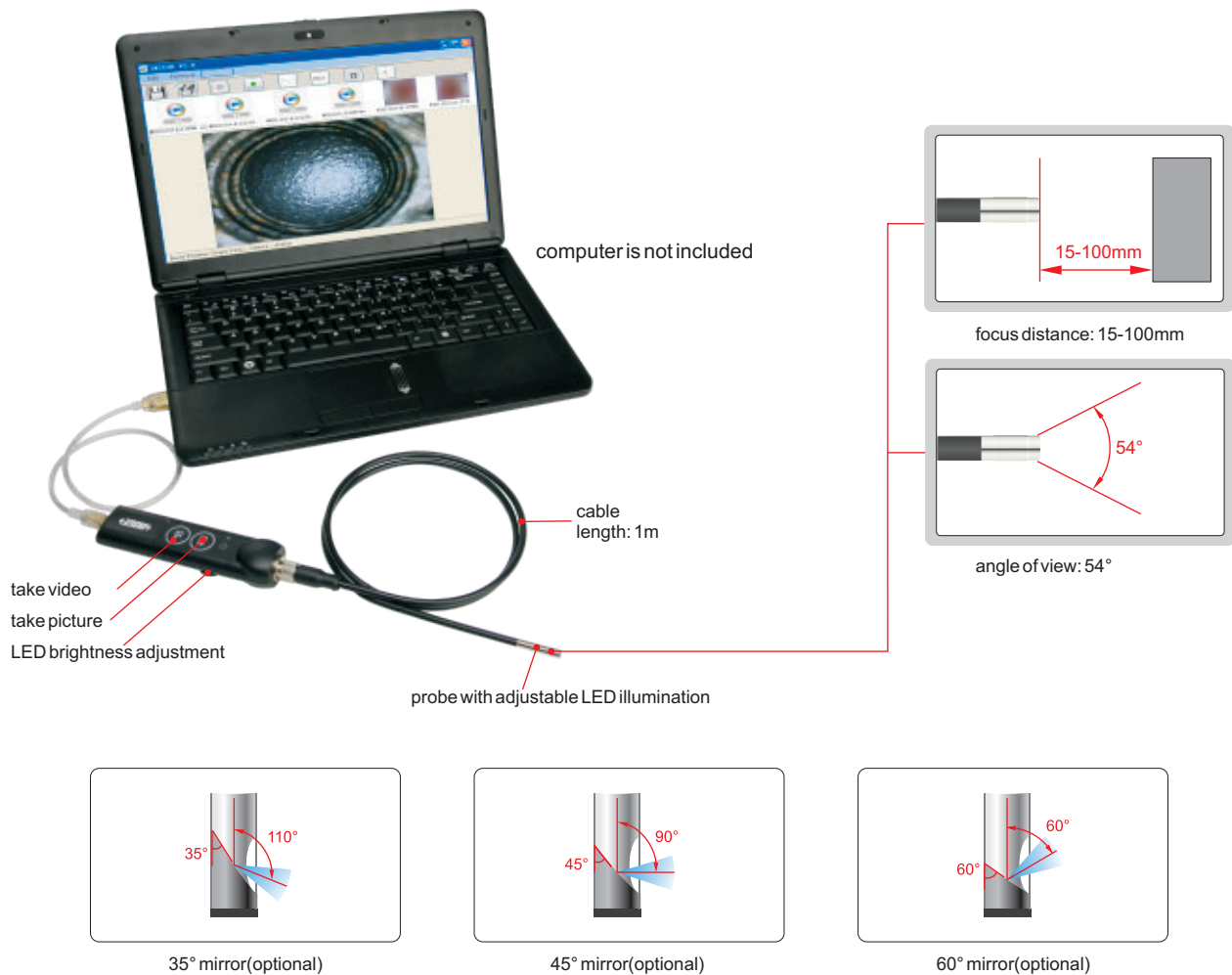
Main unit	1pc
Cable with probe	1pc
AC/DC adapter	1pc
Video output cable	1pc

OPTIONAL ACCESSORY

35° mirror	ISV-E55-M35
45° mirror	ISV-E55-M45
60° mirror	ISV-E55-M60
Cable	Page Q5

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

ENDOSCOPE CODE ISV-E55C



SPECIFICATION

Probe diameter	5.5mm
Dust/waterproof probe	IP57
Pixel	0.3M
Resolution	640x480
Frame rate	30fps
Power supply	USB
Weight	150g

STANDARD DELIVERY

Main unit	1pc
Cable with probe	1pc
Software CD	1pc
USB cable	1pc

OPTIONAL ACCESSORY

35° mirror	ISV-E55-M35
45° mirror	ISV-E55-M45
60° mirror	ISV-E55-M60
Cable	Page Q5

ENDOSCOPE MAIN UNIT CODE ISV-MUE55*



SPECIFICATION

Video format	PAL or NTSC
Memory	2G SD card (store 6000 pictures or 15 minutes video)
Power supply	rechargeable battery (for 3 hours working)
Weight	430g

STANDARD DELIVERY

Main unit	1pc
SD card 2G	1pc
Spare battery	1pc
AC/DC adapter	1pc
Video output cable	1pc
USB cable	1pc

OPTIONAL ACCESSORY

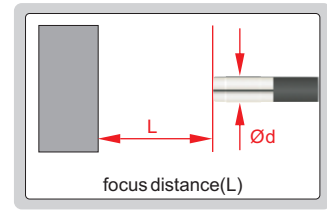
Cable	Page Q5
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* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

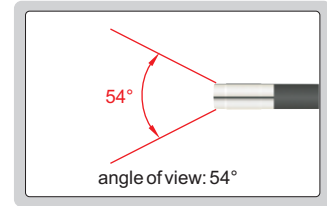
CABLE FOR ENDOSCOPE



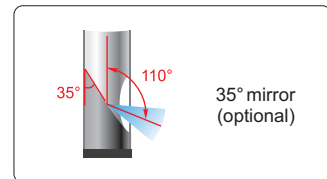
Type A
Cable



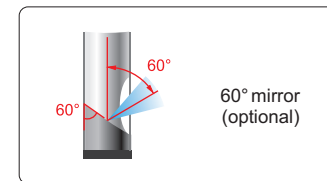
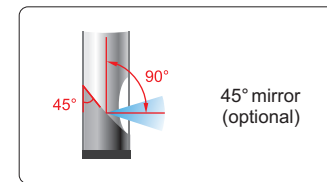
Type B
Cable



Type C
Semi-rigid cable
(Cable can be set at any shape)



Type D
Semi-rigid cable
(Cable can be set at any shape)



- IP57 dust/waterproof
- With adjustable LED illumination
- Applicable endoscopes: ISV-E55, ISV-E55B, ISV-MUE55, ISV-E55C

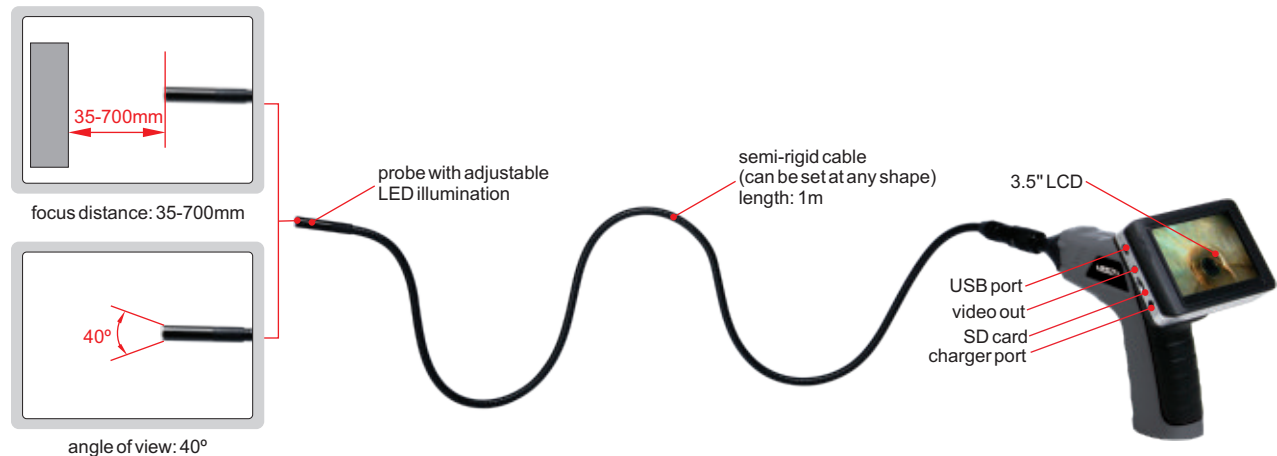
SPECIFICATION

Code	Type	Diameter (Ød)	Cable length	Focus distance(L)	Probe
ISV-E55-C4301	A	4.3mm	1m	15-30mm	pixel 0.1M resolution 320x240 frame rate 30fps
ISV-E55-C5501	B	5.5mm	1m	15-100mm	pixel 0.3M resolution 640x480 frame rate 30fps
ISV-E55-C5503			3m		
ISV-E55-C5505			5m		
ISV-E55-C5510			10m		
ISV-E55-R5501	C	5.5mm	1m		
ISV-E55-R5503			3m		
ISV-E55-R1201	D	12mm	1m		

OPTIONAL ACCESSORY

35° mirror for type B and C	ISV-E55-M35
45° mirror for type B and C	ISV-E55-M45
60° mirror for type B and C	ISV-E55-M60

ENDOSCOPE CODE ISV-1000D*



the monitor can be separated from main body



mirror



hook



magnetic pick-up

- Can take videos and pictures

SPECIFICATION

Probe diameter	9mm
Dust/waterproof probe	IP57
Pixel	0.3M
Resolution	640x480
Frame rate	30fps
Transmission distance	the monitor can be separated from main body, the maximum distance is 10m
Video format	PAL
Memory	2G SD card (store 5000 pictures or 15 minutes video)
Power supply of main body	4xAA batteries
Power supply of monitor	rechargeable battery (for 4 hours working)
Weight	1.1kg

STANDARD DELIVERY

Main body	1pc
Monitor	1pc
Cable with probe	1pc
Mirror	1pc
Hook	1pc
Magnetic pick-up	1pc

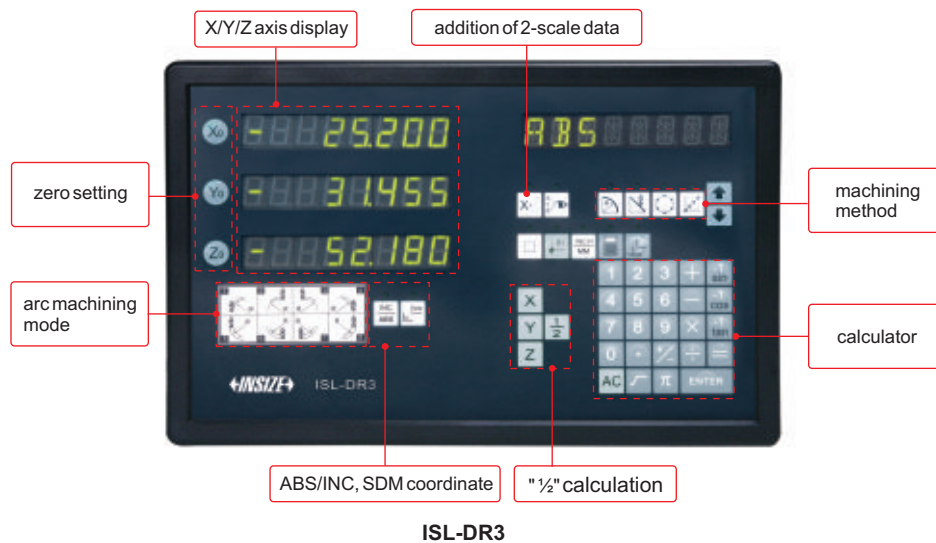
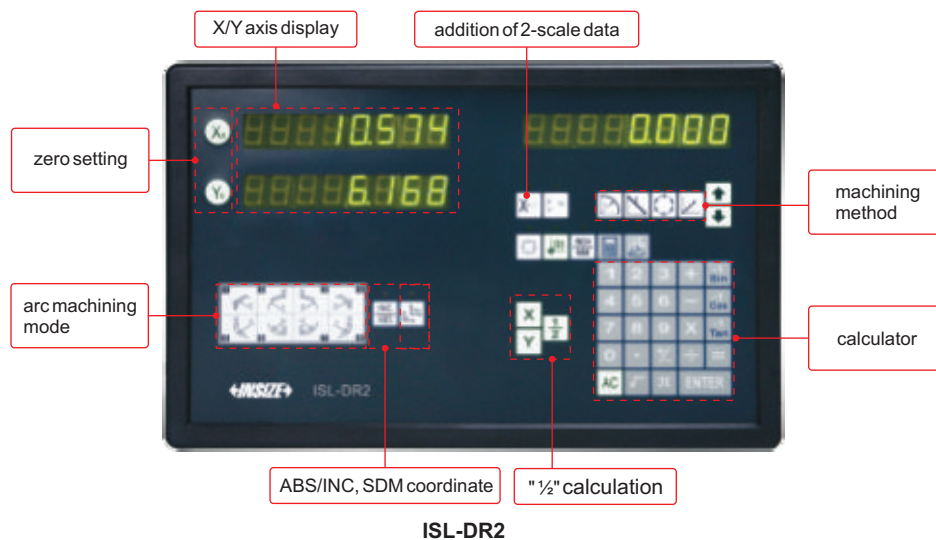
SD card 2G	1pc
AA battery	4pcs
Video output cable	1pc
AC/DC adapter	1pc
USB cable	1pc

OPTIONAL ACCESSORY

1m semi-rigid extension cable	ISV-1000D-CABLE
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* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

COUNTER



SPECIFICATION

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

STANDARD DELIVERY

Main unit	1pc
Mounting bracket	1pc
Ground cable	1pc

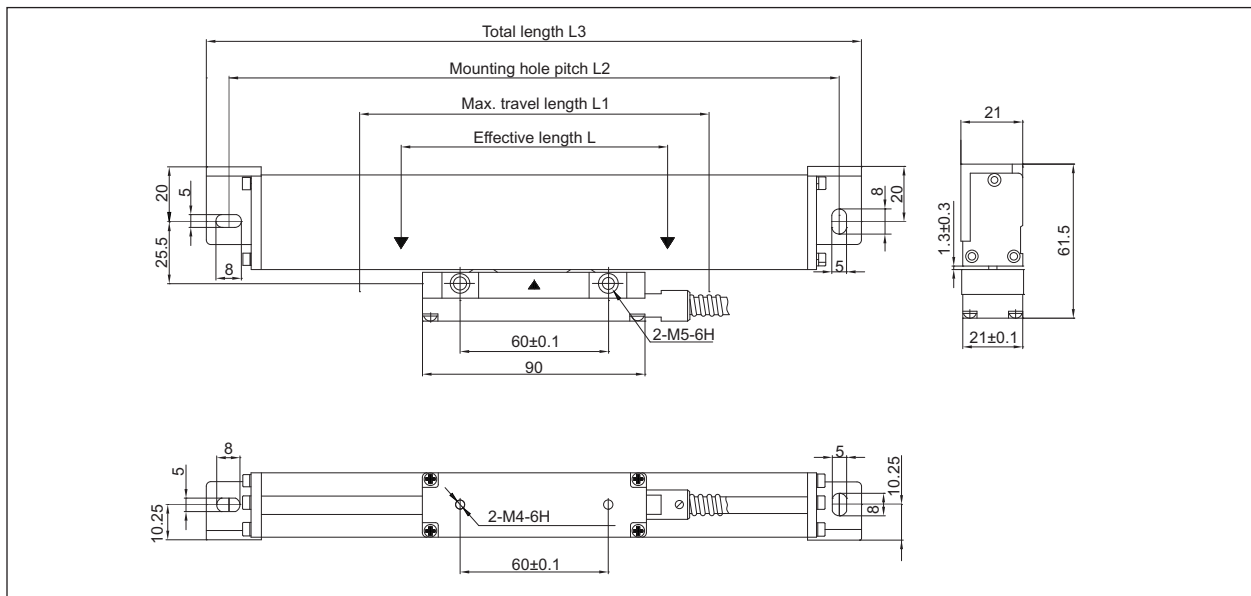
RS232C cable	1pc
Software CD for RS232C	1pc

LINEAR SCALE

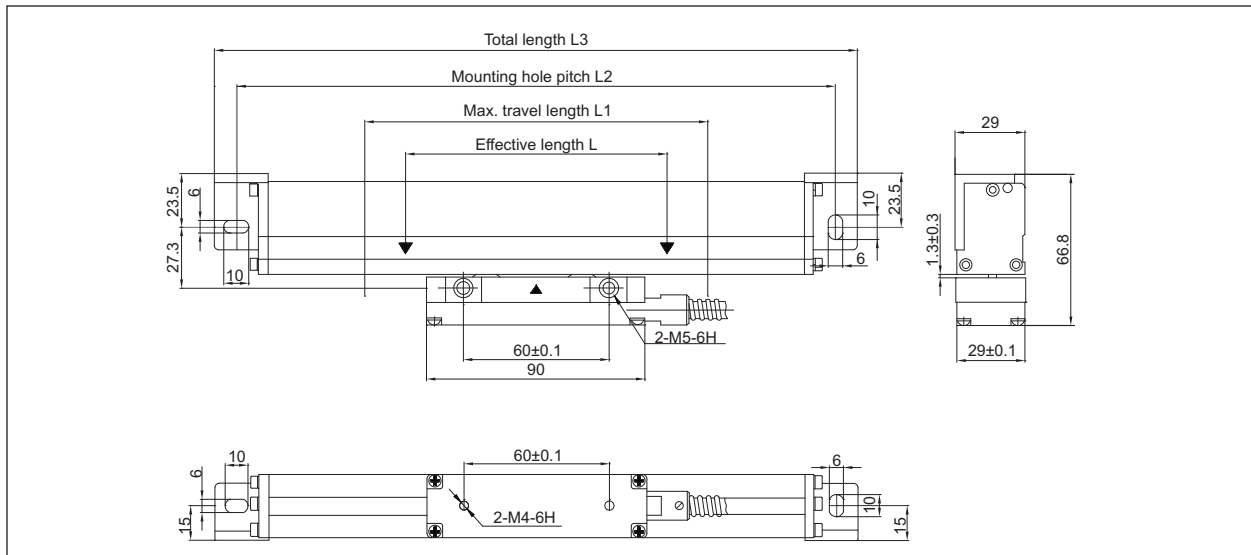


ISL-A1-300

Series ISL-A1 and ISL-A5



Series ISL-B5



Effective length(L)	Code		
	Series ISL-A1	Series ISL-A5	Series ISL-B5
50mm	ISL-A1-50	ISL-A5-50	ISL-B5-50
100mm	ISL-A1-100	ISL-A5-100	ISL-B5-100
150mm	ISL-A1-150	ISL-A5-150	ISL-B5-150
200mm	ISL-A1-200	ISL-A5-200	ISL-B5-200
250mm	ISL-A1-250	ISL-A5-250	ISL-B5-250
300mm	ISL-A1-300	ISL-A5-300	ISL-B5-300
350mm	ISL-A1-350	ISL-A5-350	ISL-B5-350
400mm	ISL-A1-400	ISL-A5-400	ISL-B5-400
450mm	ISL-A1-450	ISL-A5-450	ISL-B5-450
500mm	ISL-A1-500	ISL-A5-500	ISL-B5-500
550mm	ISL-A1-550	ISL-A5-550	ISL-B5-550
600mm	ISL-A1-600	ISL-A5-600	ISL-B5-600
650mm	ISL-A1-650	ISL-A5-650	ISL-B5-650
700mm	ISL-A1-700	ISL-A5-700	ISL-B5-700
750mm	ISL-A1-750	ISL-A5-750	ISL-B5-750
800mm	ISL-A1-800	ISL-A5-800	ISL-B5-800
850mm	ISL-A1-850	ISL-A5-850	ISL-B5-850
900mm	ISL-A1-900	ISL-A5-900	ISL-B5-900
950mm	ISL-A1-950	ISL-A5-950	ISL-B5-950
1000mm	ISL-A1-1000	ISL-A5-1000	ISL-B5-1000
1100mm			ISL-B5-1100
1200mm			ISL-B5-1200
1300mm			ISL-B5-1300
1400mm			ISL-B5-1400
1500mm			ISL-B5-1500
1600mm			ISL-B5-1600
1700mm			ISL-B5-1700
1800mm			ISL-B5-1800
1900mm			ISL-B5-1900
2000mm			ISL-B5-2000

SPECIFICATION

	Series ISL-A1		Series ISL-A5		Series ISL-B5	
L1(mm)	L+30(L<950)	L+50(L≥950)	L+30(L<950)	L+50(L≥950)	L+30(L<950)	L+50(L≥950)
L2(mm)	L+132(L<950)	L+152(L≥950)	L+132(L<950)	L+152(L≥950)	L+136(L<950)	L+156(L≥950)
L3(mm)	L+149(L<950)	L+169(L≥950)	L+149(L<950)	L+169(L≥950)	L+154(L<950)	L+174(L≥950)
Resolution	1μm		5μm		5μm	
Max. response speed	50m/min		90m/min		60m/min	
Scale grating pitch	20μm					
Scale reference point pitch	50μm					
Accuracy	±(5+5L/1000)μm L is the effective length in mm					
Cable length	3.5m(L: 50-950mm) 5m(L: 1000-1500mm) 10m(L: 1600-2000mm)					

STANDARD DELIVERY

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

DIGITAL HORIZONTAL SCALE



7101-300A

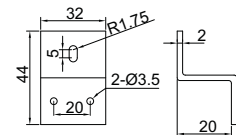


7101-400

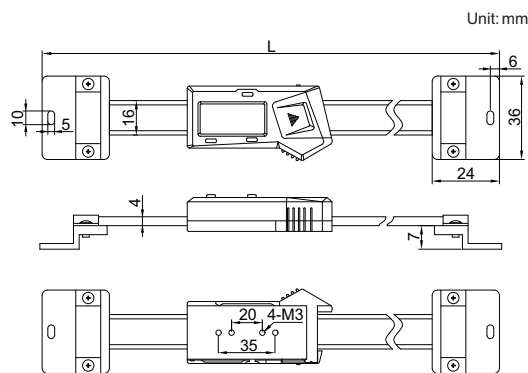
bracket



Unit: mm

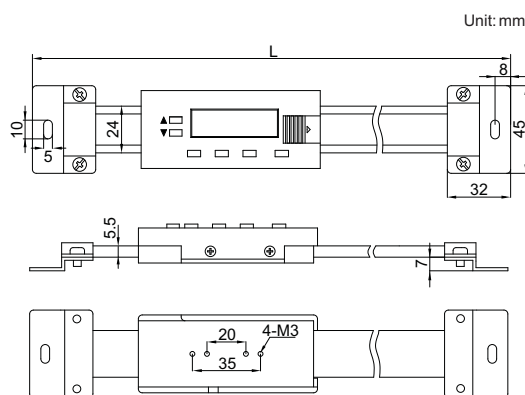


type A



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- USB data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: SPC cable (page A1-A2)

type B



- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Absolute and incremental measurement
- Battery SR44 or LR44
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back

(mm)

Code	Range	Type	Accuracy	L
7101-100A	100mm	A	±0.02mm	215
7101-150A	150mm	A	±0.03mm	265
7101-200A	200mm	A	±0.03mm	315
7101-300A	300mm	A	±0.04mm	445
7101-400	400mm	B	±0.05mm	590

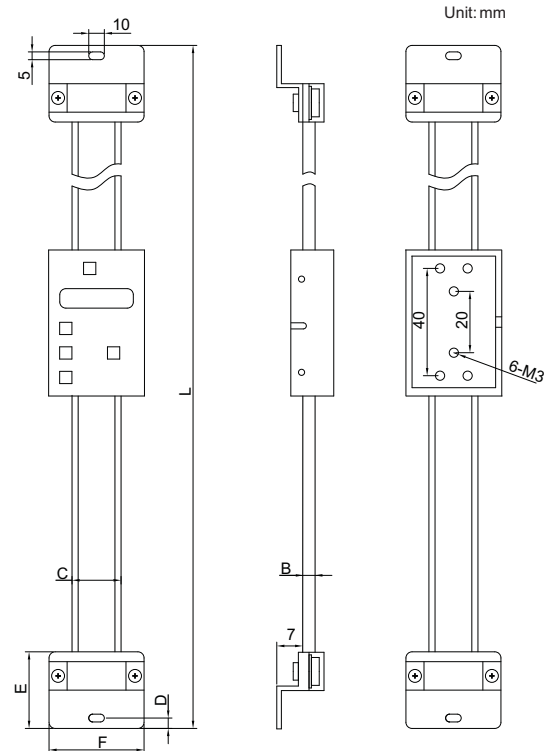
(mm)

Code	Range	Type	Accuracy	L
7101-500	500mm	B	±0.05mm	690
7101-600	600mm	B	±0.08mm	790
7101-800	800mm	B	±0.10mm	990
7101-1000	1000mm	B	±0.10mm	1190

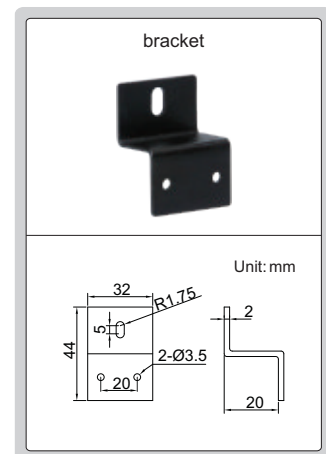
DIGITAL VERTICAL SCALE



7102-300



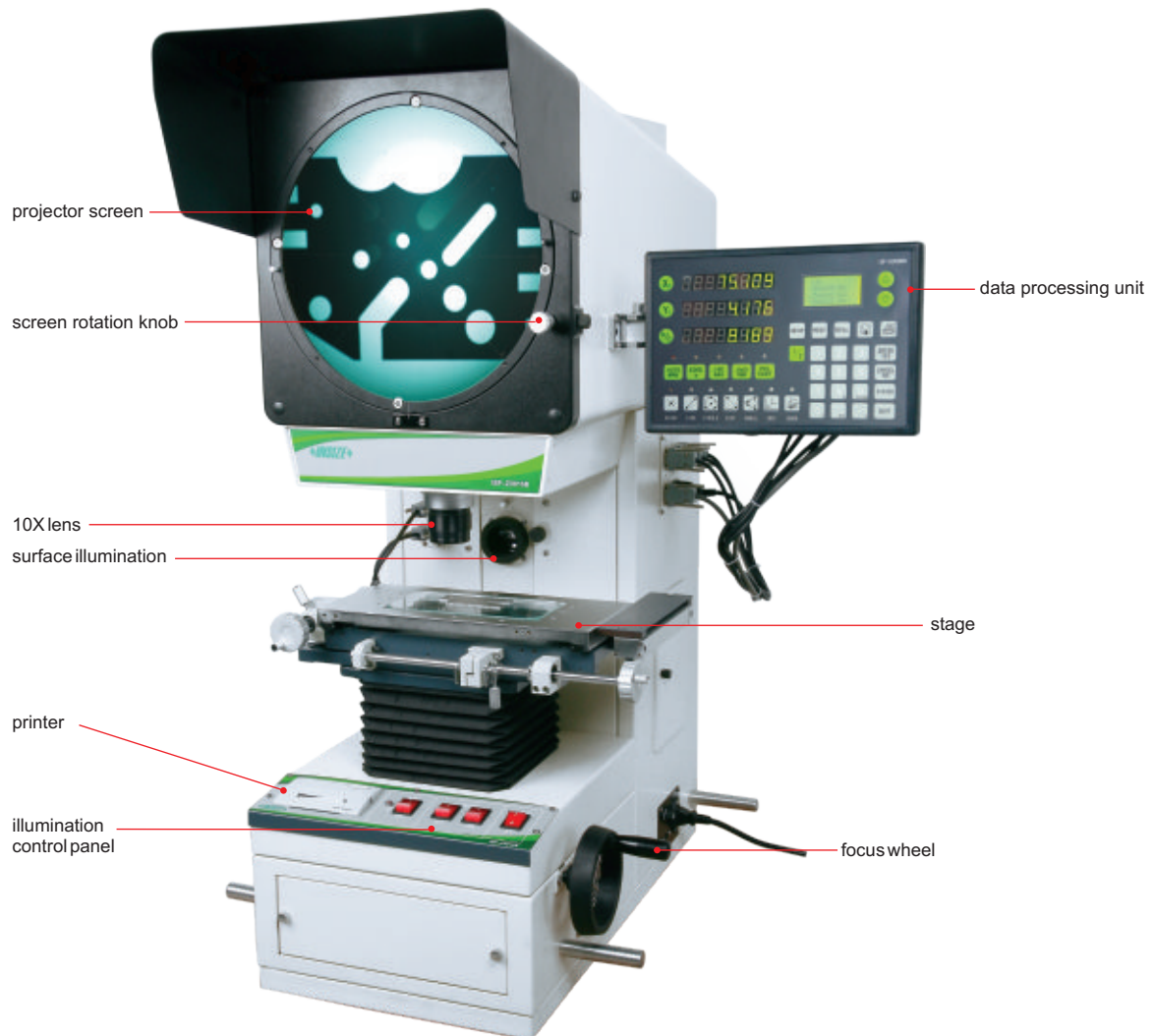
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero set, mm/in, data set
- Battery SR44 or LR44
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back



(mm)

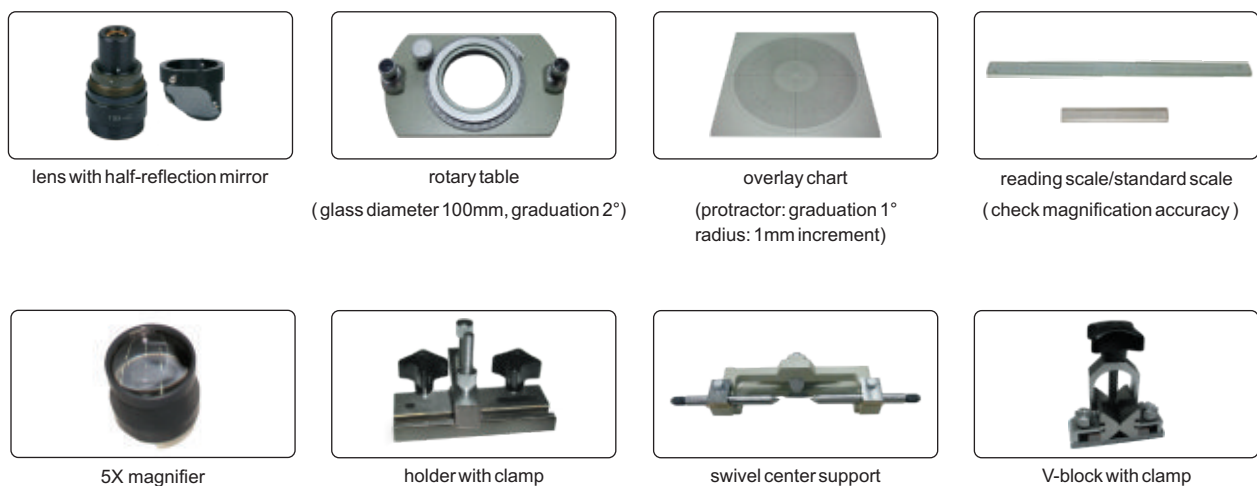
Code	Range	Accuracy	B	C	D	E	F	L
7102-100	100mm	±0.02mm	4	20	6	40	24	245
7102-150	150mm	±0.03mm	4	20	6	40	24	296
7102-200	200mm	±0.03mm	4	20	6	40	24	345
7102-300	300mm	±0.04mm	4	20	6	40	24	445
7102-400	400mm	±0.05mm	4	20	6	40	24	545
7102-500	500mm	±0.05mm	5.5	24	8	45	32	685
7102-600	600mm	±0.08mm	5.5	24	8	45	32	785
7102-800	800mm	±0.10mm	5.5	24	8	45	32	985
7102-1000	1000mm	±0.10mm	5.5	24	8	45	32	1185

PROFILE PROJECTOR CODE ISP-Z3015B*



* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

OPTIONAL ACCESSORY



SPECIFICATION

Lens	magnification	10X (standard)	20X (optional)	50X (optional)	100X (optional)
	view field	Ø30mm	Ø15mm	Ø6mm	Ø3mm
	working distance	75mm	69mm	26mm	26mm
Max. workpiece height		85mm	91mm	134mm	134mm
Magnification accuracy		±0.1%			
Image		inverted			
Projector screen		diameter: Ø300mm			
		rotation range: 0°~360°, resolution: 1' or 0.01°, accuracy: 6'			
		reference lines: cross-hairs			
Stage	metal stage size	340×152mm			
	glass stage size	195×95mm			
	X-Y stage travel	range: 150×50mm			
		resolution: 1μm			
		accuracy: (4+L/25)μm L is the measuring length in mm			
	Z(focus) travel range	80mm			
max. load capacity		4kg			
Illumination		contour illumination: 12V/100W halogen lamp, 2-step(high/low) brightness adjustment			
		surface illumination: 24V/150W halogen lamp			
Data processing unit	display	X-Y stage travel, screen rotation			
	output	RS232C			
	function	 measure coordinate of point			
		 measure coordinate of line			
		 measure center coordinate, radius of circle with three points			
		 measure distance between two objects			
		 measure angle with four points or two lines			
		 set origin of coordinate			
		 coordinate transform			
		 set midpoint of coordinate			
Dimension (L×W×H)		480×780×1150mm			
Weight		135kg			

STANDARD DELIVERY

Main unit	1pc
10X lens with half-reflection mirror	1pc
Overlay chart clip	4pcs
Level	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

20X lens with half-reflection mirror	ISP-Z3015B-LENS20X
50X lens with half-reflection mirror	ISP-Z3015B-LENS50X
100X lens with half-reflection mirror	ISP-Z3015B-LENS100X
Rotary table	ISP-Z3015B-TABLE
Overlay chart	ISP-Z3015B-CHART
50mm standard scale	ISP-Z3015B-SCALE50
360mm reading scale	ISP-Z3015B-SCALE360
5X magnifier	ISP-Z3015B-MAGNIFIER
Holder with clamp	ISP-Z3015B-HOLDER
Swivel center support	ISP-Z3015B-SUPPORT
V-block with clamp	ISP-Z3015B-VBLOCK

MANUAL ROCKWELL HARDNESS TESTER CODE ISH-R150



Ø60mm flat anvil



Ø150mm flat anvil



V-type anvil

SPECIFICATION

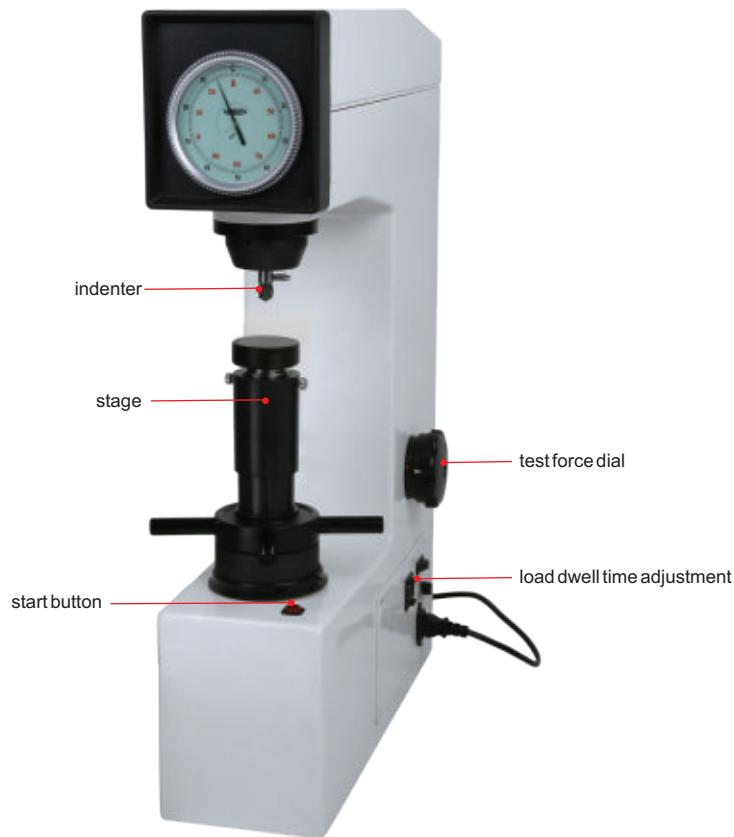
Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588N, 980N, 1471N
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc

Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB85-95	1pc
Hardness test block HRC60-70	1pc
Hardness test block HRC20-30	1pc

AUTOMATIC ROCKWELL HARDNESS TESTER **CODE ISH-MR150***



Ø60mm flat anvil



Ø150mm flat anvil



V-type anvil

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588N, 980N, 1471N
Display	analogue
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1-99 second
Min. reading	0.5HR
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Dimension	520×160×700mm
Weight	60kg

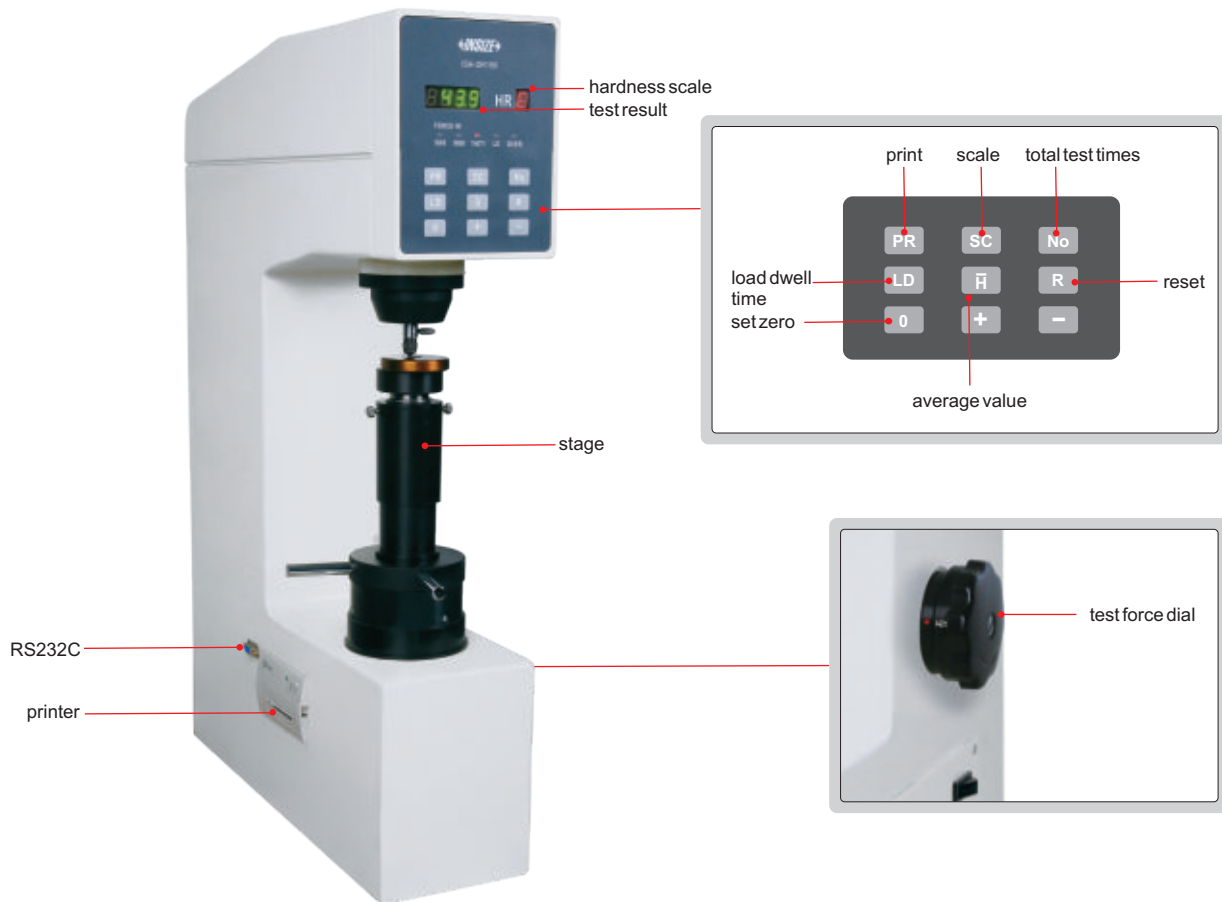
STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc

Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB85-95	1pc
Hardness test block HRC60-70	1pc
Hardness test block HRC20-30	1pc

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-DR150*



SPECIFICATION

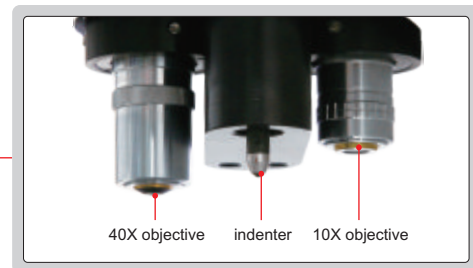
Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588, 980, 1471N
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1-30second
Min. reading	0.1HR
Data output	RS232C
Max. workpiece height	170mm
Max. workpiece depth	130mm(from the center of indenter)
Dimension	510×212×730mm
Weight	85kg

STANDARD DELIVERY

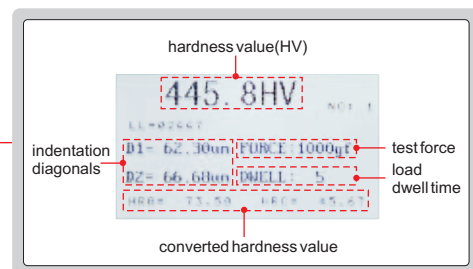
Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Ø1.5875mm carbide ball indenter	1pc
Diamond indenter	1pc
Rockwell test block	3pcs
RS232C cable	1pc
Anti-dust cover	1pc

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

DIGITAL MICRO-VICKERS HARDNESS TESTER CODE ISH-TDV2000*



motor driven turret



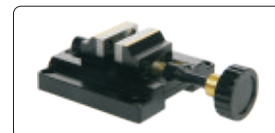
- Measure hardness of thin or small workpieces
- Based on Vickers(HV), can be converted to Rockwell(HRA, HRB and HRC)

SPECIFICATION

Test force	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1, 2kgf
Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1, HV2
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	5-60second (5 second increment)
Objective	10X, 40X
Eyepiece	15X
Total magnification	150X (for observation) 600X (for measurement)
Max. workpiece height	85mm
Max. workpiece depth	85mm (from the center of indenter)
X-Y stage	dimensions: 100×100mm
	travel range: 25×25mm
	graduation: 0.01mm
Data output	RS232C
Dimension	540×500×640mm
Weight	50kg



slice holder



vice



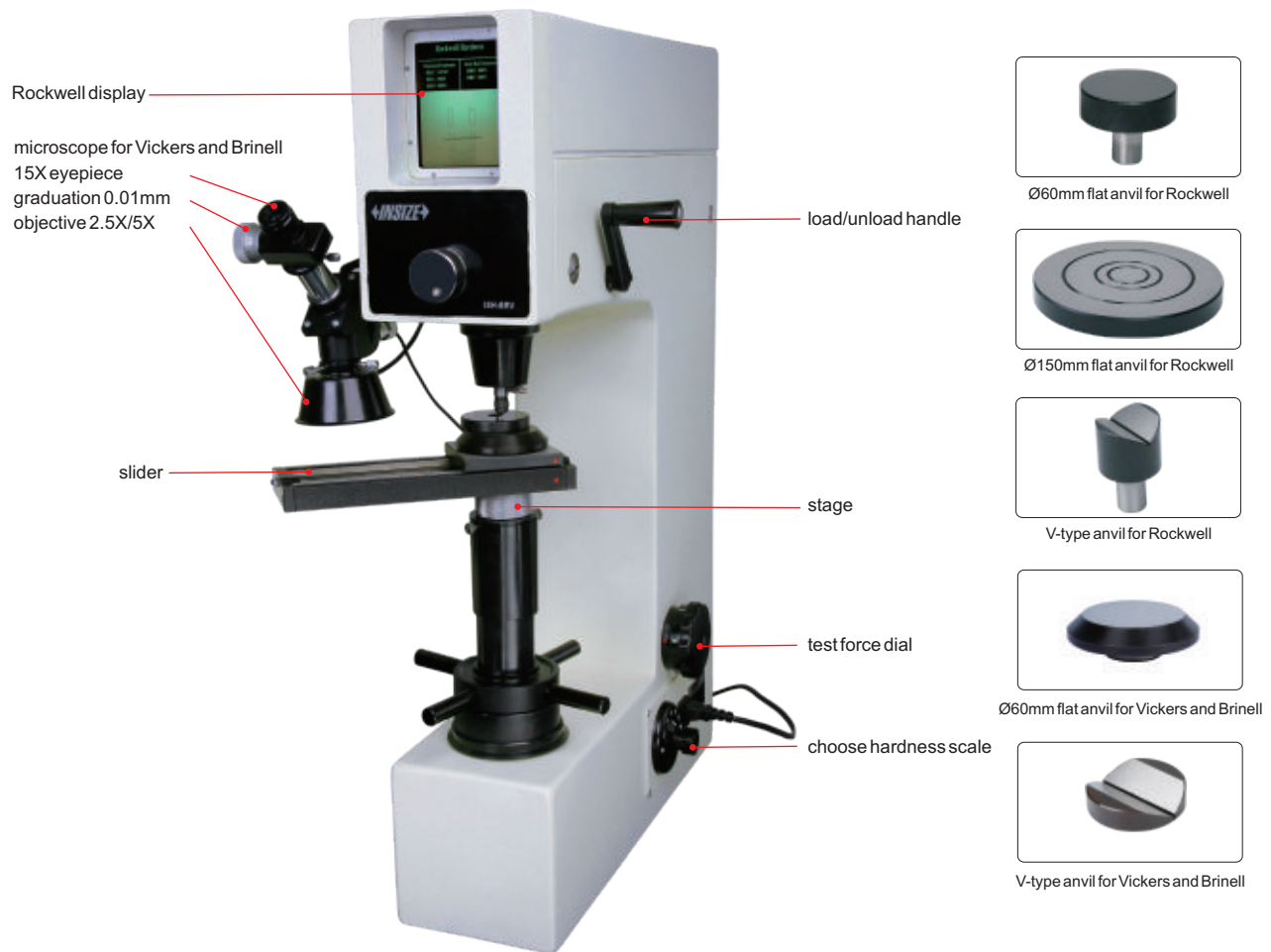
cylinder holder

STANDARD DELIVERY

Main unit	1pc
10X, 40X objective	1pc of each
Micro Vickers indenter	1pc
Micro Vickers test block (700HV1, 400HV0.2)	1pc of each
Slice holder	1pc
Vice	1pc
Cylinder holder	1pc
Level	1pc

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

BRINELL/ROCKWELL/VICKERS HARDNESS TESTER CODE ISH-BRV*



SPECIFICATION

Rockwell test load	98N preload, 588, 980, 1471N total load
Min. Rockwell reading	0.5HR
Brinell test load	306, 613, 1839N
Vickers test load	294N
Stage elevation	manual
Load control	manual
Magnification of microscope	37.5X/75X (selectable)
Max. workpiece height	180mm
Max. workpiece depth	200mm (from the center of indenter)
Dimension	546×300×767mm
Weight	90kg

STANDARD DELIVERY

Main unit	1pc
Ø1.5875mm carbide ball indenter	1pc
Diamond Rockwell indenter	1pc
Ø5mm Brinell indenter	1pc
Ø2.5mm Brinell indenter	1pc
Vickers indenter	1pc
Ø60mm flat anvil for Rockwell	1pc
Ø150mm flat anvil for Rockwell	1pc

V-anvil for Rockwell	1pc
Flat anvil for Vickers and Brinell	1pc
V-anvil for for Vickers and Brinell	1pc
Rockwell test block HRC (high, low)	1pc of each
Rockwell test block HRB	1pc
Brinell test block	1pc
Vickers test block	1pc
Anti-dust cover	1pc

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

PORTABLE HARDNESS TESTER CODE ISH-PHA*



- Supplied with impact device D
- Based on Leeb(HLD) , converted to Vickers(HV), Brinell(HB), Rockwell(HRC and HRB), Shore(HS) and tensile strength(MPa)
- Connected with printer via bluetooth
- LCD display with backlight
- Automatic power off
- According to ASTM A956



printer



hardness test block



small support ring

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±6HLD(when HLD=800)	
Display	Leeb(HLD), converted hardness, material, impact direction, test times, average value, date	
Output	bluetooth	
Applicable workpiece	minimum weight	5kg
		2kg (on solid support)
		0.1kg(coupled on plate)
	minimum thickness: 5mm	
	minimum radius of curved surface: 11mm	
	maximum roughness(Ra): 1.6μm	
Power supply	3 × AAA batteries	
Dimension	150 × 80 × 24mm	
Weight	200g	

STANDARD DELIVERY

Main unit	1pc
Impact device D	1pc
Printer	1pc
Hardness test block	1pc
Small support ring	1pc
Cleaning brush	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

Support rings	page S10
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APPLICABLE MATERIAL AND HARDNESS RANGE FOR IMPACT DEVICE D

Material	HLD	HV	HB	HRC	HRB	HS	Tensile strength(MPa)
Steel & cast steel	300-900	81-955	81-654	20-68	38-100	32-100	375-2639
Tool steel	300-840	80-898		20-67			
Stainless steel	300-800	85-802	85-655		46-101		
Cast iron	360-650		93-334				
Cast aluminum alloy	170-570		19-164		23-84		
Brass	200-550		40-173		13-95		
Bronze	300-700		60-290				
Copper	200-690		45-315				

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

PORTABLE HARDNESS TESTER CODE ISH-SPHA*



printer



hardness test block (standard)



small support ring

- Based on Leeb(HL), converted to Vickers(HV), Brinell(HB), Rockwell(HRC and HRB), Shore(HS) and tensile strength(MPa)
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 800 test results can be saved
- Low and high limits with judgement
- Touch screen operation, large display with backlight
- Language: English, Chinese, Italian, German, French and Russian
- Automatic power off
- According to ASTM A956

SPECIFICATION

Min. reading	1HL, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	±6HL (when HL=800)
Display	Leeb(HL), converted hardness, material, impact direction, test times, average value, deviation, time
Output	bluetooth and USB
Power supply	built-in rechargeable battery
Dimension	135×83×24mm
Weight	350g

STANDARD DELIVERY

Main unit	1pc
Impact device D	1pc
Printer	1pc
Hardness test block	1pc
Small support ring	1pc
Cleaning brush	1pc
AC/DC adapter	1pc
USB cable and software disc	1pc of each
Pen for touch screen	1pc

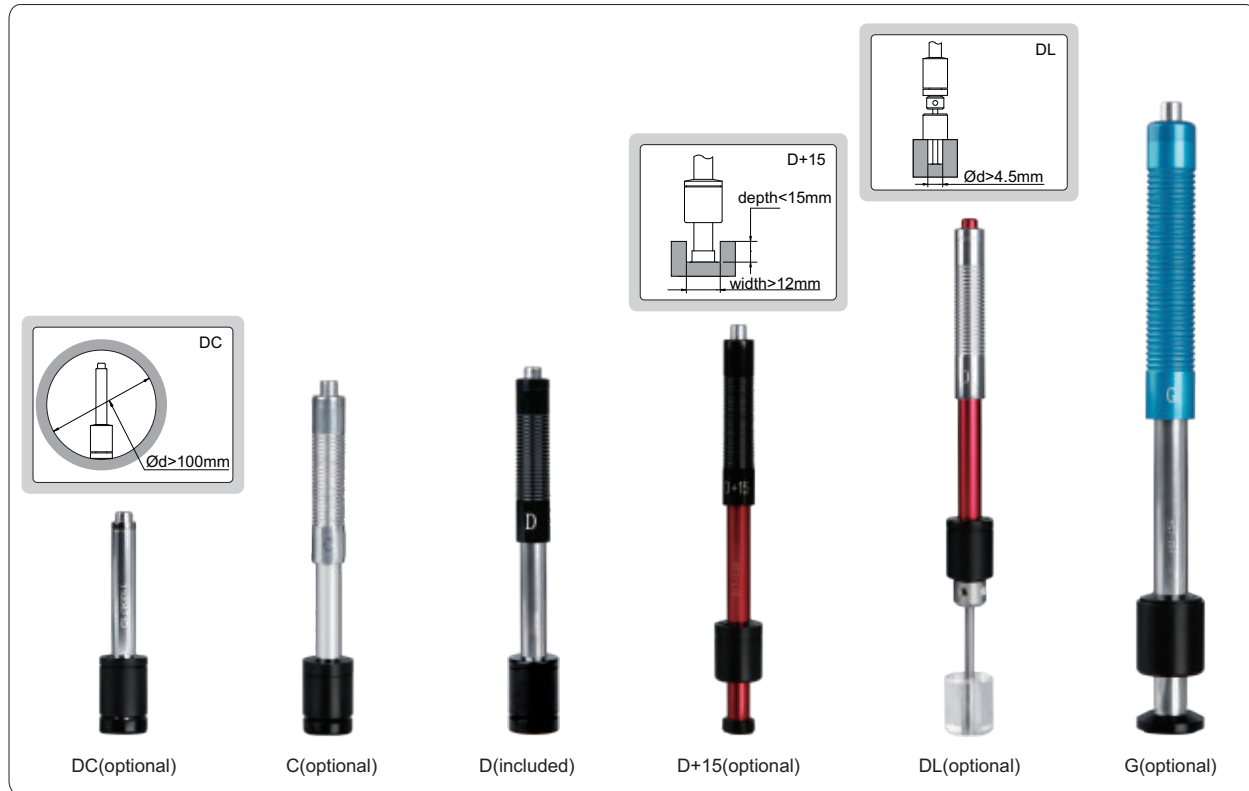
OPTIONAL ACCESSORY

Impact device DC	ISH-SPHA-DC
Impact device C	ISH-SPHA-C
Impact device D+15	ISH-SPHA-D15
Impact device DL	ISH-SPHA-DL
Impact device G	ISH-SPHA-G
Hardness test block	ISH-BHLG (page S13)
Support rings	page S10

- * Hardness test block (ISH-BHLG) is for impact device G (ISH-SPHA-G).
Hardness test block (standard) is for all others impact devices.

- * Add suffix on code No. to devote AC voltage and plug (refer to page V1)

To be continued

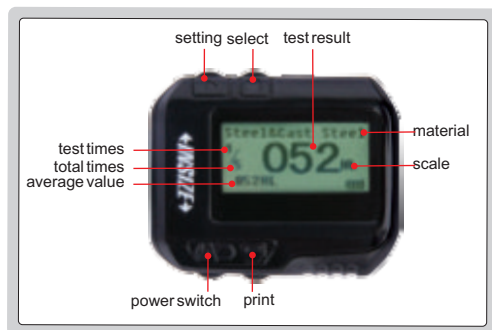
**APPLICABLE WORKPIECE**

Impact device		DC	C	D	D+15	DL	G
Application		inner wall of small space	small or thin workpiece, coating layer	general use	deep groove	narrow slot or small hole	casting or forging workpiece
Maximum roughness of workpiece(Ra)		1.6μm	0.4μm	1.6μm	1.6μm	1.6μm	7μm
Minimum weight of workpiece	direct measurement	5kg	1.5kg	5kg	5kg	5kg	15kg
	on solid support	2kg	0.5kg	2kg	2kg	2kg	5kg
	coupled on plate	0.1kg	0.02kg	0.1kg	0.1kg	0.1kg	0.5kg
Minimum thickness of workpiece		5mm	1mm	5mm	5mm	5mm	10mm

APPLICABLE MATERIAL AND HARDNESS RANGE

Material	Scale	DC	C	D	D+15	DL	G
Steel & cast steel	HRC	20-68	20-69.5	20-68	19.3-67.9	20.6-68.2	
	HRB	38-100	38.4-99.5	38-100		37.0-99.9	47.7-99.9
	HB	81-654	80-683	81-654	80-638	81-646	90-646
	HV	81-955	80-996	81-955	180-818	80-950	
	HS	32-100	32-102	32-100	33-99	31-97	
	Tensile strength(MPa)			375-2639			
Cast iron	HB	93-334		93-334			92-326
	HV						
	HRC						
Tool steel	HRC	20-67		20-67			
	HV	80-898		80-898			
Stainless steel	HRB	46-101		46-101			
	HV	85-802		85-802			
	HB	85-655		85-655			
Cast aluminum alloy	HB	19-164		19-164			
	HRB	23-84		23-84			
Brass	HB	40-173		40-173			
	HRB	13-95		13-95			
Bronze	HB	60-290		60-290			
Copper	HB	45-315		45-315			

PORTABLE HARDNESS TESTER CODE ISH-SPHD*



printer



hardness test block



small support ring

- Impact device D
- Based on Leeb(HLD), converted to Vickers(HV), Brinell(HB), Rockwell(HRC and HRB), Shore(HS) and tensile strength(MPa)
- Automatic direction correction
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 500 test results can be saved
- According to ASTM A956

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS	
Accuracy	±6HLD(when HLD=800)	
Output	USB and bluetooth	
Applicable workpiece	minimum weight	5kg
		2kg (on solid support)
		0.1kg(coupled on plate)
	minimum thickness: 5mm	
	minimum radius of curved surface: 11mm	
maximum roughness(Ra): 1.6μm		
Power supply	built-in rechargeable battery	
Dimension	147 × 35× 22mm	
Weight	65g	

STANDARD DELIVERY

Main unit	1pc
Printer	1pc
Hardness test block	1pc
Small support ring	1pc
Cleaning brush	1pc
AC/DC adapter	1pc
USB cable and software disc	1pc of each

OPTIONAL ACCESSORY

Support rings	page S10
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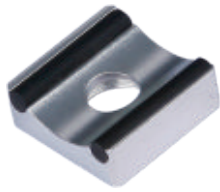
APPLICABLE MATERIAL AND HARDNESS RANGE

Material	HLD	HV	HB	HRC	HRB	HS
Steel & cast steel	300-900	81-955	81-654	20-68	38-100	32-100
Tool steel	300-840	80-898		20-67		
Stainless steel	300-800	85-802	85-655		46-101	
Cast iron	360-650		93-334			
Cast aluminum alloy	170-570		19-164		23-84	
Brass	200-550		40-173		13-95	
Bronze	300-700		60-290			
Copper	200-690		45-315			

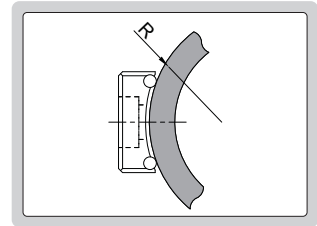
* Add suffix on code No. to devote AC voltage and plug (refer to page V1)

SUPPORT RINGS FOR PORTABLE HARDNESS TESTER

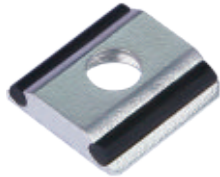
type A



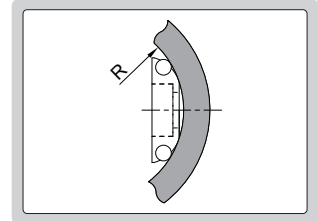
ISH-R1015



type B



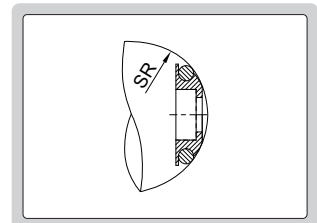
ISH-R1113



type C



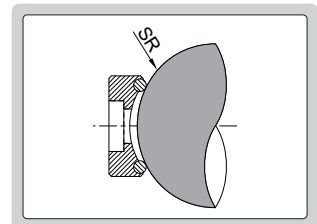
ISH-SR1113



type D



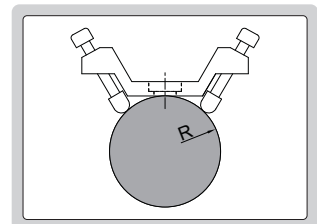
ISH-SR1015



type E



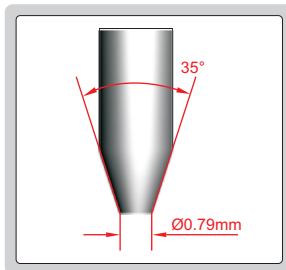
ISH-RUN



SPECIFICATION

Code	Type	Applicable workpiece	Range (mm)
ISH-R1015	A	cylindrical outside surface	R10 - 15
ISH-R14530			R14.5 - 30
ISH-R2550			R25 - 50
ISH-R1113	B	cylindrical inside surface	R11 - 13
ISH-R12517			R12.5 - 17
ISH-R16530			R16.5 - 30
ISH-SR1113	C	spherical inside surface	SR11 - 13
ISH-SR12517			SR12.5 - 17
ISH-SR16530			SR16.5 - 30
ISH-SR1015	D	spherical outside surface	SR10 - 15
ISH-SR14530			SR14.5 - 30
ISH-RUN	E	cylindrical outside surface	R > 10

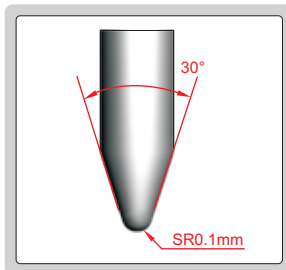
SHORE DUROMETER



blunt taper indenter



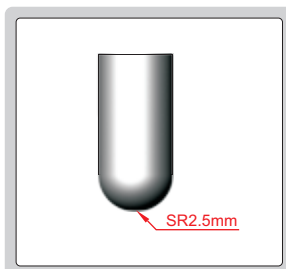
ISH-SA



sharp point indenter



ISH-SD



ball indenter



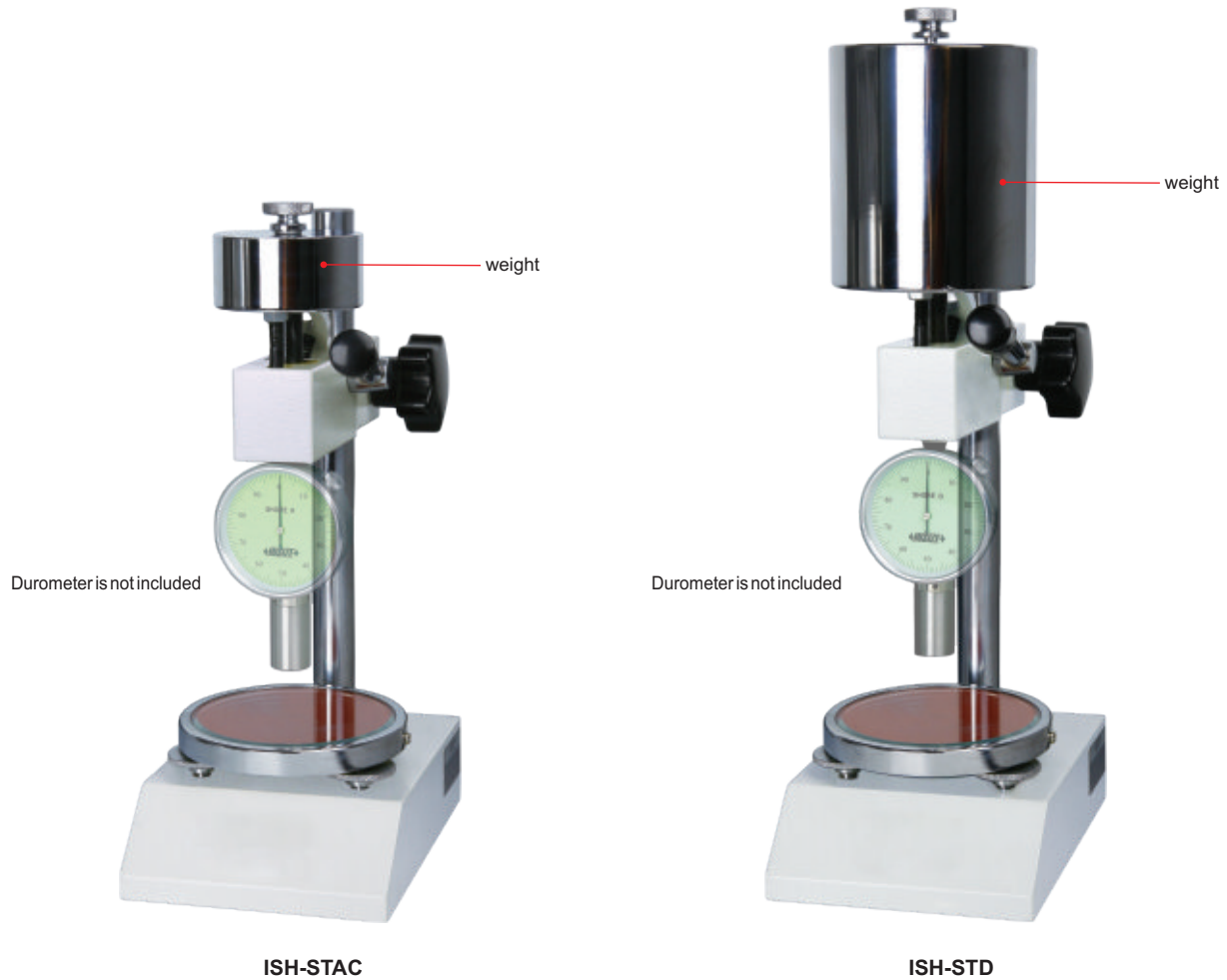
ISH-SC

- According to ISO868, ISO7619, ASTM D 2240
- Optional accessory: hardness test block for ISH-SA (code **ISH-BSA**, page S13), testing stand (page S12)

SPECIFICATION

Code	ISH-SA	ISH-SD	ISH-SC
Scale	Shore A	Shore D	Shore C
Application	natural rubber, soft elastomer, etc.	hard elastomer, plastic, hard rubber, etc.	foam, sponge, etc.
Measuring range	HA: 10-90	HD: 20-90	HW: 10-90
Resolution	1HA	1HD	1HW
Indenter protrusion	2.5mm	2.5mm	2.5mm
Dimension	115×60×25mm		
Net weight	500g		

TESTING STAND FOR SHORE DUROMETER

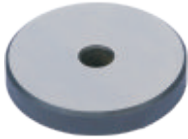


- Can perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations

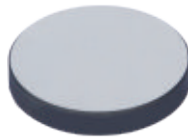
SPECIFICATION

Code	ISH-STAC	ISH-STD
Applicable durometer	ISH-SA, ISH-SC	ISH-SD
Stage diameter	Ø100mm	Ø100mm
Maximum workpiece height	75mm	75mm
Mass of weight	1kg	5kg

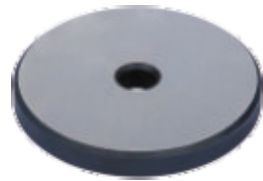
HARDNESS TEST BLOCK



Rockwell



Vickers



Brinell



Micro-Vickers



Leeb



Shore

SPECIFICATION

Code	Type	Hardness
ISH-BHRC1	Rockwell C	25-35HRC
ISH-BHRC2		40-50HRC
ISH-BHRC3		55-65HRC
ISH-BHRB	Rockwell B	75-95HRB
ISH-BHRA	Rockwell A	70-85HRA
ISH-BHV5A	Vickers	150-250HV5
ISH-BHV5B		400-500HV5
ISH-BHV5C		650-750HV5
ISH-BHV10A		400-500HV10
ISH-BHV10B		650-750HV10
ISH-BHV30		400-500HV30
ISH-BHB25A	Brinell	75-125HBW 2.5/62.5
ISH-BHB25B		150-250HBW 2.5/187.5
ISH-BHB5A		75-125HBW 5/250
ISH-BHB5B		150-250HBW 5/750
ISH-BHB10A		75-125HBW 10/1000
ISH-BHB10B		150-250HBW 10/3000
ISH-BHV005	Micro-Vickers	200-300HV0.05
ISH-BHV01A		200-300HV0.1
ISH-BHV01B		400-500HV0.1
ISH-BHV02A		400-500HV0.2
ISH-BHV02B		700-800HV0.2
ISH-BHV05		700-800HV0.5
ISH-BHV1		700-800HV1
ISH-BHLD	Leeb	750-830HLD, 750-830HLDC, 872-916HLDL, 757-833HLD+15, 812-889HLC
ISH-BHLG		550-630HLG
ISH-BSA	ShoreA	7pcs/set: 30-39HA, 40-49HA, 50-59HA, 60-69HA, 70-79HA, 80-89HA, 90-99HA

FORCE GAUGE

type A



ISF-F100

type B



ISF-F2K

- Push and pull test
- Peak(max.) or tracking work mode



flat push tip



V type push tip



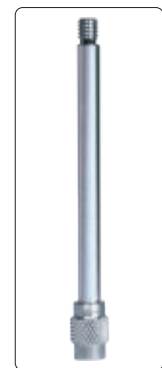
knife-edge push tip



point push tip



pull clamp



extension rod

SPECIFICATION

Code		ISF-F10	ISF-F20	ISF-F30	ISF-F50	ISF-F100	ISF-F200	ISF-F300	ISF-F500	ISF-F1K	ISF-F2K	ISF-F3K	ISF-F5K
Type		A								B			
Capacity	N	10	20	30	50	100	200	300	500	1000	2000	3000	5000
	kgf	1	2	3	5	10	20	30	50	100	200	300	500
Graduation	N	0.05	0.1	0.2	0.2	0.5	1	2	2	5	10	20	20
Accuracy		±1% full scale								±2% full scale			

STANDARD DELIVERY

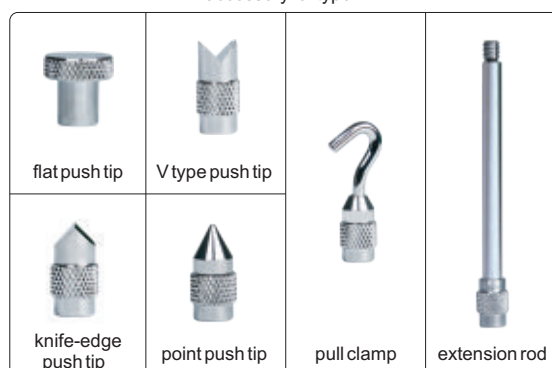
Code		ISF-F10	ISF-F20	ISF-F30	ISF-F50	ISF-F100	ISF-F200	ISF-F300	ISF-F500	ISF-F1K	ISF-F2K	ISF-F3K	ISF-F5K
Main unit		1pc								1pc			
Push tip		4pcs (flat, V type, knife-edge, point)								2pcs (flat, point)			
Pull clamp		1pc								1pc			
Extension rod		1pc								1pc			

DIGITAL FORCE GAUGE



- Push and pull test
- Peak(max.) or tracking work mode
- Units: kgf, N, lbf
- Low and high limits with judgement
- Maximum 10 memories
- Automatic power off
- Overload alarm
- RS232C output
- Built-in rechargeable battery

accessory for type A



accessory for type B



SPECIFICATION

Code	ISF-DF10*	ISF-DF20*	ISF-DF50*	ISF-DF100*	ISF-DF200*	ISF-DF500*	ISF-DF1K*	ISF-DF2K*	ISF-DF5K*	ISF-DF10K*	ISF-DF20K*	ISF-DF50K*	ISF-DF100K*
Type	A(internal sensor)						B(external sensor)						
Load capacity	10N	20N	50N	100N	200N	500N	1KN	2KN	5KN	10KN	20KN	50KN	100KN
Resolution(N)	0.005	0.01	0.01	0.05	0.1	0.1	0.5	1	1	5	10	10	50
Measuring range	10%-100% full scale												
Accuracy	±0.5% full scale												

STANDARD DELIVERY

Code	ISF-DF10	ISF-DF20	ISF-DF50	ISF-DF100	ISF-DF200	ISF-DF500	ISF-DF1K	ISF-DF2K	ISF-DF5K	ISF-DF10K	ISF-DF20K	ISF-DF50K	ISF-DF100K
Main unit	1pc						1pc						
AC/DC adapter	1pc						1pc						
Push/Pull accessory	6pcs (flat push tip, V type push tip, knife-edge push tip, point push tip, pull clamp, extension rod)						4pcs (flat push tip, adapter, pull clamps)						

OPTIONAL ACCESSORY

RS232 cable and software	ISF-DF-CABLE
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*Add suffix on code No. to devote AC voltage and plug (refer to page V1)

TESTING STAND



ISF-MTD500



ISF-MT500

force gauges are not included



compress test



horizontal orientation test

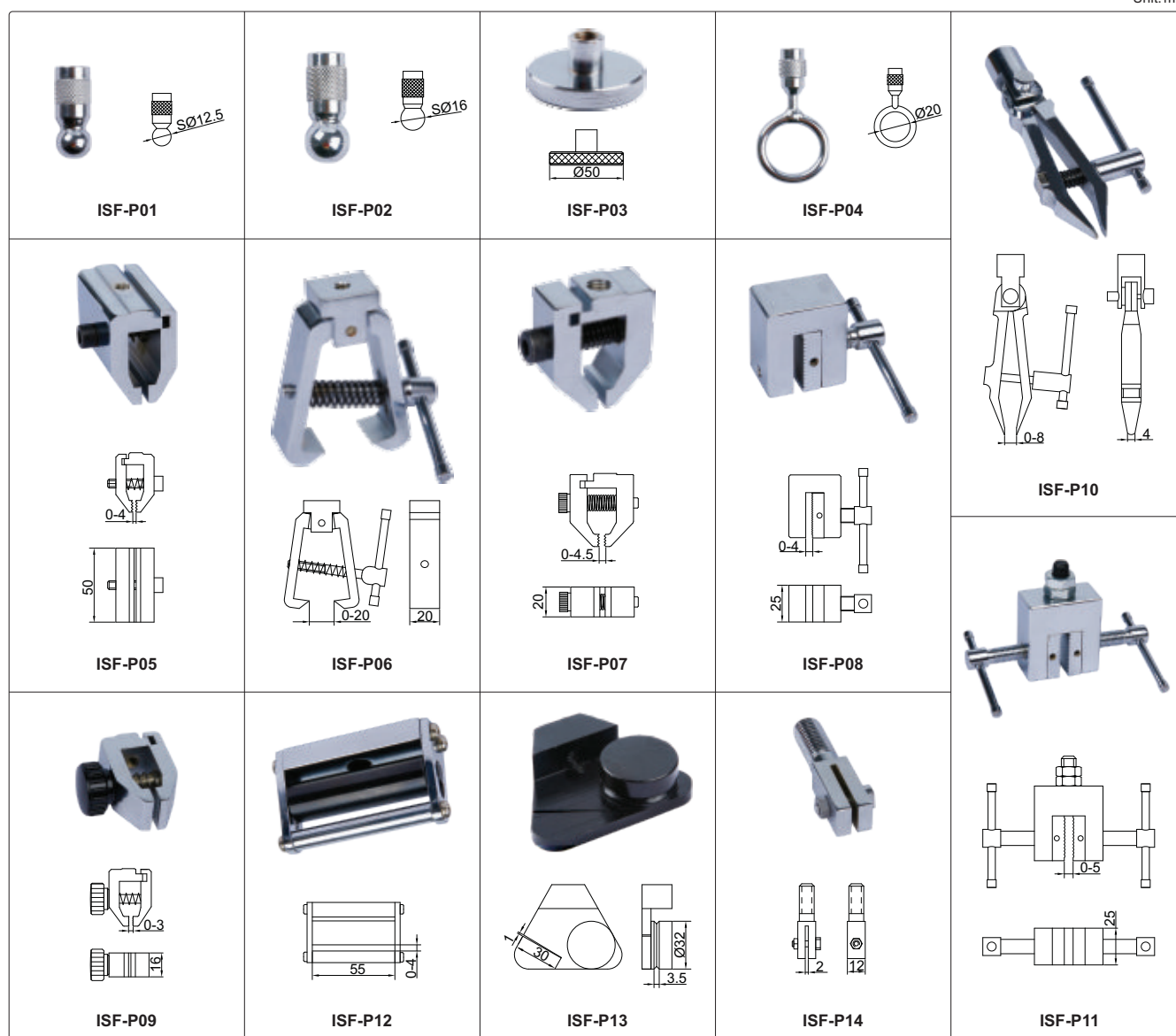
- For tensile and compress test with force gauges
- Both can be used in vertical and horizontal orientation
- ISF-MTD500 is supplied with digital scale(resolution: 0.01mm/0.0005")

SPECIFICATION

Code	ISF-MTD500	ISF-MT500
Load capacity	500N	
Travel	150mm (3mm vertical movement per revolution of handwheel)	
Dimension	160×240×460mm	
Weight	8.5kg	

PUSH TIP AND PULL CLAMP FOR FORCE GAUGE

Unit: mm



SPECIFICATION

PUSH TIP

Code	Load capacity (N)	Diameter
ISF-P01	5000	12.5mm
ISF-P02	5000	16mm
ISF-P03	3000	50mm

PULL RING

Code	Load capacity (N)	Diameter
ISF-P04	500	20mm

SPECIAL PULL CLAMP

Code	Load capacity (N)	Application
ISF-P12	5000	fabric
ISF-P13	5000	wire
ISF-P14	5000	workpiece with hole

PULL CLAMP

Code	Load capacity (N)	Jaw opening	Jaw width
ISF-P05	3000	0-4mm	50mm
ISF-P06	1000	0-20mm	20mm
ISF-P07	5000	0-4.5mm	20mm
ISF-P08	2000	0-4mm	25mm
ISF-P09	500	0-3mm	16mm
ISF-P10	500	0-8mm	4mm
ISF-P11	5000	0-5mm	25mm

DIGITAL TORQUE METER

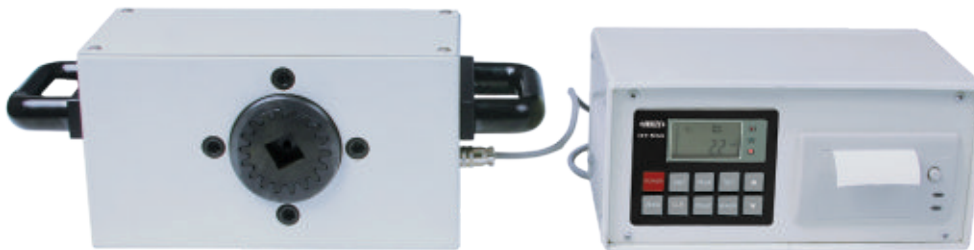
type A



IST-M10

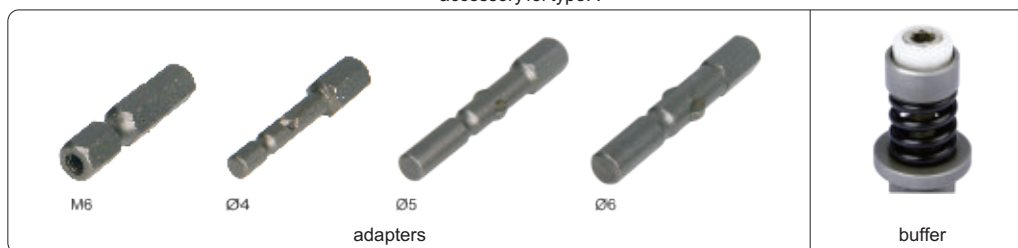
- Clockwise and counter-clockwise measurement
- Peak(max.) or tracking work mode
- Unit: kgf·cm, N·m, lbf·in
- Maximum 10 memories
- Average reading
- Low and high limits with judgement
- RS232C output
- Automatic power off

type B



IST-M50

accessory for type A



SPECIFICATION

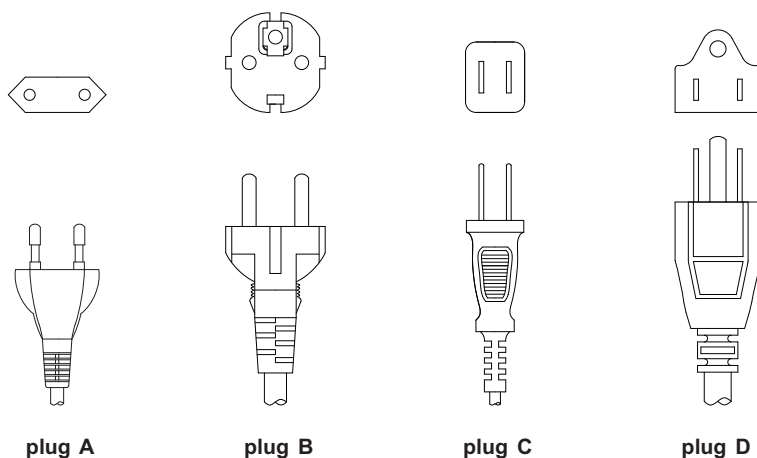
Code	IST-M1*	IST-M2*	IST-M5*	IST-M10*	IST-M20*	IST-M50*	IST-M100*	IST-M200*	IST-M500*
Type	A(internal sensor)					B(external sensor)			
Capacity (N.m)	1	2	5	10	20	50	100	200	500
Resolution (N.m)	0.0005	0.001	0.002	0.005	0.01	0.02	0.05	0.1	0.2
Printer	without					built-in			
Accuracy	±0.5% full scale					±1% full scale			
Max. test speed	5000rpm					5000rpm			
Power	built-in rechargeable battery, for 12 hours working					AC			
Weight	2.4kg					22kg			

STANDARD DELIVERY

Code	IST-M1	IST-M2	IST-M5	IST-M10	IST-M20	IST-M50	IST-M100	IST-M200	IST-M500
Main unit	1pc					1pc			
Adapter	4pcs(M6, Ø4, Ø5, Ø6)					—			
Buffer	1pc					—			
AC/DC adapter	1pc					—			
RS232 cable and software disc	1pc of each					1pc of each			

*Add suffix on code No. to devote AC voltage and plug (refer to page V1)

SUFFIX



- Add suffix on code No. to devote AC voltage and plug, such as ISP-Z3015B-P and ISP-Z3015B-U

Code	Page	Suffix	
		voltage: 220V plug A or B	voltage: 110V plug C or D
ISM-WM200	N6	-P	-U
ISM-DL120	N8	-P	-U
ISM-ZS45	N9	-P	-U
ISM-ZS45T	N9	-P	-U
ISM-S40	N10	-P	-U
ISM-M1000	N11	-P	-U
ISM-M600	N12	-P	-U
ISV-E55	Q1	-P	-U
ISV-E55B	Q2	-P	-U
ISV-MUE55	Q4	-P	-U
ISV-1000D	Q6	-P	-U
ISL-DR2	R1	-P	-U
ISL-DR3	R1	-P	-U
ISP-Z3015B	R6	-P	-U
ISH-MR150	S2	-P	-U
ISH-DR150	S3	-P	-U
ISH-TDV2000	S4	-P	-U
ISH-BRV	S5	-P	-U
ISH-PHA	S6	-P	-U
ISH-SPHA	S7	-P	-U
ISH-SPHD	S9	-P	-U
ISF-DF	T2	-P	-U
IST-M	U1	-P	-U

CODE NO. INDEX

CODE	DESCRIPTION	PAGE
11		
1102	Digital Caliper	B3
1106	Digital Caliper	B10
1108	Digital Caliper	B1
1109	Metric Digital Caliper	B1
1110	Digital Caliper With Carbide Tipped Jaws	B2
1111	Mini Digital Caliper	B4
1117	Digital Caliper	B11
1118	Waterproof Digital Caliper	B3
1119	Digital Caliper With Round Depth Bar	B2
1120	Digital Inside Groove Caliper	B20
1121	Digital Inside Point Caliper	B21
1122	Digital Hook Caliper	B28
1123	Digital Inside Knife-edge Caliper	B24
1135	Digital Caliper	B13
1136	Digital Caliper	B12
1139	Plastic Digital Caliper	B4
1141	Digital Depth Gauge	C5
1142	Digital Hook Depth Gauge	C6
1143	Digital Point Depth Gauge	C7
1144	Digital Double Hook Depth Gauge	C6
1145	Digital Depth Gauge	C10
1150	Digital Height Gauge	C1
1151	Digital Height Gauge	C2
1161	Digital Tube Thickness Caliper	B17
1162	Digital Disk Brake Caliper	B29
1163	Digital Snap Gauge	G14
1166	Digital Scribing Caliper	B27
1167	Digital Disk Brake And Pad Caliper	B30
1168	Digital Drum Brake Caliper	B30
1181	Digital Gear Tooth Caliper	B29
1183	Digital Point Caliper	B22
1185	Digital Outside Point Caliper	B19
1186	Digital Offset Caliper	B26
1187	Digital Outside Neck Caliper	B18
1188	Digital Blade Caliper	B23
1192	Digital Offset Centerline Caliper	B25
12		
1202	Vernier Caliper With Round Depth Bar	B6
1205	Vernier Caliper	B6
1207	Vernier Caliper	B14
1208	Vernier Caliper	B14
1210	Vernier Caliper	B15
1212	No Parallax Vernier Caliper	B8
1214	Vernier Caliper	B15
1215	Long Jaw Vernier Caliper	B16
1219	Vernier Caliper With Titanium Plated Beam	B7
1223	Vernier Caliper	B8
1233	Vernier Caliper	B7
1236	Vernier Caliper	B13
1238	Vernier Caliper With Carbide Tipped Jaws	B9
1239	Left Hand Vernier Caliper	B9
1240	Vernier Depth Gauge	C7

CODE	DESCRIPTION	PAGE
1244	Vernier Depth Gauge	C10
1247	Vernier Depth Gauge	C8
1248	Vernier Hook Depth Gauge	C9
1249	Vernier Depth Gauge	C8
1250	Vernier Height Gauge	C4
1253	Vernier Height Gauge	C4
1261	Tube Thickness Vernier Caliper	B17
1262	Inside Groove Vernier Caliper	B20
1263	Inside Point Vernier Caliper	B21
1264	Inside Knife-edge Vernier Caliper	B24
1265	Hook Vernier Caliper	B28
1266	Scribing Vernier Caliper	B27
1283	Point Vernier Caliper	B22
1285	Outside Point Vernier Caliper	B19
1286	Offset Vernier Caliper	B26
1287	Outside Neck Vernier Caliper	B18
1288	Blade Vernier Caliper	B23
1292	Offset Centerline Vernier Caliper	B25
13		
1311	Dial Caliper	B5
1312	Dial Caliper	B5
1315	Dial Caliper With Titanium Plated Beam	B5
1317	Dial Caliper With Titanium Plated Beam	B5
1351	Dial Height Gauge	C3
21		
2103	Digital Indicator	F1
2104	Digital Indicator	F1
2108	Digital Indicator For Bore Gauges	F2
2109	Digital Indicator With Lifting Lever	F3
2112	Digital Indicator	F2
2122	Digital Bore Gauge	E12
2125	Digital Bore Gauge Set	E14
2126	Digital Precision Bore Gauge	E13
2127	Digital Bore Gauge	E15
2128	Digital Bore Gauge	E16
2129	Digital Precision Bore Gauge Set	E14
2132	Digital External Caliper Gauge	G4
2141	Digital Depth Gauge	C13
2151	Digital Internal Caliper Gauge	G4
2152	Bore Gauge For Small Holes	E10
2153	Precision Bore Gauge For Small Holes	E11
2163	Digital Snap Gauge	G13
2164	Digital 3-purpose Snap Gauge	G14
2166	Digital Snap Gauge	G13
2167	Digital Snap Gauge	G13
2172	Digital Protractor	J6
2173	Digital Level And Protractor	J2
2176	Digital Protractor	J3
2178	Digital Level And Protractor	J1
2183	Digital Radius Gauge	G16
2184	Dial Snap Gauge	G2
2185	Dial Snap Gauge	G1

CODE NO. INDEX

CODE	DESCRIPTION	PAGE
22		
2278	Combination Square Set	J7
23		
2306	One Revolution Dial Indicator	F8
2307	Inch Dial Indicator	F10
2308	Dial Indicator	F4
2309	Dial Indicator	F6
2310	Dial Indicator	F5
2311	Dial Indicator	F3
2313	Precision Dial Indicator	F9
2314	Shockproof Dial Indicator	F7
2318	Dial Indicator	F10
2321	Internal Dial Caliper Gauge	G3
2322	Bore Gauge	E12
2324	Waterproof Dial Indicator	F7
2328	Double Face Dial Indicator	F9
2329	Dial Indicator With Lifting Lever	F8
2332	External Dial Caliper Gauge	G3
2341	Dial Depth Gauge	C11
2342	Dial Depth Gauge	C12
2360	Precision Thickness Gauge	G7
2361	Thickness Gauge	G8
2363	Thickness Gauge	G9
2364	Thickness Gauge	G5
2365	Thickness Gauge	G7
2366	Thickness Gauge	G5
2367	Tube Thickness Gauge	G11
2368	Thickness Gauge With Rolling Wheel	G12
2372	Universal Protractor	J6
2373	Dial Protractor	J5
2374	Protractor	J5
2380	Dial Test Indicator	F16
2381	Dial Test Indicator	F16
2384	Precision Dial Test Indicator	F17
2385	Centering Indicator	L17
2386	Large Range Dial Test Indicator	F17
2388	Precision Dial Test Indicator	F17
2390	Long Styli Dial Test Indicator	F16
2392	Sphere Radius Gauge	G16
2395	Bore Gauge Checker	E16
28		
2801	Reverse Reading Dial Indicator	F4
2802	Reverse Reading Dial Indicator	F5
2824	Bore Gauge Set	E14
2825	Precision Bore Gauge	E13
2827	Bore Gauge	E15
2828	Bore Gauge	E16
2829	Precision Bore Gauge Set	E14
2841	Crankshaft Tester	G15
2852	Bore Gauge For Small Holes	E10
2853	Precision Bore Gauge For Small Holes	E11
2861	Thickness Gauge	G6

CODE	DESCRIPTION	PAGE
2862	Thickness Gauge	G9
2863	Thickness Gauge	G10
2864	Thickness Gauge With Pointed Tips	G11
2866	Thickness Gauge With Pointed Tips	G10
2867	Digital Thickness Gauge	G6
2869	Saw Setting Dial Gauge	G12
2870	Thickness Gauge	G8
31		
3101	Digital Outside Micrometer	D1
3108	Metric Digital Outside Micrometer	D2
3109	Digital Outside Micrometer	D3
3127	Digital Three Points Internal Micrometer	E7-E8
3128	Digital Wide Range Three Points Internal Micrometer	E9
32		
3200	Mini Outside Micrometer	D7
3202	Outside Micrometer	D5
3203	Outside Micrometer	D4
3205	Outside Micrometer With Extension Anvil Collar	D10
3206	Outside Micrometer With Interchangeable Anvils	D8
3207	No Parallax Outside Micrometer	D6
3208	Quick Setting Outside Micrometer	D6
3210	1µm Graduation Outside Micrometer	D5
3211	1µm Graduation Outside Micrometer	D6
3220	Inside Micrometer	E1
3221	Tubular Inside Micrometer	E2
3222	Tubular Inside Micrometer	E2
3224	Tubular Inside Micrometer	E3
3225	Tubular Inside Micrometer	E3
3227	Three Points Internal Micrometer	E5-E6
3228	Wide Range Three Points Internal Micrometer	E9
3229	Tubular Inside Micrometer	E4
3230	Point Micrometer	D14
3232	Blade Micrometer	D13
3233	Spline Micrometer	D15
3235	Limit Micrometer	D11
3236	Outside Micrometer For Left And Right Hand	D7
3238	Caliper Type Micrometer	D30
3239	Sheet Metal Micrometer	D19
3240	Depth Micrometer	C15
3241	Depth Micrometer	C15
3260	Spherical Anvil Tube Micrometer	D17
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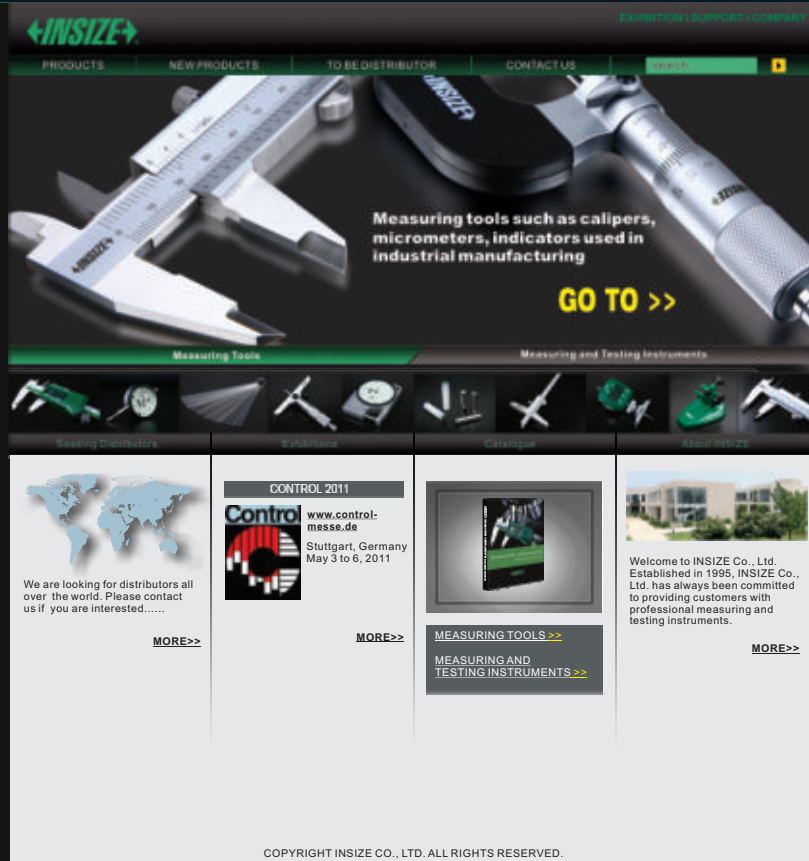
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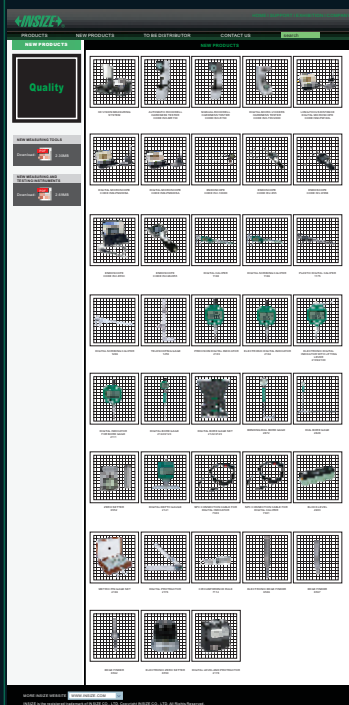
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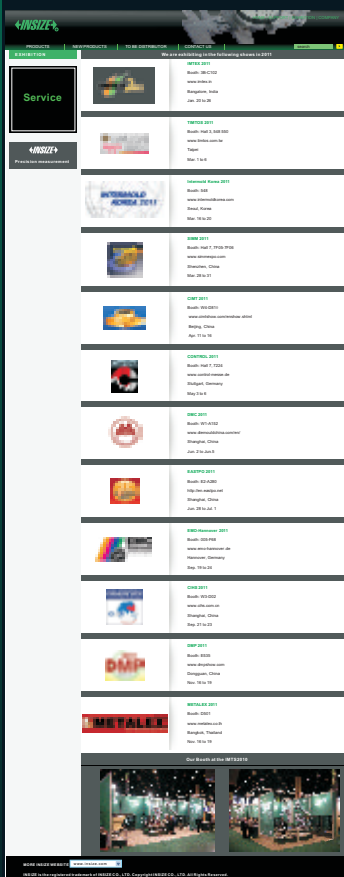
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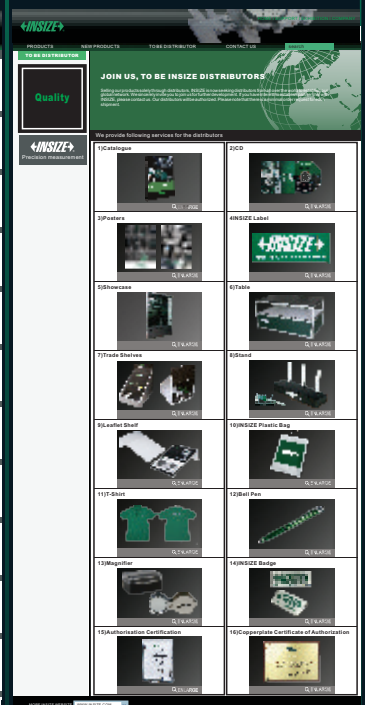
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