2019
2020

MEASURING INSTRUMENTS

CATALOGUE NO. EU258

◄INSIZE►

All products in this catalogue are usually stocked and available from INSIZE Europe in Spain (subject to our final confirmation)

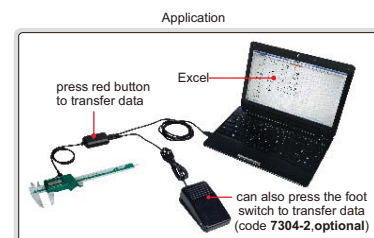# DATA OUTPUT CABLES (KEYBOARD FORMAT)

- Data can be transferred as keyboard signal to Excel, Word, txt and other files
- Suitable for any softwares which can receive keyboard signal
- There is no need to install drivers and softwares
- Optional accessories: foot switch (code **7304-2**), hub (code **7302-HUB**, **7302-HUB7**)

7302-SPC3A

Application

press red button to transfer data

Excel

can also press the foot switch to transfer data (code **7304-2**,**optional**)

Code	Description	Plug type to product	Socket type on product	Plug type to computer	Applicable products
7302-SPC5A	cable for digital calipers (length 2.5m)				for digital calipers / for digital depth gages / for digital height gages
7302-SPC6	cable for digital micrometers (length 2.5m)			USB	for digital micrometers / for digital three points internal micrometers
7302-SPC3A	cable for digital indicators (length 2.5m)				for digital indicators
7302-SPC3B					for digital thickness gages / for digital internal/external caliper gages / for digital protractors

FOOT SWITCH

- For data transfer

Code	Description	Applicable products
7304-2	data transfer foot switch with cable (length 1.5m)	7302 series data cables 7305 series data cables (separated button type)

7304-2

Application

press the footswitch to transfer data (code **7304-2**,**optional**)
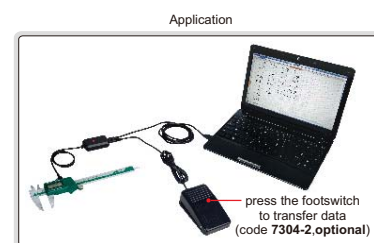
HUB

7302-HUB

7302-HUB7

Application

7302-HUB7

connect multiple data cables

- Suitable for USB plug data cable

Code	Description	Applicable products
7302-HUB	4-channel hub (length 0.3m, USB computer plug)	7302 series data cables 7305 series data cables (USB plug type)
7302-HUB7	7-channel hub (length 1m, USB computer plug)	
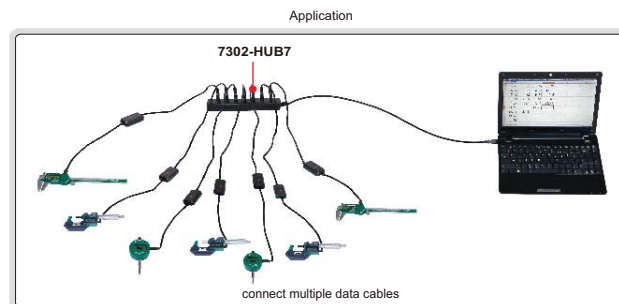
WIRELESS DATA TRANSFER SYSTEM

receiver
7315-2

receiver
7315-3

transmitter
7315-40

read
button

VIDEO

7315-3 application (single channel)

transmitter
(7315-20)

10m

receiver
(7315-3)

7315-2 application (multichannel)

transmitter
(7315-40)

10m

10m

10m

receiver
(7315-2)

transmitter
(7315-30)

transmitter
(7315-20)

- Transfer distance is 10 meter
- Press the button to transmit data
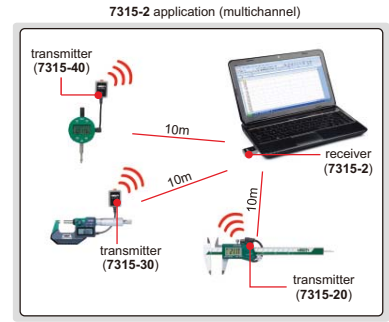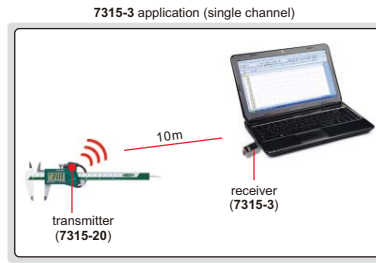
Code	Description	Plug to product	Remark
7315-2	multichannel receiver		■ Connected with maximum 8 transmitters, each of which has a unique identification ID ■ Text format virtual com port, converted to keyboard format with supplied software (data can be transmitted to EXCEL, WORD etc and any softwares which receive keyboard signal)
7315-3	single channel receiver		■ Connected with 1 transmitter only, transmitter can be changed as needed ■ No need to install drivers and softwares ■ Keyboard format (data can be transmitted to EXCEL, WORD etc. and any softwares which receive keyboard signal)
7315-20	transmitter		for digital calipers for digital depth gages for digital height gages
7315-30	transmitter		for digital micrometers for digital three points internal micrometers
7315-40	transmitter		for digital indicators
7315-50	transmitter		for digital thickness gages for digital internal/external caliper gages for digital protractors

WIRELESS DIGITAL CALIPERS (NON-WATERPROOF)

L

3.7mm

thumb roller

press the button
to transmit data

data transfer
signal light

1113-150

INSPECTION
CERTIFICATE
TRACEABLE TO DKD

receiver (optional)

multichannel
receiver (7315-2)

single channel
receiver (7315-3)

application

6m

6m

6m

multichannel
receiver (7315-2)
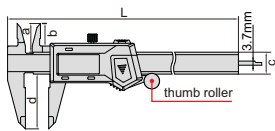
- Built-in wireless data transfer module, Zigbee signal
- Transfer distance is 6 meter
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, data transfer
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: receiver (code **7315-2**, **7315-3**)

(mm)
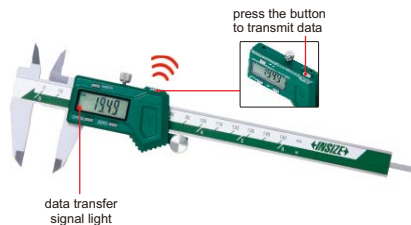
Code	Range	Accuracy	L	a	b	c	d
1113-150 *	0-150mm/0-6"	±0.03mm	236	21	16	16	40
1113-200 *	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1113-300 *	0-300mm/0-12"	±0.03mm	400	25	20.5	16	60

*Supplied with manufacturer inspection certificate traceable to DKD Germany
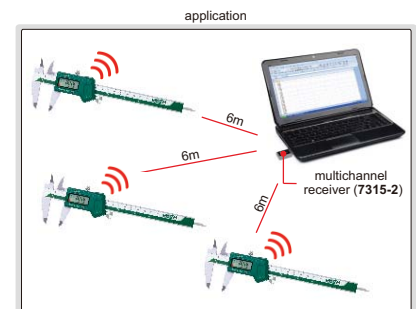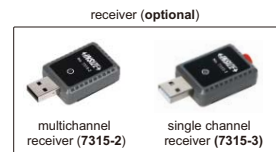
WATERPROOF DIGITAL CALIPERS

INSPECTION CERTIFICATE
TRACEABLE TO DKD

ATTENTION: NO DATA OUTPUT

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

IP67 WATERPROOF

1118-150BW

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- Battery CR2032, meet DIN862
- Made of stainless steel
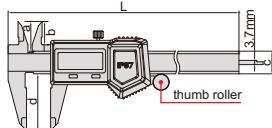
Without thumb roller (mm)

Code	Range	Accuracy	L	a	b	c	d
1118-150BW*	0-150mm/0-6"	±0.03mm	236	21	16	16	40
1118-200BW*	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1118-300BW*	0-300mm/0-12"	±0.03mm	400	25	20.5	17	60

With thumb roller (mm)

Code	Range	Accuracy	L	a	b	c	d
1118-150B*	0-150mm/0-6"	±0.03mm	236	21	16	16	40
1118-200B*	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1118-300B*	0-300mm/0-12"	±0.03mm	400	25	20.5	17	60

*Supplied with manufacturer inspection certificate traceable to DKD Germany

HEAVY DUTY 300mm DIGITAL CALIPERS (NON-WATERPROOF)

INSPECTION CERTIFICATE
TRACEABLE TO DKD

DATA OUTPUT

1196-300W

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

Unit: mm
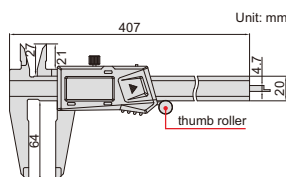
Code	Range	Thumb roller	Accuracy
1196-300W*	0-300mm/0-12"	without	±0.03mm
1196-300*	0-300mm/0-12"	with	±0.03mm

*Supplied with manufacturer inspection certificate traceable to DKD Germany

METRIC DIGITAL CALIPERS (NON-WATERPROOF)

1109-150W

- Resolution: 0.01mm
- Buttons: on/off, zero, hold
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output, meet DIN862
- Made of stainless steel
- Optional accessory: data output cable

DIGITAL CALIPERS (STANDARD TYPE, NON-WATERPROOF)

DATA OUTPUT

INSPECTION CERTIFICATE
TRACEABLE TO DKD

1108-150W

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output, meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
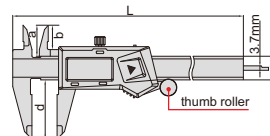
Without thumb roller (mm)

Code	Range	Accuracy	L	a	b	c	d
1108-150W*	0-150mm/0-6"	±0.02mm	236	21	16	16	40
1108-200W*	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1108-300W*	0-300mm/0-12"	±0.03mm	400	25	20.5	16	60

With thumb roller (mm)

Code	Range	Accuracy	L	a	b	c	d
1108-150*	0-150mm/0-6"	±0.02mm	236	21	16	16	40
1108-200*	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1108-300*	0-300mm/0-12"	±0.03mm	400	25	20.5	16	60

*Supplied with manufacturer inspection certificate traceable to DKD Germany

DIGITAL CALIPERS (NON-WATERPROOF)

INSPECTION CERTIFICATE
TRACEABLE TO DKD

ATTENTION: NO DATA OUTPUT

1114-150AW

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

Without thumb roller (mm)

Code	Range	Accuracy	L	a	b	c	d
1114-150AW*	0-150mm/0-6"	±0.03mm	236	21	16	16	40
1114-200AW*	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1114-300AW*	0-300mm/0-12"	±0.03mm	400	25	20.5	17	60

With thumb roller (mm)

Code	Range	Accuracy	L	a	b	c	d
1114-150A*	0-150mm/0-6"	±0.03mm	236	21	16	16	40
1114-200A*	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1114-300A*	0-300mm/0-12"	±0.03mm	400	25	20.5	17	60

*Supplied with manufacturer inspection certificate traceable to DKD Germany

DATA OUTPUT

LOCK READING WITH "HOLD" BUTTON

INSPECTION CERTIFICATE
TRACEABLE TO DKD

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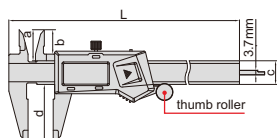
Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1109-150W*	0-150mm	±0.03mm	without	236	21	16	16	40
1109-200W*	0-200mm	±0.03mm	without	286	24	19	16	50
1109-300W*	0-300mm	±0.03mm	without	400	25	20.5	16	60
1109-150*	0-150mm	±0.03mm	with	236	21	16	16	40
1109-200*	0-200mm	±0.03mm	with	286	24	19	16	50
1109-300*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

*Supplied with manufacturer inspection certificate traceable to DKD Germany

DIGITAL CALIPERS WITH CARBIDE TIPPED JAWS (NON-WATERPROOF)

INSPECTION CERTIFICATE
TRACEABLE TO DKD

DATA OUTPUT

1110-150AW
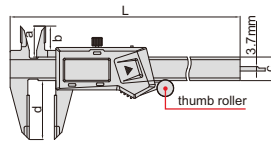
- Carbide tipped jaws for inside and outside measurements
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable

thumb roller

Without thumb roller (mm)

Code	Range	Accuracy	L	a	b	c	d
1110-150AW*	0-150mm/0-6"	±0.03mm	236	21	16	16	40
1110-200AW*	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1110-300AW*	0-300mm/0-12"	±0.03mm	400	25	20.5	16	60

With thumb roller (mm)

Code	Range	Accuracy	L	a	b	c	d
1110-150A*	0-150mm/0-6"	±0.03mm	236	21	16	16	40
1110-200A*	0-200mm/0-8"	±0.03mm	286	24	19	16	50
1110-300A*	0-300mm/0-12"	±0.03mm	400	25	20.5	16	60

*Supplied with manufacturer inspection certificate traceable to DKD Germany

DIGITAL CALIPER WITH CERAMIC TIPPED JAWS (NON-WATERPROOF)

INSPECTION CERTIFICATE
TRACEABLE TO DKD

DATA OUTPUT

1193-150W

ceramic tipped jaws

- Ceramic tipped jaws for outside measurement, extremely wear-resistant, non-magnetic, non-conductive
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Meet DIN862
- Optional accessory: data output cable

(mm)

Code	Range	Accuracy	L	a	b	c	d
1193-150W*	0-150mm/0-6"	±0.03mm	235	21	16.5	16	40

*Supplied with manufacturer inspection certificate traceable to DKD Germany
−Sizes available up to 300mm

MINI DIGITAL CALIPERS (NON-WATERPROOF)

ATTENTION: NO DATA OUTPUT

1111-100A

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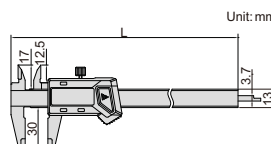
- Resolution: 0.01mm/0.0005"
- Buttons: zero, mm/inch, on/off
- Automatic power off, move the digital unit to turn on power
- Battery LR44
- Meet DIN862
- Made of stainless steel

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

DIGITAL CALIPERS WITH ROUND DEPTH BAR (NON-WATERPROOF)

INSPECTION CERTIFICATE
TRACEABLE TO DKD

DATA OUTPUT

1119-150W

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
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable

Unit: mm

thumb roller

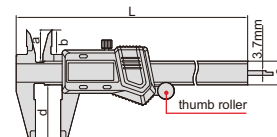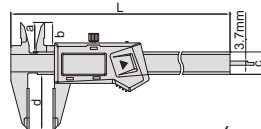| Code	Range	Accuracy	Thumb roller
1119-150W*	0-150mm/0-6"	±0.03mm	without
1119-150*	0-150mm/0-6"	±0.03mm	with

*Supplied with manufacturer inspection certificate traceable to DKD Germany

LEFT HAND DIGITAL CALIPERS (NON-WATERPROOF)

INSPECTION CERTIFICATE
TRACEABLE TO DKD

DATA OUTPUT

1130-150W

- Designed for left handed users
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable

Unit: mm
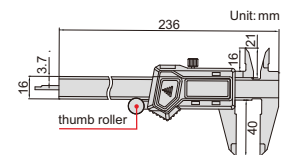
thumb roller

Code	Range	Accuracy	Thumb roller
1130-150W*	0-150mm/0-6"	±0.03mm	without
1130-150*	0-150mm/0-6"	±0.03mm	with

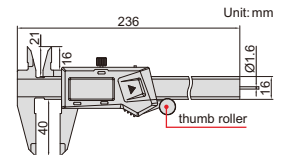*Supplied with manufacturer inspection certificate traceable to DKD Germany
−Sizes available up to 300mm

DIGITAL CALIPERS (NON-WATERPROOF)

DATA OUTPUT

1171-300

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

(mm)

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

DIGITAL CALIPERS (NON-WATERPROOF)

DATA OUTPUT

1170-300

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

(mm)

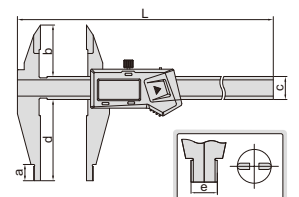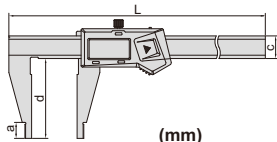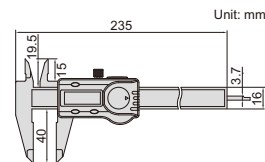| Code	Range	Accuracy	L	a	c	d	e
1170-200	0-200mm/0-8"	±0.03mm	320	12	17	60	10
1170-306	0-300mm/0-12"	±0.04mm	420	12	17	60	10
1170-300	0-300mm/0-12"	±0.04mm	420	12	17	90	10

PLASTIC DIGITAL CALIPER

ATTENTION: NO DATA OUTPUT

1139-150

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

Unit: mm

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

DIAL CALIPERS

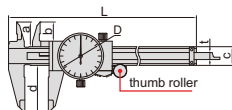**INSPECTION CERTIFICATE**
TRACEABLE TO DKD

SHOCK PROOF

1312-150A

- Shockproof dial indicator
- Made of stainless steel

thumb roller

Dial indicator graduation: 0.02mm (mm)

Code	Range	Accuracy	Thumb roller	L	a	b	c	d	D	t
1312-150AW *	0-150mm	±0.03mm	without	235	21	16.5	16	40	Ø39	6.5
1312-200AW *	0-200mm	±0.03mm	without	288	24	19	16	48	Ø39	6.5
1312-300AW *	0-300mm	±0.03mm	without	410	28	22	20	62	Ø44.5	7.5
1312-150A*	0-150mm	±0.03mm	with	235	21	16.5	16	40	Ø39	6.5
1312-200A*	0-200mm	±0.03mm	with	288	24	19	16	48	Ø39	6.5
1312-300A*	0-300mm	±0.03mm	with	410	28	22	20	62	Ø44.5	7.5

Dial indicator graduation: 0.01mm (mm)

Code	Range	Accuracy	Thumb roller	L	a	b	c	d	D	t
1311-150AW *	0-150mm	±0.03mm	without	235	21	16.5	16	40	Ø39	6.5
1311-200AW *	0-200mm	±0.03mm	without	288	24	19	16	48	Ø39	6.5
1311-300AW *	0-300mm	±0.03mm	without	410	28	22	20	62	Ø44.5	7.5
1311-150A *	0-150mm	±0.03mm	with	235	21	16.5	16	40	Ø39	6.5
1311-200A *	0-200mm	±0.03mm	with	288	24	19	16	48	Ø39	6.5
1311-300A *	0-300mm	±0.03mm	with	410	28	22	20	62	Ø44.5	7.5

* Supplied with manufacturer inspection certificate traceable to DKD Germany

MINI VERNIER CALIPER

1204-70

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

Unit: mm

Code	Range	Graduation	Accuracy
1204-70	0-70mm	0.05mm	±0.05mm
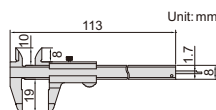
MINI VERNIER CALIPER

1203-1003

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

Unit: mm

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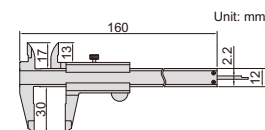
MINI VERNIER CALIPER

1201-1003

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

Unit: mm

Code	Range	Graduation	Accuracy
1201-1003	0-100mm	0.05mm	±0.05mm
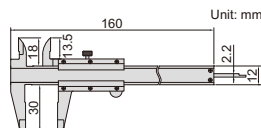
VERNIER CALIPER WITH ROUND DEPTH BAR

1202-150

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

Unit: mm

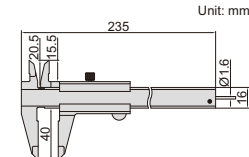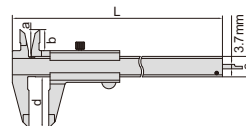| Code	Range	Accuracy
1202-150	0-150mm/0-6"	±0.05mm

VERNIER CALIPERS

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

1205-1502S

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	17	50
1205-300S	0-300mm/0-12"	±0.05mm	414	27.5	22	20	64

Graduation 0.05mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1503S	0-150mm	±0.05mm	235	20.5	15.5	16	40
1205-2003S	0-200mm	±0.05mm	290	23.5	19	17	50
1205-3003S	0-300mm	±0.05mm	414	27.5	22	20	64

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1502S	0-150mm/0-6"	±0.03mm	235	20.5	15.5	16	40
1205-2002S	0-200mm/0-8"	±0.03mm	290	23.5	19	17	50
1205-3002S	0-300mm/0-12"	±0.03mm	414	27.5	22	20	64

Graduation 0.02mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1501S	0-150mm	±0.03mm	235	20.5	15.5	16	40
1205-2001S	0-200mm	±0.03mm	290	23.5	19	17	50
1205-3001S	0-300mm	±0.03mm	414	27.5	22	20	64

DEPTH BASE ATTACHMENTS

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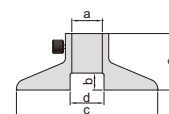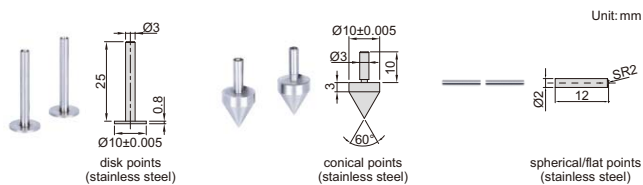- Suitable for digital calipers and dial calipers
- Made of stainless steel

VIDEO

(mm)

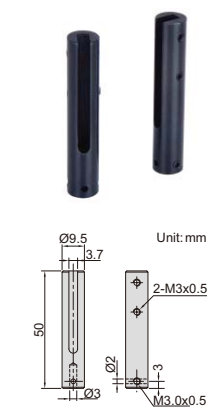| Code	a	b	c	d	e	Application
6140	16.5	9	75	18	30	Suitable for calipers with beam width (w) 16mm
6140-300A	20	15	125	22	34	Suitable for calipers with beam width (w) 20mm

6140

ACCESSORY SET FOR DIGITAL CALIPER CODE 6144

Unit: mm

disk points (stainless steel)

conical points (stainless steel)

spherical/flat points (stainless steel)

Unit: mm

measuring external groove diameter (h1≤3.5mm)

measuring internal groove diameter (h2≤3.5mm)

measuring center distance

spherical points for groove diameter (inside hole) measurement

flat points for external groove diameter measurement

- Suitable for 0-150mm/0-6" and 0-200mm/0-8" digital calipers (thickness of lower jaws≤3.7mm)

Code
6144
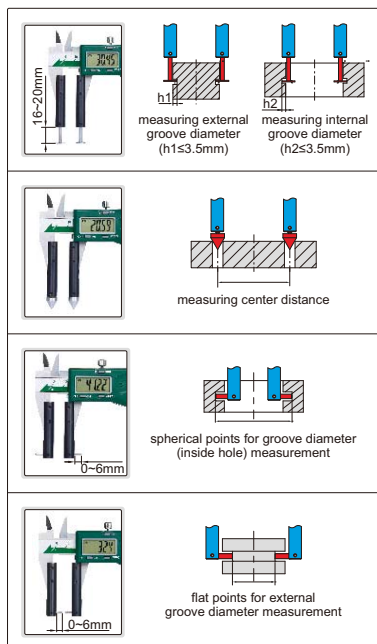
DIGITAL CALIPERS (NON-WATERPROOF)

DATA OUTPUT

1106-501

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable

(mm)
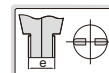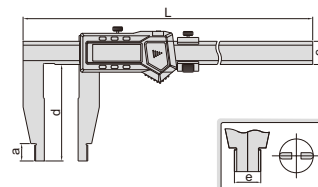
Code	Range	Accuracy	a	c	d	e	L
1106-301	0-300mm/0-12"	±0.05mm	18	24	100	20	420
1106-302	0-300mm/0-12"	±0.05mm	18	24	150	20	420
1106-451	0-450mm/0-18"	±0.05mm	18	24	100	20	625
1106-501	0-500mm/0-20"	±0.05mm	18	24	100	20	675
1106-502	0-500mm/0-20"	±0.06mm	18	24	150	20	675
1106-503	0-500mm/0-20"	±0.06mm	24	31	200	20	675
1106-601	0-600mm/0-24"	±0.05mm	18	24	100	20	770
1106-802	0-800mm/0-32"	±0.07mm	24	31	150	20	1025
1106-1002	0-1000mm/0-40"	±0.08mm	24	31	150	20	1220
1106-1502	0-1500mm/0-60"	±0.11mm	24	42	150	20	1780
1106-2002	0-2000mm/0-80"	±0.14mm	24	42	150	20	2290

Sizes available up to 3000mm

DIGITAL CALIPERS (NON-WATERPROOF)

DATA OUTPUT

1135-601

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable

(mm)

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

VERNIER CALIPER (SOLID TYPE)

1207-394

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

Unit: mm
440
40
90
12
20
10

Code	Range	Accuracy
1207-394	0-300mm/0-12"	±0.07mm

Sizes available up to 1000mm

VERNIER CALIPERS (SOLID TYPE)

1208-521

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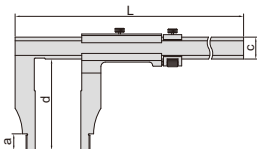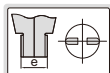
Graduation 0.05mm/1/128" (mm)

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

Graduation 0.02mm (mm)

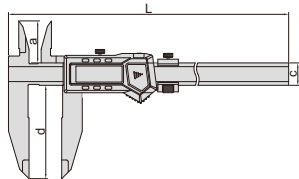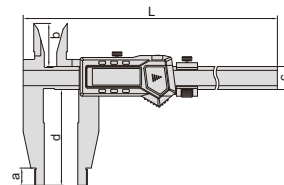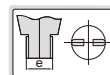| Code	Range	Accuracy	a	c	d	e	L
1208-521	0-500mm	±0.06mm	18	24	150	20	670
1208-1021	0-1000mm	±0.08mm	24	31	150	20	1230

Sizes available up to 2000mm

DIGITAL CALIPERS (NON-WATERPROOF)

DATA OUTPUT

1136-501

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable

(mm)

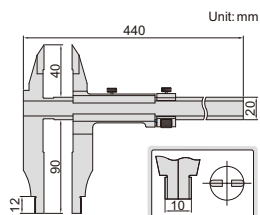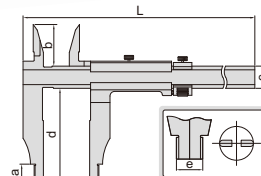| Code	Range	Accuracy	a	b	c	d	e	L
1136-301	0-300mm/0-12"	±0.05mm	18	45	24	100	20	420
1136-501	0-500mm/0-20"	±0.05mm	18	45	24	100	20	675
1136-502	0-500mm/0-20"	±0.06mm	18	45	24	150	20	675
1136-601	0-600mm/0-24"	±0.05mm	18	45	24	100	20	770
1136-1002	0-1000mm/0-40"	±0.08mm	24	60	31	150	20	1220

Sizes available up to 2000mm

VERNIER CALIPERS (SOLID TYPE)

1236-511

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

Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	a	b	c	d	e	L
1236-524	0-500mm/0-20"	±0.08mm	18	45	24	150	20	670
1236-614	0-600mm/0-24"	±0.08mm	18	45	24	100	20	770
1236-1024	0-1000mm/0-40"	±0.12mm	24	60	31	150	20	1230

Graduation 0.02mm (mm)

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

VERNIER CALIPERS

1214-500

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

(mm)
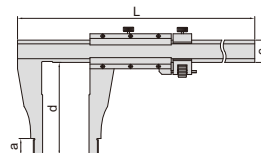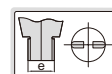
Code	Range	Accuracy	a	c	d	e	L
1214-300	0-300mm/0-12"	±0.05mm	10	20	75	10	410
1214-450	0-450mm/0-18"	±0.05mm	18	24	100	20	620
1214-500	0-500mm/0-20"	±0.05mm	18	24	100	20	670
1214-600	0-600mm/0-24"	±0.05mm	18	24	100	20	770
1214-1000	0-1000mm/0-40"	±0.08mm	24	32	140	20	1216

Sizes available up to 2000mm

UNIVERSAL CALIPER (NON-WATERPROOF)
CODE 1125-600

DATA OUTPUT

VIDEO

1125-600

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

working with stands

working with measuring jaws

778

Unit: mm

24

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

*The range changes according to different points

Half disk points (included)

Ø5   Unit: mm

50

2

flat measuring face

spherical measuring face

5   R10

Measuring external groove diameter with flat measuring face (depth h1≤2.5mm)

Measuring internal groove diameter with spherical measuring face (depth h2≤7.5mm)

h1

h2

Depth stop (included)

Unit: mm

18

8   16

10   23

35   8

Round shoulder points (optional)

Ø5   Unit: mm

5   10

5   R10

Measuring inside diameter

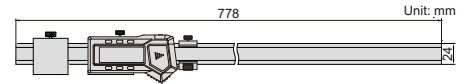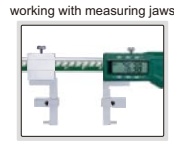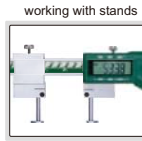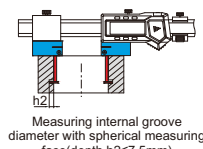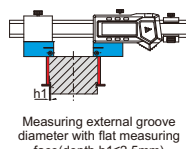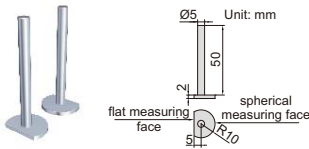**Code 1125-T102**

Conical points (optional)

Unit: mm

Ø5

Ø20±0.005

Measuring center distance

Code 1125-T101

Spherical points (included)

Unit: mm

20

Ø5   10   SR2

Ø2

Flat shoulder points (optional)

Unit: mm

Ø5

10 15   5

16

12   6

Measuring outside diameter
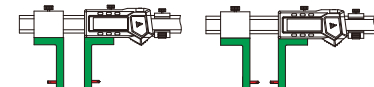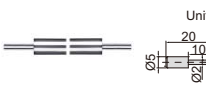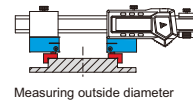
Code 1125-T103

Stands (included)

40   Unit: mm

20

Point sleeve (optional)

Unit: mm

Ø5   21   Ø5

Working with multifunctional points, ball points and screw thread points
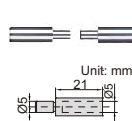
Code 1125-T104

Measuring jaws (included)

40   Unit: mm

5

60   70

Ø5   16.5

10
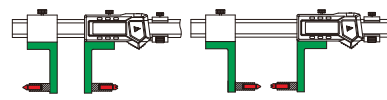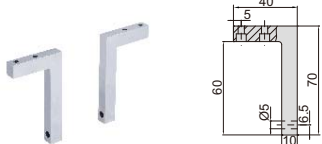
Multifunctional points 7392 (optional)

Ball points 7391 (optional)

Screw thread points 7381, 7321 (optional)

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS (NON-WATERPROOF)
CODE 1526-200

DATA OUTPUT

preset buttons

+ −

2500

290   Unit: mm

3.7

24   20

16

30   Ø2

40   13.5

5.5

1526-200

depth stop 6143 (optional)

1655

zero setting block for external measurement (included)

install points

measuring jaw

point

fix screw

Short spherical points (included)

Unit: mm

SR2

Ø2   6

Long spherical/flat points (included)

Unit: mm

SR2

Ø2   12

Spherical blade points (included)

Unit: mm

6   SR2

1   Ø2   12

- Supplied with 3 pairs of points and zero setting block for external measurement
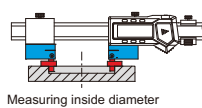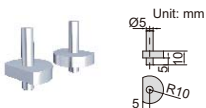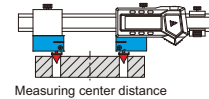- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: points (code **1526-T101**, **7392**, **7391**, **7381**, **7321**), depth stop (code **6143**), data output cable

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

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS (NON-WATERPROOF) CODE 1124-300A

DATA OUTPUT
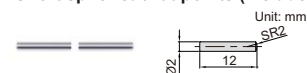
preset buttons

1124-300A

Unit: mm
407

Short spherical/flat points (included)
Unit: mm
Ø2 12 SR2

Long spherical/flat points (included)
Unit: mm
Ø2 20 SR2

Short spherical blade points (included)
Unit: mm
6 SR2
1 Ø2 12
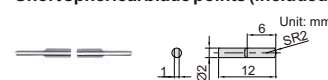
Long spherical blade points (included)
Unit: mm
8 SR2
1 Ø2 20
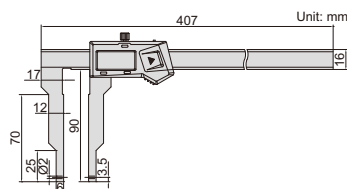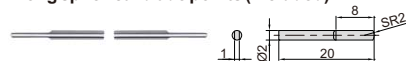
depth stop **6143** (optional)

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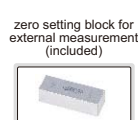
install points
measuring jaw
point
fix screw
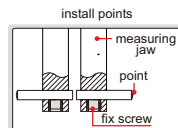
- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
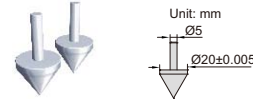- Optional accessory: points (code **1526-T101**, **7392**, **7391**, **7381**, **7321**), depth stop (code **6143**), data output cable

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

DIGITAL INSIDE GROOVE CALIPER

DATA OUTPUT

preset buttons

depth stop **6143** (optional)

1520-150

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

Unit: mm
236

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

DIGITAL INSIDE GROOVE CALIPERS

DATA OUTPUT

preset buttons

1120-150A

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

Unit: mm

depth stop **6143** (optional)

(mm)

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

DIGITAL INSIDE GROOVE CALIPER

DATA OUTPUT

1176-150

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

Unit: mm
260
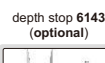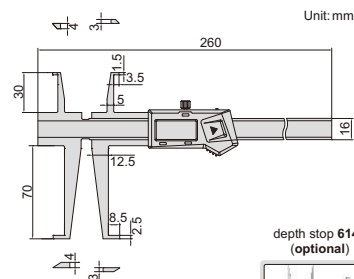
sizes to be measured (use upper jaws)
D1 L1
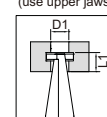
sizes to be measured (use lower jaws)
L2 D2

depth stop **6143** (optional)

preset buttons
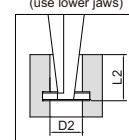
(mm)

D1	L1
Ø9	<8
Ø10	<15
Ø11~150	<30

(mm)

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

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

DIGITAL INSIDE POINT CALIPERS

DATA OUTPUT

1121-150A
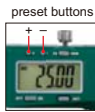
preset buttons

depth stop **6143** (optional)

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

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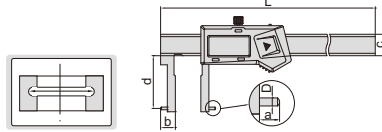
Code	Range	Accuracy	L	a	b	c	d	D
1121-150A	24-150mm	±0.04mm	250	5	12	16	30	Ø2
1121-200A	25-200mm	±0.04mm	310	5	12.5	16	40	Ø2
1121-3001A	50-300mm	±0.06mm	410	8	25	17	80	Ø3

DIGITAL INSIDE KNIFE-EDGE CALIPER

DATA OUTPUT

1123-150A

Unit: mm

- Measure diameter of deep step holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable
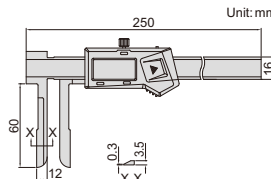
Code	Range	Accuracy
1123-150A	15-150mm/0.6-6"	±0.05mm
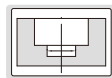
DIGITAL OUTSIDE POINT CALIPER

DATA OUTPUT

1185-150A

depth stop **6143** (optional)

Unit: mm

- Measure wall thickness inside bores and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code **6143**), data output cable
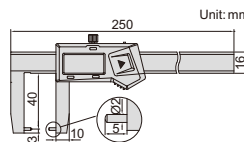
Code	Range	Accuracy
1185-150A	0-150mm/0-6"	±0.04mm
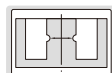
DIGITAL INSIDE GROOVE CALIPER

DATA OUTPUT

1178-300

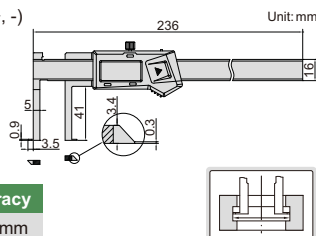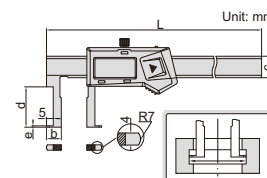preset buttons

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

Unit: mm

sizes to be measured

(mm)

D1	L1
Ø25	<50
Ø26	<60
Ø27~300	<110

depth stop **6143** (optional)

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

DIGITAL OUTSIDE NECK CALIPER

DATA OUTPUT

depth stop **6143** (optional)

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, data output
- Made of stainless steel
- Optional accessory: depth stop (code **6143**), data output cable
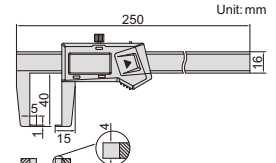
Unit: mm

Code	Range	Accuracy
1187-150A	0-150mm/0-6"	±0.04mm
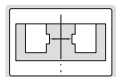
DEPTH STOP FOR CALIPERS

Unit: mm

2-M3x0.5
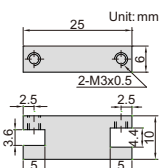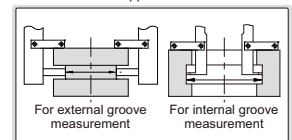
6143

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

Code
6143

Application

For external groove measurement

For internal groove measurement

DIGITAL SMALL POINT CALIPER

DATA OUTPUT

1169-150

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

Unit: mm

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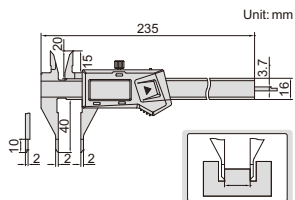
DIGITAL POINT CALIPER

DATA OUTPUT

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, data output
- Made of stainless steel
- Optional accessory: data output cable

Unit: mm

Code	Range	Accuracy
1183-150A	0-150mm/0-6"	±0.03mm
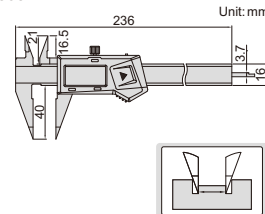
DIGITAL BACK-JAW CENTERLINE CALIPERS

DATA OUTPUT

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

back-jaw

1177-200

(mm)

| Code	Range	Accuracy	ØD	c	L1	L2	L
1177-200	10-200mm/0.4-8"	±0.10mm	10	16	18	45	310
1177-300	10-300mm/0.4-12"	±0.10mm	10	16	18	45	410
1177-500	20-500mm/0.8-20"	±0.10mm	20	24	26	70	692
1177-1000	30-1000mm/1.2-40"	±0.12mm	30	31	39	70	1242
1177-1500	30-1500mm/1.2-60"	±0.15mm	30	31	39	70	1745
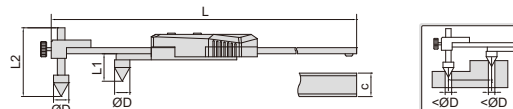
DIGITAL CENTERLINE AND EDGE TO CENTER CALIPER

DATA OUTPUT

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

1525-300

measure hole center distance

(mm)

Code	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy	ØD	L1	L2	c	L
1525-300	5-300mm/0.2-12"	10-300mm/0.4-12"	±0.08mm	10	44.5	55	17	410
1525-500	10-500mm/0.4-20"	20-50mm/0.8-20"	±0.09mm	20	40	50	24	690
1525-1000	15-1000mm/0.6-40"	30-1000mm/1.2-40"	±0.12mm	30	60	70	31	1255
1525-1500	15-1500mm/0.6-60"	30-1500mm/1.2-60"	±0.15mm	30	60	70	31	1760

Unit: mm

measure edge to hole center distance
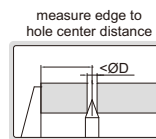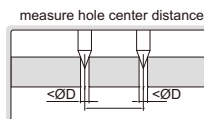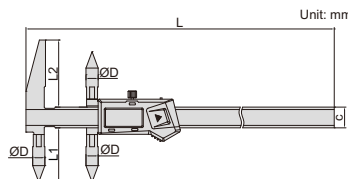
DIGITAL BACK-JAW EDGE TO CENTER CALIPERS

DATA OUTPUT

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

1524-200

preset buttons

back-jaw

Unit: mm

Code	Range	Accuracy	L
1524-200	5-200mm/0.2-8"	±0.1mm	310mm
1524-300	5-300mm/0.2-12"	±0.1mm	410mm
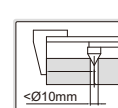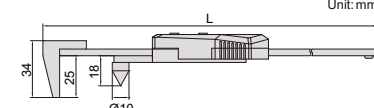
DIGITAL OFFSET CENTERLINE CALIPER

DATA OUTPUT

1192-150A

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

(mm)
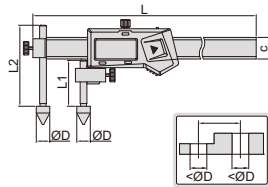
Code	Range	Accuracy	c	ØD	L1	L2	L
1192-150A	10-150mm/0.4-6"	±0.05mm	16	10	32	65	236

Sizes available up to 1500mm

DIGITAL OFFSET CALIPERS

DATA OUTPUT

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, data output
- Made of stainless steel
- Optional accessory: data output cable

Unit: mm

(mm)
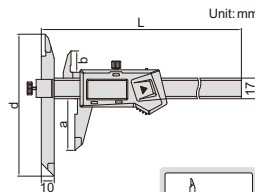
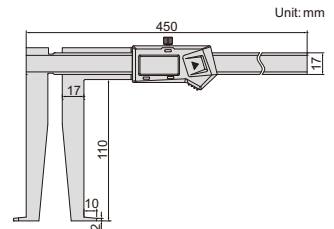| Code	Range	Accuracy	L	a	b	d
1186-150A	0-150mm/0-6"	±0.04mm	239	40	16.5	110
1186-300A	0-300mm/0-12"	±0.05mm	389	60	20.5	130

DIGITAL HOOK CALIPER

DATA OUTPUT

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, data output
- Made of stainless steel
- Optional accessory: data output cable
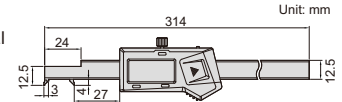
Unit: mm

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

DIGITAL ARC RADIUS CALIPERS

DATA OUTPUT

1189-150B

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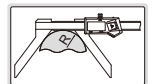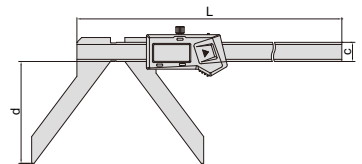
(mm)

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

DIGITAL V TYPE CALIPERS

DIRECT READING, CALCULATION IS NOT REQUIRED

DATA OUTPUT

- Measure the outside diameter of odd number of flutes (such as taps, reamers, end mills and gears)
- Direct reading, calculation is not required
- Resolution: 0.01mm/0.0005"
- Buttons: mm/inch, on/off, origin set
- Battery LR44, automatic power off
- After automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory:
  50mm calibration cylinder (code **6316-50**),
  data output cable (code **7302-SPC9**)

1529-5

50mm calibration cylinder (**optional**) code **6316-50**
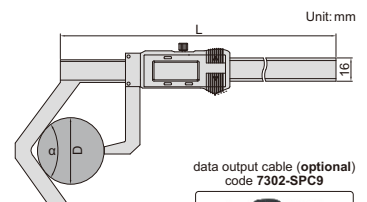
data output cable (**optional**) code **7302-SPC9**

Unit: mm

(mm)

Code	Range (D)	Flutes	Accuracy	Angle α	L
1529-3	50-200mm/2-8"	3	±0.06mm	60°	310
1529-5	50-200mm/2-8"	5	±0.06mm	108°	410
1529-19	50-200mm/2-8"	19	±0.06mm	85°15'47"	692
1529-23	50-200mm/2-8"	23	±0.06mm	70°26'5"	1242
1529-31	50-200mm/2-8"	31	±0.06mm	75°29'2"	1745

DIGITAL RTJ RING GROOVE CALIPERS

DATA OUTPUT

- Measure ring grooves of flange
- Resolution: 0.01mm/0.0005"
- Button function: on/off, set, zero, mm/inch, data preset
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable

1179-300

1179-300 preset buttons

applicable for RTJ ring grooves with angle 23°
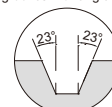
10mm and 25mm need to be added on the reading

1179-600

measure outside diameter of RTJ ring groove

measure inside diameter of RTJ ring groove

Unit: mm
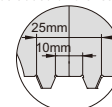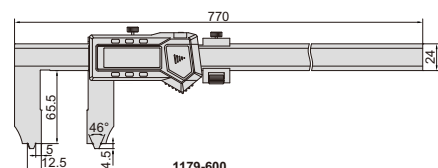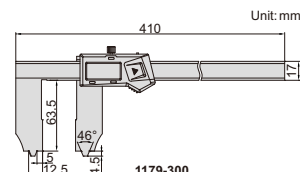
1179-300

1179-600

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

DIGITAL BLADE CALIPERS

DATA OUTPUT

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, data output
- Made of stainless steel
- Optional accessory: data output cable

Unit: mm
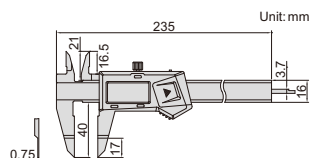
Code	Range	Accuracy
1188-150A	0-150mm/0-6"	±0.03mm

Sizes available up to 300mm
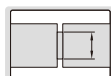
DIGITAL TUBE THICKNESS CALIPER

DATA OUTPUT

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, data output
- Made of stainless steel
- Optional accessory: data output cable

Unit: mm

Ød>3mm
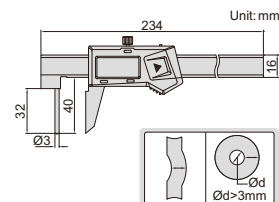
Code	Range	Accuracy
1161-150A	0-150mm/0-6"	±0.05mm

DIGITAL CALIPER WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT

ball tips are not included

1528-3001

- Resolution 0.01mm/.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: ball tips, data output cable

Unit: mm

Ball tips (optional, supplied in pair)

Unit: mm

1527-T101

1527-T104

type A

type B

Code	Range	Accuracy
1528-3001	(12.7+D)~300mm*	±0.03mm

*"D" is the diameter of ball tips.

preset buttons

Code	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" (Ø1.5875mm)	±0.005mm	A	Ruby
1527-T102	1/8" (Ø3.175mm)	±0.005mm	B	Stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	B	Stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	B	Stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	B	Stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	B	Stainless steel

DIGITAL CALIPER WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT

Unit: mm
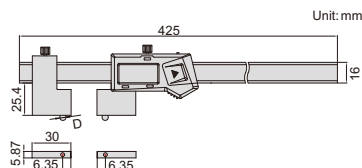
Ball tips (optional, supplied in pair)

1527-T101   **1527-T104**

Unit: mm

type A   type B

1527-3001

- Resolution 0.01mm/.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: ball tips, data output cable

back-jaw
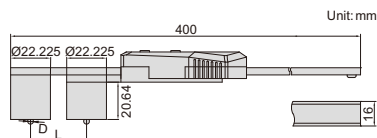
ball tips are optional

preset buttons

Code	Range	Accuracy
1527-3001	(22.22+D)~300mm*	±0.03mm

*"D" is the diameter of ball tips.

Code	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" (Ø1.5875mm)	±0.005mm	A	Ruby
1527-T102	1/8" (Ø3.175mm)	±0.005mm	B	Stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	B	Stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	B	Stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	B	Stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	B	Stainless steel

DIGITAL CRIMP HEIGHT CALIPER

DATA OUTPUT

1165-150A
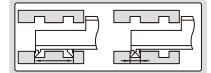
- Measure crimp height
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable

Unit: mm

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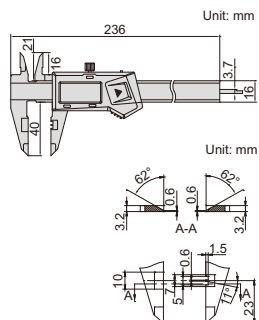
Code	Range	Accuracy
1165-150A	0-150mm/0-6"	±0.03mm

DIGITAL CALIPER WITH LARGE MEASURING FACES

DATA OUTPUT

1172-200

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

Unit: mm

measure diameter of wire ropes

measure thickness of rubber, sponge, etc.
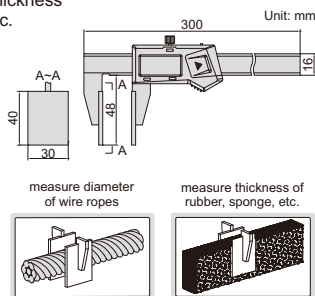
Code	Range	Accuracy
1172-200	0-200mm/0-8"	±0.07mm

DIGITAL GEAR TOOTH CALIPERS

ATTENTION: NO DATA OUTPUT
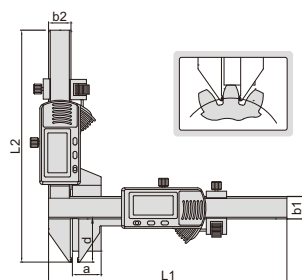
- Resolution: 0.01mm/0.0005"
- Carbide tips
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

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

DIGITAL DISK BRAKE CALIPER

DATA OUTPUT

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, data output
- Made of stainless steel
- Optional accessory: data output cable

Unit: mm

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

DIGITAL DISK BRAKE AND PAD CALIPER

DATA OUTPUT

1167-150A

Unit: mm

245

53 · 48 · 64.5 · 16 · 3 · 6 · 6

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

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

DIGITAL DRUM BRAKE CALIPER

DATA OUTPUT

1168-300A

Unit: mm

28.5 · 46 · 61 · 8 · 16 · 435

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

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

WATERPROOF DIGITAL DEPTH GAGES

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

ATTENTION: NO DATA OUTPUT

IP67 WATERPROOF

1149-150

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

L · a · d · b

(mm)

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

DIGITAL POINT DEPTH GAGE (NON-WATERPROOF)

DATA OUTPUT

1143-200A

Unit: mm

291 · 100 · 14.5 · Ø1.5

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

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

DIGITAL DEPTH GAGES WITH MOUNTING HOLES FOR EXTENSION BASE (NON-WATERPROOF)

DATA OUTPUT

1147-300

Unit: mm

L · 2-Ø5 · 100 · 70 · 5 · 16 · 7

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

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

extension base (**optional**)

6141 series

DIGITAL DEPTH GAGES (STANDARD TYPE, NON-WATERPROOF)

DATA OUTPUT

1141-150A

L · a · d · b

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

(mm)

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

DIGITAL DOUBLE HOOK DEPTH GAGES (NON-WATERPROOF)

DATA OUTPUT

1144-150A

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery Cr2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable

(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"	±0.03mm	383	150
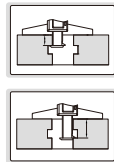
DIGITAL HOOK DEPTH GAGES (NON-WATERPROOF)

DATA OUTPUT

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
- Data output
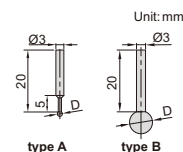- Made of stainless steel
- Optional accessory: data output cable
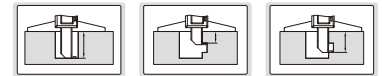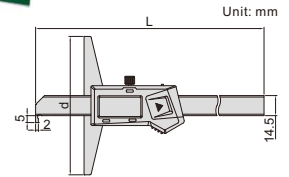
Code	Range	Accuracy	L	d
1142-150A	0-150mm/0-6"	±0.03mm	230mm	100mm
1142-200A	0-200mm/0-8"	±0.03mm	280mm	100mm

Sizes available up to 300mm

DIGITAL DEPTH GAGES WITH ROUND DEPTH BAR (NON-WATERPROOF)

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

MEASURE WIDTH AND DEPTH OF GROOVES INSIDE BORE

MEASURE DEPTH OF SMALL HOLES (>Ø4mm)

DATA OUTPUT

1148-100S

1148-200

extension base for **1148-200** (**optional**)

6141 series

(mm)

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

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

OPTIONAL DISK POINTS

Code	Description	H	Remark
1148-P101	0.5mm disk point	0.5±0.005mm	for narrow grooves
1148-P102	0.7mm disk point	0.7±0.005mm	for narrow grooves
1148-P103	1mm disk point	1±0.005mm	for grooves inside blind hole

1148-P103 (**optional**), measure width of bottom grooves inside blind hole

1148-P101 (**optional**)

MINI DIGITAL DEPTH GAGE (NON-WATERPROOF)

DATA OUTPUT

set zero — zero set surface (included)

measurement
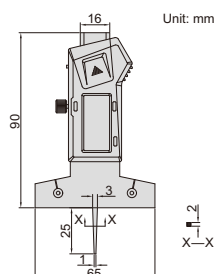
1145-25A

- Measure depth of small groove and hole, also measure depth of tire tread
- Buttons: on/off, zero, mm/inch
- Supplied with zero set surface
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable

Code	Range	Accuracy	Resolution
1145-25A	0-25mm/0-1"	±0.03mm	0.01mm/0.0005"

MINI DIGITAL DEPTH GAGES WITH ROUND BAR (NON-WATERPROOF)

DATA OUTPUT

Unit: mm

- Measure depth of small groove and hole
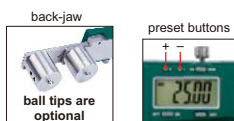- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+,-)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
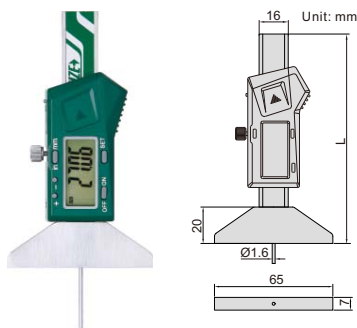
1140-25

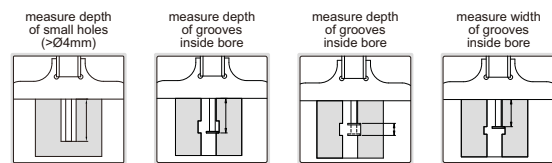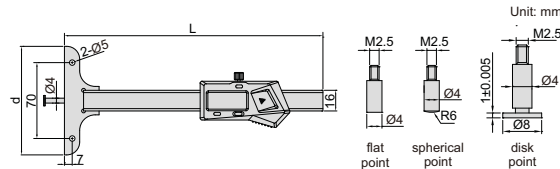| Code	Range	Accuracy	L
1140-25	0-25mm/0-1"	±0.02mm	114mm
1140-50	0-50mm/0-2"	±0.02mm	140mm

EXTENSION BASES

6141-260

Unit: mm

6141-180

6141-260

6141-320

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

VIDEO

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

DIAL DEPTH GAGE

Unit: mm

pointed tip
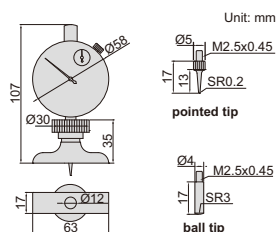
ball tip

2341-101A

- Dial indicator graduation: 0.01mm
- Stainless steel base
- Supplied with pointed tip and ball tip

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

DIGITAL DEPTH GAGES

DATA OUTPUT

2141-202A

- Accuracy: ±20μm
- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery
- Automatic power off
- Data ouput
- Stainless steel base
- Extension rods: 12.5mm (1 pc), 25mm (1 pc), 50mm (1 pc), 75mm (1 pc), 100mm (2 pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: data output cable

VIDEO

Unit: mm

pointed tip

ball tip

extension rods
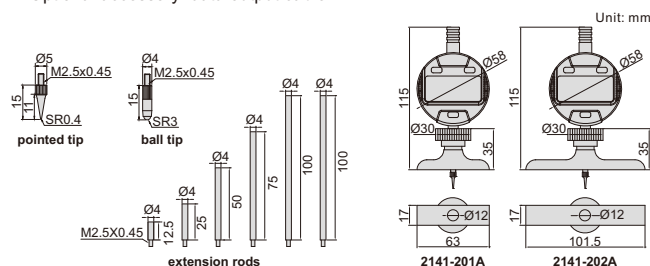
2141-201A

2141-202A

Code	Range	Digital indicator stroke	Digital indicator resolution	Base
2141-201A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	63x17mm
2141-202A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	101.5x17mm

DIAL DEPTH GAGE

Unit: mm

2342-202

VIDEO

- Accuracy: ±0.03mm
- Dial indicator stroke: 30mm
- Dial indicator graduation: 0.01mm
- Stainless steel base
- Extension rods: 25mm (1 pc), 50mm (1 pc), 75mm (1 pc), 100mm (2 pcs)
- Supplied with pointed tip and ball tip

extension rods

pointed tip

ball tip

Code	Range	Base
2342-202	0-300mm	101.5x17mm
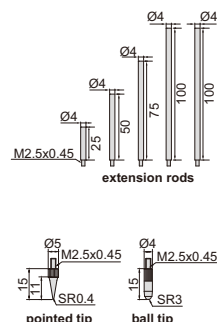
DEPTH MICROMETERS

- Graduation: 0.01mm
- Meet DIN863-2
- Micrometer head accuracy: +/-3μm
- Rod accuracy: +/-(2+L/75)μm,
  L is the measuring range in mm
- Rods with flat end
- Ratchet stop
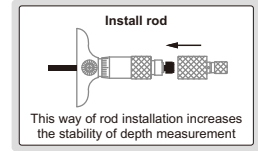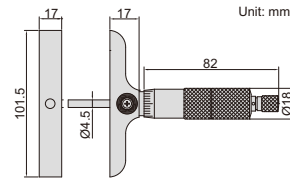
Code	Range	Rods
3241-25	0-25mm	1 pc
3241-50	0-50mm	2 pcs
3241-100	0-100mm	4 pcs
3241-150	0-150mm	6 pcs
3241-300	0-300mm	12 pcs

3241-100

Unit: mm

Install rod

This way of rod installation increases
the stability of depth measurement

DIGITAL DEPTH MICROMETERS

DATA OUTPUT

IP65 WATERPROOF

Install rod
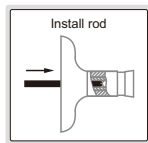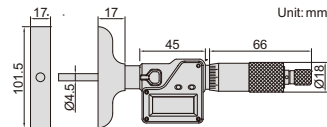
- Micrometer head accuracy: +/-3μm
- Rod accuracy: +/-(2+L/75)μm,
  L is the measuring range in mm
- Button function: on/off, set,
  mm/inch, ABS/INC
- IP65 dust/waterproof
- Data output
- LR44 battery
- Automatic power off
- Rods with flat end
- Ratchet stop
- Optional accessory:
  data output cable

3540-150

Unit: mm

Code	Range	Resolution	Rods
3540-50	0-50mm/0-2"	0.001mm/0.00005"	2 pcs
3540-150	0-150mm/0-6"	0.001mm/0.00005"	6 pcs
3540-300	0-300mm/0-12"	0.001mm/0.00005"	12 pcs

VERNIER HEIGHT GAGES (BASIC TYPE)

**ATTENTION: CAN NOT USE CLAMP
FOR PROTRACTORS (CODE 2372-CLAMP)**

dial test indicator holder (**optional**)

7151-CL1

Unit: mm

Unit: mm
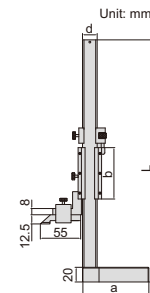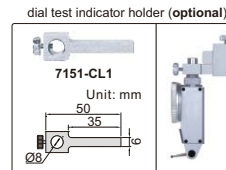
1253-200

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

scriber (included)

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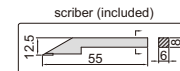
Code	Range	Accuracy	L	a	b	d
1253-150	0-150mm/0-6"	±0.03mm	265	75	57	16
1253-200	0-200mm/0-8"	±0.03mm	325	90	70	20

VERNIER HEIGHT GAGES

- Adjustable main scale to set zero
- Carbide tipped scriber
- Made of stainless steel
  (except the base)
- Satin chrome plated scale
- Supplied with magnifier
- With fine adjustment
- Supplied with dust cover
- Optional accessory:
  dial test indicator holder (code **6293-6**),
  clamp for protractors (code **2372-CLAMP**)

1250-300

Unit: mm

scriber (included)

dial test indicator holder (**optional**)

6293-6

Unit: mm

dovetail groove stem hole Ø4 stem hole Ø8

A-A

clamp for protractors (**optional**)

Unit: mm

2372-CLAMP

(mm)
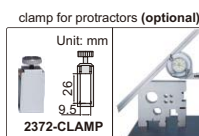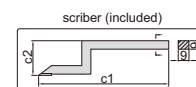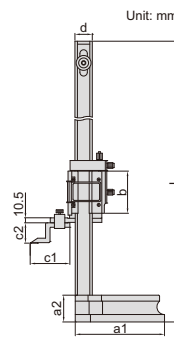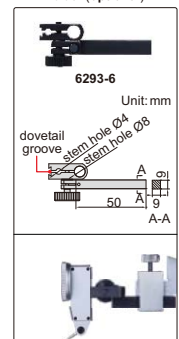
Code	Range	Graduation	Accuracy	L	a1	a2	b	c1	c2	d
1250-300	0-300mm/0-12"	0.02mm/0.001"	±0.04mm	545	135	43	75	80	30	28
1250-600	0-600mm/0-24"	0.02mm/0.001"	±0.05mm	870	180	54	85	80	41	35

DIGITAL HEIGHT GAGES WITH DRIVING WHEEL

DATA OUTPUT

INSPECTION CERTIFICATE
TRACEABLE TO DKD

VIDEO

clamp for protractors (**optional**)
Unit: mm
26
9.5
2372-CLAMP

dial test indicator holder (**optional**)
6293-6
Unit: mm
dovetail groove
stem hole Ø4
stem hole Ø8
A
9
50
A
9
A-A

Unit: mm
c
114
L
b
12
a
H
W

supporting rod

scriber (included)
b
L
9
a
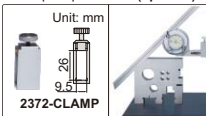
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, preset (+,-), hold
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032
- Data output
- Supplied with dust cover
- Optional accessory: data output cable, dial test indicator holder (code **6293-6**), clamp for protractors (code **2372-CLAMP**)

(mm)
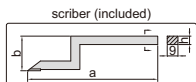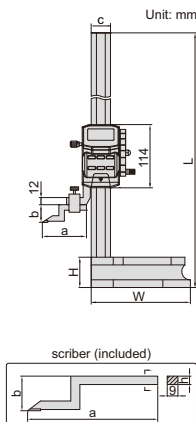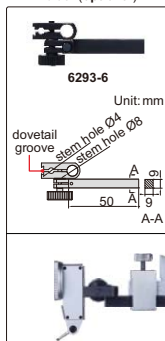
Code	Range	Accuracy	L	W	H	a	b	c	h
1156-300*	0-300mm/0-12"	±0.03mm	515	180	55	80	30	35	9
1156-600*	0-600mm/0-24"	±0.05mm	815	180	55	80	30	35	9
1156-1000*	0-1000mm/0-40"	±0.07mm	1220	265	70	92	48	40	12

***Supplied with manufacturer inspection certificate traceable to DKD Germany**

1156-300   front   side   **1156-1000**

DIGITAL HEIGHT GAGE (BASIC TYPE)

ATTENTION: CAN NOT USE CLAMP FOR PROTRACTORS (CODE 2372-CLAMP)

DATA OUTPUT

dial test indicator holder (**optional**)
7151-CL1
Unit: mm
50
35
6
Ø8
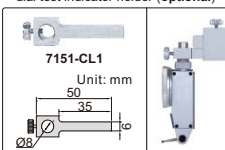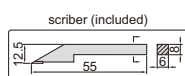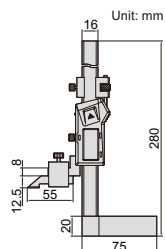
1154-150

Unit: mm
16
280
8
12.5
55
20
75

scriber (included)
12.5
55
80
6

- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- With fine adjustment
- Made of stainless steel
- Battery CR2032, data output
- Optional accessory: data output cable, dial test indicator holder (code **7151-CL1**)

Code	Range	Resolution	Accuracy
1154-150	0-150mm/0-6"	0.01mm/0.0005"	±0.03mm

MINI DIGITAL HEIGHT GAGE (NON-WATERPROOF)

DATA OUTPUT

1146-20A

Unit: mm
16
128
40
Ø2
25
25
12
30°
SR 0.2

application
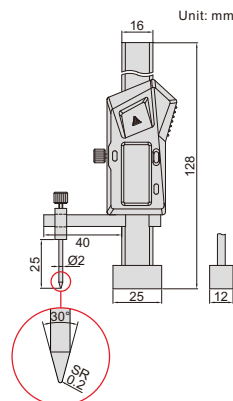
- Measure height difference of two surfaces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable

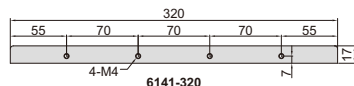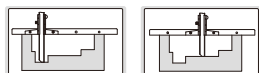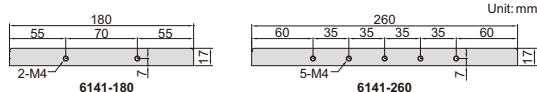| Code	Range	Accuracy
1146-20A	0~±20mm/0~±0.8"	±0.02mm
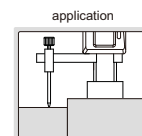
DIGITAL OUTSIDE MICROMETERS (BASIC TYPE)

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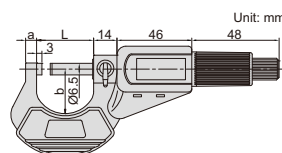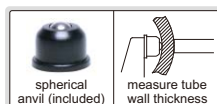
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")

3109-25A

spherical anvil (included)   measure tube wall thickness

ATTENTION: NO DATA OUTPUT

friction thimble for one hand operation

Unit: mm
a
L
14
46
48
3
Ø6.5

(mm)

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

***Supplied with manufacturer inspection certificate traceable to DKD Germany**

DIGITAL OUTSIDE MICROMETERS (WITH DATA OUTPUT)

IP65 WATERPROOF

DATA OUTPUT

data output

3101-25A

Unit: mm

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable

spherical anvil (included)   measure tube wall thickness

(mm)
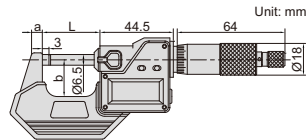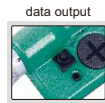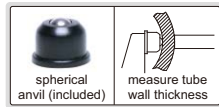
Code	Range	Accuracy	L	a	b
3101-25A*	0-25mm/0-1"	±2μm	34.5	6	25
3101-50A*	25-50mm/1-2"	±2μm	59.5	8	32
3101-75A*	50-75mm/2-3"	±3μm	84.5	8	44.5
3101-100A*	75-100mm/3-4"	±3μm	109.5	8	57
3101-125A	100-125mm/4-5"	±3μm	135	10	70
3101-150A	125-150mm/5-6"	±3μm	160.5	10	82

*Supplied with manufacturer inspection certificate traceable to DKD Germany
- Sizes available up to 300mm

DIGITAL OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)

ATTENTION: NO DATA OUTPUT

IP65 WATERPROOF

without data output

3108-25A

Unit: mm

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")

spherical anvil (included)   measure tube wall thickness

(mm)
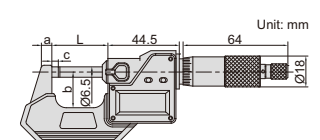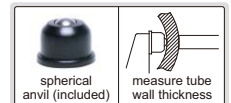
Code	Range	Accuracy	L	a	b	c
3108-25A*	0-25mm/0-1"	±2μm	34.5	6	25	3
3108-50A*	25-50mm/1-2"	±2μm	59.5	8	32	3
3108-75A*	50-75mm/2-3"	±3μm	84.5	8	44.5	3
3108-100A*	75-100mm/3-4"	±3μm	109.5	8	57	3

*Supplied with manufacturer inspection certificate traceable to DKD Germany
- Sizes available up to 200mm

OUTSIDE MICROMETERS

3203-50A

3203-25A

3203-1004A

3203-3006A

Metric (mm)

Code	Range	Accuracy	L	a	b
3203-25A*	0-25mm	±2μm	32	9	28
3203-50A*	25-50mm	±2μm	57	14	38
3203-75A*	50-75mm	±2μm	82	15	49
3203-100A*	75-100mm	±3μm	107	15	60
3203-125A	100-125mm	±3μm	133	16.5	73
3203-150A	125-150mm	±3μm	158	16.5	85
3203-175A	150-175mm	±4μm	183	19.4	104
3203-200A	175-200mm	±4μm	209	19.4	117
3203-225A	200-225mm	±4μm	234	19.4	130
3203-250A	225-250mm	±5μm	260	19.4	142
3203-275A	250-275mm	±5μm	285	19.4	155
3203-300A	275-300mm	±5μm	310	19.4	168

- Graduation: 0.01mm
- Carbide measuring faces
- Meet DIN863-1, ratchet stop
- Supplied with setting standards (except 0-25mm)

Unit: mm

Imperial

Code	Range	Accuracy	L	a	b
3203-1A*	0-1"	.00016"	1.260"	.354"	1.102"
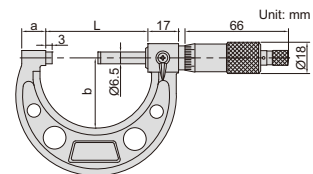
Metric micrometer set

Code	Range	Micrometers included	Packaging
3203-1004A*	0-100mm	3203-25A, 3203-50A, 3203-75A, 3203-100A	blow mould case
3203-1506A	0-150mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A	blow mould case
3203-3006A	150-300mm	3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A	aluminum box

*Supplied with manufacturer inspection certificate traceable to DKD Germany

1µm GRADUATION OUTSIDE MICROMETERS

- Graduation: 0.001mm
- Carbide measuring faces
- Meet DIN863-1
- Ratchet stop
- Supplied with setting standards
  (except 0-25mm)

Unit: mm

INSPECTION CERTIFICATE
TRACEABLE TO DKD
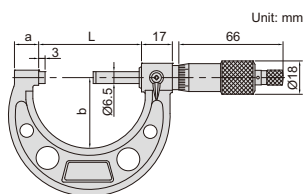
3210-25A

Individual					(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

Set

Code	Range	Micrometers included
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

* Supplied with manufacturer inspection certificate traceable to DKD Germany
- Sizes available up to 200mm

DIGITAL OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

IP65 WATERPROOF   DATA OUTPUT

3506-400A

Unit: mm

type A

type B
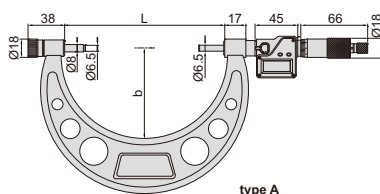
setting standard (included)

- Resolution 0.001mm/0.0001"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable

interchangeable anvils (included) for different measuring ranges
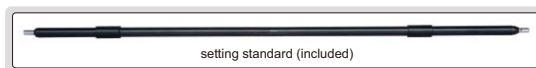
						(mm)
Code	**Range**	**Type**	**Accuracy**	**L**	**b**	**Setting standard (included)**
3506-300A	150-300mm/6-12"	A	±8µm	305	165	150, 175, 200, 225, 250, 275
3506-400A	300-400mm/12-16"	B	±9µm	405	224	325, 375
3506-500A	400-500mm/16-20"	B	±11µm	505	275	425, 475

Sizes available up to 1000mm

OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

Unit: mm

type A

type B
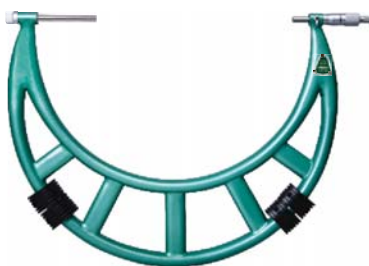
setting standard (included)

3206-400
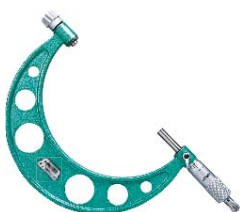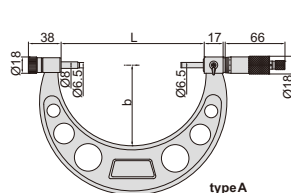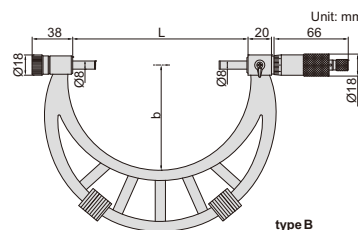
3206-150A

- Graduation 0.01mm
- Ratchet stop
- Meet DIN863-3
- Carbide measuring faces
- Supplied with setting standards

interchangeable anvils (included) for different measuring ranges

						(mm)
Code	**Range**	**Type**	**Accuracy**	**L**	**b**	**Setting standard (included)**
3206-150A	0-150mm	A	6µm	158	82	25, 50, 75, 100, 125
3206-200A	100-200mm	A	7µm	208	114	100, 125, 150, 175
3206-300A	150-300mm	A	9µm	308	165	150, 175, 200, 225, 250, 275
3206-301A	200-300mm	A	9µm	308	165	200, 225, 250, 275
3206-400	300-400mm	B	11µm	409	224	325, 375
3206-500	400-500mm	B	13µm	509	275	425, 475
3206-600	500-600mm	B	14µm	609	321	525, 575

Sizes available up to 1000mm

OUTSIDE MICROMETERS

- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)

3202-25A

Unit: mm

INSPECTION CERTIFICATE
TRACEABLE TO DKD

Individual

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

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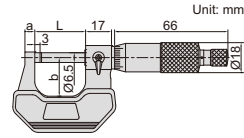
Code	Range	Micrometers included
3202-1004A *	0-100mm	3202-25A, 3202-50A, 3202-75A, 3202-100A
3202-1506A	0-150mm	3202-25A, 3202-50A, 3202-75A, 3202-100A, 3202-125A, 3202-150A

*Supplied with manufacturer inspection certificate traceable to DKD Germany
–Sizes available up to 200mm

INDICATING MICROMETERS

Unit: mm

support
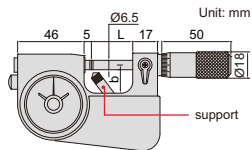
3332-25

- Meet DIN863-3
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

(mm)

Code	Micrometer head range	Micrometer head accuracy	Micrometer head graduation	L	b
3332-25	0-25mm	4μm	0.002mm	28.5	19
3332-50	25-50mm	4μm	0.002mm	53.5	30

Sizes available up to 100mm

DIGITAL CRIMP HEIGHT MICROMETER

IP65 WATERPROOF

DATA OUTPUT

3566-25BA

- Measure the height of crimp contact
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: data output cable

Unit: mm
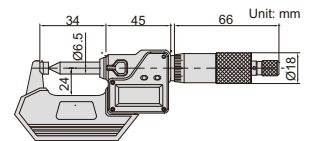
Code	Range	Accuracy
3566-25BA	0-25mm/0-1"	±4μm
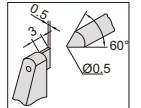
SCREW THREAD MICROMETERS

NON-ROTATING SPINDLE

measuring tips are optional

3281-25A

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

Unit: mm

60° setting standards (included)

55° setting standards (**optional**)
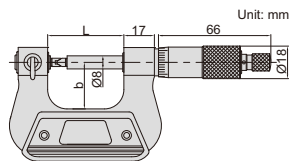
accuracy of micrometers with tips   (mm)

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

(mm)

Code	Range	L	b	55° setting standard (optional)
3281-25A	0-25mm	42	26	-
3281-50A	25-50mm	67	38	**3281-SP1**
3281-75A	50-75mm	92	50	**3281-SP2**
3281-100A	75-100mm	117.6	62	**3281-SP3**

Sizes available up to 200mm
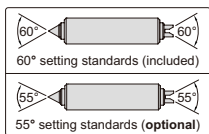
DIGITAL SCREW THREAD MICROMETER

NON-ROTATING SPINDLE

DATA OUTPUT

measuring tips are optional

3581-25A

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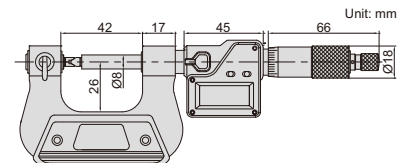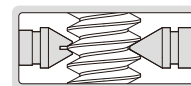
- Measure pitch diameter of screw threads
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards
- Optional accessary: 55° setting standards, measuring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

60° setting standards (included)

55° setting standards (**optional**)
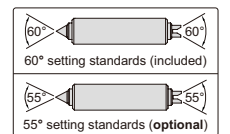
accuracy of micrometers with tips

Pitch	Range
0.4~0.5	±0.01mm
0.6~0.8	±0.01mm
1~1.25	±0.012mm
1.5~2.0	±0.014mm
2.5~3.5	±0.016mm

Code	Range
3581-25A	0-25mm/0-1"

Sizes available up to 100mm

MEASURING TIPS FOR SCREW THREAD MICROMETERS

7381-T13

- Supplied in pairs
- Suitable for **3281**, **3581** series micrometers

Unit: mm

Ø5 | 60° | Ø5
60° thread angle

Ø5 | 55° | Ø5
55° thread angle

Whitworth thread (55° thread angle)

Code	Pitch
7381-T2S	10 pairs/set: 60-48TPI, 48-40TPI, 40-32TPI, 32-24TPI, 24-18TPI, 18-14TPI, 14-10TPI, 10-7TPI, 7-4.5TPI, 4.5-3.5TPI, including all above tips

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
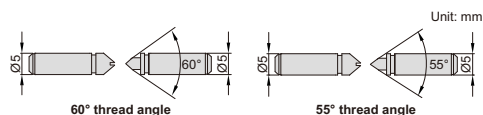
POINT MICROMETER

3230-25A

Unit: mm

57 | 17 | 66 | Ø18
32 | Ø6.5

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

30° SR0.3
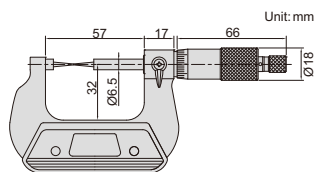
Code	Range	Graduation	Accuracy
3230-25A	0-25mm	0.01mm	4μm

Sizes available up to 100mm

BLADE MICROMETERS

NON-ROTATING SPINDLE

3232-25A

Unit: mm

L | 17 | 66 | Ø18
b

- Meet DIN863-3
- Measure the groove diameter of shafts and keyways
- Graduation: 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

type A 0.75 | 6.5 | 6

type B 0.4 | 3.5 | 6
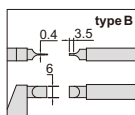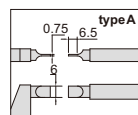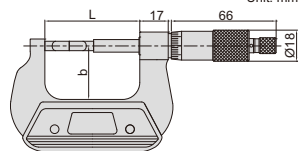
Code	Range	Type	Accuracy	L	b
3232-25A	0-25mm	A	4μm	57mm	32mm
3232-50A	25-50mm	A	4μm	82mm	44.5mm
3232-75A	50-75mm	A	5μm	107mm	57mm
3232-100A	75-100mm	A	5μm	132.6mm	69.5mm
3232-25BA	0-25mm	B	4μm	57mm	32mm

Sizes available up to 175mm

DIGITAL POINT MICROMETERS

IP65 WATERPROOF

DATA OUTPUT

3530-25A

Unit: mm

57 | 45 | 66 | Ø18
32 | Ø6.5

- Measure the web thickness of drills, small grooves and keyways
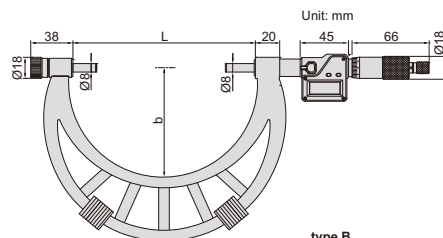- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable

type A 30° SR0.3

type B 15° SR0.3

Code	Range	Type	Accuracy
3530-25A	0-25mm/0-1"	A	±4μm
3530-25BA	0-25mm/0-1"	B	±4μm

Sizes available up to 100mm

DIGITAL BLADE MICROMETERS

NON-ROTATING SPINDLE

DATA OUTPUT

3532-25A

Unit: mm

L | 45 | 66 | Ø18
b

- 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
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable

0.75 | 6.5 | 6

(mm)
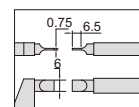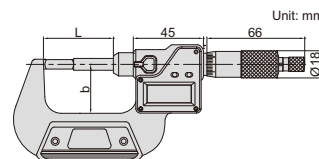
Code	Range	Accuracy	L	b
3532-25A	0-25mm/0-1"	±4μm	57	32
3532-50A	25-50mm/1-2"	±4μm	82	44.5

Sizes available up to 100mm

DIGITAL SPLINE MICROMETER

IP65 WATERPROOF

DATA OUTPUT

3533-25A

Unit: mm

- Measure splined shafts, slots and keyways
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable
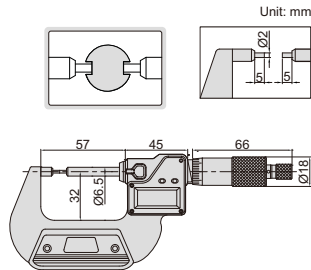
Code	Range	Accuracy	Resolution
3533-25A	0-25mm/0-1"	±4μm	0.001mm/0.00005"

Sizes available up to 100mm

SPHERICAL ANVIL TUBE MICROMETERS

3260-25A

Unit: mm

- Meet DIN863-3
- Measure wall thickness of tubes
- Graduation: 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

type A type B
8 8
SR5 SR5

>Ø10mm
>Ø10mm
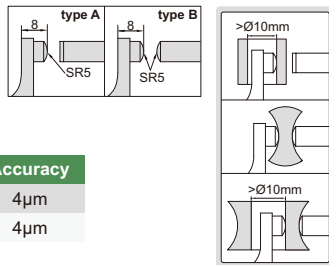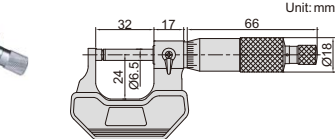
Code	Range	Type	Accuracy
3260-25A	0-25mm	A	4μm
3260-25SA	0-25mm	B	4μm

Sizes available up to 100mm

MICROMETER SETTING STANDARDS

6310-100

(mm)
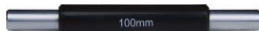
Code	Length	Accuracy	D
6310-25	25	±1.5μm	Ø7
6310-50	50	±2μm	Ø7
6310-75	75	±2.5μm	Ø7
6310-100	100	±3μm	Ø8

DIGITAL SPHERICAL ANVIL TUBE MICROMETERS

IP65 WATERPROOF

DATA OUTPUT

3560-25A

Unit: mm

type A type B
8 8
SR5 SR5
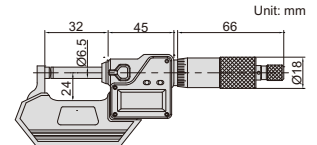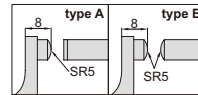
- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable

>Ø10mm
>Ø10mm

Code	Range	Type	Accuracy
3560-25A	0-25mm/0-1"	A	±4μm
3560-25SA	0-25mm/0-1"	B	±4μm

Sizes available up to 100mm
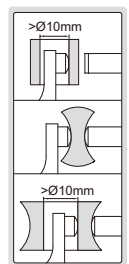
WIRE MICROMETER

3285-10
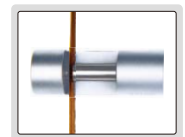
- Meet DIN863-3
- Measure diameter of wires and small balls
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces

Unit: mm

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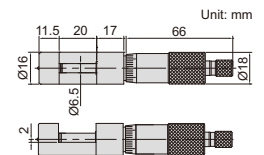
MICROMETER HEAD

6381-25W

Unit: mm
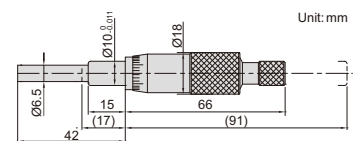
- Meet DIN863-2
- Ratchet stop

Code	Range	Stem	Spindle tip	Accuracy	Graduation
6381-25W	0-25mm	plain	flat (carbide)	3μm	0.01mm

MICROMETER STAND

6301

6301-1

Unit: mm

Unit: mm

6301-2

■ Suitable for micrometers up to 100mm

Unit: mm
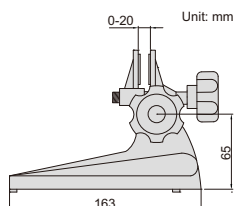
Code
6301

■ Suitable for inside micrometers

Code	Description	Applicable products
6301-1	clamp for inside micrometers	all sizes of **3220** series
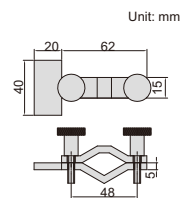
■ Suitable for three points internal micrometers

Code	Description	Applicable products
6301-2	clamp for three points internal micrometers	up to100mm of **3127** and **3227** series

MICROMETER STAND

■ Suitable for micrometers up to 100mm

Code
6300

6300

Unit: mm
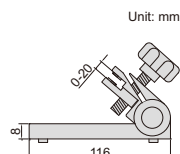
TUBULAR INSIDE MICROMETERS

■ Graduation: 0.01mm
■ Accuracy: (6+L/50)µm
    L=maximum measuring length (mm)
■ Optional accessary: setting ring (code **6312**)

Code	Range	Travel of micrometer head	Extension rods
3221-50	25-50mm	7mm	2pcs
3221-300	50-300mm	13mm	10pcs

Sizes available up to 1000mm

3221-50

Unit: mm
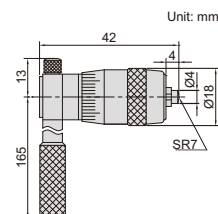
TUBULAR INSIDE MICROMETERS

■ Graduation: 0.01mm
■ Accuracy: (3+n+L/50)µm
    n=number of rods,
    L=maximum measuring length (mm)
■ Supplied with setting standards
■ Carbide measuring faces

3222-150

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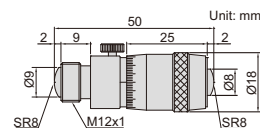
Code	Range	Travel of micrometer head	Extension rods
3222-150	50-150mm	13mm	13mm, 25mm, 50mm
3222-300	50-300mm	13mm	13mm, 25mm, 50mm (2 pcs), 100mm
3222-500	50-500mm	13mm	13mm, 25mm, 50mm (2 pcs), 100mm, 200mm
3222-600	50-600mm	13mm	13mm, 25mm, 50mm, 100mm, 150mm, 200mm
3222-1000	50-1000mm	13mm	13mm,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

THREE POINTS INTERNAL MICROMETERS

INSPECTION CERTIFICATE

- Meet DIN863-4
- 6-12mm: graduation 0.001mm, 12-100mm: graduation 0.005mm
- Ratchet stop
- Optional accessory: setting rings (code **6312**), micrometer stand and clamp (code **6301** and **6301-2**)

micrometer stand with clamp (**optional**)

3227-8

Type A
6-12mm, steel measuring points

3227-16
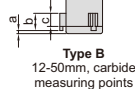
Type B
12-50mm, carbide measuring points

3227-125
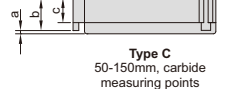
Type C
50-150mm, carbide measuring points

Individual (mm)

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

setting ring

6-100mm: included
100-200mm: **optional**

extension rod

included

Set

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

* Supplied with manufacturer inspection certificate
– Sizes available up to 300mm

3227-504

WIDE RANGE THREE POINTS INTERNAL MICROMETERS

INSPECTION CERTIFICATE

Unit: mm

- Meet DIN863-4
- Graduation 0.001mm
- Carbide measuring faces
- Ratchet stop
- Setting rings are included (except 200-300mm)

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

* Supplied with manufacturer inspection certificate
– Sizes available up to 300mm
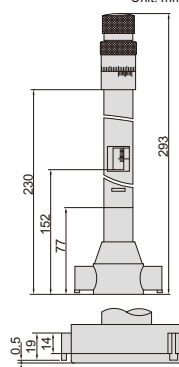
setting ring

3228-70

293
230
152
77
0.5
19
14

DIGITAL THREE POINTS INTERNAL MICROMETERS

micrometer stand with clamp (optional)

IP65 WATERPROOF

DATA OUTPUT

INSPECTION CERTIFICATE

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: data output cable, setting ring (code **6312**), micrometer stand and clamp (code **6301** and **6301-2**)

3127-12
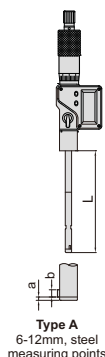
Type A
6-12mm, steel measuring points

3127-40
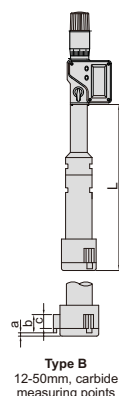
Type B
12-50mm, carbide measuring points

3127-125
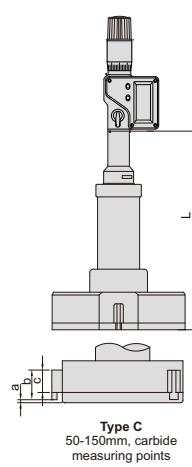
Type C
50-150mm, carbide measuring points

Individual (mm)

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3127-8 *	6-8mm/0.24-0.31"	A	4µm	Ø6mm (included)	100mm	54.5	1.5	2.5	—
3127-10 *	8-10mm/0.31-0.39"	A	4µm	Ø8mm (included)	100mm	54.5	1.5	2.5	—
3127-12 *	10-12mm/0.39-0.47"	A	4µm	Ø10mm (included)	100mm	54.5	1.5	2.5	—
3127-16 *	12-16mm/0.47-0.63"	B	4µm	Ø16mm (included)	150mm	80	0.5	6	4.5
3127-20 *	16-20mm/0.63-0.79"	B	4µm	Ø16mm (included)	150mm	80	0.5	6	4.5
3127-25 *	20-25mm/0.79-0.98"	B	4µm	Ø25mm (included)	150mm	90	0.5	8	6
3127-30 *	25-30mm/0.98-1.18"	B	4µm	Ø25mm (included)	150mm	90	0.5	8	6
3127-40 *	30-40mm/1.18-1.57"	B	4µm	Ø40mm (included)	150mm	97	0.5	14	12
3127-50 *	40-50mm/1.57-1.97"	B	5µm	Ø40mm (included)	150mm	97	0.5	14	12
3127-63 *	50-63mm/1.97-2.48"	C	5µm	Ø62mm (included)	150mm	114	0.5	17.5	14.5
3127-75 *	62-75mm/2.44-2.95"	C	5µm	Ø62mm (included)	150mm	114	0.5	17.5	14.5
3127-88 *	75-88mm/2.95-3.46"	C	5µm	Ø87mm (included)	150mm	114	0.5	17.5	14.5
3127-100 *	87-100mm/3.43-3.94"	C	5µm	Ø87mm (included)	150mm	114	0.5	17.5	14.5
3127-125 *	100-125mm/3.94-4.92"	C	5µm	**optional**	150mm	150	0.5	19.5	14.5
3127-150 *	125-150mm/4.92-5.91"	C	5µm	**optional**	150mm	150	0.5	19.5	14.5

setting ring

6-100mm: included
100-150mm: **optional**

extension rod

included

Set

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

3127-202

*Supplied with manufacturer inspection certificate
−Sizes available up to 300mm

DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETERS

INSPECTION CERTIFICATE

- Meet DIN863-4
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output, LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Setting rings are included (except 200-300mm)
- Optional accessary: data output cable
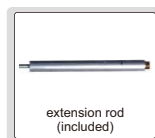
setting ring

extension rod (included)

Unit: mm
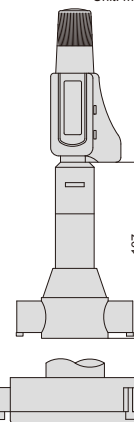
IP54 WATERPROOF

DATA OUTPUT

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

*Supplied with manufacturer inspection certificate

3128-70

PISTOL GRIP THREE POINTS BORE GAGES

INSPECTION CERTIFICATE
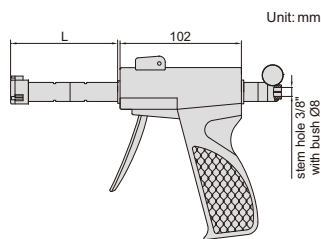
Unit: mm

Type A
6-12mm, steel measuring points

stem hole 3/8" with bush Ø8
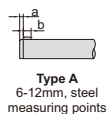
2124-8

digital indicator is optional
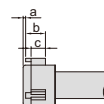
Type B
12-50mm, carbide measuring points

2124-25

digital indicator is optional
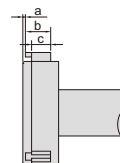
Type C
50-100mm, carbide measuring points

digital indicator is optional

2124-100

■ Optional accessory: digital indicators
(code **2108-101F**, resolution 0.001mm/0.00005"),
setting rings (code **6312**)

setting ring (included)

extension rod (included)

Individual (mm)

Code	Range	Type	Accuracy (without digital indicator)	Setting ring (included)	Extension rod (included)	L	a	b	c
2124-8 *	6-8mm	A	4µm	Ø6mm	100mm	50	1.5	2.5	—
2124-10 *	8-10mm	A	4µm	Ø8mm	100mm	50	1.5	2.5	—
2124-12 *	10-12mm	A	4µm	Ø10mm	100mm	50	1.5	2.5	—
2124-16 *	12-16mm	B	4µm	Ø16mm	150mm	65	0.5	6	4.5
2124-20 *	16-20mm	B	4µm	Ø16mm	150mm	65	0.5	6	4.5
2124-25 *	20-25mm	B	4µm	Ø25mm	150mm	91	0.5	8	6
2124-30 *	25-30mm	B	4µm	Ø25mm	150mm	91	0.5	8	6
2124-40 *	30-40mm	B	4µm	Ø40mm	150mm	97	0.5	14	12
2124-50 *	40-50mm	B	5µm	Ø40mm	150mm	97	0.5	14	12
2124-63 *	50-63mm	C	5µm	Ø62mm	150mm	112	0.5	17.5	14.5
2124-75 *	62-75mm	C	5µm	Ø62mm	150mm	112	0.5	17.5	14.5
2124-88 *	75-88mm	C	5µm	Ø87mm	150mm	112	0.5	17.5	14.5
2124-100 *	87-100mm	C	5µm	Ø87mm	150mm	112	0.5	17.5	14.5

Set

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

2124- S504

* Supplied with manufacturer inspection certificate
- Sizes available up to 300mm

BORE GAGE SETS

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

packaging (code **2824-S3**)

■ Repeatability: 0.003mm
■ Optional accessory: setting ring (code **6312**)
         long handle (code **7351**)

Code	Range	Indicator	Bore gages included	Accuracy	
2824-S160	35-160mm	dial indicator, code **2308-10FA**, range 10mm, graduation 0.01mm	① 35-50mm (dial indicator and handle are not included) ② 50-160mm	35-50mm ±0.018mm 50-160mm ±0.018mm	
2824-S3	18-160mm	dial indicator, code **2308-10FA**, range 10mm, graduation 0.01mm	① 18-35mm ② 35-60mm (dial indicator is not included) ③ 50-160mm (dial indicator is not included)	18-35mm ±0.015mm 35-60mm ±0.018mm 50-160mm ±0.018mm	

2824-S160   **2824-S3**

BORE GAGES FOR SMALL HOLES

DATA OUTPUT

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

Unit: mm

2852-10

2152-18

ceramic anvil

| 6-10mm | 10-18.5mm |

6-10mm
- Ø4.5
- SR0.5 (steel) contact point
- SR1 anvil (steel) 3.6 5.7
- 85
- 48

10-18.5mm
- Ø6
- SR0.75 (steel) contact point
- SR1 anvil (ceramic) 5.6 7.8
- 77
- 105

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

MIN

The minimum value tracking function can find the diameter automatically.

- Repeatability: 0.003mm
- Optional accessory: setting ring (code **6312**)

With dial indicator

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

With digital indicator

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

BORE GAGE

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

Unit: mm

- SR2.5 anvil (ceramic)
- 391
- Ø14.8
- 109
- 85
- SR2 (ceramic) contact point
- 16
- 123
- Ø19

2828-800A

- Repeatability: 0.003mm

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

BORE GAGES

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

DATA OUTPUT

18-35mm	35-60mm	50mm up to160mm
160-250mm		
250-450mm		

ceramic contact point

ceramic anvil

ceramic anvil

2322-160A   **2122-35A**

Unit: mm

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

MIN

The minimum value tracking function can find the diameter automatically.

18-35mm
- 109
- 141
- Ø9
- SR1.5 (steel) contact point
- SR1 anvil (ceramic)
- 12.2 6.4
- Ø12.7

35mm up to 450mm
- 109
- L
- ØE
- SR1.5 (ceramic) contact point
- F anvil (ceramic)
- A B
- C
- ØD

- Repeatability: 0.003mm
- Optional accessory: setting ring (code **6312**), long handle (code **7351**)

(mm)

Range	A	B	C	ØD	ØE	F	L
35-60mm	22	9	27	13	12.8	SR2	141
50-100mm	26	9	35	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

With dial indicator

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

With digital indicator

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

BORE GAGE SETTERS

Unit:mm

application

bore gage

gage block

7353-160

horizontal use

gage blocks for **7353-160**

- Vertical and horizontal use
- To be used with gage blocks

Gage block set for 7353-160

Blocks per set	Size (mm)	Step (mm)	Quantity (pcs)	Remark
33	1.005		1	grade 2 (ISO3650)
	1.01-1.09	0.01	9	
	1.1-1.9	0.1	9	
	1-9	1	9	
	10-30	10	3	
	50		1	
	100		1	

Code	Range	Repeatability	Remark
7353-160	0-160mm	1.2µm	with gage block set
7353-160W	0-160mm	1.2µm	without gage block set

LONG HANDLES

Unit: mm

method of use (replace the original handle with long handle)

original handle

long handle

7351-EX11

type A

consist of two pieces

type B

one piece
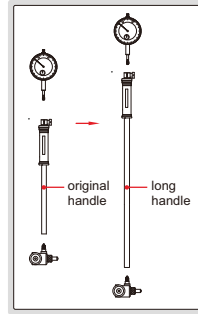
- To assist deep-hole measurement
- Can be used for bore gages **2322**, **2122**, **2824** and **2827**
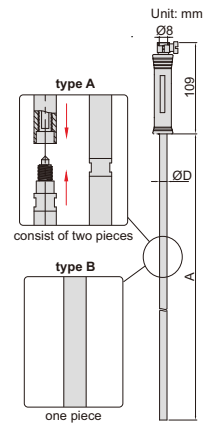
Code	Applicable bore gages	A	ØD	Type
7351-EX11	35-60mm, 50-100mm, 50-160mm, 100-160mm	475mm	13mm	B
7351-EX12		980mm	13mm	
7351-EX13		1480mm	14.5mm	A
7351-EX14		1980mm	14.5mm	
7351-EX21	160-250mm, 250-450mm	480mm	14.5mm	B
7351-EX22		980mm	14.5mm	
7351-EX23		1480mm	14.5mm	A
7351-EX24		1980mm	14.5mm	

SETTING RINGS

CAN SUPPLY CUSTOM SETTING RING FROM Ø1.500MM TO Ø200.000MM, FOR EXAMPLE, Ø17.085MM

INSPECTION CERTIFICATE

- For zero setting of inside micrometers, three points internal micrometers and bore gages
- Deviation (difference between the ordered size and the size marked on the setting ring when supplied): For example, the ordered size is Ø10.125mm, the size marked on the setting ring when supplied may be Ø10.135mm
- Meet DIN2250-1:2008

Ø1.5mm-100mm

Ø100mm-200mm

6312-20

(mm)

Code	Size
6312-1D5*	Ø1.5
6312-2*	Ø2
6312-2D5*	Ø2.5
6312-3*	Ø3
6312-3D5*	Ø3.5
6312-4*	Ø4
6312-4D5*	Ø4.5
6312-5*	Ø5
6312-5D5*	Ø5.5
6312-6*	Ø6
6312-6D5*	Ø6.5
6312-7*	Ø7
6312-7D5*	Ø7.5
6312-8*	Ø8
6312-8D5*	Ø8.5
6312-9*	Ø9
6312-9D5*	Ø9.5
6312-10*	Ø10
6312-10D5*	Ø10.5
6312-11*	Ø11
6312-11D5*	Ø11.5
6312-12*	Ø12
6312-12D5*	Ø12.5
6312-13*	Ø13
6312-13D5*	Ø13.5
6312-14*	Ø14
6312-14D5*	Ø14.5

(mm)

Code	Size
6312-15*	Ø15
6312-15D5*	Ø15.5
6312-16*	Ø16
6312-16D5*	Ø16.5
6312-17*	Ø17
6312-17D5*	Ø17.5
6312-18*	Ø18
6312-18D5*	Ø18.5
6312-19*	Ø19
6312-19D5*	Ø19.5
6312-20*	Ø20
6312-20D5*	Ø20.5
6312-21*	Ø21
6312-21D5*	Ø21.5
6312-22*	Ø22
6312-22D5*	Ø22.5
6312-23*	Ø23
6312-23D5*	Ø23.5
6312-24*	Ø24
6312-24D5*	Ø24.5
6312-25*	Ø25
6312-25D5*	Ø25.5
6312-26*	Ø26
6312-26D5*	Ø26.5
6312-27*	Ø27
6312-27D5*	Ø27.5
6312-28*	Ø28

(mm)

Code	Size
6312-28D5*	Ø28.5
6312-29*	Ø29
6312-29D5*	Ø29.5
6312-30*	Ø30
6312-31*	Ø31
6312-32*	Ø32
6312-33*	Ø33
6312-34*	Ø34
6312-35*	Ø35
6312-36*	Ø36
6312-37*	Ø37
6312-38*	Ø38
6312-39*	Ø39
6312-40*	Ø40
6312-41*	Ø41
6312-42*	Ø42
6312-43*	Ø43
6312-44*	Ø44
6312-45*	Ø45
6312-46*	Ø46
6312-47*	Ø47
6312-48*	Ø48
6312-49*	Ø49
6312-50*	Ø50
6312-55*	Ø55
6312-60*	Ø60
6312-62*	Ø62

(mm)

Code	Size
6312-65*	Ø65
6312-70*	Ø70
6312-75*	Ø75
6312-80*	Ø80
6312-85*	Ø85
6312-87*	Ø87
6312-90*	Ø90
6312-95*	Ø95
6312-100*	Ø100
6312-112D5*	Ø112.5
6312-125*	Ø125
6312-137D5*	Ø137.5
6312-150*	Ø150
6312-162D5*	Ø162.5
6312-175*	Ø175
6312-187D5*	Ø187.5
6312-200*	Ø200
6312-212D5*	Ø212.5
6312-225*	Ø225
6312-237D5*	Ø237.5
6312-250*	Ø250
6312-262D5*	Ø262.5
6312-275*	Ø275
6312-287D5*	Ø287.5
6312-300*	Ø300

*Supplied with manufacturer inspection certificate

Diameter d **	b	D	Deviation	Roundness and cylindricity
Ø1.5-2.5	4mm	22mm	±10.0µm	0.3µm
Ø2.5-3	5mm	22mm	±10.0µm	0.3µm
Ø3-5	5mm	22mm	±10.0µm	0.4µm
Ø5-10	8mm	32mm	±10.0µm	0.4µm
Ø10-15	10mm	38mm	±10.0µm	0.5µm
Ø15-18	12mm	45mm	±10.0µm	0.5µm
Ø18-20	12mm	45mm	±10.0µm	0.6µm
Ø20-25	14mm	53mm	±10.0µm	0.6µm
Ø25-30	16mm	63mm	±10.0µm	0.6µm
Ø30-32	16mm	63mm	±10.0µm	0.7µm
Ø32-40	18mm	71mm	±10.0µm	0.7µm
Ø40-50	20mm	85mm	±10.0µm	0.7µm
Ø50-60	20mm	100mm	±10.0µm	0.8µm
Ø60-70	24mm	112mm	±10.0µm	0.8µm
Ø70-80	24mm	125mm	±10.0µm	0.8µm
Ø80-90	24mm	140mm	±10.0µm	1.0µm
Ø90-100	24mm	160mm	±10.0µm	1.0µm

(mm)

Diameter d **	b	b1	d1	D	Deviation	Roundness and cylindricity
Ø100-110	28	14	132	170	±10.0µm	1.0µm
Ø110-120	28	16	140	180	±10.0µm	1.0µm
Ø120-130	28	16	150	190	±10.0µm	1.2µm
Ø130-140	28	18	160	200	±10.0µm	1.2µm
Ø140-150	28	18	170	212	±10.0µm	1.2µm
Ø150-160	28	20	180	224	±10.0µm	1.2µm
Ø160-170	32	20	190	236	±10.0µm	1.2µm
Ø170-180	32	20	200	250	±10.0µm	1.2µm
Ø180-190	32	22	212	265	±10.0µm	1.4µm
Ø190-200	32	22	224	280	±10.0µm	1.4µm
Ø200-212	32	22	236	300	±10.0µm	1.4µm
Ø212-224	32	25	250	315	±10.0µm	1.4µm
Ø224-236	36	25	265	335	±10.0µm	1.4µm
Ø236-250	36	28	280	355	±10.0µm	1.4µm
Ø250-265	36	28	300	375	±10.0µm	1.6µm
Ø265-280	36	28	315	400	±10.0µm	1.6µm
Ø280-300	36	32	335	425	±10.0µm	1.6µm
Ø300-315	36	32	355	450	±10.0µm	1.6µm

**For example Ø3-5mm means Ø3mm<diameter d≤Ø5mm

SMALL HOLE GAGE SET

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

step 1　step 2

adjusting screw

4208-1

(mm)
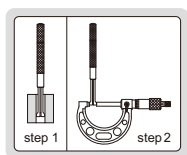
Range	L	a	b	ØD
3-5mm	76	24	52	5
5-7.5mm	79	27	52	5
7.5-10mm	88	30	58	6
10-13mm	91	34	58	6

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

DIGITAL RADIUS GAGE

ATTENTION: NO DATA OUTPUT

VIDEO
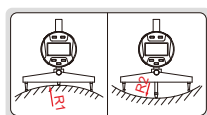
2183

- Resolution: 0.005mm/0.00005"
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Measure radius of internal or external arcs
- Display can be rotated by 320º
- Supplied with 5 jaws for different sizes of arc
- Battery CR2032
- Automatic power off

Unit: mm

123

100　60

10°　SØ3　20　SØ3
30　SØ3
SØ3　SØ3
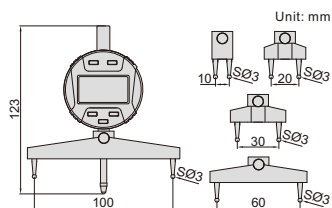
Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (mm)
2183	5-910mm/0.2-35.83"	7-910mm/0.3-35.83"	±0.01R*

*R is the radius to be measured

TELESCOPING GAGE SET

Øa　Øb

clamp　Øc

4206-1

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

step 1　step 2

(mm)

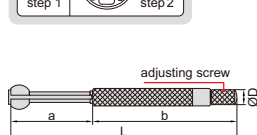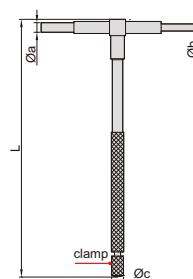| Range	L	Øa	Øb	Øc
8-12.7mm	115	3.9	2.9	6.2
12.7-19mm	115	5.3	3.8	6.2
19-32mm	115	5.3	3.8	6.2
32-54mm	137	7.6	6.1	7.2
54-90mm	137	7.6	6.1	7.2
90-150mm	137	7.6	6.1	7.2

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

CIRCUMFERENCE TAPES
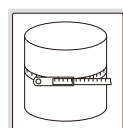
7114-950

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

Unit: mm

25　16　thickness 0.8
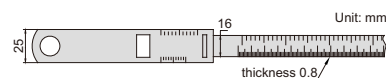
Code	Circumference range	Diameter range	Accuracy	
			Circumference	Diameter
7114-950	150-950mm	Ø50-300mm	±1.5mm	±0.5mm
7114-2200	940-2200mm	Ø300-700mm	±1.5mm	±0.5mm
7114-3460	2190-3460mm	Ø700-1100mm	±1.5mm	±0.5mm

COMPACT DIGITAL INDICATOR

DATA OUTPUT

INSPECTION CERTIFICATE
TRACEABLE TO NIST

Unit: mm

17　7.5
36
Ø42
60　24
15
Ø8-⁰.₀₀₉
M2.5x0.45
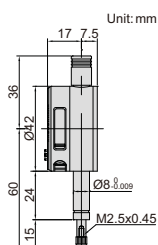
2114-5F

- Button function:
  - in/mm: short press for inch/metric conversion
    - long press to change measuring direction
  - ABS: short press for absolute/incremental measurement
    - long press to preset data
  - 0/ON: short press to turn on when power is off
    - short press to set zero when power is on
    - long press to turn off
- Keep preset data and tolerance data in memory after restart
- CR1632 battery, automatic power off
- Data output
- Optional accessory: data output cable, contact points

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

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIGITAL INDICATORS (ADVANCED TYPE)

INSPECTION CERTIFICATE
TRACEABLE TO NIST

DATA OUTPUT

VIDEO

2103-10F
2104-10F

2103-10F

2103-25F
2104-25F

2104-25F

Unit: mm
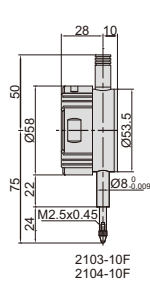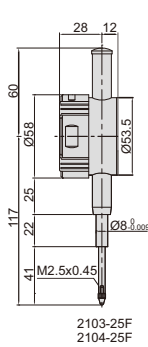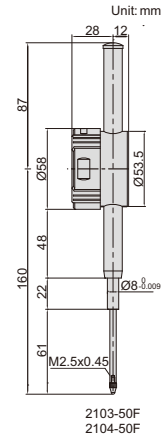
2103-50F
2104-50F

2103-50F

- Reading in digital and analog
- Display can be rotated by 320º
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable, backs, contact points

320°

display can be rotated by 320°

spindle lift knob is included

max./min./TIR

max./min./TIR measurement

analog pointer

analog pointer

warning when over tolerance

blink
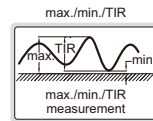
Resolution 0.001mm/0.00005"

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

*Supplied with manufacturer inspection certificate traceable to NIST USA

Resolution 0.01mm/0.0005"

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

DIGITAL INDICATORS (STANDARD TYPE)

INSPECTION CERTIFICATE
TRACEABLE TO NIST

DATA OUTPUT

2112-10F
2112-101F

2112-101F

2112-25F
2112-251F

2112-251F

Unit: mm
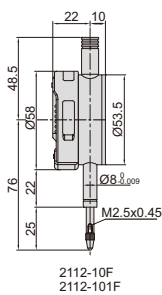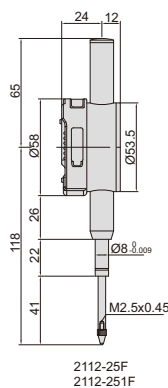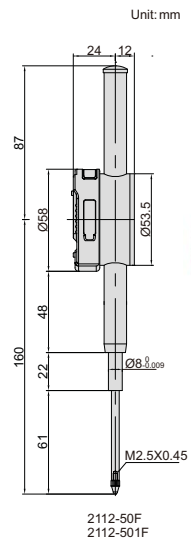
2112-50F
2112-501F

2112-501F

- Button function: on/off, inch/mm, zero
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable, backs, contact points

spindle lift knob is included

Resolution 0.01mm/0.0005"

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

*Supplied with manufacturer inspection certificate traceable to NIST USA

Resolution 0.001mm/0.00005"

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

WATERPROOF DIGITAL INDICATORS

WATERPROOF

DATA OUTPUT

Unit: mm

24.5 | 11
56.5
Ø61 | Ø59
100.5
23
47
Ø8 $_{-0.009}^{0}$
M2.5×0.45

2115-10F
2115-101F

2115-10F

26.5 | 13
65.5
Ø61 | Ø59
117.5
24
21
42
Ø16
Ø8 $_{-0.009}^{0}$
Ø4.5
M2.5×0.45
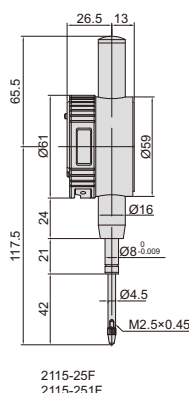
2115-25F
2115-251F

2115-25F

24.5 | 11
95
Ø61 | Ø59
154.5
46
20
58
Ø13.7
Ø8 $_{-0.009}^{0}$
Ø4.5
M2.5×0.45
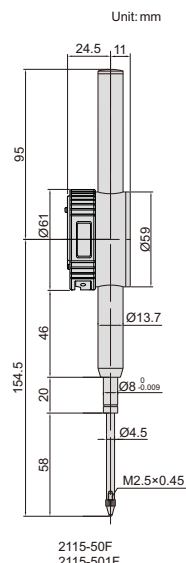
2115-50F
2115-501F

2115-50F

Resolution 0.001mm/0.00005"

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

Resolution 0.01mm/0.0005"

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

*Supplied with manufacturer inspection certificate traceable to NIST USA

- Dust/waterproof
- Button function: on/off, zero, mm/inch
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable, backs, contact points

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

NO AUTO POWER OFF DIGITAL INDICATORS

ONE BATTERY FOR 4000 WORKING HOURS

DATA OUTPUT

Unit: mm

22 | 10
48.5
Ø58 | Ø53.5
76
22
25
Ø8 $_{-0.009}^{0}$
M2.5x0.45

2113-10F
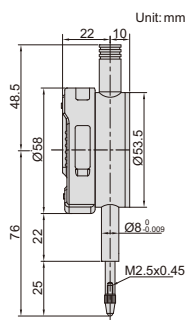
- No auto power off, tracking the deformation of mould and steel structure for a long time
- Low power consumption
- Button function: on/off, zero, inch/mm
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, data output
- With flat back
- Optional accessory: data output cable (code **7305-SPC1A**), backs, contact points

spindle lift knob is included

Code	Range	Resolution	Accuracy	Hysteresis
2113-10F*	12.7mm/0.5"	0.01mm/0.0005"	20µm	10µm
2113-101F*	12.7mm/0.5"	0.001mm/0.00005"	5µm	2µm

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIGITAL INDICATOR FOR BORE GAGE

DATA OUTPUT

320°

display can be rotated by 320°

Unit: mm

28 | 12
50
Ø58 | Ø53.5
75
22
24
Ø8 $_{-0.009}^{0}$
M2.5X0.45

2108-10F
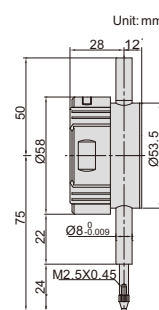
- Specially designed for bore gages
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after imputing the size of setting ring
- Reading in digital and analog
- Display can be rotated by 320º
- Button function: minimum value tracking, calibration, data preset, inch/metric conversion, absolute/incremental measurement
- Keep data in memory after power off/on
- CR2032 battery, automatic power off
- Data output, with flat back
- Optional accessory: data output cable, backs, contact points, spindle lift knob (code **7332**)

analog pointer

analog pointer

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

MIN

The minimum value tracking function can find the diameter automatically.
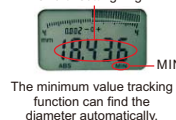
Code	Range	Resolution	Accuracy	Hysteresis
2108-10F*	12.7mm/0.5"	0.01mm/0.0005"	20µm	10µm

*Supplied with manufacturer inspection certificate traceable to NIST USA

LARGE STROKE DIGITAL INDICATORS

DATA OUTPUT

Unit: mm

2117-100
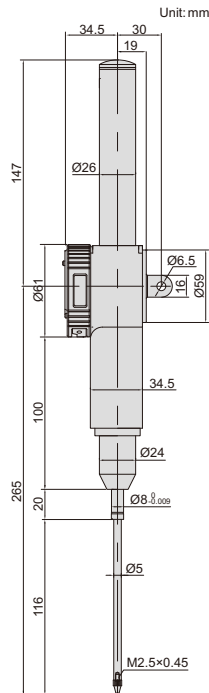
spindle lift knob is included
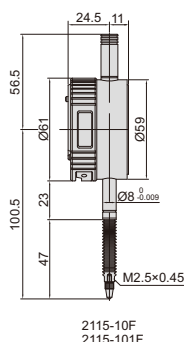
- Button function: on/off, zero, mm/inch
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable, backs, contact points

Resolution 0.01mm/0.0005"

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

Resolution 0.001mm/0.00005"

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

PRECISION DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELED BEARING

Unit: mm
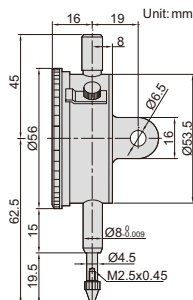
2313-1A

- Graduation: 0.001mm
- Dial reading: 0-100-0
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

Code	Range	Accuracy	Hysteresis	Range/rev	Remark
2313-1FA*	1mm	5μm	2μm	0.2mm	flat back
2313-2FA*	2mm	8μm	2.5μm	0.2mm	flat back
2313-1A*	1mm	5μm	2μm	0.2mm	lug back

*Supplied with manufacturer inspection certificate traceable to NIST USA

BACK PLUNGER TYPE DIGITAL INDICATOR

DATA OUTPUT

INSPECTION CERTIFICATE
TRACEABLE TO NIST

Unit: mm

2118-10
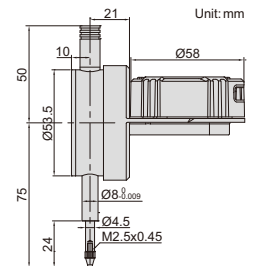
- Display can rotate 320º, and display direction is changeable
- Reading in digital and analog
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Data output, with flat back
- Optional accessory: data output cable, backs, contact points

VIDEO

max./min./TIR

spindle lift knob is included

analog pointer

warning when over tolerance

max./min./TIR measurement

analog pointer

blink

display direction is changeable

default direction

data output is blocked at this direction

battery house is blocked at this direction

Remark: To change above direction, 4 fixing screws on the back of display need to be removed first.

display can rotate 320º

Code	Range	Resolution	Accuracy	Hysteresis
2118-10*	12.7mm/0.5"	0.01mm/0.0005"	20μm	10μm

*Supplied with manufacturer inspection certificate traceable to NIST USA

## COMPACT DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST
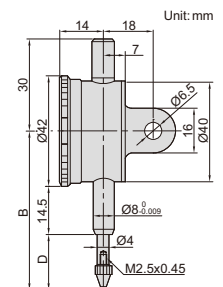
JEWELED BEARING

- Range/rev: 0.5mm
- Dial reading: 0-50
- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

2311-5

Unit: mm

Code	Range	Graduation	Accuracy	Hysteresis	Remark	B	D
2311-3F*	3mm	0.01mm	12μm	3μm	flat back	46	10.5
2311-5F*	5mm	0.01mm	14μm	3μm	flat back	48	12.5
2311-3*	3mm	0.01mm	12μm	3μm	lug back	46	10.5
2311-5*	5mm	0.01mm	14μm	3μm	lug back	48	12.5

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATORS (BASIC TYPE)

INSPECTION CERTIFICATE
TRACEABLE TO NIST

2301-10

Unit: mm

- Graduation: 0.01mm
- Dial reading: 0-100
- Meet DIN878
- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Packed in carton box
- Optional accessory: backs, contact points

carton box

Code	Range	Accuracy	Hysteresis	Range/rev	Remark
2301-10F *	10mm	17µm	3µm	1mm	flat back
2301-10 *	10mm	17µm	3µm	1mm	lug back with spare flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATORS (STANDARD TYPE)

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELED BEARING

2308-10A

Unit: mm

- Graduation: 0.01mm
- Dial reading: 0-100
- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points
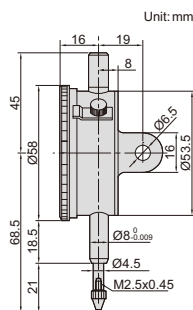
Code	Range	Accuracy	Hysteresis	Range/rev	Remark
2308-3FA *	3mm	12µm	3µm	1mm	flat back
2308-5FA *	5mm	14µm	3µm	1mm	flat back
2308-10FA *	10mm	17µm	3µm	1mm	flat back
2308-3A *	3mm	12µm	3µm	1mm	lug back
2308-5A *	5mm	14µm	3µm	1mm	lug back
2308-10A *	10mm	17µm	3µm	1mm	lug back

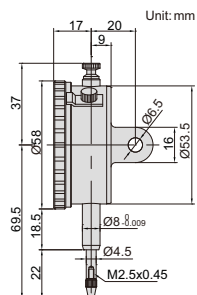*Supplied with manufacturer inspection certificate traceable to NIST USA

SHOCKPROOF DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELED BEARING

SHOCK PROOF

2314-10A

Unit: mm

- Graduation: 0.01mm
- Dial reading: 0-100
- Meet DIN878
- Shockproof
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

Code	Range	Accuracy	Hysteresis	Range/rev	Remark
2314-10FA *	10mm	17µm	3µm	1mm	flat back
2314-10A *	10mm	17µm	3µm	1mm	lug back

*Supplied with manufacturer inspection certificate traceable to NIST USA

WATERPROOF DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST

IP54 WATERPROOF

2324-10A

Unit: mm

- Hysteresis: 3µm
- Dial reading: 0-100
- Meet DIN878
- IP54 dust/waterproof
- With limit pointers
- Optional accessory: back, contact points
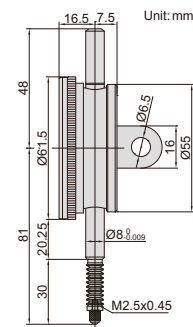
Code	Range	Graduation	Accuracy	Range/rev	Remark
2324-10FA *	10mm	0.01mm	17µm	1mm	flat back
2324-10A *	10mm	0.01mm	17µm	1mm	lug back

*Supplied with manufacturer inspection certificate traceable to NIST USA

BACK PLUNGER TYPE DIAL INDICATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST

handle (included)

- Dial reading: 0-100
- Supplied with handle
- With limit pointers
- Optional accessory: contact points

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

*Supplied with manufacturer inspection certificate traceable to NIST USA

2357-5

Unit: mm

handle

DIAL INDICATOR (BASIC TYPE)

INSPECTION CERTIFICATE
TRACEABLE TO NIST

carton box

- Graduation: 0.01mm
- Dial reading: 0-100
- Supplied with limit pointers and bezel clamp
- Packed in carton box
- Optional accessory: backs, contact points

2302-25F

Unit: mm

Code	Range	Accuracy	Hysteresis	Range/rev	Remark
2302-25F*	25mm	35µm	7µm	1mm	flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA

DOUBLE FACE DIAL INDICATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST

front   back

2328-10

Unit: mm
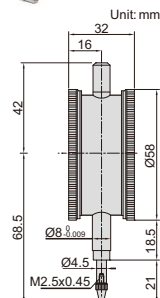
- Graduation: 0.01mm
- Meet DIN878
- Read from both sides
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: contact points

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

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATORS (LONG STROKE)

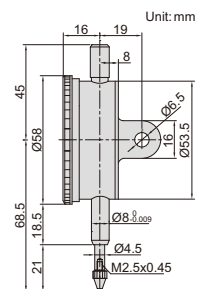**INSPECTION CERTIFICATE**
TRACEABLE TO NIST

2310-30A

Unit: mm
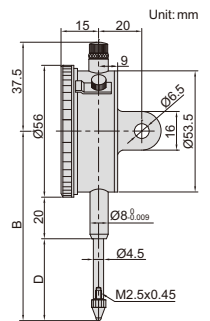
- Graduation: 0.01mm
- Dial reading: 0-100
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

(mm)

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

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATORS (LONG STROKE)
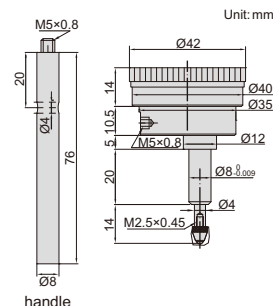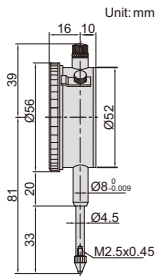
JEWELED BEARING **SHOCK PROOF**

INSPECTION CERTIFICATE
TRACEABLE TO NIST

2309-50

- Range/rev: 1mm
- Dial reading: 0-100
- Shockproof
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: backs, contact points

back of type B

stem clamp Ø10mm of **2309-100D**

Unit: mm
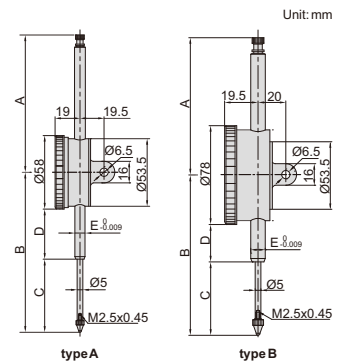
type A   type B

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

(mm)

Code	Type	A	B	C	D	E
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
2309-100D	B	167.6	207.8	108	60.8	Ø10

Note: 1) **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) **2309-30F** can not accept optional backs

*Supplied with manufacturer inspection certificate traceable to NIST USA

ONE REVOLUTION DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST

SHOCK PROOF

2316-05F

- Meet DIN878
- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- With flat back
- Supplied with limit pointers
- Optional accessory: backs, contact points

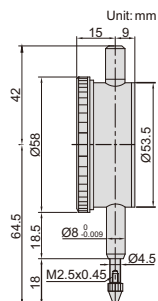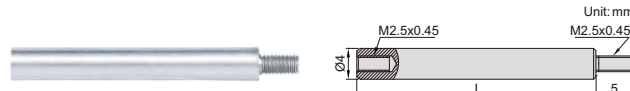| Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2316-05F*	0.5mm	0.01mm	9μm	3μm	25-0-25
2316-1F*	1mm	0.01mm	9μm	3μm	50-0-50

*Supplied with manufacturer inspection certificate traceable to NIST USA

EXTENSION RODS

Unit: mm

6282-2010

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

CONTACT POINTS

Unit: mm
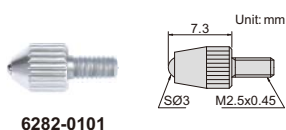
6282-0101

BALL POINT

Code	Material of measuring face	L (mm)
6282-0101	carbide	7.3
6282-0103	ceramic	7.3
6282-0104	carbide	8.3
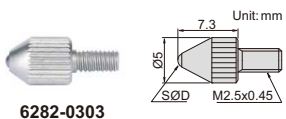
6282-0303

BALL POINT

Code	Material of measuring face	SØD
6282-0301	steel	1mm
6282-0302	carbide	1.5mm
6282-0303	carbide	1.8mm
6282-0304	carbide	2.5mm
6282-0305	carbide	4mm
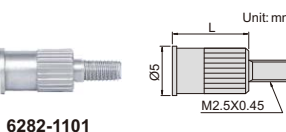
6282-1101

FLAT POINT

Code	Material of measuring face	L
6282-1101	steel	8mm
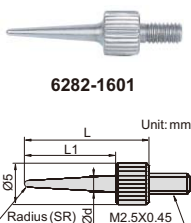
6282-1601

NEEDLE POINT (mm)

Code	Material of measuring face	L1	L	SR	Ød
6282-1601	steel	11	15	0.4	2
6282-1602	steel	13	17	0.2	2
6282-1603	steel	21	25	0.4	3
6282-1604	steel	31	35	0.4	3
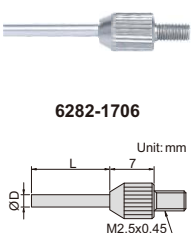
6282-1706

NEEDLE POINT

Code	Material of measuring face	ØD	L
6282-1705	carbide	1mm	8mm
6282-1706	carbide	1mm	10mm
6282-1707	carbide	1mm	20mm
6282-1708	carbide	1mm	40mm
6282-1712	carbide	1.5mm	20mm
6282-1713	carbide	1.5mm	40mm
6282-1714	carbide	2mm	8mm
6282-1715	carbide	2mm	18mm
6282-1716	carbide	2mm	28mm
6282-1717	carbide	2mm	40mm
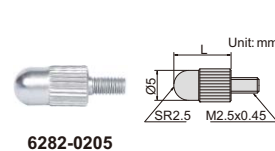
6282-0205

SHELL TYPE POINT

Code	Material of measuring face	L
6282-0205	steel	15mm
6282-0210	steel	30mm
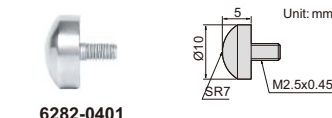
6282-0401

SPHERICAL POINT

Code	Material of measuring face
6282-0401	steel
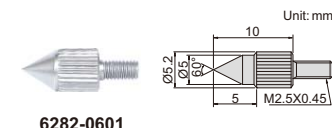
6282-0601

CONICAL POINT

Code	Material of measuring face
6282-0601	steel
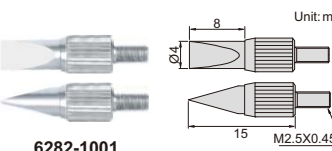
6282-1001

KNIFE EDGE POINT

Code	Material of measuring face
6282-1001	steel
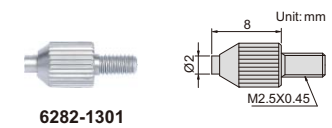
6282-1301

FLAT POINT

Code	Material of measuring face
6282-1301	carbide
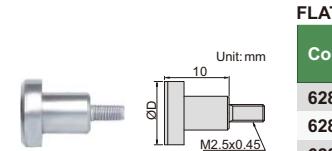
6282-1201

FLAT POINT

Code	Material of measuring face	ØD
6282-1201	steel	10mm
6282-1202	steel	15mm
6282-1203	steel	20mm
6282-1204	steel	25mm
6282-1205	steel	30mm
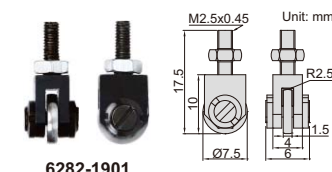
6282-1901

ROLLER POINT

Code	Material of measuring face
6282-1901	steel

LUG BACKS

7330-L2
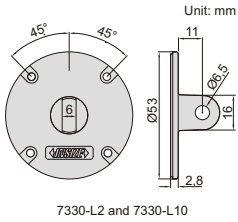
Code	For digital/dial indicators
7330-L1	2311
7330-L2	2308 2309 (except 2309-30, 2309-30F) 2313 2314 2324 2316
7330-L5	2103 2104 2108 2109 2112 2113 2115
7330-L10	2310

Unit: mm

7330-L2 and 7330-L10

BACK PLUNGER TYPE DIAL TEST INDICATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELED BEARING

Unit: mm

2398-08

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli

clamps (included)

Unit: mm
Ø8   Ø4

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

＊Supplied with manufacturer inspection certificate traceable to NIST USA

TILTED FACE TYPE DIAL TEST INDICATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELED BEARING

Unit: mm

2399-08

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli

clamps (included)

Unit: mm
Ø8   Ø4
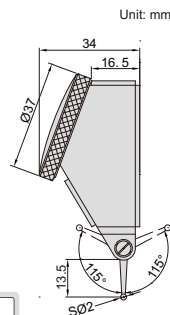
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2399-08＊	0.8mm	0.01mm	13µm	3µm	0-40-0

＊Supplied with manufacturer inspection certificate traceable to NIST USA

SPINDLE LIFT KNOB

7332

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

Code
7332

DIAL TEST INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELED BEARING

2380-08

- Meet DIN2270 (except **2380-02**, **2381-02**)
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli

clamps (included)
Unit: mm
Ø8   Ø4

Unit: mm

Graduation: 0.01mm **(mm)**

Code	Range	Accuracy	Hysteresis	Dial reading	A	L
2380-08＊	0.8mm	13µm	3µm	0-40-0	Ø30	13.5
2381-08＊	0.8mm	13µm	3µm	0-40-0	Ø37	13.5

Graduation: 0.002mm **(mm)**

Code	Range	Accuracy	Hysteresis	Dial reading	A	L
2380-02＊	0.2mm	6µm	2µm	0-100-0	Ø30	12.5
2381-02＊	0.2mm	6µm	2µm	0-100-0	Ø37	12.5

＊Supplied with manufacturer inspection certificate traceable to NIST USA

LONG STYLI DIAL TEST INDICATOR

JEWELED BEARING

INSPECTION CERTIFICATE
TRACEABLE TO NIST

2383-08A

clamps (included)
Unit: mm
Ø8   Ø4

Unit: mm

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli

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

＊Supplied with manufacturer inspection certificate traceable to NIST USA

LARGE RANGE DIAL TEST INDICATOR
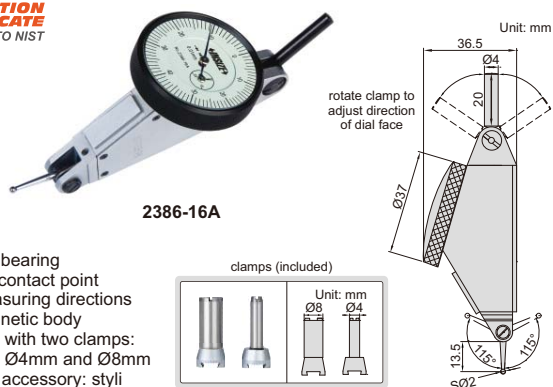
INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELED BEARING

2386-16A

Unit: mm

rotate clamp to adjust direction of dial face

clamps (included)
Unit: mm
Ø8 Ø4

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli
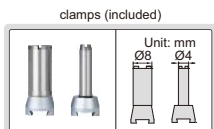
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2386-16A*	1.6mm	0.01mm	25µm	8µm	0-40-0

*Supplied with manufacturer inspection certificate traceable to NIST USA

LARGE RANGE BACK PLUNGER TYPE DIAL TEST INDICATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELED BEARING

2480-16

Unit: mm

rotate clamp to adjust direction of dial face

clamps (included)
Unit: mm
Ø8 Ø4
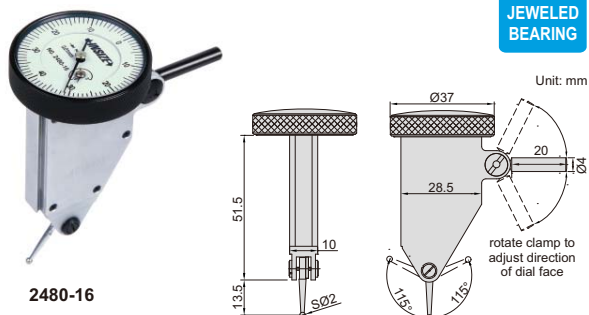
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli
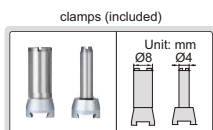
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2480-16*	1.6mm	0.01mm	18µm	3µm	0-40-0

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL TEST INDICATOR HOLDERS

6293-1

6293-2

dovetail groove stem hole Ø4 stem hole Ø8
Unit: mm
6293-1/6293-6
A-A
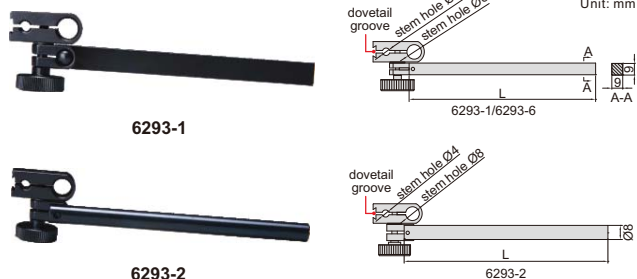
dovetail groove stem hole Ø4 stem hole Ø8
6293-2

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

ROUND BODY DIAL TEST INDICATOR

Unit: mm

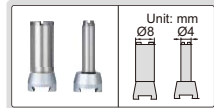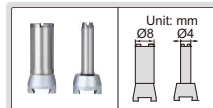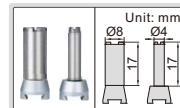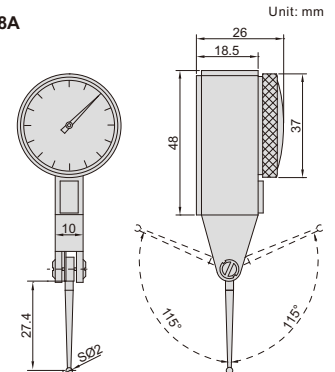INSPECTION CERTIFICATE
TRACEABLE TO NIST
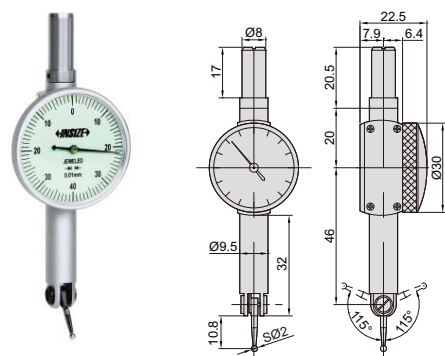
JEWELED BEARING

2391-08

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Adjustable two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli

clamps (included)
Unit: mm
Ø8 Ø4
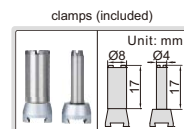
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2391-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

*Supplied with manufacturer inspection certificate traceable to NIST USA

CLAMPS FOR DIAL TEST INDICATORS

Unit: mm

Code	ØD
6298-1	Ø4mm
6298-2	Ø8mm

6298-1   **6298-2**

ØD

STYLI FOR DIAL TEST INDICATORS

6284-3

M1.6x0.35mm

(mm)
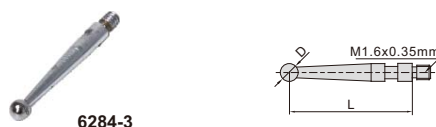
Code	For dial test indicator	Material of contact point	L	D
6284-1	2380-08	steel	13.5	SØ1
6284-3	2398-08	carbide	13.5	SØ2
6284-4	2381-08	ruby	13.5	SØ2
6284-8	2399-08	carbide	13.5	SØ3
6284-21	2380-02	steel	12.5	SØ1
6284-22	2381-02	carbide	12.5	SØ2
6284-71	2391-08	carbide	10.8	SØ2

DIAL TEST INDICATOR UNIVERSAL HOLDER

6297-1

- Set the indicators at the desired attitude to the workpiece

dovetail groove Unit: mm
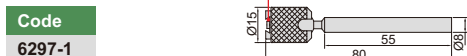
Code
6297-1

DIAL TEST INDICATOR HOLDER

Unit: mm

6296-1

■ Supplied with hex key

Code
6296-1

stem hole Ø8
stem hole Ø6
stem hole Ø4
dovetail groove
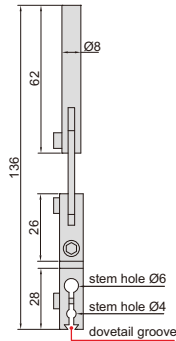
DIAL TEST INDICATOR CENTERING HOLDER

Unit: mm

6291-1

■ Center cylinders or holes on machine tools

Code
6291-1

dovetail groove
stem hole Ø4
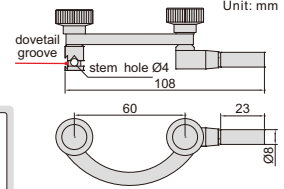
DIAL GAGE TESTER
CODE 2396-25A

■ To calibrate dial indicators, test indicators and dial bore gages
■ Dimension: 270x210x205mm
■ Weight: 11kg

ATTENTION: NOT SUITABLE FOR GAGES WITH GRADUATION 0.001MM

V clamp — stand for bore gage
stand for dial indicator
micrometer head
stem hole Ø8mm
platform
force gage
height adjustment (for force gage)
base

2396-25A

VIDEO

Micrometer head

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

Force gage

Range	Graduation	Accuracy
0-1.6N	0.05N	±5% (of load capacity)

Platform

Diameter	Flatness	Roughness
50mm	1µm	0.05µm

half round gage block
code **2396-block** (**optional**)

Half round gage block (optional)

Code	Parallelism
2396-block	1µm

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

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

Inspect accuracy of test indicators

Test force of dial indicators

Test repeatability of dial indicators

Test the effect of lateral force on accuracy of dial indicators (half round gage block is required)
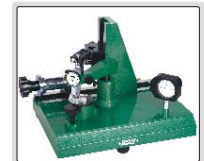
Test the effect of lateral force on accuracy of test indicators (half round gage block is required)

UNIVERSAL MAGNETIC STANDS

■ For digital/dial indicators and dial test indicators

6210-81

dovetail groove
stem hole Ø8
Ø9
Ø10
M8x1.25
150
50(W)x60(D)
6210-81

6210-80

dovetail groove
stem hole Ø8
Ø10
Ø12
M8x1.25
150
50(W)x60(D)
6210-80

Unit: mm
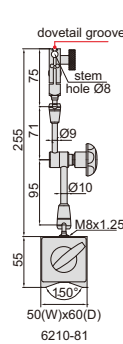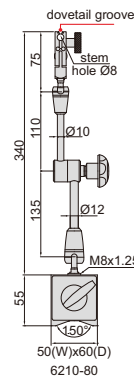
dovetail groove
stem hole Ø8
Ø10
Ø12
M8x1.25
150
50(W)x75(D)
6210-100
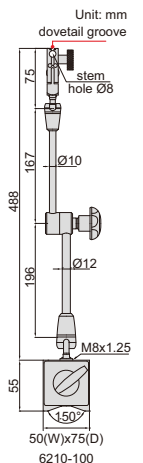
6210-100

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

MAGNETIC STANDS

6200-60

6201-60

6202-80

6202-100

20° adjustable

stem hole Ø4
stem hole 3/8" DIA. with bush Ø8
Ø10
Ø12
M8x1.25
150°
50(W)x60(D)
6200-60
176 / 165 / 55

stem hole Ø4
stem hole 3/8" DIA. with bush Ø8
Ø10
Ø12
M8x1.25
150°
50(W)x60(D)
6201-60
176 / 150 / 55

stem hole Ø4
stem hole 3/8" DIA. with bush Ø8
Ø12
Ø16
M8x1.25
150°
50(W)x60(D)
6202-80
225 / 200 / 55

Unit: mm
stem hole Ø4
stem hole 3/8" DIA. with bush Ø8
Ø12
Ø20
M10x1.25
150°
50(W)x73(D)
6202-100
355 / 220 / 55
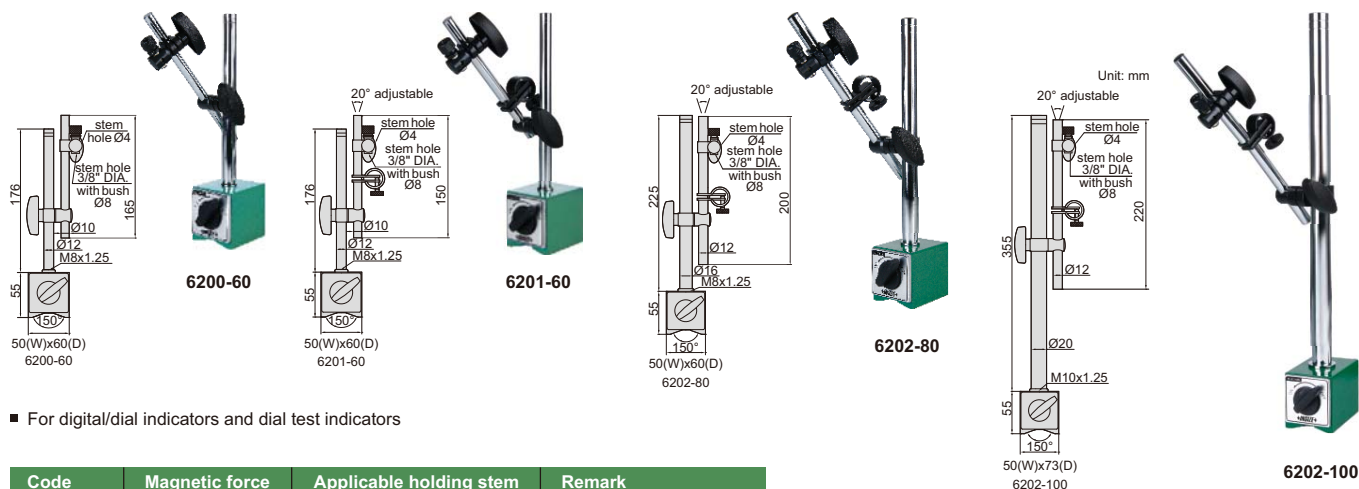
- For digital/dial indicators and dial test indicators

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 (ECONOMIC TYPE)

ATTENTION: LOW LOCKING FORCE

dovetail groove
Unit: mm
stem hole Ø8
Ø10
Ø12
M8x1.25
150°
50(W)x63(D)
355 / 75 / 125 / 144 / 55

- Applicable holding stem: Ø8mm
- For digital/dial indicators and dial test indicators
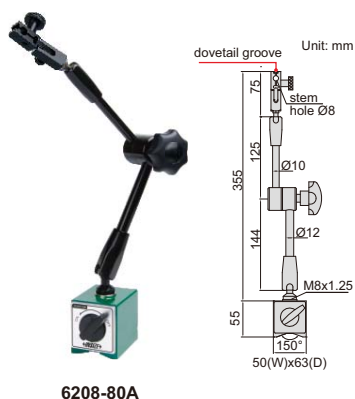
6208-80A

Code	Magnetic force	Remark
6208-80A	80kgf	with fine adjustment and dovetail groove

FLEX ARM MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

Unit: mm
stem hole Ø4
stem hole 3/8" DIA. with bush Ø8
Ø16
150°
50(W)x60(D)
330 / 55

- For dial test indicators
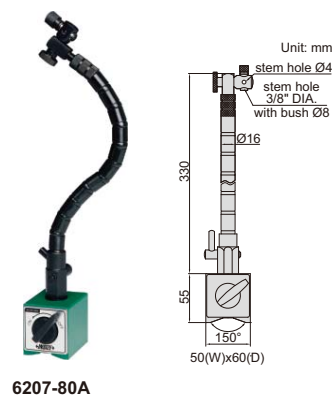
6207-80A

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

MAGNETIC STAND WITH DOUBLE FINE ADJUSTMENT

fine adjustment
fine adjustment

dovetail groove
Unit: mm
stem hole Ø8
Ø9
Ø10 fine adjustment
M8x1.25
150°
50(W)x60(D)
255 / 75 / 71 / 95 / 55

- Magnetic force: 80kgf
- With double fine adjustments on the head and on the base
- For digital/dial indicators and dial test indicators
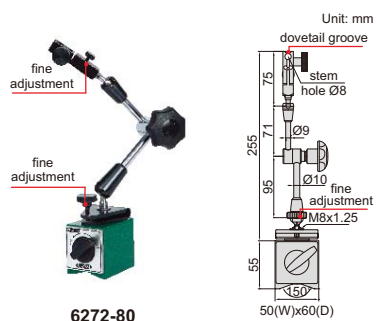
6272-80

Code	Applicable holding stem	Remark
6272-80	Ø8mm	with double fine adjustment and dovetail groove

VACUUM STAND

VIDEO

Unit: mm
dovetail groove
stem hole Ø8
Ø9
Ø10
M8x1.25
Ø80
Ø90
255 / 75 / 71 / 95 / 28

- Diameter of vacuum disc: Ø80mm
- Suitable for granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators
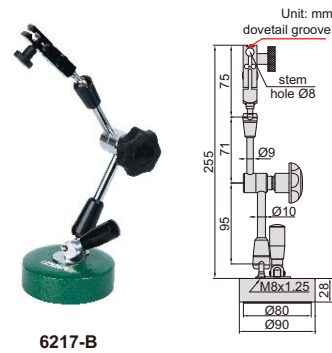
6217-B

Code	Vacuum force	Applicable holding stem	Remark
6217-B	80kgf	Ø8mm	with fine adjustment and dovetail groove

MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

Unit: mm

- dovetail groove
- stem hole Ø6
- stem hole Ø8
- 75
- 50
- 25
- Ø6
- Ø30

- For dial test indicators
- With dovetail groove
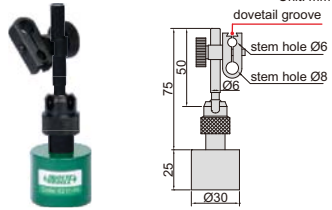
6211-10

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

MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

Unit: mm

- dovetail groove
- stem hole Ø8
- 75
- 192
- 47
- 57
- 36
- Ø8
- Ø9
- 150°
- 30(W)x36(D)

- For dial test indicators
- With fine adjustment and dovetail groove
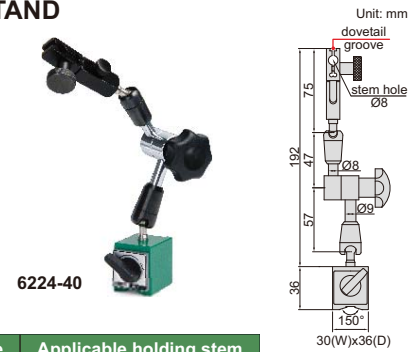
6224-40

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

GRANITE DIAL INDICATOR STAND

Unit: mm

- Ø30
- holder
- fine adjustment
- stem hole Ø8
- 74
- 225
- 54
- base
- 200(W)x150(D)

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

6866-150

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

DIAL INDICATOR STAND

Unit: mm

- fine adjustment
- Ø24
- holder
- stem hole Ø8
- 68
- 182
- plain anvil
- Ø58
- 20
- 47
- 160
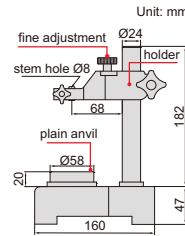
- Vertical travel of holder: 100mm
- Fine adjustment range: 2mm
- Applicable holding stem: Ø8mm
- Supplied with dust cover

6862-1002

Code	Anvil
6862-1002	plain, flatness 1.5µm, hardness HRC60±2

DIAL INDICATOR STAND

Unit: mm

- Ø30
- holder
- fine adjustment
- stem hole Ø8
- 74
- 225
- serrated anvil
- 90(W)x95(D)
- 20
- 42
- 183
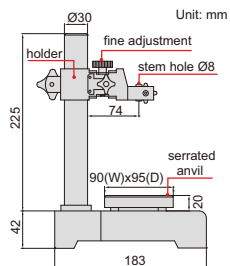
6863-150

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

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

DIGITAL HIGH PRECISION HEIGHT GAUGES

- Measuring force: 1.0~1.5N
- Power suppy: 5V/1A (adapter or charge pal)
- High stability, high precision, high response speed (5000mm/s)
- High brightness LED display
- Ceramic base flatness:1µm

foot switch
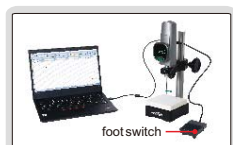
data transfer to Excel without software

power supplied by charge pal

LED display

mm/inch

on/off, zero

ceramic base(wear off and corrosion resistance)

spindle lift knob

1155-505

STANDARD DELIVERY

Main unit	1 pc

Unit: mm

- Ø35
- 80
- 355
- 130×130
- 45
- 195

Code	Range	Resolution	Accuracy (20°C)	Output
1155-505	0~50mm	0.5µm/0.00002" (can switch to:1µm/0.00005")	1.5µm	USB
1155-510	0~50mm	0.1µm/0.000005" (can switch to:1µm/0.00005")	1µm	USB
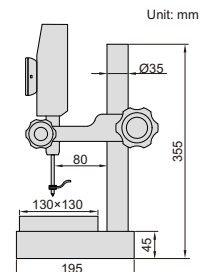
OPTIONAL ACCESSORY

Contact point	code 6282
Charge pal	1155-5-POB
Data output cables (including foot switch)	1155-5-FOS

CONCENTRICITY GAGES

4789-1
Unit: mm

17
Ø22.4
Ø15
9

4789-3
Unit: mm

1.6 13.4
Ø22.4
Ø12
Ø15
2
9

To ensure the accuracy, the distance between measuring point and roller should be less than 30mm

driving wheel
<30mm
roller

Unit: mm

stem hole Ø8   dovetail groove
driving wheel
roller
80
M8x1.25
250(W)x78(D)

can add other magnetic stands

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

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

DIGITAL INTERNAL CALIPER GAGES

analog pointer

analog pointer
0.005

tolerance display

analog pointer   upper limit
lower limit
judgement
0.010

2121-15

max./min.

max.
min.

max./min. measurement

Unit: mm

A   W
30°
R
A   A-A
L
Ø50

- Resolution: 0.005mm/0.0002"
- Repeatability: 0.01mm
- Reading in digit and analog
- Display can be rotated by 170º
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output

(mm)

Code	Range	Accuracy	Repeatability	L	H	W	R
2121-15	5-15mm/0.2-0.6"	±0.03mm	0.01mm	20	2	1.5	R0.3
2121-25	5-25mm/0.2-1.0"	±0.03mm	0.01mm	35	1.5	1.0	R0.3
2121-31	10-30mm/0.4-1.2"	±0.03mm	0.01mm	55	5.5	2.5	R0.5
2121-41	20-40mm/0.8-1.6"	±0.03mm	0.01mm	80	6.0	3.0	R0.5

Sizes available up to 60mm

CONCENTRICITY GAGE

for cylinder

for tube

4786-1

Unit: mm

stem hole Ø8   dovetail groove
chuck
Ø85
Ø16
Ø30
133
100
83
M8x1.25
300(L) x 200(W)

To ensure the accuracy, the distance between measuring point and chuck should be less than 50mm

<50mm
chuck

- Accuracy: 8µm
- Optional accessory:
  dial test indicator

Code	Applicable inside diameter	Applicable outside diameter
4786-1	Ø24-64mm	±0.03mm

BENCH CENTER (BASIC TYPE)

V-slot   V-slot

4782-300

- Runout accuracy: 2µm
- Distance between two centers: 300mm
- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder Ø4~Ø22mm

Unit: mm

column
dovetail groove
stem hole Ø8
Ø20
Ø14
tailstock
tailstock
18
20
243.5
Ød
guide surface
80
161
300
550(W)x130(D)

Code	Parallelism*	Center height	Diameter of center (Ød)	Load
4782-300	0.01mm	80mm	Ø16mm	25kg

*Parallelism of two centers to the guide surface

INTERNAL DIAL CALIPER GAGES

Unit: mm

2222-15

A   W
H
30°
R
A   A-A
L
Ø67

(mm)

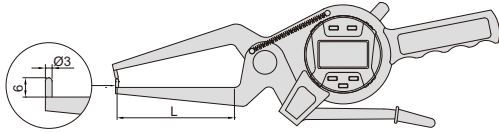| Code	Range	Graduation	Accuracy	L	H	W	R
2222-15	5-15mm	0.01mm	±0.02mm	20	2	1.5	R0.3
2222-25	5-25mm	0.01mm	±0.03mm	35	1.5	1.0	R0.3
2222-301	10-30mm	0.01mm	±0.03mm	55	5.5	2.5	R0.5
2222-401	20-40mm	0.01mm	±0.03mm	80	6.0	3.0	R0.5

Sizes available up to 60mm

DIGITAL EXTERNAL CALIPER GAGE
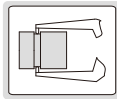
DATA OUTPUT

2132-20

Unit: mm

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

Code	Range	Resolution	Accuracy	L (mm)
2132-20	0-20mm/0-0.8"	0.01mm/0.0005"	±0.04mm	60

Sizes available up to 100mm

EXTERNAL DIAL CALIPER GAGE

2333-201

Unit: mm

(mm)

Code	Range	Graduation	Accuracy	L	H	W	R
2333-201	0-20mm	0.01mm	±0.03mm	80	25	6.5	R0.5

Sizes available up to 60mm

DIGITAL THICKNESS GAGES

DATA OUTPUT

Unit: mm

2871-101

- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable

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

DIGITAL EXTERNAL CALIPER GAGE

2131-21

Unit: mm
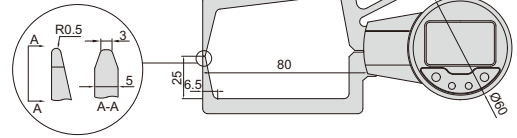
max./min.

max./min. measurement
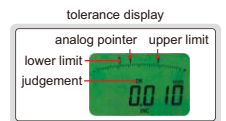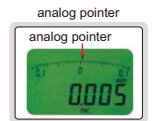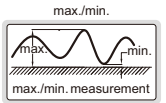
- Resolution: 0.005mm/0.0002"
- Repeatability: 0.01mm
- Reading in digit and analog
- Display can be rotated by 170º
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output

analog pointer

analog pointer

tolerance display

analog pointer   upper limit
lower limit
judgement

Code	Range	Accuracy
2131-21	0-20mm/0-0.8"	±0.03mm

Sizes available up to 60mm

THICKNESS GAGES

Unit: mm
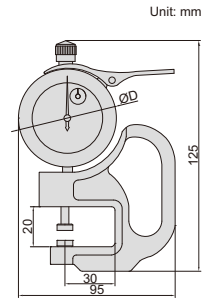
2364-10   **2364-1**

Code	Range	Graduation	Accuracy	ØD
2364-10	0-10mm	0.01mm	±0.02mm	58mm
2364-1	0-1mm	0.001mm	±0.005mm	56mm

Ø10 ceramic

Ø10 ceramic

DIGITAL THICKNESS GAGE

DATA OUTPUT

Unit: mm

2872-10

- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
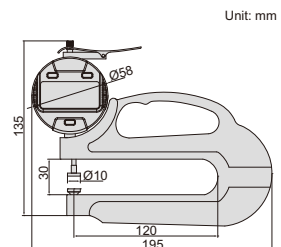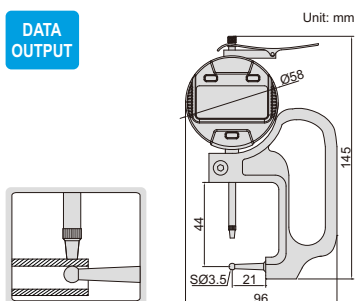- Data output
- Optional accessory: data output cable

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

DIGITAL TUBE THICKNESS GAGE
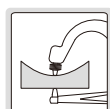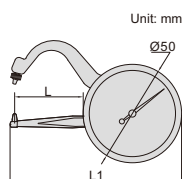
DATA OUTPUT

Unit: mm

2876-10

- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable

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

THICKNESS GAGE

Unit: mm

Ø50

2862-101

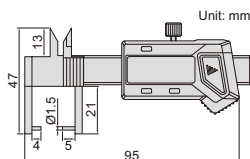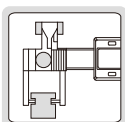| Code	Range	Graduation	Accuracy	L	L1
2862-101	0-10mm	0.05mm	±0.1mm	35mm	85mm

DIGITAL 3-PURPOSE SNAP GAGE

ATTENTION: NO DATA OUTPUT

SUITABLE FOR JEWELLERY

2164-25A

Unit: mm

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

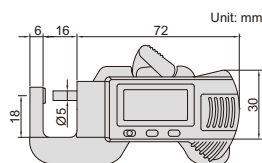| Code	Range	Accuracy
2164-25A	0-25mm/0-1"	±0.03mm

DIGITAL SNAP GAGE

DATA OUTPUT

2166-12

Unit: mm

- Optional accessory: data output cable

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

THICKNESS GAGE

SUITABLE FOR JEWELLERY

Unit: mm

Lie-down use for small articles on the table
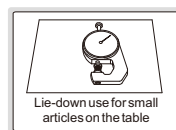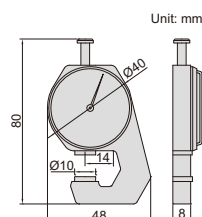
2361-10

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

DIAL SNAP GAGE (ECONOMIC TYPE)

IP54 WATERPROOF

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

3334-25

Unit: mm
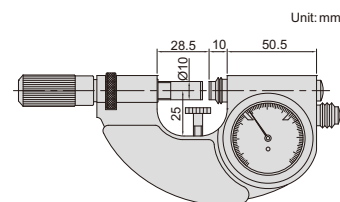
Code	Range
3334-25	0-25mm

Sizes available up to 100mm

STEP AND GAP GAGE

DATA OUTPUT

front **2168-12** back

zero setting block (included)

- Measure step height and gap width
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with zero setting block
- Optional accessory: data output cable

Unit: mm

step height   gap width
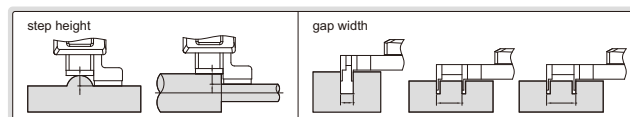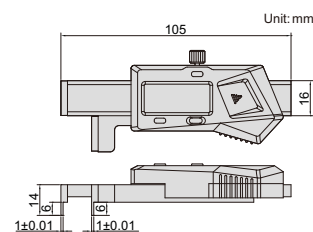
Code	Range	Resolution	Accuracy
2168-12	0-12.7mm/0-0.5"	0.01mm/0.0005"	±0.03mm

CRANKSHAFT TESTERS

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
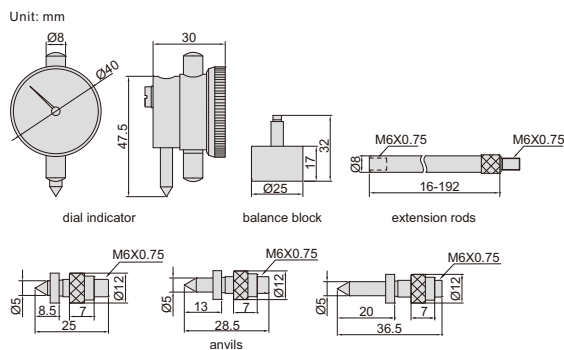
2841-500

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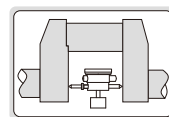
INDIVIDUAL STEEL GAGE BLOCKS

INSPECTION CERTIFICATE

CUSTOM-MADE
CAN SUPPLY ANY SIZES FROM 0.5 TO 1000MM,
SUCH AS 72.672MM

Unit: mm

without clamping hole   with clamping holes

4101-A70   4101-A200

- Grade 0, 1 and 2 gage blocks are available
- Made of alloy steel
- Meet ISO3650
- Gage blocks ≥125mm have clamping holes
- Supplied with manufacturerinspection certificate

Dimension: (mm)

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

Grade 0 (mm)

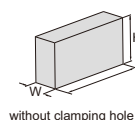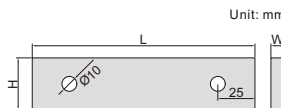| Code	Size
4101-A1	1
4101-A10	10
4101-A100	100

Grade 2 (mm)

Code	Size
4101-C1	1
4101-C10	10
4101-C100	100
4101-C200	200
4101-C250	250
4101-C300	300

| Grade 1	(mm)	Grade 1	(mm)	Grade 1	(mm)	Grade 1	(mm)	Grade 1	(mm)
Code	Size	Code	Size	Code	Size	Code	Size	Code	Size
4101-BD5	0.5	4101-B1D12	1.12	4101-B1D4	1.4	4101-B5	5	4101-B22	22
4101-B1	1	4101-B1D15	1.15	4101-B1D42	1.42	4101-B5D5	5.5	4101-B23	23
4101-B1D001	1.001	4101-B1D16	1.16	4101-B1D43	1.43	4101-B6	6	4101-B25	25
4101-B1D002	1.002	4101-B1D18	1.18	4101-B1D45	1.45	4101-B7	7	4101-B30	30
4101-B1D003	1.003	4101-B1D19	1.19	4101-B1D46	1.46	4101-B7D5	7.5	4101-B35	35
4101-B1D004	1.004	4101-B1D2	1.2	4101-B1D47	1.47	4101-B8	8	4101-B40	40
4101-B1D005	1.005	4101-B1D21	1.21	4101-B1D48	1.48	4101-B8D5	8.5	4101-B45	45
4101-B1D006	1.006	4101-B1D22	1.22	4101-B1D49	1.49	4101-B9	9	4101-B50	50
4101-B1D009	1.009	4101-B1D24	1.24	4101-B1D5	1.5	4101-B9D5	9.5	4101-B60	60
4101-B1D01	1.01	4101-B1D25	1.25	4101-B1D6	1.6	4101-B10	10	4101-B70	70
4101-B1D02	1.02	4101-B1D26	1.26	4101-B1D7	1.7	4101-B11	11	4101-B75	75
4101-B1D03	1.03	4101-B1D27	1.27	4101-B1D8	1.8	4101-B12	12	4101-B80	80
4101-B1D04	1.04	4101-B1D3	1.3	4101-B1D9	1.9	4101-B13	13	4101-B90	90
4101-B1D05	1.05	4101-B1D32	1.32	4101-B2	2	4101-B14	14	4101-B100	100
4101-B1D06	1.06	4101-B1D33	1.33	4101-B2D5	2.5	4101-B15	15	4101-B125	125
4101-B1D07	1.07	4101-B1D34	1.34	4101-B3	3	4101-B16	16	4101-B131D4	131.4
4101-B1D08	1.08	4101-B1D35	1.35	4101-B3D5	3.5	4101-B18	18	4101-B150	150
4101-B1D09	1.09	4101-B1D36	1.36	4101-B4	4	4101-B20	20		
4101-B1D1	1.1	4101-B1D37	1.37	4101-B4D5	4.5	4101-B21	21		

Sizes available up to 1000mm

STEEL GAGE BLOCK SETS

- Made of alloy steel
- Meet ISO3650
- Gage blocks ≥ 125mm have clamping holes
- Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

4100-87

Unit: mm

without clamping hole

with clamping hole
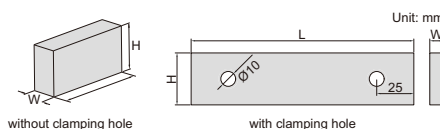
Dimension:		(mm)
Size (L)	W	H
0.5≤L≤10mm	9	30
L>10mm	9	35

Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 1	Grade 2
122	1.0005 1.001-1.009 1.01-1.49 1.6-1.9 0.5-24.5 30-100 25-75	0.001 0.01 0.1 0.5 10 50	1 9 49 4 49 8 2	4100-1122	
112	1.0005 1.001-1.009 1.01-1.49 0.5-24.5 25-100	0.001 0.01 0.5 25	1 9 49 49 4	4100-1112	4100-2112
103	1.005 1.01-1.49 0.5-24.5 25-100	0.01 0.5 25	1 49 49 4	4100-1103	4100-2103

Blocks per set	Gage blocks included in set			Code		
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1	Grade 2
87	1.001-1.009 1.01-1.49 0.5-9.5 10-100	0.001 0.01 0.5 10	9 49 19 10	4100-87	4100-187	4100-287
47	1.005 1.01-1.19 1.2-1.9 1-9 10-100	0.01 0.1 1 10	1 19 8 9 10	4100-47	4100-147	4100-247
32	1.005 1.01-1.09 1.1-1.9 1-9 10-30 50	0.01 0.1 1 10	1 9 9 9 3 1	4100-32	4100-132	4100-232
8	125-175 200-250 300-500	25 50 100	3 2 3		4100-18	

PIN GAGE HANDLES

handle

brass
(0.2~7.14mm)

aluminum
(7.14~25.65mm)

clamping bush

handle

pin gage (go)　　clamping bush　　pin gage (no go)

before assembly

after assembly

- Wrench is needed to install pins
- Clamping bushes (0.2~7.14mm) are made of brass, clamping bushes (7.14~25.65mm) are made of aluminum

Code	Applicable pin gage diameter	Including	
		Handle	Clamping bush (mm)
7341-0S	0.2-1.02mm	1 pc	6 pairs (the clamping range are 0.2-0.38, 0.38-0.51, 0.51-0.64, 0.64-0.76, 0.76-0.89, 0.89-1.02)
7341-1S	1.02-1.91mm	1 pc	7 pairs (the clamping range are 1.02-1.14, 1.14-1.27, 1.27-1.40, 1.40-1.52, 1.52-1.65, 1.65-1.78, 1.78-1.91)
7341-2S	1.91-3.33mm	1 pc	8 pairs (the clamping range are 1.91-2.08, 2.08-2.26, 2.26-2.44, 2.44-2.62, 2.62-2.79, 2.79-2.97, 2.97-3.15, 3.15-3.33)
7341-3S	3.33-4.57mm	1 pc	7 pairs (the clamping range are 3.33-3.51, 3.51-3.68, 3.68-3.86, 3.86-4.04, 4.04-4.22, 4.22-4.39, 4.39-4.57)
7341-4S	4.57-5.79mm	1 pc	6 pairs (the clamping range are 4.57-4.78, 4.78-4.98, 4.98-5.18, 5.18-5.38, 5.38-5.59, 5.59-5.79)
7341-5S	5.79-7.14mm	1 pc	6 pairs (the clamping range are 5.79-5.99, 5.99-6.20, 6.20-6.40, 6.40-6.63, 6.63-6.88, 6.88-7.14)
7341-6S	7.14-8.66mm	1 pc	6 pairs (the clamping range are 7.14-7.39, 7.39-7.65, 7.65-7.90, 7.90-8.15, 8.15-8.41, 8.41-8.66)
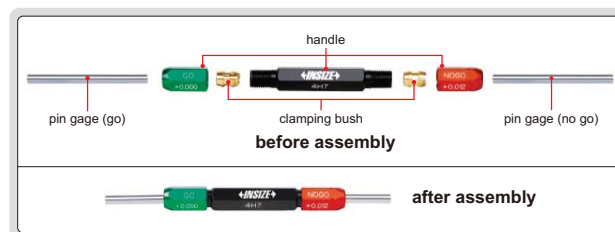
| Code	Applicable pin gage diameter	Including	
		Handle	Clamping bush (mm)
7341-7S	8.66-10.31mm	1 pc	6 pairs (the clamping range are 8.66-8.92, 8.9 -9.17, 9.17-9.42, 9.42-9.70, 9.70-10.01, 10.01-10.31)
7341-8S	10.31-11.81mm	1 pc	4 pairs (the clamping range are 10.31-10.67, 10.67-11.05, 11.05-11.43, 11.43-11.81)
7341-9S	11.81-12.95mm	1 pc	3 pairs (the clamping range are 11.81-12.19, 12.19-12.57, 12.57-12.95)
7341-10S	12.95-14.71mm	1 pc	4 pairs (the clamping range are 12.95-13.51, 13.51-13.89, 13.89-14.30, 14.30-14.71)
7341-11S	14.71-16.13mm	1 pc	4 pairs (the clamping range are 14.71-15.09, 15.09-15.49, 15.49-15.88, 15.88-16.13)
7341-12S	16.13-17.88mm	1 pc	4 pairs (the clamping range are 16.13-16.66, 16.66-17.07, 17.07-17.48, 17.48-17.88)
7341-13S	17.88-19.30mm	1 pc	4 pairs (the clamping range are 17.88-18.26, 18.26-18.67, 18.67-19.05, 19.05-19.30)
7341-15S	19.30-25.65mm	1 pc	8 pairs (the clamping range are 19.30-19.84, 19.84-20.62, 20.62-21.41, 21.41-22.23, 22.23-23.03, 23.03-23.80, 23.80-24.59, 24.59-25.65)

PIN GAGE SETS

Code	Diameter Ød	Step	Pin gages per set
4166-411	1.0mm, 1.1mm, 1.2mm, ···· 5.0mm	0.1mm	41
4166-511	5.0mm, 5.1mm, 5.2mm, ···· 10.0mm	0.1mm	51
4166-512	10.0mm, 10.1mm, 10.2mm, ···· 15.0mm	0.1mm	51
4166-513	15.0mm, 15.1mm, 15.2mm, ···· 20.0mm	0.1mm	51

Code	Diameter Ød	Step	Pin gages per set
4166-2S	1.00mm, 1.01mm, 1.02mm, ···· 2.00mm	0.01mm	101
4166-3S	2.00mm, 2.01mm, 2.02mm, ···· 3.00mm	0.01mm	101
4166-4S	3.00mm, 3.01mm, 3.02mm, ···· 4.00mm	0.01mm	101
4166-5S	4.00mm, 4.01mm, 4.02mm, ···· 5.00mm	0.01mm	101
4166-6S	5.00mm, 5.01mm, 5.02mm, ···· 6.00mm	0.01mm	101
4166-7S	6.00mm, 6.01mm, 6.02mm, ···· 7.00mm	0.01mm	101
4166-8S	7.00mm, 7.01mm, 7.02mm, ···· 8.00mm	0.01mm	101
4166-9S	8.00mm, 8.01mm, 8.02mm, ···· 9.00mm	0.01mm	101
4166-10S	9.00mm, 9.01mm, 9.02mm, ···· 10.00mm	0.01mm	101

Unit: mm

Ød

50

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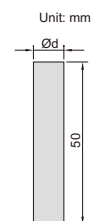
Code	Diameter Ød	Step	Pin gages per set
4166-0D	0.20mm, 0.21mm, 0.22mm, ···· 0.50mm	0.01mm	31
4166-1	0.50mm, 0.51mm, 0.52mm, ···· 1.00mm	0.01mm	51
4166-1D	1.00mm, 1.01mm, 1.02mm, ···· 1.50mm	0.01mm	51
4166-2	1.50mm, 1.51mm, 1.52mm, ···· 2.00mm	0.01mm	51
4166-2D	2.00mm, 2.01mm, 2.02mm, ···· 2.50mm	0.01mm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

| Code	Diameter Ød	Step	Pin gages per set
4166-10D	10.00mm, 10.01mm, 10.02mm, ···· 10.50mm	0.01mm	51
4166-11	10.50mm, 10.51mm, 10.52mm, ···· 11.00mm	0.01mm	51
4166-11D	11.00mm, 11.01mm, 11.02mm, ···· 11.50mm	0.01mm	51
4166-12	11.50mm, 11.51mm, 11.52mm, ···· 12.00mm	0.01mm	51
4166-12D	12.00mm, 12.01mm, 12.02mm, ···· 12.50mm	0.01mm	51
4166-13	12.50mm, 12.51mm, 12.52mm, ···· 13.00mm	0.01mm	51
4166-13D	13.00mm, 13.01mm, 13.02mm, ···· 13.50mm	0.01mm	51
4166-14	13.50mm, 13.51mm, 13.52mm, ···· 14.00mm	0.01mm	51
4166-14D	14.00mm, 14.01mm, 14.02mm, ···· 14.50mm	0.01mm	51
4166-15	14.50mm, 14.51mm, 14.52mm, ···· 15.00mm	0.01mm	51
4166-15D	15.00mm, 15.01mm, 15.02mm, ···· 15.50mm	0.01mm	51
4166-16	15.50mm, 15.51mm, 15.52mm, ···· 16.00mm	0.01mm	51
4166-16D	16.00mm, 16.01mm, 16.02mm, ···· 16.50mm	0.01mm	51
4166-17	16.50mm, 16.51mm, 16.52mm, ···· 17.00mm	0.01mm	51
4166-17D	17.00mm, 17.01mm, 17.02mm, ···· 17.50mm	0.01mm	51
4166-18	17.50mm, 17.51mm, 17.52mm, ···· 18.00mm	0.01mm	51
4166-18D	18.00mm, 18.01mm, 18.02mm, ···· 18.50mm	0.01mm	51
4166-19	18.50mm, 18.51mm, 18.52mm, ···· 19.00mm	0.01mm	51
4166-19D	19.00mm, 19.01mm, 19.02mm, ···· 19.50mm	0.01mm	51
4166-20	19.50mm, 19.51mm, 19.52mm, ···· 20.00mm	0.01mm	51

PLAIN PLUG GAGES
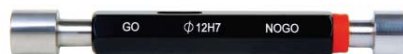
4124-12

- Supplied with Go and No-Go gages together
- Class H7
- Hardness HRC 60±2
- Standard DIN7150-2

Type A

Type B

Type A

Type B
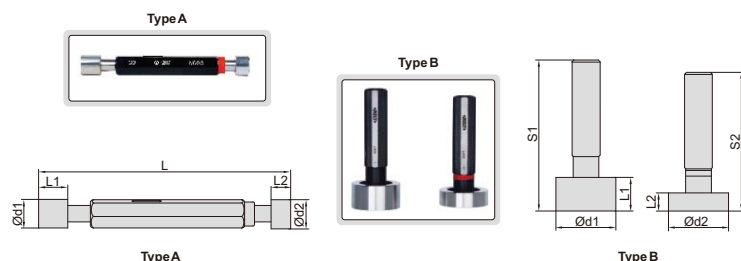
Size tolerance of H7						(mm)
Diameter Ød	Size tolerance of Go gage (μm)	Size tolerance of No-Go gage (μm)	L1	L2	L	S1, S2
≥2, ≤3	+0.5 / +2.5	+9 / +11	6.5	4.5	62	–
>3, ≤6	+0.75 / +3.25	+10.75 / +13.25	8	6	74	–
>6, ≤10	+0.75 / +3.25	+13.75 / +16.25	10	7	87	–
>10, ≤14	+1 / +4	+16.5 / +19.5	12	8	99	–
>14, ≤18	+1 / +4	+16.5 / +19.5	14	10	114	–
>18, ≤24	+1 / +5	+19 / +23	16	12	132	–
>24, ≤30	+1 / +5	+19 / +23	18	14	136	–
>30, ≤40	+1.5 / +5.5	+23 / +27	20	15	155	–
>40, ≤50	+1.5 / +5.5	+23 / +27	25	18	169	–
>50, ≤65	+1.5 / +6.5	+27.5 / +32.5	30	18	–	164, 152
>65, ≤80	+1.5 / +6.5	+27.5 / +32.5	35	25	–	169, 159
>80, ≤100	+2 / +8	+32 / +38	35	25	–	169, 159

Code	Diameter	Type	Code	Diameter	Type	Code	Diameter	Type	Code	Diameter	Type	Code	Diameter	Type
4124-2	2mm	A	4124-13	13mm	A	4124-24	24mm	A	4124-38	38mm	A	4124-52	52mm	B
4124-3	3mm	A	4124-14	14mm	A	4124-25	25mm	A	4124-39	39mm	A	4124-55	55mm	B
4124-4	4mm	A	4124-15	15mm	A	4124-26	26mm	A	4124-40	40mm	A	4124-60	60mm	B
4124-5	5mm	A	4124-16	16mm	A	4124-28	28mm	A	4124-41	41mm	A	4124-65	65mm	B
4124-6	6mm	A	4124-17	17mm	A	4124-29	29mm	A	4124-42	42mm	A	4124-70	70mm	B
4124-7	7mm	A	4124-18	18mm	A	4124-30	30mm	A	4124-44	44mm	A	4124-75	75mm	B
4124-8	8mm	A	4124-19	19mm	A	4124-31	31mm	A	4124-45	45mm	A	4124-80	80mm	B
4124-9	9mm	A	4124-20	20mm	A	4124-32	32mm	A	4124-46	46mm	A	4124-85	85mm	B
4124-10	10mm	A	4124-21	21mm	A	4124-34	34mm	A	4124-47	47mm	A	4124-100	100mm	B
4124-11	11mm	A	4124-22	22mm	A	4124-35	35mm	A	4124-49	49mm	A			
4124-12	12mm	A	4124-23	23mm	A	4124-36	36mm	A	4124-50	50mm	A			

METRIC FINE THREAD PLUG GAGES

INSPECTION CERTIFICATE

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

4139-20P

Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Code	Size (mm)
4139-3D *	M3x0.35	4139-9P *	M9x1	4139-14L *	M14x0.75	4139-20R *	M20x1.5	4139-30P *	M30x1	4139-42P *	M42x1
4139-4G *	M4x0.5	4139-10G *	M10x0.5	4139-14P *	M14x1	4139-20T *	M20x2	4139-30R *	M30x1.5	4139-42R *	M42x1.5
4139-5G *	M5x0.5	4139-10L *	M10x0.75	4139-14Q *	M14x1.25	4139-22L *	M22x0.75	4139-30T *	M30x2	4139-42T *	M42x2
4139-6G *	M6x0.5	4139-10P *	M10x1	4139-14R *	M14x1.5	4139-22P *	M22x1	4139-33P *	M33x1	4139-42V *	M42x3
4139-6L *	M6x0.75	4139-10Q *	M10x1.25	4139-16L *	M16x0.75	4139-22R *	M22x1.5	4139-33R *	M33x1.5	4139-45P *	M45x1
4139-7G *	M7x0.5	4139-11P *	M11x1	4139-16P *	M16x1	4139-22T *	M22x2	4139-33T *	M33x2	4139-45R *	M45x1.5
4139-7L *	M7x0.75	4139-12G *	M12x0.5	4139-16R *	M16x1.5	4139-24P *	M24x1	4139-36R *	M36x1.5	4139-45T *	M45x2
4139-8G *	M8x0.5	4139-12L *	M12x0.75	4139-18G *	M18x0.5	4139-24R *	M24x1.5	4139-36T *	M36x2	4139-45V *	M45x3
4139-8L *	M8x0.75	4139-12P *	M12x1	4139-18L *	M18x0.75	4139-24T *	M24x2	4139-36V *	M36x3		
4139-8P *	M8x1	4139-12Q *	M12x1.25	4139-18P *	M18x1	4139-27P *	M27x1	4139-39R *	M39x1.5		
4139-9G *	M9x0.5	4139-12R *	M12x1.5	4139-18R *	M18x1.5	4139-27R *	M27x1.5	4139-39T *	M39x2		
4139-9L *	M9x0.75	4139-14G *	M14x0.5	4139-20P *	M20x1	4139-27T *	M27x2	4139-39V *	M39x3		

*Supplied with manufacturer inspection certificate

METRIC FINE THREAD RING GAGES

INSPECTION CERTIFICATE

ATTENTION: WEAR RESISTANCE IS NOT GOOD

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

4129-10P

4129-10PN

Code (GO)	Code (NOGO)	Size (mm)	Code (GO)	Code (NOGO)	Size (mm)	Code (GO)	Code (NOGO)	Size (mm)
4129-4G *	4129-4GN *	M4x0.5	4129-12R *	4129-12RN *	M12x1.5	4129-27R *	4129-27RN *	M27x1.5
4129-5G *	4129-5GN *	M5x0.5	4129-14L *	4129-14LN *	M14x0.75	4129-27T *	4129-27TN *	M27x2
4129-6G *	4129-6GN *	M6x0.5	4129-14P *	4129-14PN *	M14x1	4129-30P *	4129-30PN *	M30x1
4129-6L *	4129-6LN *	M6x0.75	4129-14Q *	4129-14QN *	M14x1.25	4129-30R *	4129-30RN *	M30x1.5
4129-7L *	4129-7LN *	M7x0.75	4129-14R *	4129-14RN *	M14x1.5	4129-30T *	4129-30TN *	M30x2
4129-8G *	4129-8GN *	M8x0.5	4129-16L *	4129-16LN *	M16x0.75	4129-33P *	4129-33PN *	M33x1
4129-8L *	4129-8LN *	M8x0.75	4129-16P *	4129-16PN *	M16x1	4129-33T *	4129-33TN *	M33x2
4129-8P *	4129-8PN *	M8x1	4129-16R *	4129-16RN *	M16x1.5	4129-36P *	4129-36PN *	M36x1
4129-9G *	4129-9GN *	M9x0.5	4129-18P *	4129-18PN *	M18x1	4129-36R *	4129-36RN *	M36x1.5
4129-9L *	4129-9LN *	M9x0.75	4129-18R *	4129-18RN *	M18x1.5	4129-36T *	4129-36TN *	M36x2
4129-9P *	4129-9PN *	M9x1	4129-18T *	4129-18TN *	M18x2	4129-36V *	4129-36VN *	M36x3
4129-10G *	4129-10GN *	M10x0.5	4129-20G *	4129-20GN *	M20x0.5	4129-39P *	4129-39PN *	M39x1
4129-10L *	4129-10LN *	M10x0.75	4129-20P *	4129-20PN *	M20x1	4129-39T *	4129-39TN *	M39x2
4129-10P *	4129-10PN *	M10x1	4129-20R *	4129-20RN *	M20x1.5	4129-39V *	4129-39VN *	M39x3
4129-10Q *	4129-10QN *	M10x1.25	4129-20T *	4129-20TN *	M20x2	4129-42P *	4129-42PN *	M42x1
4129-11G *	4129-11GN *	M11x0.5	4129-22P *	4129-22PN *	M22x1	4129-42R *	4129-42RN *	M42x1.5
4129-11L *	4129-11LN *	M11x0.75	4129-22R *	4129-22RN *	M22x1.5	4129-42T *	4129-42TN *	M42x2
4129-11P *	4129-11PN *	M11x1	4129-22T *	4129-22TN *	M22x2	4129-42V *	4129-42VN *	M42x3
4129-12G *	4129-12GN *	M12x0.5	4129-24P *	4129-24PN *	M24x1	4129-45R *	4129-45RN *	M45x1.5
4129-12L *	4129-12LN *	M12x0.75	4129-24R *	4129-24RN *	M24x1.5	4129-45T *	4129-45TN *	M45x2
4129-12P *	4129-12PN *	M12x1	4129-24T *	4129-24TN *	M24x2	4129-45V *	4129-45VN *	M45x3
4129-12Q *	4129-12QN *	M12x1.25	4129-27P *	4129-27PN *	M27x1			

*Supplied with manufacturer inspection certificate

METRIC THREAD PLUG GAGES

INSPECTION CERTIFICATE

ATTENTION: WEAR RESISTANCE IS NOT GOOD

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

4130-10

Individual

Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Code	Size (mm)
4130-2 *	M2x0.4	4130-8 *	M8x1.25	4130-20 *	M20x2.5	4130-42 *	M42x4.5
4130-2D5 *	M2.5x0.45	4130-9 *	M9x1.25	4130-22 *	M22x2.5	4130-45 *	M45x4.5
4130-3 *	M3x0.5	4130-10 *	M10x1.5	4130-24 *	M24x3	4130-48 *	M48x5
4130-3D5 *	M3.5x0.6	4130-11 *	M11x1.5	4130-27 *	M27x3	4130-52 *	M52x5
4130-4 *	M4x0.7	4130-12 *	M12x1.75	4130-30 *	M30x3.5	4130-56 *	M56x5.5
4130-5 *	M5x0.8	4130-14 *	M14x2	4130-33 *	M33x3.5	4130-60 *	M60x5.5
4130-6 *	M6x1	4130-16 *	M16x2	4130-36 *	M36x4		
4130-7 *	M7x1	4130-18 *	M18x2.5	4130-39 *	M39x4		

Set

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

*Supplied with manufacturer inspection certificate

METRIC THREAD RING GAGES

INSPECTION CERTIFICATE

ATTENTION: WEAR RESISTANCE IS NOT GOOD

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

4120-16

4120-16N

Individual

Code (GO)	Code (NOGO)	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
4120-10 *	4120-10N *	M10x1.5

Code (GO)	Code (NOGO)	Size (mm)
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
4120-33 *	4120-33N *	M33x3.5

Go ring gage set

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

No Go ring gage set

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

*Supplied with manufacturer inspection certificate

AMERICAN STANDARD THREAD PLUG GAGES

INSPECTION CERTIFICATE

- Supplied with Go and No-Go gages together
- Class 2B
- Standard ANSI/ASME B1.2

ATTENTION: WEAR RESISTANCE IS NOT GOOD
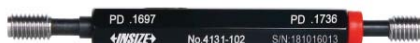
4131-102

Code	Size
4131-41 *	4-40UNC
4131-61 *	6-32UNC
4131-81 *	8-32UNC
4131-102 *	10-32UNF
4131-1B1 *	1/4-20UNC
4131-1B2 *	1/4-28UNF

Code	Size
4131-5D1 *	5/16-18UNC
4131-5D2 *	5/16-24UNF
4131-3C1 *	3/8-16UNC
4131-3C2 *	3/8-24UNF
4131-7D2 *	7/16-20UNF
4131-1A1 *	1/2-13UNC

Code	Size
4131-1A2 *	1/2-20UNF
4131-9D2 *	9/16-18UNF
4131-5C1 *	5/8-11UNC
4131-5C2 *	5/8-18UNF
4131-3B1 *	3/4-10UNC
4131-3B2 *	3/4-16UNF

*Supplied with manufacturer inspection certificate

AMERICAN STANDARD THREAD RING GAGES

ATTENTION: WEAR RESISTANCE IS NOT GOOD

INSPECTION CERTIFICATE

- Class 2A
- Standard ANSI/ASME B1.2

front   back

4121-1B1

front   back

4121-1B1N

Code (GO)	Code (NOGO)	Size
4121-41 *	4121-41N *	4-40UNC
4121-61 *	4121-61N *	6-32UNC
4121-81 *	4121-81N *	8-32UNC
4121-102 *	4121-102N *	10-32UNF
4121-1B1 *	4121-1B1N *	1/4-20UNC
4121-1B2 *	4121-1B2N *	1/4-28UNF

Code (GO)	Code (NOGO)	Size
4121-5D1 *	4121-5D1N *	5/16-18UNC
4121-5D2 *	4121-5D2N *	5/16-24UNF
4121-3C1 *	4121-3C1N *	3/8-16UNC
4121-3C2 *	4121-3C2N *	3/8-24UNF
4121-7D2 *	4121-7D2N *	7/16-20UNF
4121-1A1 *	4121-1A1N *	1/2-13UNC

Code (GO)	Code (NOGO)	Size
4121-1A2 *	4121-1A2N *	1/2-20UNF
4121-9D2 *	4121-9D2N *	9/16-18UNF
4121-5C1 *	4121-5C1N *	5/8-11UNC
4121-5C2 *	4121-5C2N *	5/8-18UNF
4121-3B1 *	4121-3B1N *	3/4-10UNC
4121-3B2 *	4121-3B2N *	3/4-16UNF

*Supplied with manufacturer inspection certificate

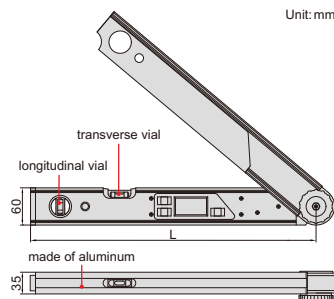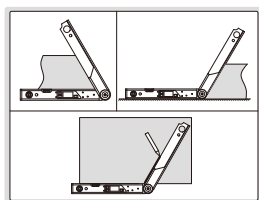## WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

ABSOLUTE LEVEL

AUTOMATIC BACKLIGHT

IP54 WATERPROOF

2174-225

Unit: mm

transverse vial
longitudinal vial
made of aluminum

- Suitable for setting horizontal and vertical mitre angles of cutting machine
- Buttons: ON/OFF, HOLD/SUP, SPR/CNR/MTR/BVL
- IP54 dust/waterproof
- With transverse and longitudinal vials
- 2xAAA batteries
- Absolute level, zero setting is not needed when batteries are replaced
- Backlight turns off in one minute after no data changing, automatic power off in 5 minutes

Code	Size (L)	Range	Resolution	Accuracy
2174-225	490mm	0 - 225°	0.05°	±0.10°

DIGITAL PROTRACTOR

Unit: mm

2171-250

made of stainless steel
level vial
made of aluminum
locking screw
analogue quadrant
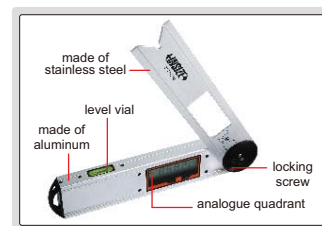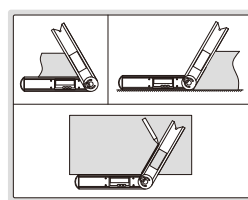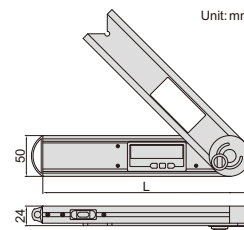
- Buttons: on/off, hold (keep the reading), zero, ABS (absolute and incremental measurement)
- Fix the locking screw at 4 positions for different measuring ranges: 0°~225°, -225°~0°, -45°~180°, -180°~45°
- Remove the locking screw for 360° range
- With level vial
- Battery CR2032
- Automatic power off

Code	Size (L)	Range	Resolution	Accuracy
2171-250	250mm	0 - 360°	0.05°	±0.15°

DIGITAL PROTRACTORS

- Resolution: 0.1°
- Buttons: on/off, zero
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- Made of stainless steel
- CR2032 battery
- Automatic power off
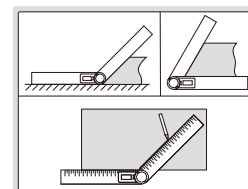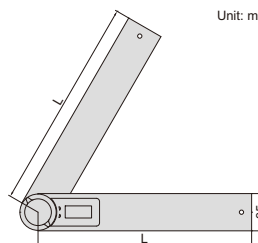
Unit: mm

2176-200

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

PROTRACTOR (ECONOMIC TYPE)

- Made of stainless steel
- With clamping screw

Unit: mm
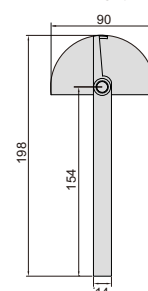
4780-85A

Code	Size	Range	Graduation	Accuracy
4780-85A	90x154mm	0-180°	1°	±0.5°

PROTRACTORS

4799-180
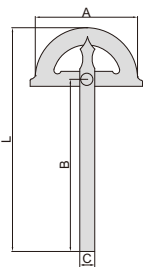
- Made of stainless steel
  (**4799-1300** is made of carbon steel)
- Satin chrome plated scale
- With clamping screw

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

PROTRACTORS

4797-100
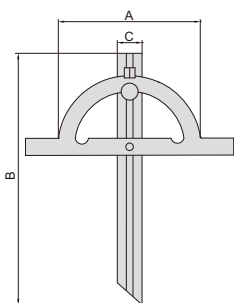
- Graduation: 1°
- Made of carbon steel
- Satin chrome plated
- With clamping screw
- The blade is moveable

blade
the blade is moveable
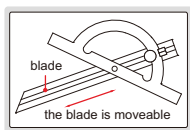
Code	Size (AxB)	Range	Accuracy	C
4797-100	100x150mm	10-170°	±0.3°	18mm
4797-150	150x300mm	10-170°	±0.3°	22mm
4797-200	200x400mm	10-170°	±0.3°	24mm
4797-250	250x500mm	10-170°	±0.3°	28mm
4797-300	300x600mm	10-170°	±0.3°	32mm

UNIVERSAL PROTRACTOR

150mm blade (included)
300mm blade (included)
Unit: mm
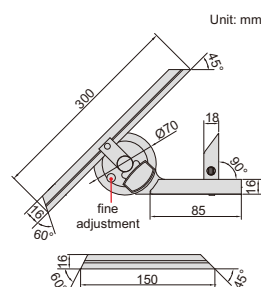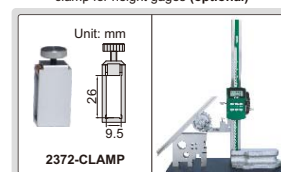
2372-360

- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp
  (code **2372-CLAMP**), suitable for
  height gages **1156**, **1351** and **1250**

clamp for height gages **(optional)**
Unit: mm
2372-CLAMP

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

PROTRACTOR

Unit: mm

2374-320

α=0~50°
α=50°~140°
α=140°~230°
α=230°~320°
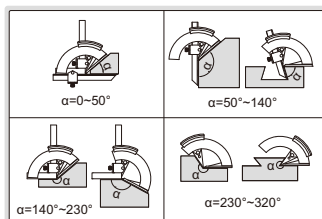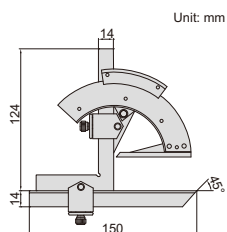
- Made of stainless steel
- Satin chrome plated scale

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

DIAL PROTRACTOR
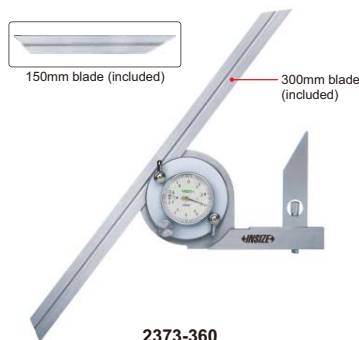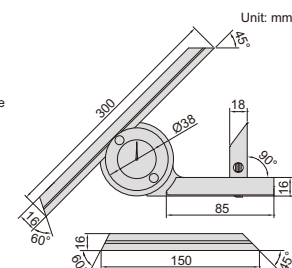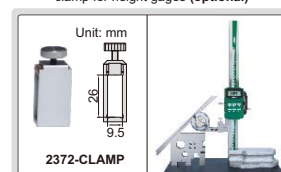
150mm blade (included)
300mm blade (included)
Unit: mm

2373-360

- Made of stainless steel
- Optional accessory: clamp
  (code **2372-CLAMP**), suitable for
  height gages **1156**, **1351** and **1250**

clamp for height gages **(optional)**
Unit: mm
2372-CLAMP

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

DIGITAL PROTRACTOR

150mm blade (included)

square (included)

300mm blade (included)

Unit: mm

fine adjustment
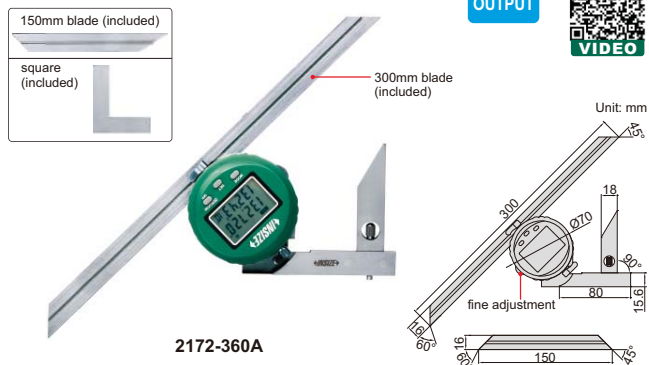
2172-360A

- Display in degree (for example 32.655°) and degree/minute/second (for example 32°39'30")
- SET button: preset the reading, change measuring direction
- MODE button: choose 0~90°, 0~180° or 0~360° display
- ZERO/ON/OFF button: zero and power on/off
- Battery CR2032, automatic power off
- Data output
- Supplied with square to set 90°
- Made of stainless steel
- Optional accessory: data output cable, clamp (code **2372-CLAMP**), suitable for height gages **1156**,**1351** and **1250**

clamp for height gages **(optional)**

Unit: mm

2372-CLAMP
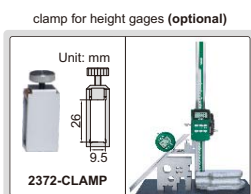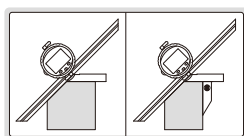
Code	Range	Graduation	Accuracy
2172-360A	0-360°	10"/0.005°	±5'

GRANITE SQUARE

CUSTOM-MADE SUPPLY SPECIAL SIZES ACCORDING TO CUSTOMER'S REQUEST
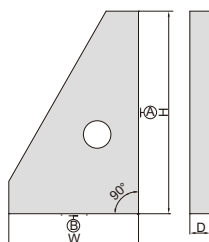
4141-250

Code	Size (HxW)	Flatness of A	Flatness of B	Squareness of A to B	D
4141-250	250x160mm	1μm	1μm	2μm	25mm
4141-400	400x250mm	1.5μm	1μm	3μm	40mm
4141-630	630x400mm	2μm	1.5μm	4μm	63mm

GRANITE SQUARE WITH V GROOVE
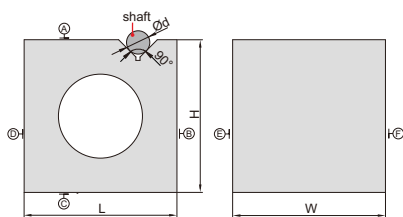
shaft

4142-200

- Parallelism and squareness of A, B, C, D, E and F: 6μm
- Parallelism and squareness of V groove to A, B, C, D, E and F: 6μm

Code	Size (LxWxH)	Range of shaft (Ød)
4142-200	200x200x200mm	9-70mm

90° BEVELED EDGE SQUARES

- DIN875 grade 00
- Satin chrome plating
- Beveled edges for inside and outside measurement
- Made of hardened stainless steel

4790-0100

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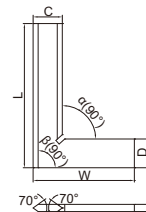
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-050	50x40mm	2.4μm	2.5μm	13	13	4
4790-075	75x50mm	2.6μm	2.8μm	15	15	4
4790-0100	100x70mm	2.8μm	3.0μm	20	20	5
4790-0150	150x100mm	3.2μm	3.5μm	30	30	6
4790-0200	200x130mm	3.7μm	4.0μm	34	34	7
4790-0300	300x200mm	4.6μm	5.0μm	40	40	8

90° FLAT EDGE SQUARES

- DIN875 grade 0
- Made of hardened stainless steel

4791-100

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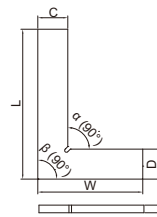
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-50	50x40mm	6μm	6μm	15	15	4
4791-75	75x50mm	6μm	7μm	15	15	4
4791-100	100x70mm	7μm	7μm	20	20	5
4791-150	150x100mm	7μm	8μm	30	30	6
4791-200	200x130mm	8μm	9μm	30	30	7
4791-250	250x165mm	9μm	10μm	35	35	7
4791-300	300x200mm	10μm	11μm	40	40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

90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

4793-100

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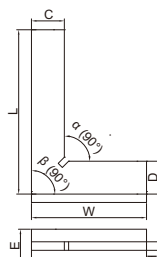
Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4793-50	50x40mm	6μm	6μm	13	13	4	13
4793-75	75x50mm	6μm	7μm	15	15	4	15
4793-100	100x70mm	7μm	7μm	20	20	5	20
4793-150	150x100mm	7μm	8μm	30	30	6	30
4793-200	200x130mm	8μm	9μm	30	30	7	30
4793-250	250x165mm	9μm	10μm	35	35	7	35
4793-300	300x200mm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

INSIZE

90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

4792-100

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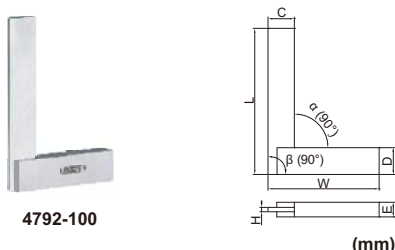
Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4792-50	50x40mm	6μm	6μm	12	12	3	10
4792-75	75x50mm	6μm	7μm	14	14	3	10
4792-100	100x70mm	7μm	7μm	18	18	3	10
4792-150	150x100mm	8μm	8μm	22	22	4	12
4792-200	200x130mm	9μm	9μm	25	25	4	12

45° SQUARES WITH WIDE BASE

4747-150

- Made of hardened stainless steel

(mm)
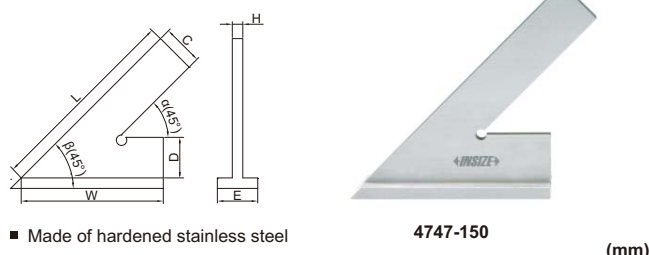
Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4747-150	150x100mm	32μm	36μm	20	20	5	20
4747-200	200x130mm	36μm	41μm	25	25	5	25

STRAIGHT EDGES

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

4700-100

(mm)

Code	Size (L)	Straightness	W	H
4700-100	100mm	2.4μm	5	25
4700-150	150mm	2.6μm	6	30
4700-200	200mm	2.8μm	6	30
4700-300	300mm	3.2μm	8	40

Sizes available up to 500mm

FEELER GAGE

4601-25

- Range: 0.04-1.00mm
- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: ±(3+T/80) μm,
  'T' is the thickness of leaves in μm

Unit: mm

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

MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDENED

ATTENTION: LOW ACCURACY

- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardened
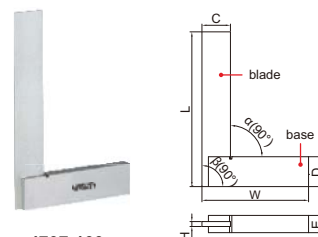
4707-100

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4707-75	75x50mm	26μm	28μm	16	16	3	9
4707-100	100x70mm	28μm	30μm	19	19	3	12
4707-150	150x100mm	33μm	35μm	25	25	3	16
4707-200	200x130mm	37μm	40μm	30	32	4	16
4707-250	250x165mm	42μm	45μm	30	32	4	19
4707-300	300x200mm	47μm	50μm	32	32	4	19
4707-400	400x250mm	56μm	60μm	38	38	5	22
4707-500	500x300mm	65μm	70μm	45	50	6	25

Sizes available up to 1000x550mm

TRY SQUARE

Unit: mm
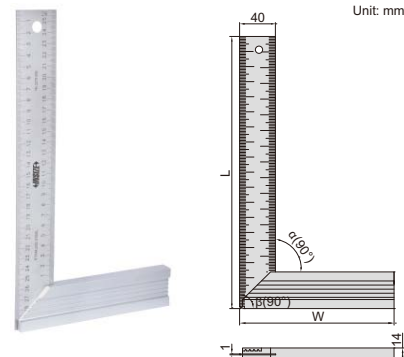
- Graduation: 1mm
- Stainless steel blade, aluminum base

2275-300

Code	Size (LxW)	Squareness	
		Inside (α)	Outside (β)
2275-300	300x170mm	0.5mm	0.5mm

MAGNALIUM STRAIGHT EDGES

4180-500

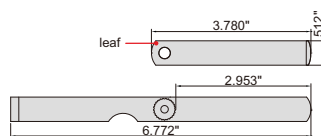- Made of magnalium, light weight, non-deform, no rusty

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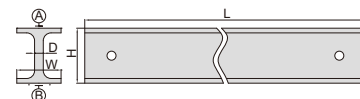
Code	Length (L)	Flatness of A and B	Parallelism between A and B	H	W	D
4180-500	500mm	3μm	4μm	60	30	5
4180-1000	1000mm	5μm	8μm	60	30	5
4180-1500	1500mm	15μm	22μm	100	40	5

IMPERIAL FEELER GAGE

4608-31

leaf	3.780"	.512"
	2.953"	
	6.772"	

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

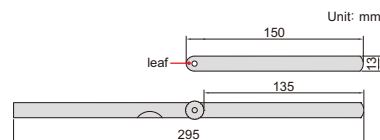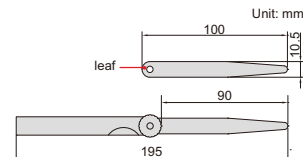| Thickness of leaves included	Accuracy
0.010" (brass)	±0.00039"
0.0015", 0.002"	±0.0002"
0.0025", 0.003", 0.004", 0.005", 0.006", 0.007"	±0.00028"
0.008", 0.009"	±0.00035"
0.010", 0.011"	±0.00039"
0.012", 0.013"	±0.00047"
0.014", 0.015"	±0.00051"
0.016", 0.017"	±0.00055"
0.018", 0.019"	±0.00059"
0.020", 0.021"	±0.00067"
0.022", 0.023"	±0.00071"
0.024", 0.025", 0.026"	±0.00075"
0.028"	±0.00091"
0.030"	±0.00094"
0.032", 0.035"	±0.00102"

Code	Range	Quantity of Leaves
4608-31	0.0015"~0.035"	32

LONG FEELER GAGE

4605-20

Unit: mm

leaf	150	13
	135	
	295	

- Range: 0.05-1.00mm
- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: ±(3+T/80) μm, 'T' is the thickness of leaves in μm

Code	Thickness of leaves included (mm)	Quantity of leaves
4605-20	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20

FEELER GAGES

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

4602-20

Unit: mm

leaf	100	10.5
	90	
	195	

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
4602-32	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

FEELER GAGE TAPES

5000 Unit: mm

4621-30

- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 5m
- Width 13mm
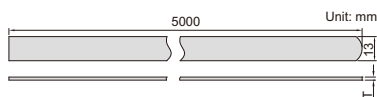
Code	Thickness (T)	Accuracy	Code	Thickness (T)	Accuracy	Code	Thickness (T)	Accuracy
4621-02	0.02mm	±4μm	4621-12	0.12mm	±5μm	4621-50	0.50mm	±14μm
4621-03	0.03mm	±4μm	4621-15	0.15mm	±6μm	4621-55	0.55mm	±14μm
4621-04	0.04mm	±4μm	4621-18	0.18mm	±7μm	4621-60	0.60mm	±14μm
4621-05	0.05mm	±4μm	4621-20	0.20mm	±8μm	4621-65	0.65mm	±14μm
4621-06	0.06mm	±4μm	4621-25	0.25mm	±9μm	4621-70	0.70mm	±17μm
4621-07	0.07mm	±5μm	4621-30	0.30mm	±9μm	4621-75	0.75mm	±17μm
4621-08	0.08mm	±5μm	4621-35	0.35mm	±11μm	4621-80	0.80mm	±19μm
4621-09	0.09mm	±5μm	4621-40	0.40mm	±12μm	4621-90	0.90mm	±22μm
4621-10	0.10mm	±5μm	4621-45	0.45mm	±12μm			

PITCH GAGE

4824-12

- Check the pitch of screw thread
- Accuracy: ±0.07mm
- Made of medium carbon steel
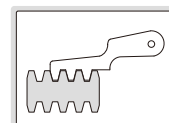
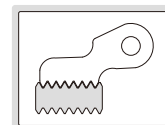| Code	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-12	2-20mm	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12

PITCH GAGES (ECONOMIC TYPE)

ATTENTION: LOW ACCURACY

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

4820-124

Metric 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-124	0.25-7mm	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

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

Metric 60° and Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-452	0.25-6mm	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	

Metric 60° and Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-552	0.4-7mm	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	

RADIUS GAGES (ECONOMIC TYPE)

ATTENTION: LOW ACCURACY

- Made of carbon steel

4801-17
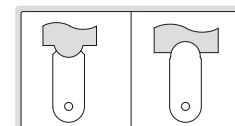
Code	Range	Radius of leaves included (mm)	Quantity of leaves (internal+external)	Accuracy
4801-17	1-7mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	17+17	±0.03mm
4801-16	7.5-15mm	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15	16+16	±0.035mm
4801-15	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 GAGE SET (ECONOMIC TYPE)

ATTENTION: LOW ACCURACY

use of handle

3 concave and 2 convex gaging surfaces
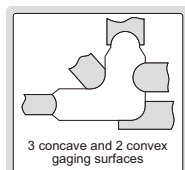
- Accuracy: ±0.05mm
- Each piece has 3 concave and 2 convex gaging surfaces
- Supplied with handle
- Made of medium carbon steel

4804-26

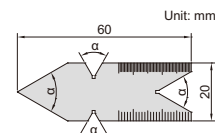| Code	Range	Radius of leaves included (mm)	Quantity of leaves
4804-26	0.5-13mm	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13	26

CENTER GAGES
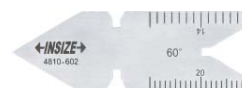
**4810-602**

- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: ±30min.
- Made of stainless steel

Unit: mm

check the angle of screw cutting tools

check the angle of screw thread

machine tools
workpiece
set the position of screw cutting tools

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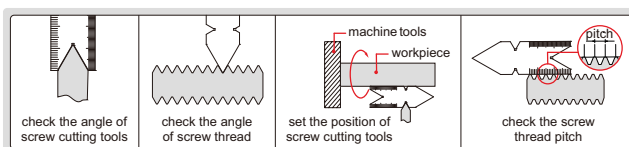
Code	Thread type	Angle (α)	Graduation
4810-601	METRIC 60°	60°	0.5mm and 1mm
4810-55	WHITWORTH 55°	55°	14ths and 20ths on front side, 24ths and 32ths on back side

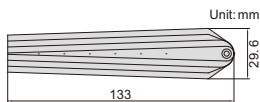## RADIUS GAGE
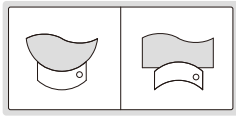
- Accuracy: ±0.06mm
- Made of stainless steel

4802-31

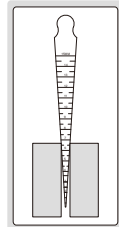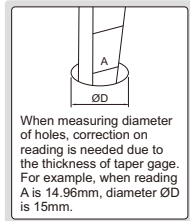| Code	Range	Radius of leaves included (mm)	Quantity of leaves
4802-31	25-40mm	25, 25.5, 26, 26.5, 27, 27.5, 28, 28.5, 29, 29.5, 30, 30.5, 31, 31.5, 32, 32.5, 33, 33.5, 34, 34.5, 35, 35.5, 36, 36.5, 37, 37.5, 38, 38.5, 39, 39.5, 40	31 pcs

TAPER GAGE SET

front   back

4837-1

measure slot width

Unit: mm
29.6
133

- Include 4pcs (1-8mm, 8-15mm, 15-22mm, 22-29mm)
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

measure diameter of hole

A
ØD

When measuring diameter of holes, correction on reading is needed due to the thickness of taper gage. For example, when reading A is 14.96mm, diameter ØD is 15mm.

Code	Range	Graduation	Accuracy
4837-1	1-29mm	0.05mm	±0.05mm

TAPER SLOT GAGES

4630-1

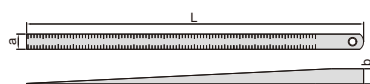reading   reading
side view   front view

- For quick measurement of slot width
- Satin chrome plated reading surface
- Made of stainless steel

L
a
b

(mm)

Code	Range	Graduation	Accuracy	L	a	b
4630-3	0.4-6mm	0.05mm	±0.04mm	164	12.5	6.5
4630-1	0.5-10mm	0.05mm	±0.07mm	220	10	10.5
4630-2	0.5-15mm	0.1mm	±0.08mm	184	12.5	16.5

TAPER GAGES

W

front   back

4833-2

measure slot width

measure diameter of hole
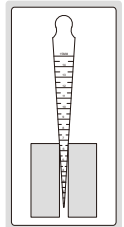
A
ØD

When measuring diameter of holes, correction on reading is needed due to the thickness of taper gage. For example, when reading A is 14.96mm, diameter ØD is 15mm.
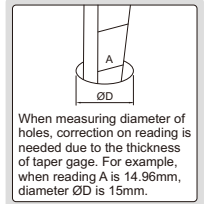
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (only for **4833-1**, **4833-2**)
- Made of stainless steel

Code	Range	Graduation	Accuracy	L	W
4833-1	0.8-15mm	0.1mm	±0.1mm	146mm	17mm
4833-2	15-30mm	0.1mm	±0.1mm	159mm	30.4mm
4833-3	30-45mm	0.1mm	±0.1mm	166mm	45.4mm
4833-4	45-60mm	0.1mm	±0.1mm	170mm	60.5mm

CONE BORE GAGES

- Graduation: 0.1mm
- Accuracy: ±0.05mm
- Quick measurement of bore diameter
- Hardened steel, HRC50-58
- Satin chrome plated surface
- Aluminium oxided handle

Ød1
Ød2

4852-3

(mm)

Code	Range	L	Ød1	Ød2
4852-1	1-6.5mm	62.5	7	0.8
4852-3	3-16mm	143	17	2.8

DIGITAL TAPER SLOT GAGE

ATTENTION: ACTUAL SLOT WIDTH IS 1/10 OF THE READING
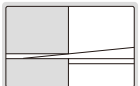
DATA OUTPUT

1160-10

Unit: mm
306
4
16
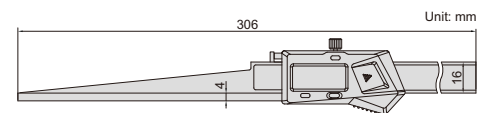
- Measuring opening, slot width
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable

measure slot width

Code	Range	Accuracy
1160-10	0.2-10mm/0.008-0.394"	±0.03mm

DIGITAL CHAMFER GAGE

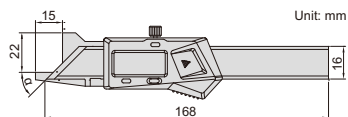**DATA OUTPUT**

1180-6

Unit: mm

measure chamfer dimension

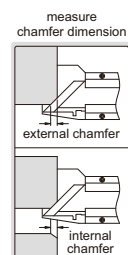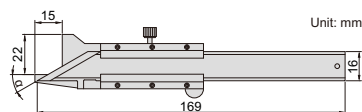external chamfer

internal chamfer
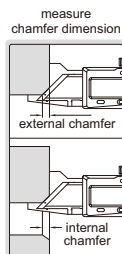
- Measure 30º/45º/60º chamfer dimension
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable

Code	Range	Accuracy	Chamfer (α)
1180-6	0-10mm/0-0.39"	±0.06mm	45º
1180-63	0-10mm/0-0.39"	±0.06mm	30º
1180-66	0-10mm/0-0.39"	±0.06mm	60º

FILLET WELDING GAGE

Unit: mm

4836-1

- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel

convex weld   concave weld

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

FILLET WELDING GAGE

Unit: mm

4832-1

throat size   leg length

- 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

CHAMFER GAGE

1267-6

Unit: mm

measure chamfer dimension

external chamfer

internal chamfer

- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Accuracy	Graduation	Chamfer (α)
1267-6	0-10mm	±0.06mm	0.02mm	45º

CHAMFER GAGE

Unit: mm

4844-1

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

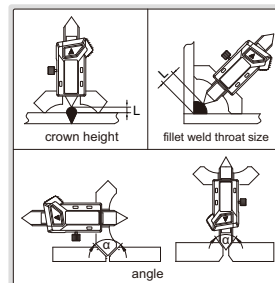| Code	Graduation	Accuracy
4844-1	0.5mm	±0.25mm

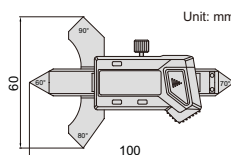## DIGITAL WELDING GAGE

ATTENTION: NO DATA OUTPUT

4831-20A

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

Unit: mm
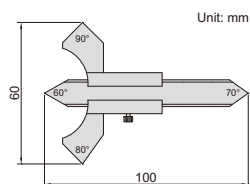
crown height   fillet weld throat size

angle

Code	Measurement	Range	Resolution	Accuracy
4831-20A	crown height	0-7mm	0.01mm/0.0005"	±0.03mm
	fillet weld throat size	0-20mm	0.01mm/0.0005"	±0.1mm
	angle	60°, 70°, 80°, 90°	—	±1°

WELDING GAGE

- Made of stainless steel
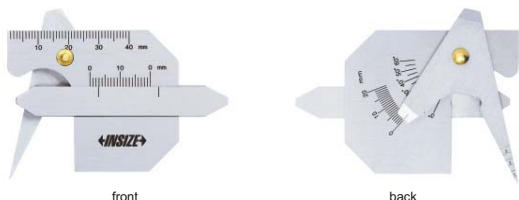- Satin chrome plated reading surface

4830

Unit: mm

crown height fillet weld throat size
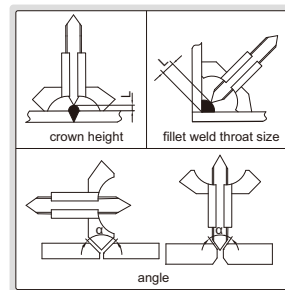
angle

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°

WELDING GAGE

front   back

6832-1

- Made of stainless steel
- Satin chrome plated surface

Unit: mm

leg length leg height crown height throat size

angle gap length

Code	Measurement	Range	Graduation	Accuracy
6832-1	leg length	0-20mm	1mm	±0.3mm
	leg height	0-20mm	1mm	±0.3mm
	crown height	0-20mm	1mm	±0.3mm
	throat size	0-10mm	1mm	±0.3mm
	angle	0°-60°	5°	±1°
	gap	1-3.5mm	0.5mm	±0.2mm
	length	0-40mm	1mm	±0.3mm
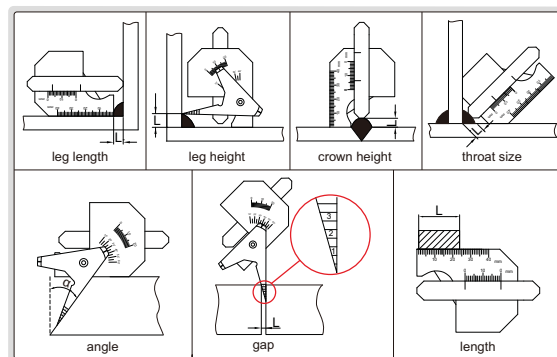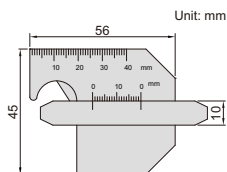
WELDING GAGE

front   back

4835-1

scale
pointer
Unit: mm

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

crown height fillet weld leg height

fillet weld throat size angle of preparation

misalignment (high-low) undercut depth

length 45° angle

Code	Measurement	Range	Graduation	Accuracy
4835-1	crown height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	fillet weld leg height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	misalignment (high-low)	0-25mm (0-1")	1mm (1/16")	±0.5mm
	undercut depth	0-2mm (0-1/8")	1mm (1/16")	±0.5mm
	fillet weld throat size	0-20mm (0-3/4")	1mm (1/16")	±0.5mm
	angle of preparation	0-60°	5°	±1°
	length	0-60mm (0-2")	1mm (1/16")	±0.5mm
	45° angle	—	—	±1°
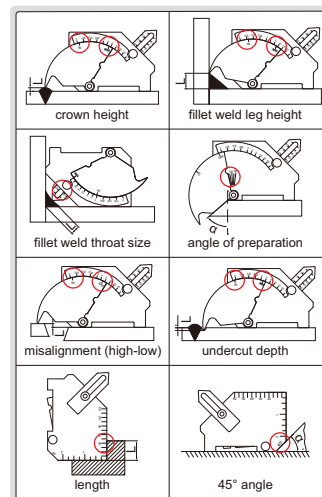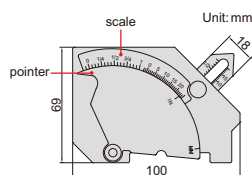
WELDING GAGE
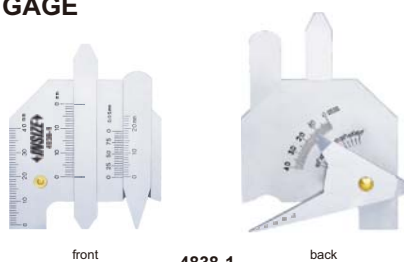
front   **4838-1**   back

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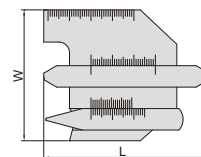
Code	Measurement	Range	Graduation	Accuracy
4838-1	crown height	0-10mm	1mm	±0.5mm
	leg height	0-14mm	1mm	±0.5mm
	undercut depth	0-5mm	0.05mm	±0.05mm
	throat size	0-13mm	1mm	±0.5mm
	weld length	0-40mm	1mm	±1mm
	angle	90°-150°	5°	±1°
	gap	0.5-5mm	1mm	±0.5mm
	length	0-40mm	1mm	±0.5mm

crown height   leg height   undercut depth   throat size

weld length   angle   gap   length
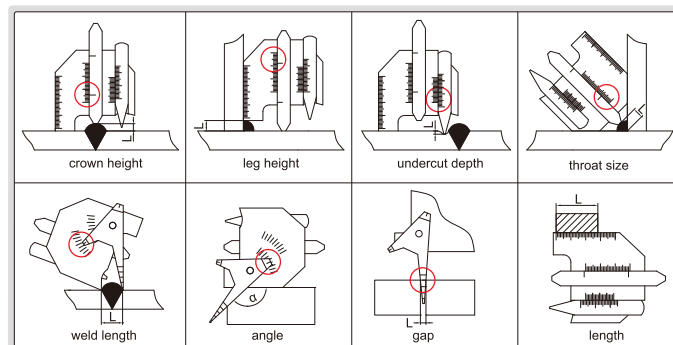
WELDING GAGE

4850-1

■ Made of stainless steel

Unit: mm
54
58

leg height (b)
theoretical throat size (a)   throat size

angle of preparation   thickness
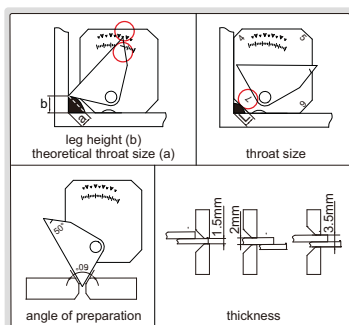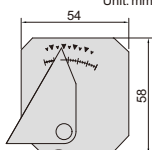
Code	Measurement	Range	Graduation	Accuracy
4850-1	leg height (b)	0-18mm	1mm	±0.5mm
	theoretical throat size (a)	2-12mm	1mm	±0.5mm
	throat size	4, 5, 6, 7mm	—	±0.5mm
	angle of preparation	50°, 60°	—	±1°
	thickness	1.5, 2, 3.5mm	—	±0.2mm

WELDING GAGE

4834-1

locking screw   Unit: mm
102
pointer   32

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

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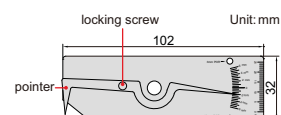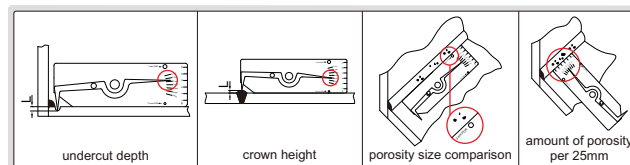
Code	Measurement	Range	Graduation	Accuracy
4834-1	undercut depth	0-6mm	0.5mm	±0.5mm
	crown height	0-6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—

FILLET WELDING GAGE

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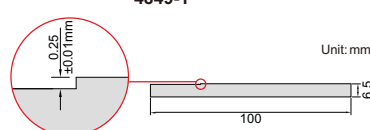■ Made of stainless steel

4847-1

convex weld size   length
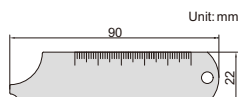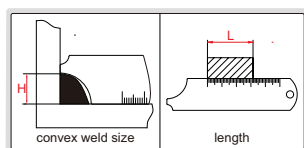
Unit: mm
90
22

Code	Measurement	Range	Graduation	Accuracy
4847-1	convex weld size	4, 6, 8, 10, 12, 14mm	—	±0.5mm
	length	0-50mm	1mm	±0.5mm

WELDING UNDERCUT GAGE

4849-1

0.25 ±0.01mm

Unit: mm
100
6.5

0.5
0.25
100
Ø6.5   45°   20

application

light gap

When there is a light gap, h<0.25mm;
When there is no light gap, h≥0.25mm

calibration block (included)
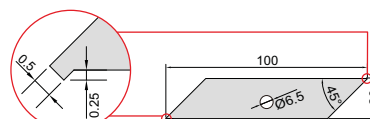
Code
4849-1

■ Measure undercut
■ Calibration block is included
■ Made of stainless steel

FILLET WELDING GAGE

Unit: mm
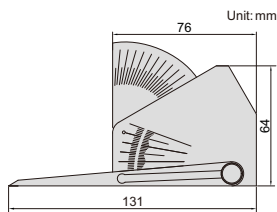
4846-1

- Calculating card is included
- Made of stainless steel

calculating card (included)

| weld seam height of acute angle | weld seam height of obtuse angle |
| angle | angle of preparation |

measure weld seam height **W** and angle **θ**, calculate theoretical throat size **te** and leg height **L2** according to **W** and **θ**.
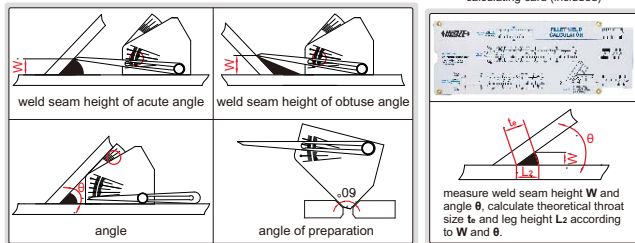
Code	Measurement	Range	Graduation	Accuracy
4846-1	weld seam height **W**	0-50mm/0-2"	2mm/.050"	±1mm
	angle **θ**	30°~90°	2.5°	±1°
	60° angle	—	—	±0.5°

WELDING GAGE

Unit: mm

4848-1

- Made of stainless steel

Ø2.5 pointer

misalignment (high-low)	length
angle of preparation	gap
	thickness
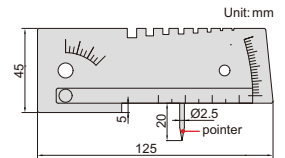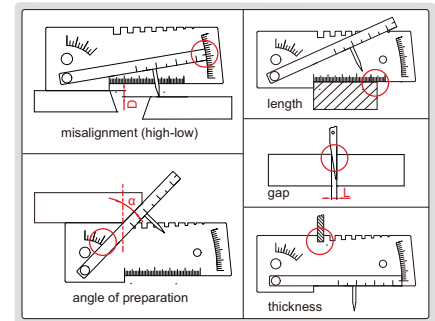
Code	Measurement	Range	Graduation	Accuracy
4848-1	misalignment (high-low)	-5mm~+15mm	1mm	±0.5mm
	angle of preparation	0°-45°	5°	±2.5°
	length	0-50mm	1mm	±0.5mm
	gap	1-4mm	0.5mm	±0.25mm
	thickness	1, 1.2, 2.0, 2.5, 3.0, 3.25, 4.0, 5.0mm	—	±0.1mm

WELDING GAGE

- Made of stainless steel

scale B
scale C
scale A
reading line
(on transparent plastic plate)
scale A
scale B
scale C
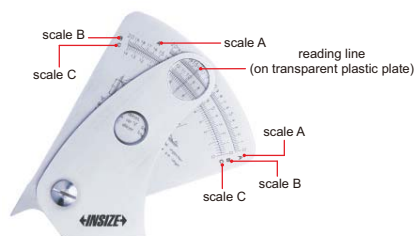
4840-1

Code	Graduation	Accuracy
4840-1	0.2mm	±0.3mm
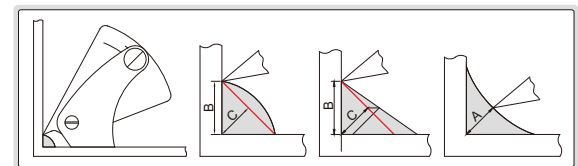
WELDING GAGE

- Accuracy: ±0.5mm
- Made of stainless steel

| leg height | crown height |
| theoretical leg height of convex weld | theoretical leg height of concave weld |

4851-1

Unit: mm
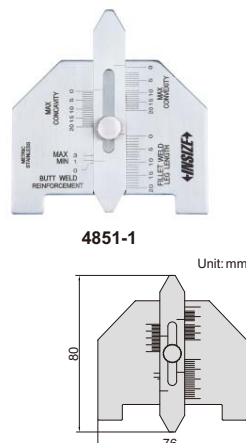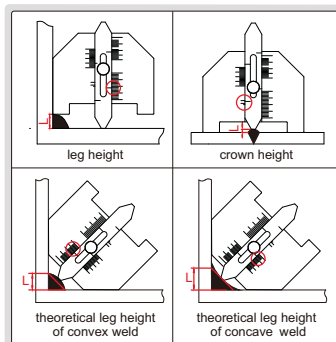
Code	Measurement	Range	Graduation
4851-1	leg height	0-20mm	1mm
	crown height	0-3mm	—
	theoretical leg height of convex weld	0-20mm	1mm
	theoretical leg height of concave weld	0-20mm	1mm

PIPE WELDING GAGE

Unit: mm

fit-up gap

internal misalignment
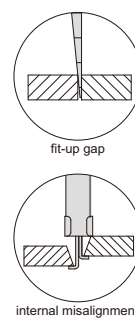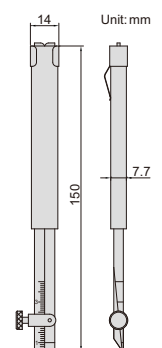
4841-1

- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4841-1	internal misalignment	0-30mm	1mm	±0.5mm
	fit-up gap	0.7-4mm	0.1mm	±0.1mm

PIPE WELDING GAGE

- Made of stainless steel

Unit: mm

front   back

4839-1

bevel on end preparation   pipe wall thickness

internal misalignment   fit-up gap

crown height   distance between two marking lines of socket weld

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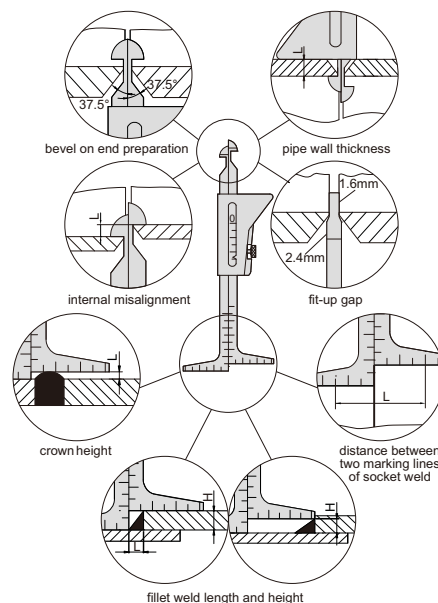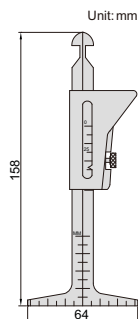
Code	Measurement	Range	Graduation	Accuracy
4839-1	bevel on end preparation	37.5°	—	±1°
	pipe wall thickness	0-45mm (0~1-3/4")	1mm (1/16")	±0.5mm
	internal misalignment	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm
	fit-up gap	1.6mm, 2.4mm	—	±0.1mm
	crown height	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm
	distance between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

6-PIECE WELDING GAGE SET

- Includes:
  1) Welding gage (code **4834-1**)
  2) Fillet welding gage, size 3~25mm, 7 blades (code **4836-1**)
  3) Pipe welding gage (code **4841-1**)
  4) Telescoping inspection mirror, size of mirror Ø32mm, length 178~505mm (code **7160-1**)
  5) Pocket rule with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code **7119-150**)
  6) LED flashlight (code **ISGF-0501**)

Code
5064

5064

7-PIECE WELDING GAGE SET

- Includes:
  1) Welding gage (code **4834-1**)
  2) Welding gage (code **4851-1**)
  3) Fillet welding gage, size 3~25mm, 7 blades (code **4836-1**)
  4) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
  5) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.005" (code **1108-150**)
  6) Pocket rule with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code **7119-150**)
  7) Magnifier with illumination, magnification 4X (code **7513-4**)

Code
5072

5072

7-PIECE WELDING GAGE SET

- Includes:
  1) Welding gage (code **4834-1**)
  2) Welding gage (code **4851-1**)
  3) Pipe welding gage (code **4839-1**)
  4) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
  5) Telescoping inspection mirror, size of mirror Ø32mm, length 178~505mm (code **7160-1**)
  6) Magnifier with illumination, magnification 4X (code **7513-4**)
  7) Steel rule, range 150mm/6", graduation 0.5mm, 1mm, 1/64", 1/32", 1/16" (code **7110-150**)
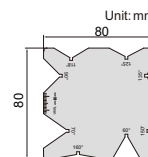
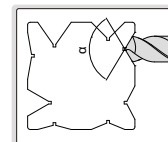| Code |
|------|
| 5071 |

5071

DRILL ANGLE GAGE

Unit: mm

4842-1

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

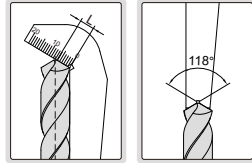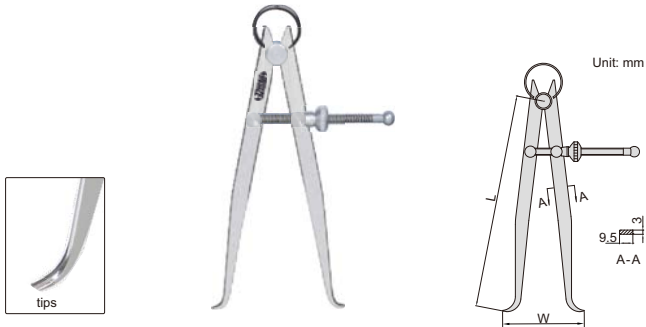| Code	Accuracy
4842-1	±0.5°

DRILL POINT GAGE

Unit: mm

4843-1

- For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
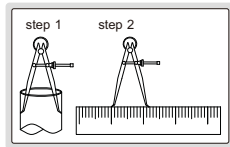- Made of stainless steel

Code	Accuracy	
	Angle	Length
4843-1	±0.5°	±0.5mm

INSIDE SPRING CALIPERS

Unit: mm

7261-150

tips

- Made of carbon steel

Code	Size (L)	Range (W)
7261-150	150mm	20-170mm
7261-200	200mm	22-220mm
7261-250	245mm	30-270mm
7261-300	300mm	30-320mm

step 1   step 2

SPRING DIVIDERS

Unit: mm
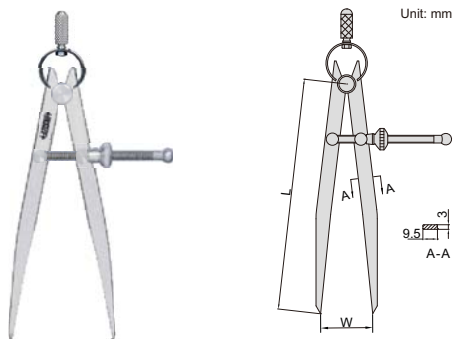
7260-150

- Made of carbon steel
- Hardened points

Code	Size (L)	Range (W)
7260-150	150mm	0-150mm
7260-200	200mm	0-210mm
7260-250	245mm	0-260mm
7260-300	300mm	0-320mm

step 1

step 2
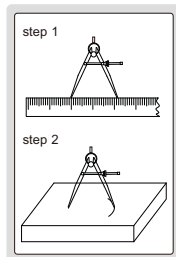
OUTSIDE SPRING CALIPERS

Unit: mm

tips
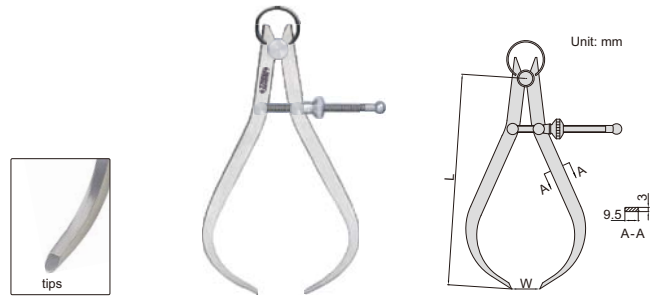
7262-150

- Made of carbon steel

Code	Size (L)	Range (W)
7262-150	155mm	0-140mm
7262-200	210mm	0-210mm
7262-250	265mm	0-270mm
7262-300	310mm	0-320mm

step 1   step 2
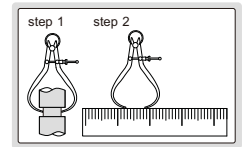
DIVIDERS
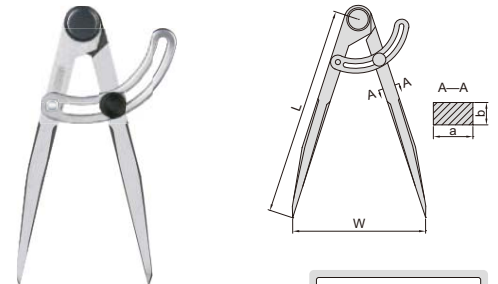
7247-150

- Made of carbon steel
- Hardened points

step 1

step 2

(mm)

Code	Size (L)	Range (W)	a	b
7247-150	150mm	0-140mm	8.5	7
7247-200	200mm	0-190mm	10	7
7247-300	300mm	0-290mm	12	7
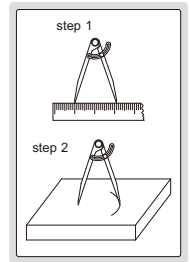
MEASURING TAPES

EG II

graduation

- Non-glare nylon surface for wear resistance

7140-5

packaging

locking knob
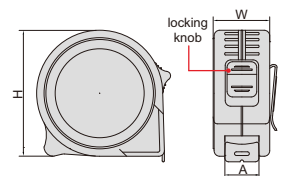
Code	Range	Graduation	Width of tape A	W	H
7140-3	0-3m	1mm	16mm	28mm	62mm
7140-5	0-5m	1mm	19mm	30mm	68mm
7140-8	0-8m	1mm	25mm	38mm	78mm

MEASURING TAPE (BASIC TYPE)

EG II

7142-5

- Matt Nylon coating tape, wear resistance

graduation

locking knob
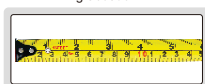
packaging
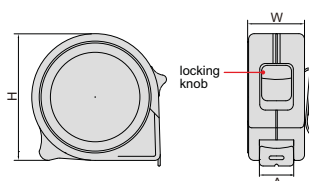
Code	Range	Graduation	Width of tape A	W	H
7142-5	0-5m/0-16ft	1mm, 1/16"	19mm	31mm	64mm

LONG MEASURING TAPE

EG II

- High tensile strength fibreglass tape
- Nylon coating tape, wear resistance

7143-50

graduation
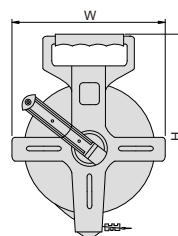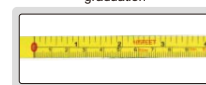
Code	Range	Graduation	Width of tape	W	H
7143-50	0-50m/0-165ft	1mm, 1/8"	13mm	220mm	320mm

MEASURING WHEEL (BASIC TYPE)

Unit: mm

550-1110 (adjustable)

rotate to adjust handle

Ø159.1

reset

counter

vertical needle

support
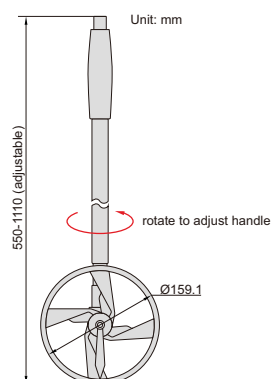
7144-1

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

Code	Range	Resolution
7144-1	0.1-9999.9m	0.1m

MEASURING WHEEL

counter reset

brake

after folding

backpack (included)

reset

counter

Unit: mm

1000

500

Ø319.2

vertical needle

support

7145-1

- ABS plastic frame, wear-resistant PU tire
- Two-section foldable handle
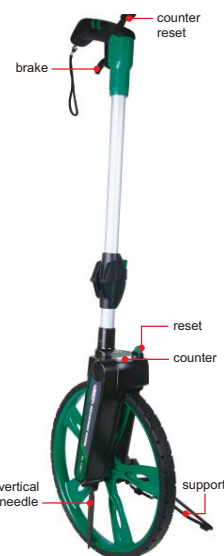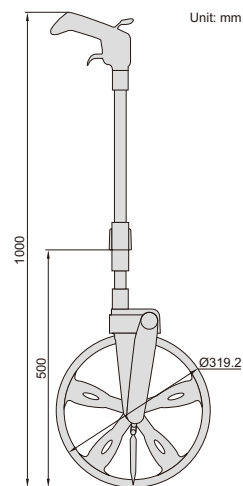
Code	Range	Resolution
7145-1	0.1-9999.9m	0.1m

ALUMINUM RULES

- Graduation: 1mm
- Made of aluminum, oxidized surface

L

W

L1

4.7mm
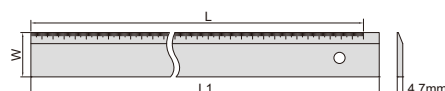
Code	Range (L)	Accuracy	L1	W
7123-300	300mm	±0.5mm	321mm	50mm
7123-600	600mm	±0.9mm	624mm	50mm
7123-1000	1000mm	±0.9mm	1024mm	50mm

7123-600

STEEL RULES

7110-300
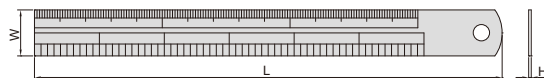
- Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- Rigid rules
- Made of stainless steel
- Non-glare surface

(mm)

Code	Range	Accuracy	L	W	H	Remark
7110-150	150mm/6"	±0.15mm	170	18	1.0	graduation on front and back
7110-200	200mm/8"	±0.15mm	220	18	1.0	graduation on front and back
7110-300	300mm/12"	±0.15mm	330	25	1.0	graduation on front and back
7110-3001	300mm/12"	±0.15mm	325	30	1.0	graduation on front and back
7110-500	500mm/20"	±0.15mm	530	30	1.2	graduation on front and back
7110-600	600mm/24"	±0.20mm	630	30	1.2	graduation on front and back
7110-1000	1000mm/40"	±0.20mm	1040	32	1.5	graduation on front and back
7110-1500	1500mm/60"	±0.35mm	1550	38	1.8	graduation on front

Sizes available up to 2000mm

POCKET RULE WITH SLIDING CLIP

7119-150

Unit: mm
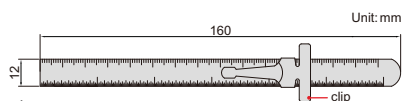
- With sliding clip, clip also can be used as depth gage base
- Inch/metric conversion table on the back
- Made of stainless steel

Code	Range	Graduation	Accuracy
7119-150	150mm/6"	1mm, 1/64"	±0.15mm

T-SHAPE MARKING GAGE

1275-150A
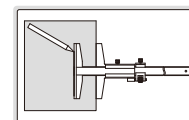
- Graduation: 0.05mm
- Made of stainless steel
- Satin chrome plated reading surface

Unit: mm

Code	Range	Accuracy
1275-150A	0-150mm	±0.05mm
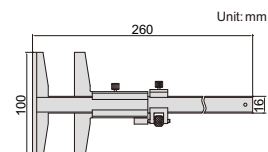
MARKING GAGES

7120-200A
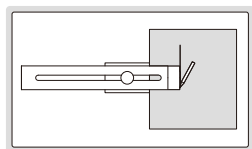
- Made of carbon steel
- Satin chrome plated
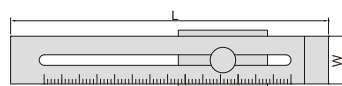
Code	Range	Graduation	Accuracy	L	W
7120-200A	0-200mm	0.1mm	±0.1mm	250mm	40mm
7120-250A	0-250mm	0.1mm	±0.1mm	300mm	40mm
7120-300A	0-300mm	0.1mm	±0.1mm	350mm	40mm

CENTER MARKING GAGES

7205-100
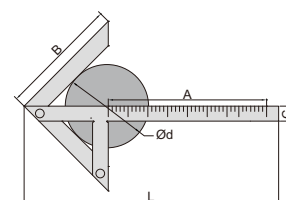
- Accuracy: ±0.15mm
- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated
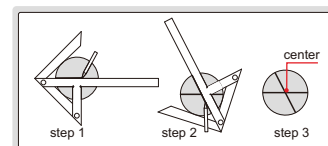
Code	Size (AxB)	Diameter of shafts (Ød)	C	L
7205-100	100x70mm	4-90mm	12mm	153mm
7205-150	150x130mm	4-190mm	15mm	245mm
7205-200	200x150mm	6-220mm	15mm	310mm

COMBINATION SQUARE SETS

Unit: mm

- Center head (made of cast iron):
  To locate center of cylinder with
  diameter (Ød): 30-100mm
  Accuracy: ±0.15mm
- Protractor head (made of cast iron):
  To set the blade at desired angle to
  an edge of a workpiece, and can be
  used to measure angles
  Range: 0-180°, accuracy: ±20min.
- Square head (made of cast iron):
  To set the blade at 90° or 45° to
  an edge of a workpiece
  Accuracy: ±8min for 90° square,
  ±10min for 45° square
- Blade (made of stainless steel):
  Range: 300mm/12",
  Graduation: 0.5mm and 1/32" on front
  face, 1mm and 1/64" on back face
- Optional accessory: rigid rule (code **7113**)

2278-2

2278-180

scriber
level
square head
center head
blade
protractor head
115
176
305
25

locate center | protractor | level
set 45° | set 90° | rule and marking

Code	Remark
2278-2	2-piece set
2278-180	4-piece set
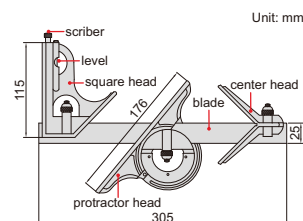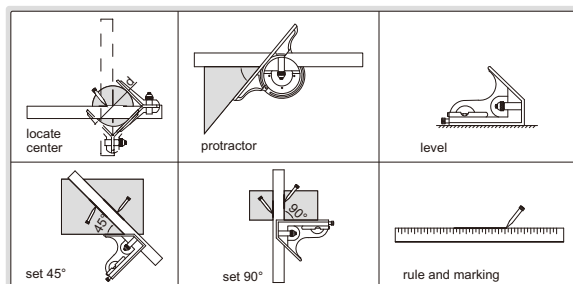
COMBINATION SQUARE (ECONOMIC TYPE)

- Square head (made of zinc):
  To set the blade at 90° or 45°
  to an edge of a workpiece
  Accuracy: ±0.5°
- Blade (made of stainless steel):
  Range: 300mm/12",
  Graduation: 1mm and 1/32" on
  front face,1mm and 1/16" on back face

Unit: mm

scriber
level
square head
blade
102
25.5
300

2276-300

set 90° | set 45°
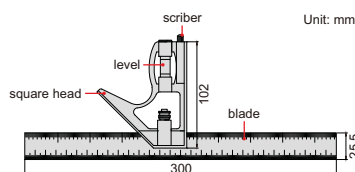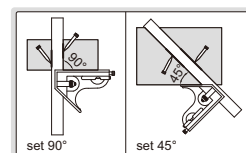
Code
2276-300

SCRIBER CALIPER

7202-200A

The position of scriber tip can be adjusted

Unit: mm
265
17.5
16
Ø8
Ø2

- Graduation: 0.1mm, 1/128"
- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip
- Optional accessory: carbide scriber tip
  (code **SP-SCRIBER-7202**)

Code	Range	Accuracy
7202-200A	0-200mm/0-8"	±0.1mm

SCRIBING CALIPER

7203-300A

Unit: mm
408
53
15
Ø8
16

- Made of stainless steel
- Satin chrome plated reading surface
- Hardened scriber tips
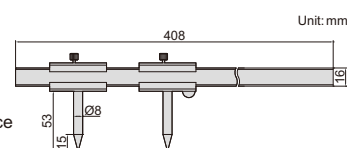
Code	Range	Accuracy	Graduation
7203-300A	51-300mm	±0.1mm	0.1mm

HEIGHT SCRIBER

Unit: mm
Ø10
200
300
27
65(W)x84(D)

6990-300A

fine adjustment

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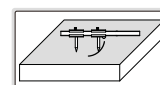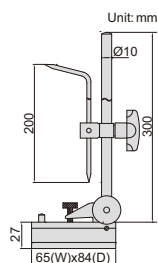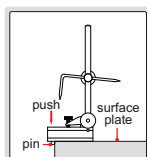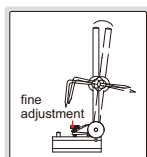
- Grooved bottom for cylinder
- Two pins to be set against
  the edge of surface plate

Code
6990-300A

SCRIBERS

7230

7231

7232

- Nickel plated

Unit: mm
Ø8
16
80
235
80
7230
94
167
Ø8
7231
6
145
7232

Code	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip
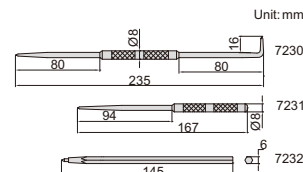
2-PIECE MEASURING TOOL SET

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

Code
5022-W

5022-W

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

4-PIECE MEASURING TOOL SETS

■ Includes:
 1) Vernier caliper, range 0-150mm/0-6"
 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**)

5041

Code	Remark
5041	Vernier caliper, graduation 0.05mm/1/128" (code **1205-150S**)
5041-2	Vernier caliper, graduation 0.02mm/0.001" (code **1205-1502S**)

5-PIECE MEASURING TOOL SET

■ Includes:
 1) Digital caliper, range 0-150mm/0-6",
  resolution 0.01mm/0.0005"
  (code **1108-150W**)
 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-W

5052-W

4-PIECE MEASURING TOOL SET

■ Includes:
 1) Digital caliper, range 0-150mm/0-6",
  resolution 0.01mm/0.0005"
  (code **1108-150W**)
 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-W

5042-W

6-PIECE MEASURING TOOL SETS

■ Includes:
 1) Vernier caliper, range 0-150mm/0-6"
 2) Outside micrometer, range 0-25mm
  graduation 0.01mm (code **3202-25A**)
 3) 90° beveled edge square, 100x70mm
  grade 00 (code **4790-0100**)
 4) Straight edge, 100mm (code **4700-100**)
 5) Spring divider, 150mm (code **7260-150**)
 6) Steel rule, 200mm/8" (code **7110-200**)

5063

Code	Remark
5063	Vernier caliper, graduation 0.05mm/1/128" (code **1205-150S**)
5063-2	Vernier caliper, graduation 0.02mm/0.001" (code **1205-1502S**)

13-PIECE MEASURING TOOL SETS

■ Includes:
 1) Digital caliper, range 0-150mm/0-6",
  resolution 0.01mm/0.0005"
 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 for depth base attachment

5013-W

Code	Remark
5013-W	Digital caliper, without thumb roller code **1108-150W**
5013	Digital caliper, with thumb roller code **1108-150**

GRANITE SURFACE PLATES

INSPECTION CERTIFICATE

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

6900-132

Grade 00

Code	Size (LxWxH)	Flatness	Weight (Kg)	Max. load (Kg)
6900-132 *	300x200x60mm	2.7µm	11	30
6900-142 *	400x250x60mm	2.9µm	18	50
6900-144 *	400x400x60mm	3.1µm	29	60
6900-153 *	500x315x70mm	3.2µm	33	60
6900-164 *	630x400x80mm	3.5µm	60	65
6900-166 *	630x630x100mm	3.8µm	119	75
6900-185 *	800x500x100mm	3.9µm	120	100
6900-1106 *	1000x630x140mm	4.4µm	265	200
6900-1128 *	1200x800x160mm	4.9µm	461	500

Grade 0

Code	Size (LxWxH)	Flatness	Weight (Kg)	Max. load (Kg)
6900-032 *	300x200x60mm	5.4µm	11	60
6900-042 *	400x250x60mm	5.9µm	18	100
6900-044 *	400x400x60mm	6.3µm	29	120
6900-053 *	500x315x70mm	6.4µm	33	120
6900-064 *	630x400x80mm	7.0µm	60	130
6900-066 *	630x630x100mm	7.6µm	119	150
6900-085 *	800x500x100mm	7.8µm	120	200
6900-0106 *	1000x630x140mm	8.7µm	265	400
6900-0128 *	1200x800x160mm	9.8µm	461	1000

*Supplied with manufacturer inspection certificate

STANDS FOR GRANITE SURFACE PLATE

- For medium size granite surface plates
- 5 jacks are included
- Adjusting range of jacks: 25mm
- One foot on the bottomis adjustable
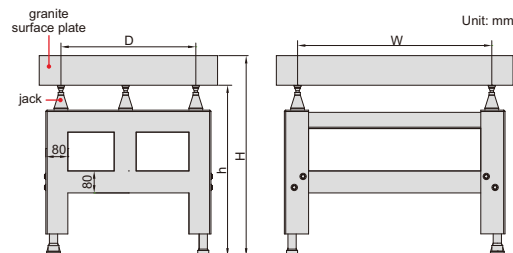
granite surface plate

jack

Unit: mm

adjustable foot

6902-64A

Low stands (mm)

Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)
6902-64A	630x400x80mm (code **6900-064** and **6900-164**)	352	224	775-800	695-720
6902-85A	800x500x100mm (code **6900-085** and **6900-185**)	448	280	775-800	675-700
6902-106A	1000x630x140mm (code **6900-0106** and **6900-1106**)	560	352	755-780	615-640
6902-128A	1200x800x160mm (code **6900-0128** and **6900-1128**)	672	448	755-780	595-620

High stands (mm)

Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)
6902-64H	630x400x80mm (code **6900-064** and **6900-164**)	352	224	1000-1025	920-945
6902-85H	800x500x100mm (code **6900-085** and **6900-185**)	448	280	1000-1025	900-925
6902-106H	1000x630x140mm (code **6900-0106** and **6900-1106**)	560	352	1000-1025	860-885
6902-128H	1200x800x160mm (code **6900-0128** and **6900-1128**)	672	448	1000-1025	840-865

V-BLOCK SETS
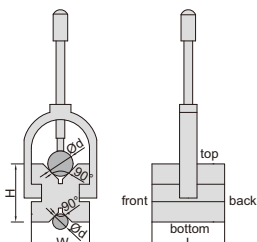
- Squareness of both V grooves to front and back sides: 5µm
- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts

top
front   back
bottom
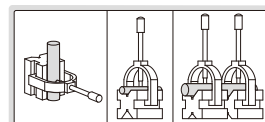
6896-11

Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of both V grooves to top and bottom sides	Height difference of a matched pair
6896-11	50x40x40mm	5-30mm	5µm	5µm
6896-12	80x63x63mm	7-63mm	5µm	5µm
6896-13	100x80x80mm	7-80mm	5µm	5µm

ROLLER BEARING V-BLOCK SETS

6888-1

Unit: mm

- Runout accuracy: 5µm
- Parallelism of bearings to bottom: 12µm
- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces
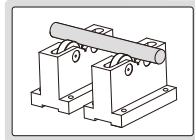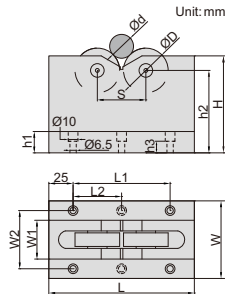
(mm)

Code	W1	W2	h1	h2	h3	L1	L2	S
6888-1	22	44	20	85	12	100	–	60
6888-2	40	60	22	85	12	100	–	50
6888-3	60	80	30	124	20	180	90	120

Code	Size (LxWxH)	Code of bearings	Diameter of bearings (ØD)	Range of shafts (Ød)	Load capacity
6888-1	150x60x100mm	6303 ZZ	42mm	25-70mm	500kg
6888-2	150x80x100mm	16004 ZZ	47mm	5-55mm	1000kg
6888-3	230x100x150mm	6306 ZZ	72mm	70-200mm	1000kg

MAGNETIC V-BLOCKS (ADVANCED TYPE)

HARDENED SURFACES   **HIGH PRECISION**   **STRONG MAGNETIC FORCE**

6889-11   **6889-1**
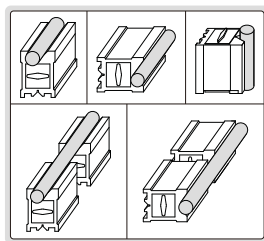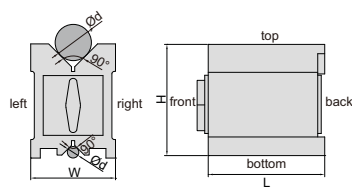
- Parallelism of V groove to top, bottom, left, right sides: 5µm
- Squareness of V groove to back side: 5µm
- Hardened, high accuracy, strong magnetic force, for grinding, light milling, drilling and inspection of round and square jobs
- All working surfaces are hardened to HRC60±2
- Magnetic force on top, bottom and two V grooves
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Suitable for cast iron surface plates and granite surface plates

Individual

Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force
6889-11	75x56x75mm	5-40mm	85kgf
6889-22	100x70x95mm	5-65mm	150kgf

Matched pair

Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Height difference of a matched pair
6889-1	75x56x75mm	5-40mm	85kgf	5µm
6889-2	100x70x95mm	5-65mm	150kgf	5µm

MAGNETIC V-BLOCK

**ATTENTION: NOT HARDENED**   **ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACE**

6890-702
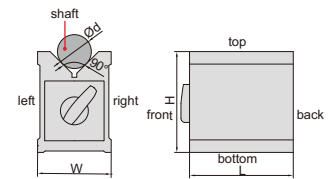
- Parallelism of V groove to top, bottom, left and right sides: 10µm
- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surface, otherwise the magnetic force will be reduced
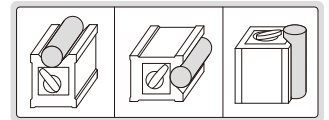
Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Squareness of V groove to back side
6890-702	70x60x73mm	6-44mm	56kgf	10µm

MAGNETIC V-BLOCK

ATTENTION: NOT HARDENED   **ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACE**

6801-1202
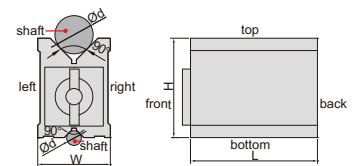
- Parallelism of V grooves to top, bottom, left, right side: 10µm
- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surface, otherwise the magnetic force will be reduced
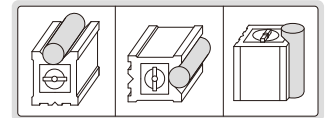
Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Squareness of V groove to back side
6801-1202	100x70x95mm	6-67mm	80kgf	10µm

PARALLEL SETS

6533-144

Unit: mm

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

(mm)
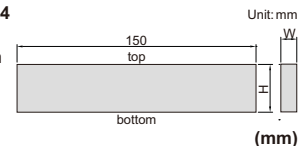
Code	Parallels per set	Thickness (W)	Height (H)
6533-10	10 pairs	3	13, 16, 19, 22, 25, 28, 31, 35, 38, 41
6533-144	14 pairs	10	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50

PARALLEL SET

6534-6
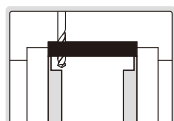
- Height difference of a matched pair: 5µm
- Hardened to HRC55-60
- Made of alloy tool steel

Unit: mm
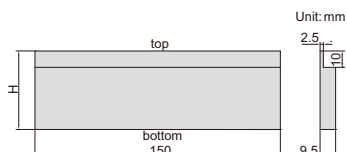
Code	Parallels per set	Parallelism between top and bottom	Height (H)
6534-6	6 pairs	5µm	25, 30, 35, 40, 45, 48mm

SINE BARS

HIGH PRECISION

4155-100

the front and back ends and two sides have mounting holes to install plate

mounting holes

plate

mounting holes

mounting holes

- Made of alloy tool steel

gage block

α=arcsin (H/E)
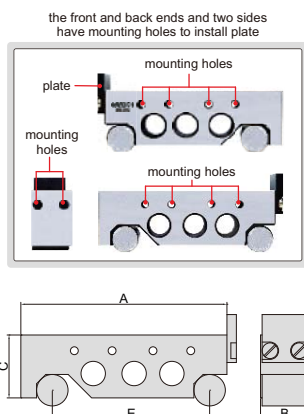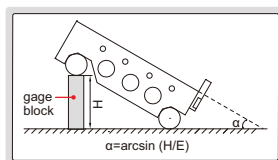
(mm)

Code	Roller distance (E)	Table size (AxB)	C	Accuracy of α at 30°
4155-100	100mm	130x30mm	40	±5 seconds
4155-200	200mm	230x30mm	40	±5 seconds
4155-300	300mm	345x40mm	50	±8 seconds

PRECISION VISES

6525-76

- Parallelism: 4µm/100mm
- Squareness: 6µm/100mm
- Made of alloy steel
- Hardness HRC56-58
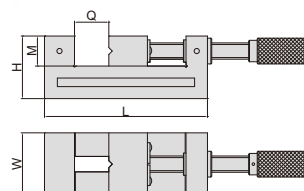
Code	Jaw opening (Q)	Jaw width (W)	L	H	M
6525-73	0-73mm	63mm	176mm	63mm	30mm
6525-76	0-76mm	73mm	190mm	73mm	35mm
6525-120	0-120mm	98mm	255mm	82mm	40mm

ANGLE PLATE SETS

4003-12

- Accuracy: ±9"
- For angle set-up in tooling, production and inspection
- Hardness HRC55
- Made of tool steel

Unit: mm

Code	Angle plates included	Angle α
4003-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°
4003-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°

RIGHT ANGLE PLATE

V groove

Unit: mm

6-M8x1.25
5-M6x1
2-Ø12.7
5-M8x1.25

2-M6x1
2-Ø12.7
4-M8x1.25

6547-1

- Made of alloy steel
- Hardened to HRC60±2
- V groove for cylinders
- Parallelism and squareness between A, B, C, D, E, F, G and H: 6µm
- Parallelism and squareness of V groove to A, B, C, D, E, F, G and H: 6µm

Code	Size (LxWxH)
6547-1	100x100x115mm

PRECISION VISES

6526-80

- Parallelism: 3µm/100mm
- Squareness: 5µm/100mm
- Made of alloy steel
- Hardness HRC56-58

(mm)

Code	Jaw opening (Q)	Jaw width (W)	Overall length (L)	H	M
6526-80	0-80mm	50mm	150mm	53	25
6526-100	0-100mm	73mm	190mm	70	35

ADJUSTABLE ANGLE BLOCK
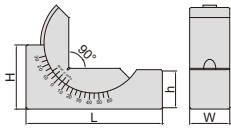
6535-30

- Graduation of angle: 10'
- Made of hardened tool steel
- With locking screw

Code	Size (LxWxH)	h	Adjustable angle	Accuracy of angle
6535-30	102x30x49mm	30mm	30°~0°~60°	10'

DIAL TEST INDICATOR CENTERING HOLDER

Unit: mm

Ø8
40
102
82

stem hole Ø8
dovetail groove
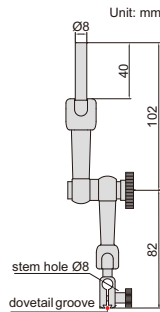
- Center cylinders or holes on machine tools
- Can be used with dial test indicators

Code
6295-1A

6295-1A

INDICATOR CENTERING HOLDER

Unit: mm

Ø8
40
185
195

stem hole Ø8
dovetail groove

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

Code
6294-1A

6294-1A

CERAMIC EDGE FINDER

Unit: mm

5mm

A
45
86
Ø8.5
6
B

6568-1

- Ceramic contact point, non magnetic
- Suitable for machine speed 400-600rpm

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

CENTERING INDICATOR

handle is fixed

2385-3

external feeler | internal feeler | small hole feeler

Unit: mm

Ø36
Ø10
21
138
160
Ø4

40 90 140
SØ3 SØ3 SØ3
P1 P2 P3
external feeler

40 90 140
SØ3 SØ3 SØ3
P4 P5 P6
internal feeler

50
Ø3
P7
small hole feeler

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

Feeler	Measuring diameter	Accuracy
P1	Ø0-60mm	0.015mm
P2	Ø0-160mm	0.02mm
P3	Ø0-250mm	0.03mm
P4	Ø3.2-80mm	0.015mm
P5	Ø3.2-180mm	0.02mm
P6	Ø3.2-280mm	0.03mm
P7	Ø0-2.8mm	0.015mm

Code
2385-3

EDGE FINDER

3mm

Unit: mm

A
65
Ø10
7
11
B

6567-1

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

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

EDGE FINDERS

Unit: mm

A
83
Ø20
B
10
6562-3

A
88
Ø20
B
9
C
8
6562-4

5mm
6562-3

2mm 5mm
6562-4

6562-3 **6562-4** 6562-3 6562-4

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

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

ZERO SETTER

6556-50

Unit: mm

setting rod (included)

72

Ø19

Unit: mm

Ø47

Ø40

H

Ø63

chuck

anvil — cutting tool
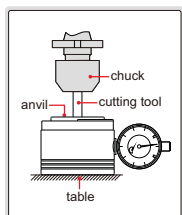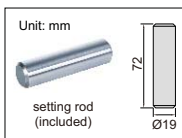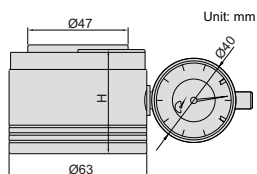
table

Code	Height (H)	Accuracy	Test force
6556-50	50mm	±10µm	10N (at 50mm)

ELECTRONIC ZERO SETTER

ATTENTION: HIGH TEST FORCE

6550-50A
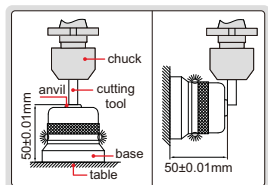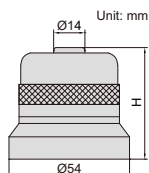
Ø14

Unit: mm

H

Ø54

- 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

chuck

anvil — cutting tool

50±0.01mm

base

table

50±0.01mm

Code	Height (H)	Accuracy	Test force
6550-50A	50mm	±10µm	27N (at 49mm)

ZERO SETTER

2394-100A

Ø31.5

Unit: mm

H

Ø42

58

55

- Magnetic base with on-off switch
- Test force: 9N (at 100mm)

chuck

anvil

cutting tool

100±0.01mm

table

100±0.01mm

Code	Height (H)	Accuracy
2394-100A	100mm	±10µm

ELECTRONIC EDGE FINDERS

6566-2   **6566-3**

LED light

beeper

LED light

Unit: mm

A

160

45

B

chuck

shank

metal workpiece

ball 5mm

table

- 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	23AE, 12Vx1pc
6566-3	Ø20mm	SØ10mm	5µm	with	23AE, 12Vx1pc

ELECTRONIC ZERO SETTER

INSIZE PLUS
MADE IN GERMANY

LOW TEST FORCE

Ø19

Unit: mm

H

Ø39

LED light

spring range 2mm

6553-50

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

chuck

anvil

cutting tool

50±0.01mm

base

table

50±0.01mm

Code	Height (H)	Accuracy	Test force
6553-50	50mm	±10µm	7N (at 49mm)

ZERO SETTER

2397-502A

Ø31.5

Unit: mm

H

Ø42

50

chuck

anvil

cutting tool

50±0.01mm

table

50±0.01mm
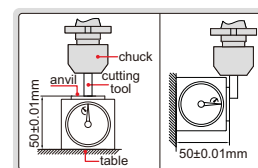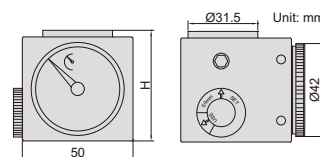
- Magnetic base

Code	Height (H)	Accuracy	Test force
2397-502A	50mm	±10µm	9N (at 50mm)

DIGITAL HORIZONTAL SCALES

DATA OUTPUT

7101-300A
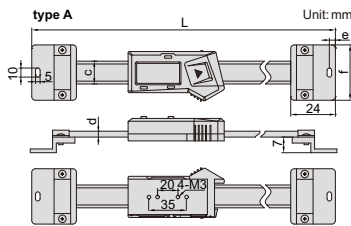
7101-400A

type A — L — Unit: mm

type B — L — Unit: mm

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: data output cable
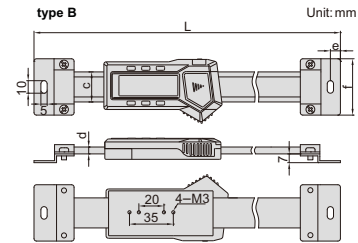
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Absolute and incremental measurement
- Battery CR2032, data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: data output cable

(mm)

Code	Range	Type	Accuracy	L	c	d	e	f
7101-100A	100mm	A	±0.02mm	215	16	4	6	36
7101-150A	150mm	A	±0.03mm	265	16	4	6	36
7101-200A	200mm	A	±0.03mm	315	16	4	6	36
7101-300A	300mm	A	±0.04mm	445	16	4	6	36
7101-400A	400mm	B	±0.05mm	590	24	5.5	8	45
7101-500A	500mm	B	±0.05mm	690	24	5.5	8	45
7101-600A	600mm	B	±0.08mm	790	24	5.5	8	45
7101-800A	800mm	B	±0.10mm	990	24	5.5	8	45
7101-1000A	1000mm	B	±0.10mm	1190	31	10.5	10	60

example of application

bracket (included)

Unit: mm

COUNTERS

X/Y axis display | addition of 2-scale data
zero setting
machining method
arc machining mode
calculator
ABS/INC, SDM coordinate | " ½ " calculation

ISL-DR2

X/Y/Z axis display | addition of 2-scale data
zero setting
machining method
arc machining mode
calculator
ABS/INC, SDM coordinate | " ½ " calculation
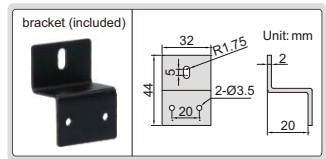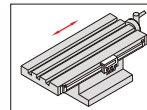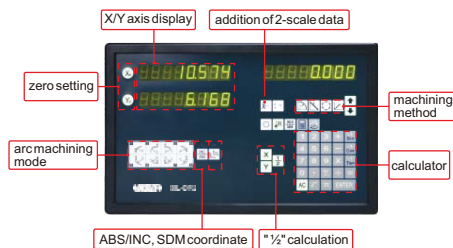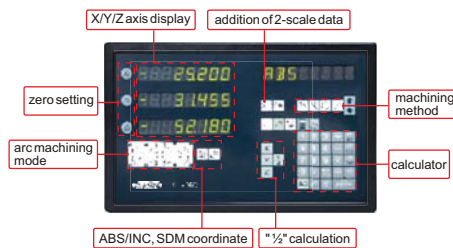
ISL-DR3

software CD (included)

VIDEO

mounting bracket (included)
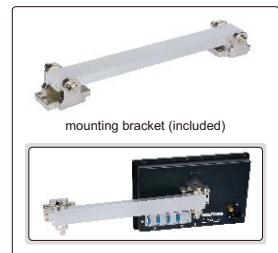
SPECIFICATION

Code	ISL-DR2	ISL-DR3
Application	two-axis	three-axis
Scale input ports	2	3
Resolution	0.05μm, 0.1μm, 0.2μm, 0.5μm, 1μm, 2μm, 5μm, 10μm, 20μm, 50μm	
Functions	addition of 2-scale data, linearity error compensation, smoothing, RS232C interface unit, BCD code out, zero setting, preset, resolution setting, counting direction setting, inch/mm conversion, ABS/INC conversion, expansion/contraction coefficient setting, "½" calculation, detecting RI, bolt-hole circle machining, ramp circle machining	
Power supply	110/220V, 50/60Hz	
Dimension	295x185x45mm	
Weight	1.45kg	

STANDARD DELIVERY

Main unit	1 pc
Mounting bracket	1 pc
Ground cable	1 pc
RS232C cable	1 pc
Software CD for RS232C	1 pc

LINEAR SCALES

ISL-A5-300

Series ISL-A5

Total length L3
Mounting hole pitch L2
Max, travel length L1
Effective length L
Unit: mm

Series ISL-B5

Total length L3
Mounting hole pitch L2
Max, travel length L1
Effective length L
Unit: mm

Effective length (L)	Code Series ISL-A1	Code Series ISL-A5	Code Series ISL-B5
50mm	ISL-A1-50	ISL-A5-50	ISL-B5-50
100mm	ISL-A1-100	ISL-A5-100	ISL-B5-100
150mm	ISL-A1-150	ISL-A5-150	ISL-B5-150
200mm	ISL-A1-200	ISL-A5-200	ISL-B5-200
250mm	ISL-A1-250	ISL-A5-250	ISL-B5-250
300mm	ISL-A1-300	ISL-A5-300	ISL-B5-300
350mm	ISL-A1-350	ISL-A5-350	ISL-B5-350
400mm	ISL-A1-400	ISL-A5-400	ISL-B5-400
450mm	ISL-A1-450	ISL-A5-450	ISL-B5-450
500mm	ISL-A1-500	ISL-A5-500	ISL-B5-500
550mm	ISL-A1-550	ISL-A5-550	ISL-B5-550
600mm	ISL-A1-600	ISL-A5-600	ISL-B5-600
650mm	ISL-A1-650	ISL-A5-650	ISL-B5-650
700mm	ISL-A1-700	ISL-A5-700	ISL-B5-700
750mm	ISL-A1-750	ISL-A5-750	ISL-B5-750
800mm	ISL-A1-800	ISL-A5-800	ISL-B5-800
850mm	ISL-A1-850	ISL-A5-850	ISL-B5-850
900mm	ISL-A1-900	ISL-A5-900	ISL-B5-900
950mm	ISL-A1-950	ISL-A5-950	ISL-B5-950
1000mm	ISL-A1-1000	ISL-A5-1000	ISL-B5-1000
1100mm		ISL-A5-1100	ISL-B5-1100
1200mm			ISL-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

'L' shape support (included)

plain base (included, for L≥1500mm)

STANDARD DELIVERY

Main Unit	1 pc
'L' shape support	1 pc
Anti-dust cover	1 pc
Plain base	1 pc (for L≥1500mm)
Mounting accessories	1 package

mounting accessories (included)

anti-dust cover (included)
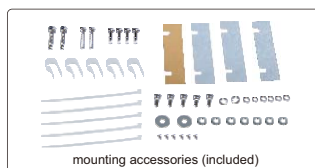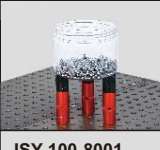
SPECIFICATION

Code	Series ISL-A1		Series ISL-A5		Series ISL-B5	
L1 (mm)	L+30(L<950)	L+50(L≥950)	L+30(L<950)	L+50(L≥950)	L+30(L<950)	L+50(L≥950)
L2 (mm)	L+132(L<950)	L+152(L≥950)	L+132(L<950)	L+152(L≥950)	L+136(L<950)	L+156(L≥950)
L3 (mm)	L+149(L<950)	L+169(L≥950)	L+149(L<950)	L+169(L≥950)	L+154(L<950)	L+174(L≥950)
Resolution	1µm		5µm		5µm	
Max. response speed	50m/min		90m/min		60m/min	
Scale grating pitch	20µm					
Scale reference point pitch	50mm					
Accuracy	±(5+5L/1000)µm L is the effective length in mm					
Cable length	3.5m (L: 50-950mm), 5m (L: 1000-1500mm), 10m (L: 1600-2000mm)					

106 PCS JIG SET FOR CMM
CODE ISY-100

VIDEO

ISY-100

application examples
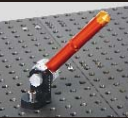
Product	Code	Size (mm)	Quantity	Application
stand	ISY-100-1001	Ø16×30	5	
	ISY-100-1002	Ø16×50	5	
	ISY-100-1003	Ø16×100	3	
stand	ISY-100-1004	Ø20×30	5	
	ISY-100-1005	Ø20×50	5	
	ISY-100-1006	Ø20×100	3	
stand with fine adjustment	ISY-100-2001	Ø16×45~60	2	height adjustment: 45~60mm
stand with fine adjustment	ISY-100-2003	Ø20×45~60	2	
horizontal spring stand	ISY-100-4001	—	2	
horizontal screw stand	ISY-100-5001	—	2	
magnetic stand (magnetic top surface)	ISY-100-7001	Ø20×25	3	
stand for slice parts	ISY-100-8001	Ø20×25	2	ISY-100-8001 and ISY-100-8002 use cooperatively
clamping stand for slice parts	ISY-100-8002		1	
clip	ISY-100-1201	—	2	
clip	ISY-100-1301	—	2	
clip stand	ISY-100-1401	Ø6×60	2	
	ISY-100-1402	Ø6×100	2	
sliding support plate	ISY-100-1801	78×20×10	3	
clamping screw	ISY-100-2301	Ø8×20	6	
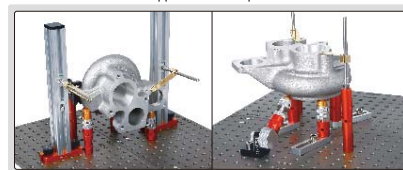
Product	Code	Size (mm)	Quantity	Application
vertical square column	ISY-100-3003	30×30×250	2	
screw	ISY-100-2302	Ø8×20	6	
base plate	ISY-600-400200	400×400×12	2 pieces /per set	—
wrench	ISY-100-3701	Ø3.8×70	1	—
wrench	ISY-100-3801	M2.5	1	—
	ISY-100-3802	M5	1	—
	ISY-100-3803	M6	1	—

Product		Code	Quantity	Application
45° stand		ISY-100-9001	2	
V shaped support		ISY-100-1901	2	
V shaped support		ISY-100-1902	2	
support head		ISY-100-2701	4*	
		ISY-100-2702	4*	
		ISY-100-2703	4*	
		ISY-100-2704	4*	
		ISY-100-2705	4*	
		ISY-100-2706	4*	
		ISY-100-2707	4*	
dust cleaner		ISY-100-3501	1	—
lubricating oil		ISY-100-3601	1	—

*2 pcs in aluminum, 2pcs in plastic

PROFILE PROJECTOR
CODE ISP-Z3015

INSPECTION CERTIFICATE

Screen diameter: 300mm

X-Y travel: 150x50mm

VIDEO

OPTIONAL ACCESSORY

lens
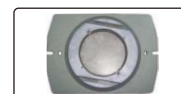
rotary table
(glass plate diameter 100mm)

overlay chart
(protractor with 1° graduation,
radius with 1mm increment)

holder with clamp

swivel center support

V-block with clamp

50mm reading scale
(check magnification accuracy)

300mm calibration scale (check
magnification accuracy together
with 50mm reading scale or
calibrate measuring accuracy)

blue filter

demo sample

SPECIFICATION

Lens	magnification	10X (included)	20X (**optional**)	50X (**optional**)	100X (**optional**)
	view field	Ø30mm	Ø15mm	Ø6mm	Ø3mm
	working distance	77.7mm	44.3mm	38.4mm	25.3mm
Max. workpiece height		90mm	90mm	90mm	90mm
Magnification accuracy		±0.08%			
Image		erect image			
Projector screen		diameter: Ø300mm			
		rotation range: 0°~360°, resolution: 1" or 0.01°			
		reference lines: cross-hairs			
Stage	metal stage size	340×152mm			
	glass stage size	196×96mm			
	X-Y stage travel	range: 150×50mm			
		resolution: 0.5µm			
		accuracy: (4+L/25)µm L is the measuring length in mm			
	Z (focus) travel range	90mm			
	max. load capacity	4kg			
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable			
		surface illumination: 24V/150W halogen lamp			
Data processing unit	display	X-Y stage travel, screen rotation			
	output	RS232C			
	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			
		½ set midpoint of coordinate			
Power supply		110/220V, 50/60Hz			
Dimension (L×W×H)		550×770×1100mm			
Weight		135kg			

STANDARD DELIVERY

Main unit	1pc
10X lens with half-reflection mirror and oblique illuminator mirror	1pc
Overlay chart clip	4pcs
Foot-switch	1pc
Anti-dust cover	1pc

STANDARD DELIVERY

20X lens with half-reflection mirror and oblique illuminator mirror	ISP-Z3015-LENS20X
50X lens with half-reflection mirror	ISP-Z3015-LENS50X
100X lens with half-reflection mirror	ISP-Z3015-LENS100X
Rotary table	ISP-Z3015-TABLE
Overlay chart	ISP-Z3015-CHART
Holder with clamp	ISP-Z3015-HOLDER
Swivel center support	ISP-Z3015-SUPPORT
V-block with clamp	ISP-Z3015-VBLOCK
50mm reading scale	ISP-Z3015-SCALE50
300mm calibration scale	ISP-Z3015-RULE
Blue filter	ISP-Z3015-FILTER
Demo sample	ISP-Z3015-DEMO

VISION MEASURING SYSTEM

INSPECTION CERTIFICATE

software CD (included)

image | measuring tools | X/Y/Z axis display

measuring object | measuring results | graphic | zoom in

ISD-V250　　computer is not included

SPECIFICATION

Code	ISD-V150	ISD-V250	ISD-V300
Measuring range (X×Y×Z)	150×100×200mm	250×150×200mm	300×200×200mm
Stage size	354×228mm	450×280mm	500×330mm
Glass stage size	210×160mm	306×196mm	350×250mm
Resolution of X/Y/Z axis	0.5µm		
Accuracy of X/Y axis	≤(2.5+L/100)µm (L is the measuring length in mm)		
Repeatability of X/Y axis	2µm		
Objective	0.7X~4.5X (zoom)		
Working distance	92mm		
Magnification	33X~195X (on 19" monitor)		
Camera	1/3" color CCD, 0.3M pixel		
Illumination	surface and contour with adjustable LED		
Max. height of workpiece	160mm		
Max. weight of workpiece	20kg		
Operation system	Windows 7/8/10		
Drive method	manual		
Power supply	110/220V, 50/60Hz		
Dimension (L×W×H)	560×540×850mm	760×600×900mm	760×600×900mm
Weight	100kg	120kg	140kg

stylus | calibration ball

probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10µm

lens with coaxial light (**optional**, must be installed in factory)

STANDARD DELIVERY

Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Foot switch	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

0.5X auxiliary objective	Code: **ISD-V-OB05X** Working distance: 175mm Magnification: 16.5~97.5X (on 19" monitor)
2X auxiliary objective	Code: **ISD-V-OB2X** Working distance: 36mm Magnification: 66~390X (on 19" monitor)
Probe	Code: **ISD-V-PROBE** Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Lens with coaxial light	Code: **ISD-V-LENS** (must be installed in factory)

SOFTWARE

- **Operation system:** Windows 7/8/10
- **Language:** English
- **Single measuring tools:**

- measure coordinate of point
- measure center coordinate, diameter and area of circle
- measure distance between two points
- measure length and diameter of arc
- measure center coordinate and axis length of ellipse
- measure length, width and area of rectangle
- measure length, width and diameter of key slot
- measure width and diameter of ring
- measure length of open curve
- measure length and area of closed curve
- measure angle of two lines
- measure focus distance of urface
- measure distance of two elements

- **Combined measuring tools:**

measure distance and angle of two elements

- **Focus indicator:**

- **Coordinate transfer:**

Center coordinate X:6.013mm Y:5.176mm → Center coordinate X:0.000mm Y:0.000mm

- **Data export to CAD, EXCEL and WORD**

CAD | EXCEL | WORD

- **Profile detection:**

- **Edge-detection:**

Point tool | Box tool | Circle tool

- **Contour scanning:**

- **CAD measuring:**

Input CAD drawing and set reference, move the stage to make the target box in the center of crosshair, then the software will do automatic measurement

CNC VISION MEASURING SYSTEM

INSPECTION CERTIFICATE

stylus — calibration ball

probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement

lens with coaxial light (included)

programmable segmented ring light (included)

ISD-V220CNC

image   X/Y/Z axis display   light controller   zoom in   movement controller   measuring tools   graphic

measuring object   measuring results

computer is not included

controller

software CD (included)

SPECIFICATION

Code	ISD-V220CNC **	ISD-V270CNC **	ISD-V370CNC **
Measuring range (X×Y×Z)	220×120×150mm	270×170×150mm	370×270×150mm
Stage size	450×280mm	500×330mm	606×466mm
Glass stage size	306×196mm	350×250mm	450×350mm
Resolution of X/Y/Z axis	0.5μm		
Accuracy of X/Y axis	≤(2.5+L/100)μm (L is the measuring length in mm)		
Repeatability of X/Y axis	2μm		
Objective	0.7X~4.5X (zoom)		
Working distance	92mm		
Magnification	20X~128X (on 19.5" monitor)		
Camera	1/2" color CCD, 0.4M pixel		
Illumination surface	coaxial light, programmable segmented ring light		
Illumination contour	adjustable LED light		
View field (diagonal length)	1.7~11.1mm		
Max. height of workpiece	160mm		
Max. weight of workpiece	30kg		
Operation system	Windows 7/8/10		
Drive method	Automatic		
Power supply	220V, 50/60Hz **		
Dimension (L×W×H)	760×600×900mm	760×600×900mm	970×670×940mm
Weight	146kg	168kg	266kg

** Add "**-U**" on code NO. when power supply is 110V, 50/60HZ

STANDARD DELIVERY

Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Len with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

0.5X auxiliary objective	Code: **ISD-V-OB05X** Working distance: 175mm Magnification: 10~64X (on 19.5" monitor)
2X auxiliary objective	Code: **ISD-V-OB2X** Working distance: 36mm Magnification: 40~256X (on 19.5" monitor)
Probe	Code: **ISD-V-PROBE** Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball

SOFTWARE

- **Operation system:** Windows 7/8/10
- **Language:** English
- **Single measuring tools:**

- measure coordinate of point
- measure center coordinate and axis length of ellipse
- measure length of open curve
- measure distance of two elements
- measure center coordinate, diameter and area of circle
- measure length, width and area of rectangle
- measure length and area of closed curve
- measure distance between two points
- measure length, width and diameter of key slot
- measure angle of two lines
- measure length and diameter of arc
- measure width and diameter of ring
- measure focus distance of urface

- **Combined measuring tools:**
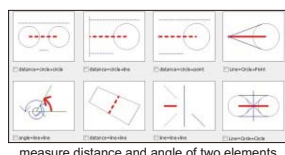
measure distance and angle of two elements

- **Focus indicator:**

Range: 1 ▼ μm

- **Coordinate transfer:**

Center coordinate X:6.013mm Y:5.176mm → Center coordinate X:0.000mm Y:0.000mm

- **Data export to CAD, EXCEL and WORD**

CAD   EXCEL   WORD

- **Profile detection:**

INSIZE → INSIZE

- **Edge-detection:**

Point tool   Box tool   Circle tool
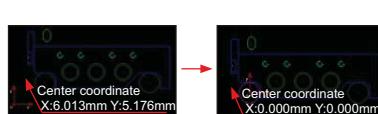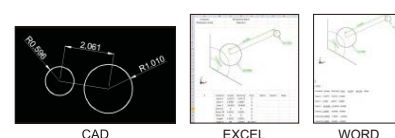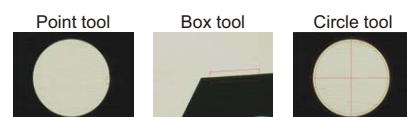
- **Contour scanning:**
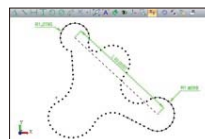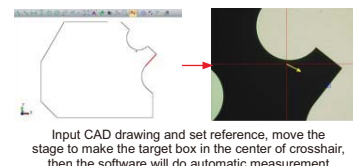
- **CAD measuring:**

Input CAD drawing and set reference, move the stage to make the target box in the center of crosshair, then the software will do automatic measurement

SURFACE PROFILE MEASURING MACHINE
CODE SPM-1000
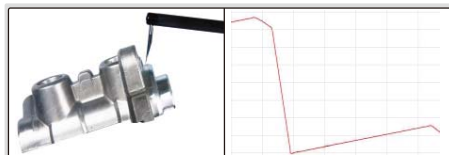
standard blocks (included)

standard balls (included)

standard shaft (included)

computer (included)

standard probe
(length 32mm, included)

vise (included)

stage (included)
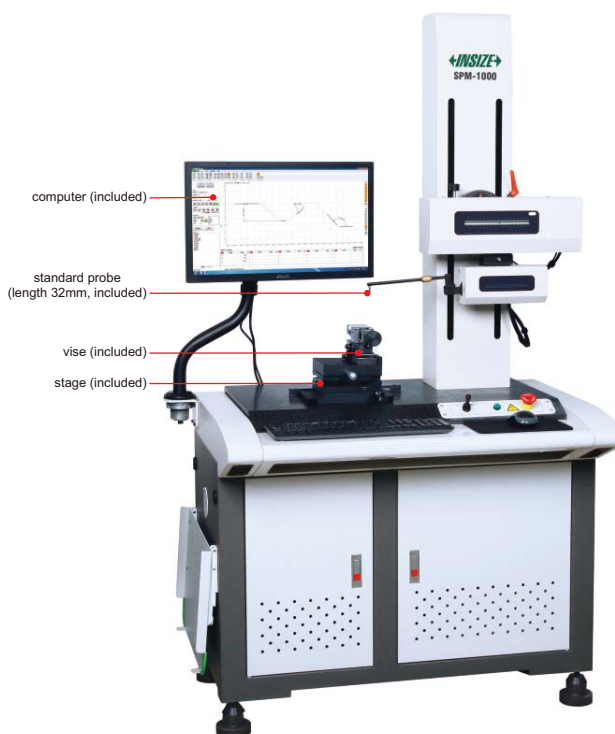
- Software is included, for surface profile measurement and data output
- Probe compensation
- Output as format xy, txt, csv, etc.
- Large range design, the leverage ratio is 1:2.2, maintain the original accuracy of the sensor
- The overall structure of the Z-axis sensor does not have any elastic components, ensuring the measuring force is constant regardless the position of probe

calibration

contour scanning

dimension measurement

data output
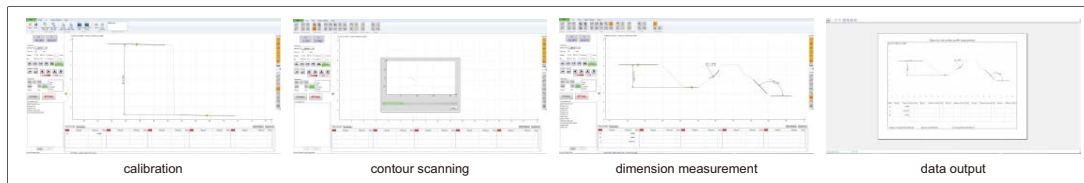
SPECIFICATION

X axis measuring range	140mm
X axis resolution	0.2μm
X axis straightness	0.8μm/100mm
X axis traverse speed	0.1~10mm/s
Z axis measuring range	±20mm
Z axis resolution	0.05μm
Z axis traverse speed	0.5~10mm/s
Linear accuracy	±(1.5+|0.2H|)μm, H is measuring height in mm
Angular measuring accuracy	±2'
Arc measuring accuracy	±(2+R/8)μm, R is 2~10mm standard ball
Radius of probe tip	25μm
Traverse direction	backword
Measuring force	0.69~0.98mN
Measuring unit	mm/inch
Traceable angle	72° (upward), 87° (downward)
Drive mode	motor
Travel of Z axis	400mm
Dimension(L×W×H)	1200×700×1780mm
Power supply	220±5%V, 50Hz
Weight	320kg

stage (included)

vise (included)
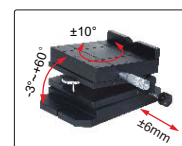
STANDARD DELIVERY

Main unit	1 pc
Standard probe and arm	1 pc of each
Standard block	2 pcs
Standard ball	2 pcs
Standard shaft	1 pc
Stage	1 pc
Vise	1 pc
Computer	1 pc
Measurement software	1 pc
Printer	1 pc
Installation tools	1 set

DIGITAL AUTO FOCUS MICROSCOPE (WITH DISPLAY)
CODE 5303-AF103

TAKE PICTURES AND VIDEOS

AUTO FOCUS

8G memory card and holder (included)
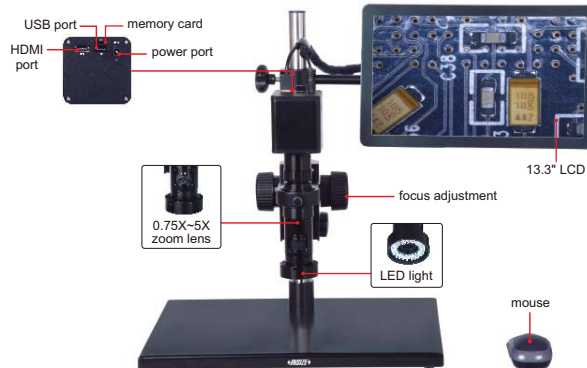
USB port — memory card
HDMI port — power port

13.3" LCD

focus adjustment

0.75X~5X zoom lens

LED light

mouse

- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to memory card
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)

2X auxiliary objective (**optional**)

1X camera adapter (**optional**)

0.5X camera adapter (included)

1X auxiliary objective (included)
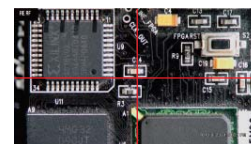
display cross hair (blue/green/red/yellow/black/brown colors)

SPECIFICATION

Magnification	20X~123X
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

X-Y glass stage (**optional**)
(X-Y travel: 74×60mm)
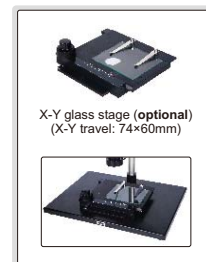
STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
8G memory card and holder	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	2 pcs

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED auxiliary lighting	ISM-DL-LED
Lens with coaxial light	ISM-DL-COAXIAL
Auxiliary objective lens	

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary Objective	Specification	Camera adapter	
		0.5X (included)	**1X (optional)**
1X (included)	**Magnification**	20~123X	40~246X
	Focus distance	48~84mm	48~84mm
	View field	13×7~2.2×1mm	6.3×3.5~1.1×0.5mm
2X (optional)	**Magnification**	40~246X	80~492X
	Focus distance	24~42mm	24~42mm
	View field	6.5×3.5~1.1×0.5mm	3.3×1.8~0.6×0.3mm

AUTO FOCUS DISTANCE

Zoom objective scale	0.75X	1X	1.5X	2X	2.5X	3X	3.5X	4X	4.5X	5X
Auto focus distance	48~84mm	50~78mm	55~73mm	62~71mm	65~70mm	66~70mm	67~70mm	68~70mm	68~70mm	68~70mm

DIGITAL MEASURING MICROSCOPE (WITH DISPLAY)

TAKE PICTURES **MEASUREMENT** **BUILT-IN SOFTWARE WITHOUT COMPUTER**

VIDEO

ISM-DL301 (with contour illumination)

- contour illumination
- contour illumination brightness adjustment

- power
- HDMI port
- USB ports
- 13.3" LCD
- fine focus knob (graduation: 2μm)
- step-zoom lens 0.75X~5X (zoom)
- LED
- mouse

ISM-DL300 (without contour illumination)

- 16G USB flash disk (included)
- calibration plate (included)
- 1X camera adapter (**optional**)
- 0.5X camera adapter (included)
- 2X auxiliary objective (**optional**)
- 1X auxiliary objective (included)

- 1080P high-definition image
- Built-in software without computer, operation by mouse
- Take pictures, saved to USB flash disk
- Measurement results can be output to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

SPECIFICATION

Code	ISM-DL300 (without contour illumination)	ISM-DL301** (with contour illumination)
Magnification	15X~100X	
Sensor	1/2" CMOS	
Pixel	2M	
Resolution	1920×1080	
Frame rate	60fps	
Output	HDMI	
Power supply	power adapter	power adapter and 220V, 50/60Hz **
Dimension (L×W×H)	570×300×430mm	
Weight	6.5kg	

Add "-U**" on code No. when power supply is 110V, 50/60Hz

MEASURING ACCURACY

Magnification	Measuring accuracy *
15X	±8μm
30X	±6μm
50X	±6μm
80X	±4μm
100X	±4μm
>100X	±4μm

* When measuring the contour of workpieces, please select **ISM-DL301** for high accuracy.

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	2 pcs

X-Y glass stage **(optional)** (X-Y travel: 74×60mm)

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED auxiliary illumination	ISM-DL-LED
Coaxial light illumination	ISM-DL-COAXIAL
Auxiliary objective lens	

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary Objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	Magnification	15~100X	30~200X
	Focus distance	70±2mm	70±2mm
	View filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	Magnification	30~200X	60~400X
	Focus distance	29±2mm	29±2mm
	View field	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

measurement   image on-line   calibration
measuring tools
assist tools
measuring results

SOFTWARE

- **Language**: English
- **Output to Excel**
- **Edge-detection**:

Point tool   Box tool   Click tool

Measurement tools:

measure length of line or distance between two points	measure length of line or distance between two points in horizontal direction	measure distance between two parallel lines	measure angle from horizontal line
measure distance between multiple parallel lines	measure length of line or distance between two points in vertical direction	measure length, width, girth and area of rectangle	measure angle of two lines
measure distance between three parallel lines	measure radius, diameter, girth and area of circle with three points	measure radius, length and angle of arc	measure distance between point and line
measure maximum distance between point and circle	measure radius, diameter, girth and area concentric of circles	measure minimum distance between point and circle	measure girth and area of polygon
measure maximum distance between line and circle	measure distance between point and center of circle	measure minimum distance between line and circle	measure angle from vertical line
measure minimum distance between two circles	measure distance between line and center of circle	measure center distance between two circles	add text
measure maximum distance between two circles	measure radius, diameter, girth and area of circle with two points	cross hair	

DIGITAL AUTO FOCUS MICROSCOPE
CODE 5302-AF105
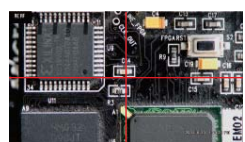
VIDEO

AUTO FOCUS　**TAKE PICTURES AND VIDEOS**

display cross hair
(blue/green/red/yellow/black/brown colors)

power on/off
HDMI port
memory card
power port
USB port
360° rotation
front/back adjustment
stand
built-in lens
LED illumination
locking ring
up/down adjustment

TV is not included (HDMI port)

- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to memory card
- Connected to TV by HDMI port
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair
  (blue/green/red/yellow/black/brown colors)

SPECIFICATION

Magnification	1.8X~27.5X (on 28" TV)
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Auto Focus distance	100mm~∞
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	500×280×410mm
Weight	17kg

8G memory card and holder (included)

STANDARD DELIVERY

Main unit (with stand)	1 pc
LED illumination	1 pc
8G memory card and holder	1 pc
Mouse	1 pc
HDMI cable (for TV)	1 pc
Power adapter	2 pcs

FOCUS DISTANCE, MAGNIFICATION AND VIEW FIELD (MANUAL FOCUS)

Focus distance	Magnification (on 28" TV)	View field (mm)
100mm	4.5~27.5X	24×14~161×90
150mm	3~21X	30×17~240×128
200mm	2.3~17.5X	38×20~305×176
250mm	2~15X	42×24~320×210
270mm	1.8~14.4X	43×25~378×240

3D MOTORIZED ROTATION MICROSCOPE (WITH DISPLAY)
CODE 5301-D400

SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLE

TAKE PICTURES AND VIDEOS

working principle

camera
mirror
mirror
45°
workpiece

VIDEO

USB port
memory card
HDMI port
power
13.3" LCD
0.5X camera adapter
360° rotation lens with LED
fine focus knob (graduation: 2μm)
0.75X~5X zoom
rotation controller
X-Y metal stage
mouse
illumination adjustment
rotation speed adjustment
illumination on/off
rotation direction switch

0°
90°
180°
270°
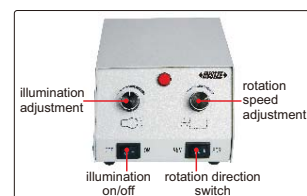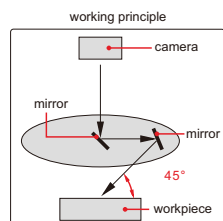
- 1080P high-definition 3D image
- Take pictures and videos, saved to memory card
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

SPECIFICATION

Magnification	12X~75X
View field	3.6×2mm~24×14.5mm
Focus distance	26mm
View angle	45°
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Rotation speed	5~27RPM, stepless adjustment
Power supply	power adapter and 110/220V, 50/60Hz
Dimension (L×W×H)	570×300×430mm
Weight	10kg

STANDARD DELIVERY

Main unit	1 pc
Rotation controller	1 pc
X-Y metal stage	1 pc
8G memory card and holder	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs
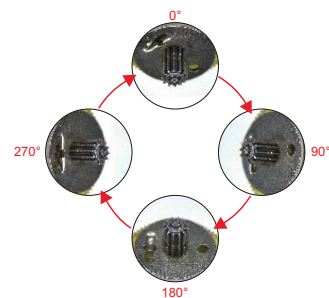
8G memory card and holder (included)

DIGITAL MICROSCOPE (WITH MEASUREMENT)
CODE 5307-ID100

BUILT-IN MEASUREMENT SOFTWARE WITHOUT COMPUTER

SD card

11.6" LCD

browse pictures and videos

take video

take picture

setting

measurement

USB ports

HDMI port

focus adjustment

objective magnification adjustment (0.7X~4.5X)

illumination brightness adjustment

measuring tools

power on/off

calibration

LED ring light

mouse

- Take pictures and videos, saved to SD card and USB flash disk
- Built-in measurement software without computer, operation by mouse

SPECIFICATION

Magnification	15X~100X
Sensor	1/3" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	USB/HDMI
Power supply	100~240V, 50~60HZ
Dimension (L×W×H)	230×260×440mm
Weight	4.5kg

adjustable display angle

STANDARD DELIVERY

Main unit	1 pc
Glass calibration rule	1 pc
1X auxiliary objective	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc

OPTIONAL ACCESSORY

0.5X auxiliary objective	**5307-ID100-OB05X**
2X auxiliary objective	**5307-ID100-OB2X**

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

0.5X auxiliary objective (optional)	Magnification	9~55X
	Focus distance	165±2mm
	View filed	37×21~5.5×3mm
1X auxiliary objective (included)	Magnification	15~100X
	Focus distance	105±2mm
	View filed	17×10~2.5×1.4mm
2X auxiliary objective (optional)	Magnification	34~221X
	Focus distance	30±2mm
	View filed	9.5×5.5~1.5×0.7mm

MEASURING ACCURACY

Magnification	Measuring accuracy
15X	±12µm
20X	±11µm
35X	±9µm
45X	±8µm
70X	±6µm
90X	±6µm
100X	±5µm

WiFi DIGITAL MEASURING MICROSCOPE
CODE ISM-WF200

VIDEO

plastic calibration rule
(graduation 1mm, included)
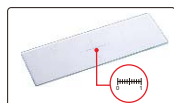
glass calibration rule
(graduation 0.1mm, included)

software CD
(included)

■ Maximum working distance is 5m under WiFi mode
■ Can be connected to multiple iPads, Android devices
  or computers at the same time under WiFi mode
■ Take pictures and videos
■ Supplied with software

take picture
illumination adjustment
USB/WiFi switch
magnification adjustment
focus support

connected to iPad by WiFi

connected to Android device by WiFi

SPECIFICATION

Magnification	10X~200X
Pixel	1.3M (resolution: 1280x1024)
Illumination	built-in adjustable LED
Power supply	built-in rechargeable battery

STANDARD DELIVERY

Microscope	1 pc
Base support	1 pc
Focus support ring for 80X/150X	1 pc
Focus support ring for 60X/200X	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc
Plastic calibration rule (graduation 1mm)	1 pc
USB cable and software	1 pc
AC/DC adapter	1 pc

stand (code ISM-PM-STAND, optional)

filter (optional)

connected to computer by WiFi

connected to computer by USB cable

OPTIONAL ACCESSORY

Stand	ISM-PM-STAND
Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE

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

❶ **Software ISM-PAD** (for iPad by WiFi)

image on-line
measurement
take picture and video
move measuring piont
picture taken before
resolution setting
take picture/video switch
measuring tools and calibration
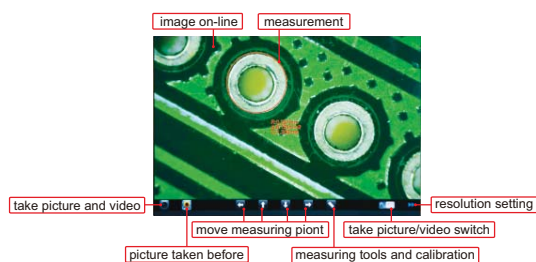
❷ **Software ISM-APK** (for Android devices by WiFi)

image on-line
measurement
take picture
move measuring piont
picture taken before
resolution setting
measuring tools and calibration
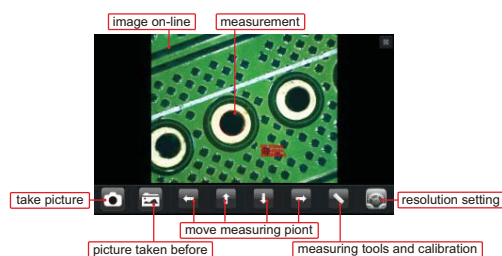
❸ **Software ISM-WF Partner** (for computer by WiFi)

take picture and video
image process
measuring tools
preview
calibration
picture taken before
image on-line
measurement
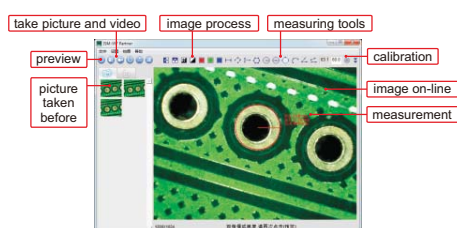
❹ **Software ISM-PRO** (for computer by USB cable)

image on-line
measurement
take picture
take video
export to Excel
export to CAD
picture taken before
measuring tools
edge detection measurement tools
comparison tools
calibration
zoom in
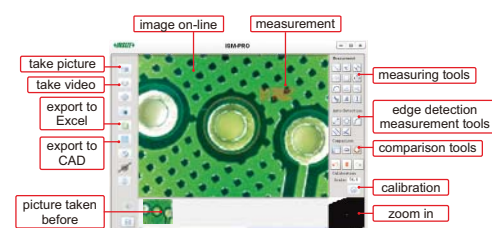
DIGITAL MEASURING MICROSCOPES

- Can take pictures and videos
- Supplied with software
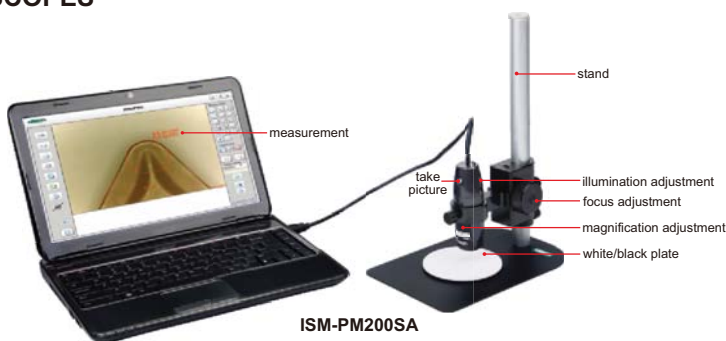
ISM-PM200SA
computer is optional

standard
measurement
stand
take picture
illumination adjustment
focus adjustment
magnification adjustment
white/black plate

software CD (included)

SPECIFICATION

Code	ISM-PM200SA	ISM-PM600SA
Magnification	10X~200X	450X~600X
Focus distance	short focus distance	short focus distance
Stand	standard	standard
Focus support	included	not included
Calibration rule	graduation 0.1 and 1mm	graduation 0.1mm
Pixel	2M (resolution: 1600×1200)	
Ilumination	built-in adjustable LED	
Power supply	USB 2.0 cable (voltage required: 5±0.1V)	

filter (optional)

focus support
(included)

put the digital microscope
directly on the workpiece for
inspection and measurement
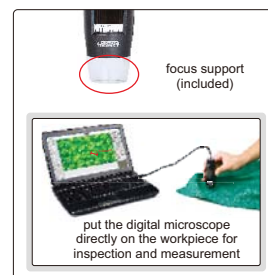
MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

ISM-PM200SA			
Magnification	Focus distance	View field (mm)	Accuracy
50X	21mm	8.1×6.4	30µm
100X	13mm	3.9×3.1	15µm
150X	16mm	2.6×2.1	10µm
200X	19mm	1.8×1.5	8µm

ISM-PM600SA			
Magnification	Focus distance	View field (mm)	Accuracy
450X	1.4mm	0.85×0.67	6µm
500X	5.5mm	0.76×0.61	6µm
550X	8.6mm	0.69×0.55	5µm
600X	11.5mm	0.63×0.51	5µm

OPTIONAL ACCESSORY

Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE

SOFTWARE

- **Language:** English, Japanese, Korean, German, Turkey, Portuguese, Chinese
- **Operation system:** Windows 7/8/XP/Vista
- **Measurement tools:**

  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 distance between two circles

  measure angle with three points

  measure angle with two lines

  add text

  add number with circle

- **Edge detection measurement tools:**

  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

image on-line
measurement
take picture
take video
input to Excel
input to CAD
picture taken before
measurement tools
edge detection measurement tools
comparison tools
calibration
zoom in
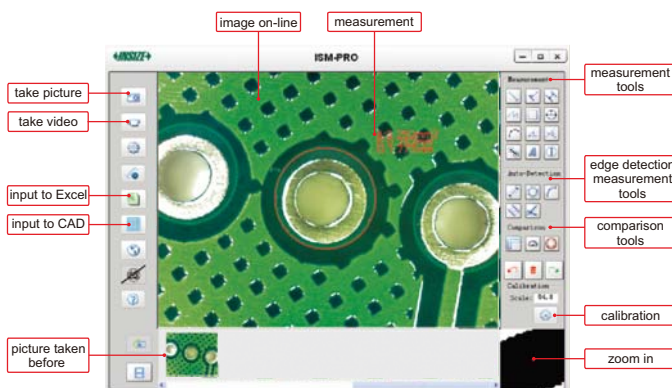
- **Comparison tools:**
  Create line, angle or circle with desired size, to compare with workpieces.

  create line   create angle   create circle with tolerance

  L:1.418mm   80.1°   R+:0.55mm R:0.500mm R-:0.450mm
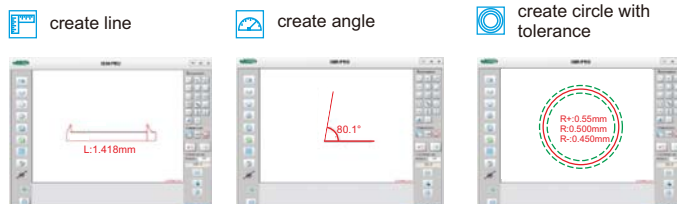
- **Data export to CAD or Excel:**

  R=0.196mm

INDUSTRIAL MICROSCOPES

- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objective 50X is spring type

VIDEO

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc

camera connector
image to eyepiece/camera switch
view field diaphragm
aperture diaphragm
polarizer filter (frosted glass/yellow/green/blue)
WF10X eyepiece
analyzer
polarizer
illumination
objective turret with five holes
stage moving knob
stage
power on/off
illumination brightness adjustment

5101-M500

SPECIFICATION

Code	5101-M500** (bright field objectives)				5101-M500BD** (bright & dark field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable				12V/50W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	5X	10X	20X	50X	5X	10X	20X	50X
Working distance	26.1mm	20.2mm	8.80mm	3.68mm	9.70mm	9.30mm	7.23mm	2.50mm
Numerical aperture	0.12	0.25	0.40	0.70	0.12	0.25	0.40	0.70
Magnification	50X~500X							
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 160×140mm							
	travel: 35x30mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz**							
Dimension (L×W×H)	415×345×380mm							
Weight	14kg							

**Add "-U" on code No. when power supply is 110V, 50/60Hz
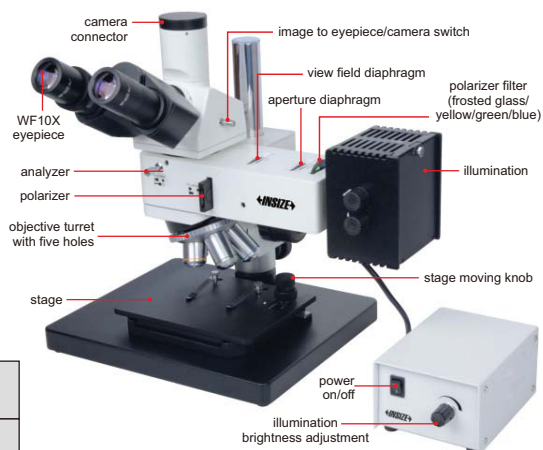
OPTIONAL ACCESSORY

Bright field objective (for 5101-M500)	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
Camera adapter		5101-M-ADAPTER
Bright & dark field objective (for 5101-M500BD)	PL40X	5101-M-BD40X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Integrated digital camera (with PAD)		ISM-ZS70

METALLURGICAL MICROSCOPES

VIDEO

- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objectives 50X, 100X are spring type

STANDARD DELIVERY

Main unit	1 pc
Polarizer and analyzer	1 pc of each
Anti-dust cover	1 pc

rotary table (O.D. Ø130mm, I.D. Ø20mm)
stage
illumination
polarizer filter (frosted glass/yellow/green/blue)
aperture diaphragm
view field diaphragm
objective turret with five holes
camera connector
coarse focusing knob
fine focusing knob (graduation 2μm)
WF10X eyepiece
analyzer
polarizer
stage moving knob
image to eyepiece/camera switch
power on/off

5103-M1000

SPECIFICATION

Code	5103-M1000** (bright field objectives)				5103-M1000BD** (bright & dark field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable				12V/50W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	10X	20X	50X	100X	5X	10X	20X	50X
Working distance	20.2mm	8.80mm	3.68mm	0.40mm	9.70mm	9.30mm	7.23mm	2.50mm
Numerical aperture	0.25	0.40	0.70	0.85	0.12	0.25	0.40	0.70
Magnification	100X~1000X				50X~500X			
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 242×200mm							
	travel: 30x30mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz**							
Dimension (L×W×H)	614×250×394mm							
Weight	13kg							

OPTIONAL ACCESSORY

Bright field objective (for 5103-M1000)	PL5X	5101-M-OB5X
	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
Bright & dark field objective (for 5103-M1000BD)	PL40X	5101-M-BD40X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5103-M-EPD10X
Camera adapter		5101-M-ADAPTER

**Add "-U" on code No. when power supply is 110V, 50/60Hz

METALLURGICAL MICROSCOPES

- Infinite optical system, observation in reflected or transmitted illumination, polarizing observation and dark field observation
- Kohler illumination system provides uniform illumination field
- Objectives 40X, 60X are spring type

blue filter (included)

frosted glass filter (included)
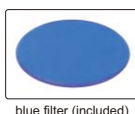
STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc
Filter (blue/frosted glass)	1 pc of each

SPECIFICATION

Code	5102-M600** (bright field objectives)				5102-M600BD** (bright & dark field objectives)			
Illumination	6V/30W (transmitted), 6V/30W (reflected)				12V/30W (transmitted), 12V/50W (reflected)			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	5X	10X	40X	60X	5X	10X	20X	40X
Working distance	26.1mm	20.2mm	3.98mm	3.18mm	9.70mm	9.30mm	7.20mm	3.00mm
Numerical aperture	0.12	0.25	0.60	0.70	0.12	0.25	0.40	0.70
Magnification	50X~600X				50X~400X			
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 210×140mm							
	travel: 75x50mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz**							
Dimension (L×W×H)	456×260×498mm							
Weight	11kg							

**Add "-U" on code No. when power supply is 110V, 50/60Hz
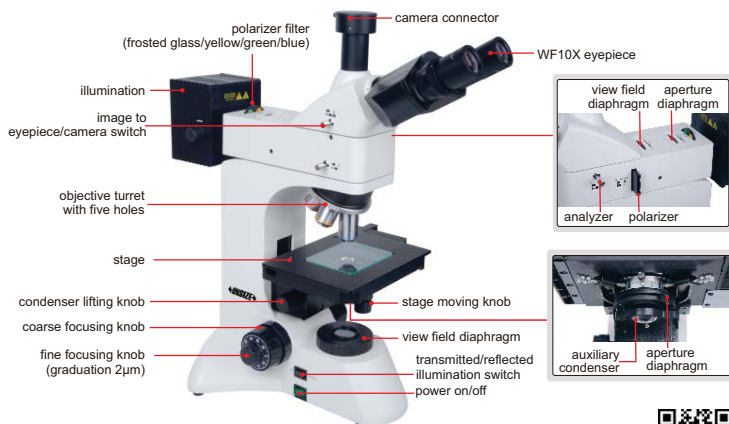
OPTIONAL ACCESSORY

Bright field objective (for 5102-M600)	PL20X	5101-M-OB20X
	PL50X	5101-M-OB50X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
Camera adapter		5101-M-ADAPTER
Bright & dark field objective (for 5102-M600BD)	PL50X	5101-M-BD50X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Integrated digital camera (with PAD)		ISM-ZS70

ZOOM STEREO MICROSCOPES (ADVANCED TYPE)

THE CAMERA OF ISM-ZS100T IS FIXED FIRMLY AT THE CENTER OF VIEW FIELD

LARGE ZOOM RATIO

application (ISM-ZS100T)
directly connect to digital camera

LED ring light (optional)

ISM-ZS100T

SPECIFICATION

Code	ISM-ZS100	ISM-ZS100T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø23mm)	
Objective	0.6X~5X (zoom)	
Zoom ratio	1:8.3	
Pupil distance	55~75mm	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	75mm	
Illumination	adjustable reflected and transmitted LED light	
Dimension (L×W×H)	260×310×490mm	
Weight	4.9kg	

STANDARD DELIVERY

Main unit	1 pc
0.55X adapter (ISM-ZS100T)	1 pc
WF10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc
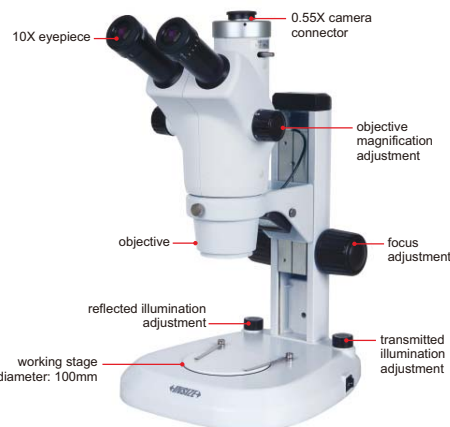
OPTIONAL ACCESSORY

Auxiliary objective	0.5X (focus distance: 220mm)	ISM-ZS100-OB05X *
	0.7X (focus distance: 125mm)	ISM-ZS100-OB07X
	2X (focus distance: 45mm)	ISM-ZS100-OB2X
Eyepiece	WF15X (view field: Ø16mm)	ISM-ZS100-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS100EP20X
	WF30X (view field: Ø8mm)	ISM-ZS100-EP30X
Adapter sleeve		ISM-ZS30-ADAPTER
Digital camera (with PAD)		ISM-ZS70
High-resolution USB camera and software		ISM-CM63
LED ring light		ISM-ZS-RL
1X adapter		ISM-ZS100-RL

*0.5X auxiliary eyepiece only must be used with adapter sleeve ISM-ZS30-ADAPTER

PARALLEL LIGHT STEREO MICROSCOPE
CODE ISM-ZS200

VIDEO

- Infinity parallel optical system and 20° inclined optical tube reduce fatigue
- Coaxial illumination is optional for deep holes which cannot be observed by ring light
- Aperture diaphragm is optional for large depth for field and high quality image

SPECIFICATION

Optical tube	binocular (20° inclined)
Eyepiece (wide field)	10X (view field: Ø22mm)
Objective	0.8X~8X (zoom)
Zoom ratio	1:10
Pupil distance	55~75mm
Diopter adjustment	±5 diopter (both eyepieces)
Working distance of objective	78mm
Max. workpiece height	72mm
Illumination	adjustable reflected and transmitted LED light
Dimension (L×W×H)	240×280×440mm
Weight	4.3kg

10X eyepiece

objective magnification adjustment

fine focus knob

1X plan field achromatic objective

reflected illumination adjustment

transmitted illumination adjustment

working stage diameter: 100mm

STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

beamsplitter (**optional**)

iris diaphragm (**optional**)

coaxial illumination (**optional**)

OPTIONAL ACCESSORY

Objective	0.5X achromatic objective (focus distance: 186mm)	ISM-ZS200-OB05X *
	2X plan achromatic objective (focus distance: 32.5mm)	ISM-ZS200-OB2X
	0.5X plan apochromatic objective (focus distance: 126mm)	ISM-ZS200-APO05X *
Eyepiece	WF15X (view field: Ø16mm)	ISM-ZS200-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS200-EP20X
	WF30X (view field: Ø20mm)	ISM-ZS200-EP30X
Adapter sleeve		ISM-ZS30-ADAPTER
Iris diaphragm		ISM-ZS200-IRD
Digital camera (with PAD)		ISM-ZS70 **
High-resoulition USB camera and software		ISM-CM63 **
Beam spilitter		ISM-ZS200-OBS
Coaxial illumination		ISM-ZS200-COAXIAL
LED ring light		ISM-ZS-RL

* 0.5X eyepiece only must be used with adapter sleeve **ISM-ZS30-ADAPTER**
** **ISM-ZS70** and **ISM-CM63** must be used with a beamspilitter

---
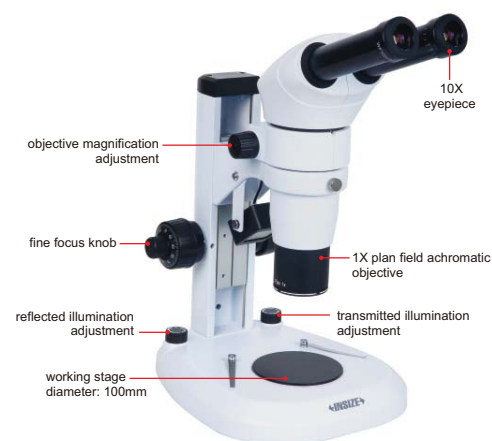
ZOOM STEREO MICROSCOPES (STANDARD TYPE)

SPECIFICATION

Code	ISM-ZS50	ISM-ZS50T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)	
Objective	0.8X~5X (zoom)	
Zoom ratio	1:6.3	
Pupil distance	55-75mm (adjustable)	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	215mm	
Illumination	adjustable reflected and transmitted LED light	
Power supply	110/220V, 50/60Hz	
Dimension (L×W×H)	290x260x480mm	
Weight	4.9kg	

WF 10X eyepiece

objective magnification adjustment

reflected LED light

focus adjustment

objective

reflected LED light adjustment

transmitted LED light adjustment

working stage diameter : 100mm

ISM-ZS50

STANDARD DELIVERY

Main unit	1 pc
WF10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

LED ring light (**optional**)

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X *
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (graduation 0.1mm/div.)	ISM-ZS50-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
Digital camera		ISM-D500
LED ring light		ISM-ZS-RL
Sleeve		ISM-ZS30-ADAPTER

* 0.5X auxiliary objective must be used with sleeve
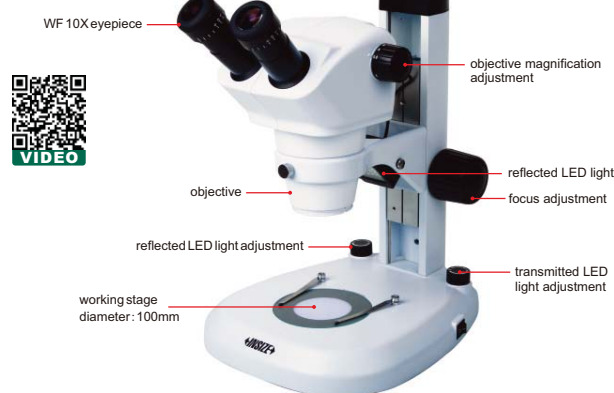
ZOOM STEREO MICROSCOPE (BASIC TYPE)
CODE ISM-ZS30

VIDEO

SPECIFICATION

Optical tube	binocular
Eyepiece (wide field)	10X (view field: Ø20mm)
Objective	1X~4.5X (zoom)
Zoom ratio	1:4.5
Pupil distance	55~75mm (adjustable)
Diopter adjustment	±5 diopter (two eyepieces)
Working distance of objective	97mm
Max. workpiece height	147mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	260×190×400mm
Weight	4.3kg

WF 10X eyepiece

objective magnification adjustment

reflected LED light

objective

focus adjustment

reflected LED light adjustment

transmitted LED light adjustment

working stage diameter: 95mm

STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
Ø95mm glass plate	1 pc
Ø95mm white/black plate	1 pc
Anti-dust cover	1 pc

LED ring light (**optional**)

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS30-OB05X *
	0.63X	ISM-ZS30-OB06X *
	0.75X	ISM-ZS30-OB07X *
	2X	ISM-ZS30-OB2X
Eyepiece	10X dividing eyepiece (graduation 0.1mm/div.)	ISM-ZS30-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
Digital camera		ISM-D500
LED ring light		ISM-ZS-RL
Sleeve		ISM-ZS30-ADAPTER

* 0.5X, 0.63X and 0.75X auxiliary objectives must be used with sleeve

---

DIGITAL CAMERA (WITH PAD)
CODE ISM-ZS70-S

VIDEO

MEASUREMENT, TAKE PICTURES AND VIDEOS

ATTENTION: CAMERA CONNECTOR AND ADAPTER ARE NEEDED ACCORDING TO MICROSCOPES

- Windows 10 operation system
- 1080P high-definition image
- Take pictures and videos
- Measurement with accuracy ±0.01mm
- Language: Chinese, English, Japanese, Korean, Russian
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable
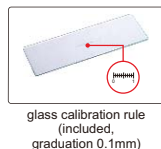
glass calibration rule (included, graduation 0.1mm)

11.6" PAD

USB port

power

C-Mount port

memory card

HDMI port

power on/off

mouse

application

connected to microscope

SPECIFICATION

Sensor	1/2.3" CMOS
Pixel	2M
Resolution	1024×768, 1280×720, 1280×1024, 1600×1200, 1920×1080
Frame rate	30fps (1920×1080)
Memory	4G
Output	HDMI/USB 2.0
Power supply	power adapter
Dimension (L×W×H)	280×53×253mm
Weight	1.5kg

STANDARD DELIVERY

Main unit	1 pc
Mouse	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc
AC/DC adapter	1 pc

software (included)

take picture and video

image on-line

measurement

measuring tools

calibration

■ Measurement tools

measure length of line or distance between two points	measure distance between two parallel lines	measure distance between multiple parallel lines	measure distance between point and line
measure length of continuous line	measure area of rectangle	measure area of polygon	measure radius of concentric circles
measure radius with three points	measure angle with three points	measure length of arc	measure distance between two circles

USB CAMERA AND SOFTWARE
CODE ISM-CM63

ATTENTION: ADAPTERS ARE NEEDED ACCORDING TO MICROSCOPES

- To be used with computers
- Sony Exmor back-illuminated CMOS sensor
- USB3.0 transfer
- Automatic exposure, gain adjustment, white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment, contrast adjustment

C-mount port

application

adapter 0.5X (**optional**)

Software (included)

selectable resolution

measurement items

real time gray calibration

histogram
(quantify the distribution of color and brightness)

black balance
(reduce color difference)

flat field correction
(reduce brightness difference)

dark field correction
(reduce thermal noise)

The software can control image completely, including measurement, image stitch, extend focus depth, image gray processing, RGB histogram observation, image color sampling, 3D plot(3D representation of image intensity), image exposure, white balance, black balance, image bit depth, flat field correction and dark field correction, etc.

Measurement tools:

- measure length of line or distance between two points
- measure rectangle
- measure angle
- measure radius, girth and area of circle
- measure axis lengths, girth and area of ellipse
- calibration
- measure distance between two parallel lines
- measure width and diameter of ring
- measure diameter, length, perimeter angle of arc
- measure area of polygon
- measure center distance between two circles
- measure length of open curve

Counting

select count tool

automatic counting

Extend focus depth

focus on the top

focus on the bottom

clear image of both top and bottom

SPECIFICATION

Sensor (back-up)	1/1.8" CMOS
Resolution	6.3M
Pixel	3072×2048
Single pixel size	2.4×2.4μm
Spectral range	380-650nm (with infrared cut filter)
Frame rate	30fps
Sampling average	1×1
Exposure time	0.1ms~15s
Power supply	USB port
Weight	400g

STANDAER DELIVERY

Camera (USB cable included)	1 pc
Software	1 pc

COMPUTER REQUIREMENT

Operation system	Windows/7/8/10
CPU	Intel Core 2 2.8Hz or above
Memery	2GB or above
USB port	USB3.0 (Recommand) or USB2.0
Display	17" or above

OPTIONAL ACCESSORY

Adapter 0.5X	**ISM-MAS-ADAPTER**

Automatic image stitch (expand field of view)

left side

right side

after stitch

Binary

separate target and background

3D plot

Visualize the distribution of image brightness and color

PORTABLE MEASURING MICROSCOPE

10X eyepiece
with graduation

10X eyepiece

focus adjustment

pen light

10X objective

ISM-PM100

SPECIFICATION

Code	ISM-PM100
Total magnification	100X
Eyepiece	10X with graduation
Objective (achromatic)	10X (numerical aperture: 0.25)
Working distance	7mm
Graduation	0.01mm
Viewing field	Ø1.8mm
Focus range	30mm
Illumination	LED light
Diameter of base	Ø63mm
Height	210mm
Weight	650g

STANDARD DELIVERY

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

FOLDING MAGNIFIER

Unit: mm

15
60
18
25
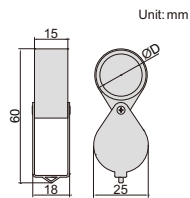
7511-8

closed

■ Glass lens

Code	Magnification	Lens diameter (ØD)
7511-8	10X	Ø21mm

FOLDING MAGNIFIER WITH ILLUMINATION

Unit: mm

7514-1

α
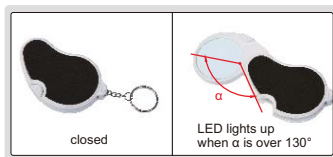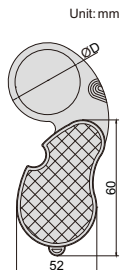
closed

LED lights up when α is over 130°

VIDEO

■ Resin lens
■ Powered by 2xCR1620 batteries (included)
■ LED lights up automatically when α is over 130°

LED

Code	Magnification	Lens diameter (ØD)
7514-1	2.5X	Ø45mm

FOLDING MAGNIFIER WITH ILLUMINATION

Unit: mm

19
85
25
26

LED ON/OFF

7515-10

closed

2 pcs LED

■ Glass lens
■ Powered by 3xLR927 batteries (included)

Code	Magnification	Lens diameter (ØD)
7515-10	10X	Ø21mm

MAGNIFIER WITH ILLUMINATION

Unit:mm

90
55
Ø20
114

6X

2X

7518-26

■ Two magnifications
■ LED illumination
■ Powered by 2 pcs AAA batteries (included)
■ Resin lens

LED

foldable handle

Code	Magnification	Lens size
7518-26	2X/6X	90x55mm

MAGNIFIERS WITH ILLUMINATION

7513-4

7513-2

2 pcs LED

- Glass lens
- Powered by 3xAAA batteries (included)

Code	Magnification	Lens diameter (ØD)	L	h
7513-2	2X	Ø75mm	170mm	90mm
7513-4	4X	Ø50mm	145mm	90mm

MAGNIFIER WITH TWO LENSES

Unit: mm

6X

10X

power on/off

7522-610

2 pcs LED
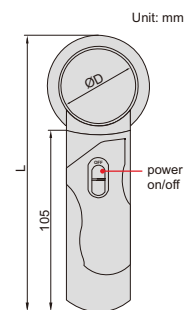
- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)

Code	Lens number	Magnification	Lens diameter (ØD)	L
7522-610	2 pcs	6X	37mm	148mm
		10X	50mm	160mm

MAGNIFICATION GLASSES

- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)

2 pcs LED

head band (included)

7523-3D5

interchangeable lenses

Code	Lens number	Magnification
7523-3D5	5 pcs	1X
		1.5X
		2X
		2.5X
		3.5X

adjustable holder and lens angle
90°

moveable lens for focus

adjustable lens and LED angle
45°
60°

THREE WAYS MAGNIFIER WITH ILLUMINATION

three ways use

battery house   power adapter

10 pcs LED

2X   4X

Unit: mm

170

ØD

Ød

280

130

ON/OFF

45
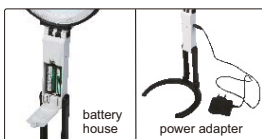
- Resin lens
- Powered by 2xAA batteries (included) or power adapter (110~240V, 50~60Hz)

Code	Magnification	Lens diameter (ØD)	Lens diameter (Ød)
7512-1	2X/4X	Ø120mm	Ø28mm

7512-1
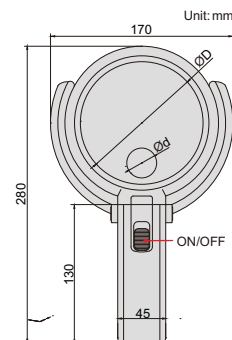
TABLE MAGNIFIER WITH ILLUMINATION
CODE 7516-5D

60 pcs LED

- LED illumination,
  working life 20000h

lens cover

clamping holder
(clamping range
10~60mm)

european power plug

400mm

380mm
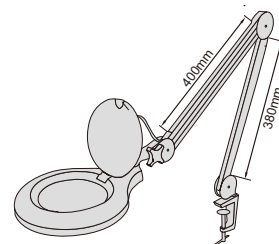
SPECIFICATION

Magnification	2.25X
Diopter	5D
Lens diameter	Ø122mm
Illumination	power: 7W, illuminance: 420lm
Power supply	100~240V, 50~60Hz

TABLE MAGNIFIERS WITH ILLUMINATION

- LED illumination,
  working life 20000h
- Resin lens

400mm

400mm

6 pcs LED

lens cover

1.75X   6X

clamping holder
(clamping range
10~60mm)

7520-320D

6 pcs LED

lens cover

clamping holder
(clamping range
10~60mm)
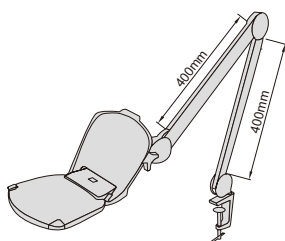
7521-3D

SPECIFICATION

Code	7520-320D	7521-3D
Magnification	double magnification 1.75X/6X	1.75X
Diopter	3D/20D	3D
Lens diameter	160×127mm	Ø126mm
Illumination	power: 6W, illumination: 550lm	
Power supply	power adapter 12V, 1A	

TABLE MAGNIFIER WITH ILLUMINATION
CODE 7517-3D

3 pcs LED

lens cover

- Four steps brightness adjustment
- LED illumination, working life 20000h
- Resin lens

SPECIFICATION

Magnification	1.75X
Diopter	3D
Lens diameter	Ø125mm
Illumination	power: 3W, illuminance: 260lm
Power supply	100~240V, 50~60Hz

TELESCOPING INSPECTION MIRRORS

7160-1

7160-2

Unit: mm

50

90

330~490

Ø32

Ø7.5

178~505

Ø10

94

7160-1   7160-2
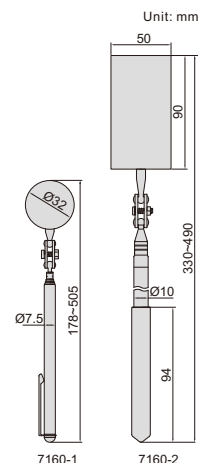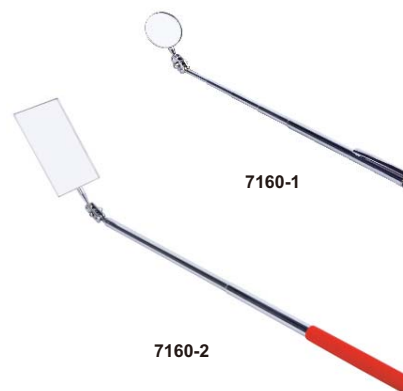
- Inspect hidden areas
- Rotation of the mirror: 360°
- Length of the handle is adjustable,
  the handle is made of brass and chrome plated

Code	Size of mirror	Length
7160-1	Ø32mm	178~505mm
7160-2	50x90mm	330~490mm

TELESCOPING INSPECTION MIRROR (WITH ILLUMINATION)

Unit: mm

- Inspect hidden areas
- The head can bend and rotate
- Telescoping handle, made of stainless steel
- With two CR2032 batteries

The head can bend and rotate

The handle length is adjustable

7162-1

42
65
285~875
Ø10
116
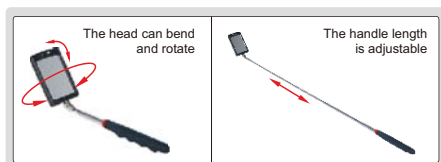
Code	Size of mirror	Length
7162-1	65x42mm	285~875mm

TELESCOPING MAGNETIC PICK-UP

Unit: mm
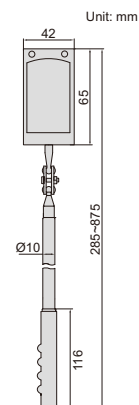
- Pick up metal parts from hidden areas
- Rotation of the magnetic head: 360°
- Length of the handle is adjustable, the handle is made of brass and chrome plated

7161-1

178~582
16
Ø8
Ø6
Ø7

Code	Size of magnetic tip	Magnetic force	Length
7161-1	Ø6mm	0.45kgf	178~582mm
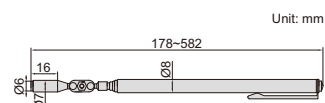
FLEXIBLE PICK-UP AND FLASHLIGHT

Unit: mm

625
Ø14.6
Ø18
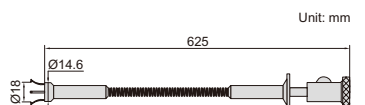
- To illumination,to pick up parts from hidden areas, or to pick up metal parts
- Flexible spring rod, made of stainless steel
- Three LR44 batteries

7164-1

Flexible spring rod

Flashlight head

Magnetic head

4 retractable claws

Code	Magnetic force	Flashlight range	Battery life
7164-1	0.9kgf	1m	24h
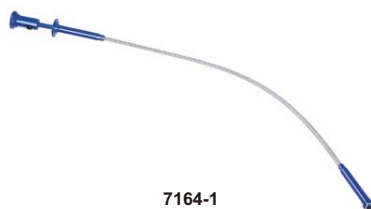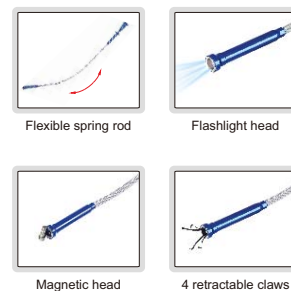
TELESCOPING MAGNETIC PICK-UP AND FLASHLIGHT

Unit: mm

172~568
Ø21.7
Ø14
Ø16
Ø19.4
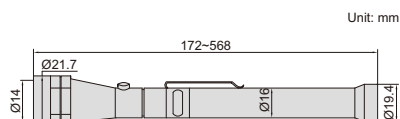
- For illumination and pick up metal parts in hidden areas
- The head can bend
- Telescoping handle, made of stainless steel
- Magnetic head and end
- With four LR44 batteries

7163-1

Magnetic head

Magnetic end

The head can bend, handle length is extendible

Handle is closed

Code	Magnetic end	Magnetic head	Flashlight range	Battery life	Length (mm)
7163-1	4kgf	2kgf	3m	8h	172~568
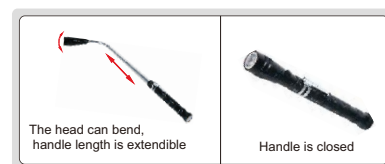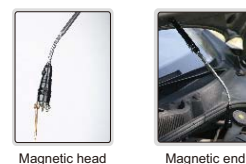
MANUAL 360° SWIVEL VIDEOSCOPE

TUNGSTEN WIRE WEAVED CABLE BREAK AND WEAR RESISTENCE

IP64 WATERPROOF

VIDEO

power on/off
LED illumination on the back

USB port
charge port
video output
SD card

5" LCD

take video
zoom
manual joystick to bend the lens in any direction

tungsten wire weaved cable

take picture

lens with adjustable LED illumination

rechargeable battery

ISV-2000DS

bend in any direction

360° swivel in clockwise and counter-clockwise
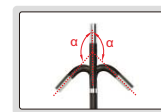
bending range of lens
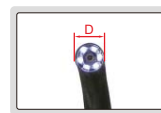
lens with LED adjustable illumination
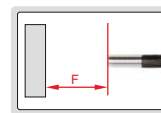
focus distance

angle of view

the cable is interchangeable

STANDARD DELIVERY

Main unit	1 pc
Cable with lens	1 pc
8G SD card	1 pc
AC/DC adapter	1 pc
Video output cable	1 pc
USB cable	1 pc
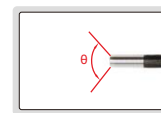
Code		ISV-2000DS
Lens	diameter (D)	6.5mm
	focus distance (F)	15mm~∞
	bending range (α)	±160°
	angle of view (θ)	90°
	illumination	8 pcs LED
	pixel	0.44M
	resolution	800×480
	dust/waterproof	IP64
	bend control	manual joystick
Cable	length	1.5m
	type	tungsten wire weaved cable
Main unit	function	take picture, take video
	file format	picture: JPG, video: AVI
	image process	brightness, image quality zoom (1X, 2X, 3X)
	memory	8G SD card
	output	TV, USB
	power supply	rechargeable battery (for 4 hours working) AC/DC adapter (for continuous working)
Weight		650g

VIDEOSCOPE CODE ISV-E10
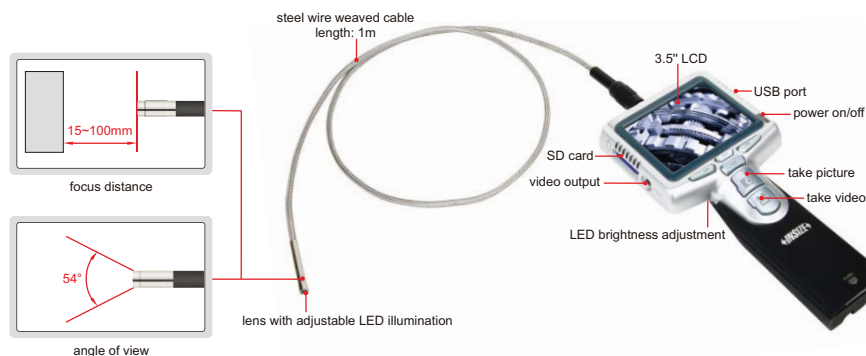
ATTENTION: THE CABLE CAN BE BENT BUT CAN'T BE SET AT A FIXED SHAPE

OPTIONAL CABLE LENGTH 3M, 5M AND 10M

IP65 WATERPROOF

steel wire weaved cable length: 1m

3.5" LCD
USB port
power on/off

SD card
video output
take picture
take video

LED brightness adjustment

15~100mm
focus distance

54°
angle of view

lens with adjustable LED illumination

VIDEO

SPECIFICATION

Lens	diameter	5.5mm
	pixel	0.3M
	resolution	640×480
Cable	frame rate	30fps
	length	1m
Main unit	type	steel wire weaved cable
	function	take picture, take video
	file format	picture: JPG, video: AVI
	image process	brightness, contrast, color saturation
	memory	2G SD card
	output	TV, USB
	power supply	rechargeable battery (for 3 hours working)
Weight		450g

STANDARD DELIVERY

Main unit	1 pc
Cable with lens	1 pc
2G SD card	1 pc
45° mirror	1 pc
AC/DC adapter	1 pc
Video output cable	1 pc
USB cable	1 pc
Lens cleaning kit	1 pc

front view

side view (with mirror)
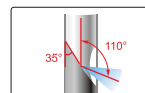
35° 110°
35° mirror (**optional**)
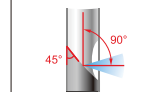
45° 90°
45° mirror (included)
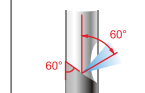
60° 60° 60°
60° mirror (**optional**)

OPTIONAL ACCESSORY

35° mirror	ISV-E55-M35
60° mirror	ISV-E55-M60

COATING THICKNESS GAGE
CODE 9501-1200

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES

DATA OUTPUT

VIDEO

- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
  Substrate: iron, steel, magnetic stainless steel (does not include non-magnetic stainless steel)
  Coating: zinc, copper, chrome, tin, plastic, powder, paint (nickel is not included)
- Eddy current probe (NFe) is to measure the thickness of non-conductive coating on non-magnetic substrate
  Substrate: copper, aluminum, zinc, non-magnetic stainless steel
  Coating: plastic, powder, paint, anodizing
- Low and high limits with judgement
- Automatic power off

magnetic induction probe FE (included)

SPECIFICATION

Probe type	Fe (included) magnetic induction probe	NFe (optional) eddy current probe	Fe90 (optional) magnetic induction probe for bores and grooves	Fe10 (optional) magnetic induction probe with big range
Measuring range	0~1250µm	0~1250µm	0~1250µm	500~10000µm
Accuracy	±(3%L+1)µm (range≤1250µm) ±(3%L+10)µm (range>1250µm)		L is measuring thickness in µm	
Resolution	0.1µm (range<100µm)			
	1µm (range≥100µm)			
Measuring mode	continuous and single			
Minimum substrate thickness	0.5mm	0.3mm	0.5mm	2mm
Minimum measuring area	Ø7mm	Ø5mm	Ø7mm	Ø40mm
Minimum curvature radius of convex workpiece	1.5mm	3mm	—	10mm
Memory	500			
Power supply	2x1.5V AA batteries			
Dimension	128x68x32mm			
Weight	340g			

eddy current probe NFe (**optional**) with zero calibration block

magnetic induction probe (Fe90) for bores and grooves (**optional**)

zero calibration block for Fe (included)

calibration foils (included)

magnetic induction probe (Fe10) with big range (**optional**)

software CD (included)

STANDARD DELIVERY

Main unit	1 pc
Magnetic induction probe (Fe)	1 pc
Zero calibration block for Fe probe	1 pc
Calibration foils (50µm, 100µm, 250µm, 500µm, 1000µm)	1 set
1.5V AA battery	2 pcs
USB cable and software	1 pc

OPTIONAL ACCESSORY

Eddy current probe (NFe) with zero calibration block	**9501-1200-NFE**
Magnetic induction probe (Fe90) for bores and grooves	**9501-1200-FE90**
Magnetic induction probe (Fe10) with big range	**9501-1200-FE10**
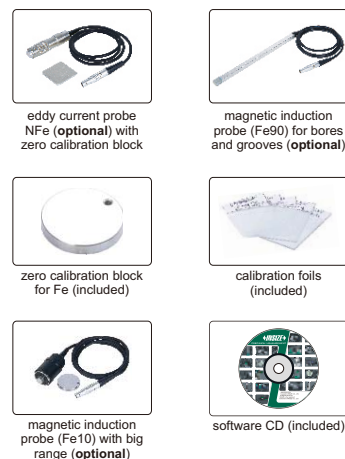
SURFACE PROFILE GAGE

VIDEO

- Measure peak-to-valley height of blast cleaned surface.
  If the profile is too low, the adhesion of the coating to the surface will be reduced.
  If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Stainless steel base

measure peak-to-valley height of blast cleaned surface

set zero

base

zero set block (included)

2344-1

Unit: mm

Ø58

Ø16

Ø2

60°

R0.05

Ø25

35

90°
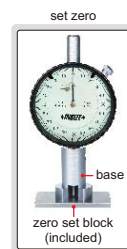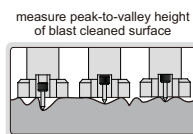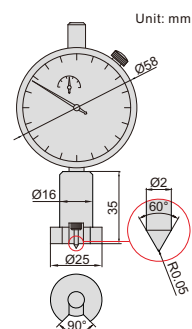
Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy
2344-1	0-1mm	1mm	0.001mm	±0.005mm

WET FILM GAGES

Unit: mm
55
32

4845-1

Unit: mm
74
65
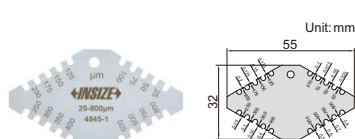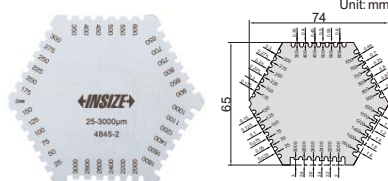
4845-2

- Made of stainless steel

Code	Range	Accuracy	Thickness
4845-1	25-800µm	±5µm	1.8mm
4845-2	25-3000µm	25-100µm: ±5µm 100µm-3000µm: ±5%	1mm

ULTRASONIC THICKNESS GAGE (STANDARD TYPE)
CODE ISU-250C

INSPECTION CERTIFICATE

DATA OUTPUT

- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice
- Low and high limits with judgement
- Average calculation of maximum 9 readings
- Data can be input to Excel and Word as keyboard signal

VIDEO

4.00mm block for calibration

LCD with backlight

USB port

transducer ISU-T08

Ød

couplant (included)

transducer ISU-T04 (**optional**)

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 (range 10~100mm) ±H/333mm (range≥100mm) H is the thickness to be measured in mm
Velocity	1000-9999m/s
Power supply	2×1.5V AAA batteries
Dimension	64×116×27mm
Weight	220g

STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-T08	1 pc
Battery (AAA)	2 pcs
Couplant (for ISU-T04, ISU-T06, ISU-T08, ISU-T12)	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

| Transducer | ISU-T04, ISU-T06, ISU-T12, ISU-T13 |
| Couplant (for ISU-T13) | ISU-HT5-COUPLANT |

SPECIFICATION OF TRANSDUCERS

Code	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipe for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T08	5.0MHz	10.8mm	0.8~300mm	20×1.2mm	<60°C	general use
ISU-T04	10.0MHz	6mm	0.7~20mm	10×1mm	<60°C	for small tube
ISU-T06	7.5MHz	8.5mm	0.7~50mm	15×1.2mm	<60°C	for thin material
ISU-T12	2.0MHz	16.3mm	2~400mm	30×4mm	<60°C	for casting steel
ISU-T13	5.0MHz	13mm	2~200mm	25×3mm	<350°C	for high temperature

ULTRASONIC THICKNESS GAGE (BASIC TYPE)
CODE ISU-100D

INSPECTION CERTIFICATE

ATTENTION: NOT SUITABLE FOR CASTING WORKPIECES

LCD with backlight

4.00mm calibration block

Ød

- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice

VIDEO

SPECIFICATION

Measuring range	0.8~300mm
Resolution	0.01mm (range<100mm)
	0.1mm (range≥100mm)
Accuracy	±0.04mm (range<10mm) ±(0.04+H/1000)mm (range 10~100mm) ±H/333mm (range≥100mm) H is the thickness to be measured in mm
Transducer	frequency	5MHz
	diameter (Ød)	10.8mm
Minimum size of pipe for measurement	20×1.2mm (diameter × wall thickness)
Applicable temperature	<60°C
Velocity	1000-9999m/s
Power supply	2×AAA batteries
Dimension	114×64×28mm
Weight	200g

STANDARD DELIVERY

Main unit	1 pc
Transducer	1 pc
Couplant	1 bottle
Battery (AAA)	2 pcs

INSIZE

ROUGHNESS TESTER
CODE ISR-S400

INSIZE PLUS
MADE IN ITALY

CUSTOM-MADE PROBES ARE AVAILABLE	DATA OUTPUT	PROBE CAN BE REPLACED

- Automatic probe leveling
- Language: English, French, German, Italian, Spanish, Portuguese
- 12 roughness parameters
- Can set tolerance
- Measuring range up to 400µm, can measure grit and shot blasting
- Traverse length up to 16mm
- The probe can be set at 90°or 270°, for transverse measurement
- Memory of maximum 100 results

software CD (included)

heavy duty test stand (**optional**)

light duty test stand (**optional**)

probe cover (included), can put the small workpieces directly on the probe for measurement
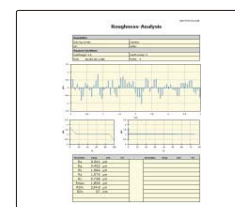
output software (included), output data and graphic to Excel, make report, print

adjustable stand (included)

transverse measurement

measuring software (**optional**), can control the roughness tester, display roughness values, profile and curve, data statistics

SPECIFICATION

Parameters		Ra, Rq, Rt, Rz, Rc, Rmax, Rsm, Rpc, Rmr, R, AR, Rx
Range		Ra: 0~100µm, Rt: 0.05~400µm
Accuracy		±3%
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force		0.75mN
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1 to 5
Traverse speed		1mm/s
Memory		100 measurement results
Output		USB
Power		built-in rechargeable battery
Dimension (L×W×H)		122x52x68mm
Weight		650g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block	1 pc
Adjustable stand	1 pc
AC/DC adapter	1 pc
Probe cover	1 pc
USB cable and output software	1 pc

OPTIONAL ACCESSORY

Extension rod	ISR-S400-ER100
Probe	see details
Measuring software	ISR-S-SOFTWARE
Heavy duty test stand	ISR-S400-DK
Light duty test stand	ISR-S400-STAND

ROUGHNESS TESTER
CODE ISR-C002

CAN BE CONTROLLED BY COMPUTER **DATA OUTPUT**

- 21 roughness parameters
- Display roughness values, profile and curve
- Memory of maximum 100 results
- Automatic power off

printer (**optional**)

software CD (included)

VIDEO

adjustable stand (included)

probe cover (included)

put the small workpieces directly under the probe for measurement

light duty test stand (**optional**)

the maximum workpiece height is 220mm

Unit: mm

extension rod (**optional**), code **ISR-C002-ER**

50
9.5
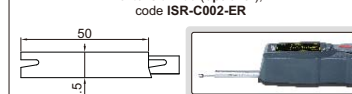
transverse rod (**optional**), code **ISR-C002-TR**

small hole probe (**optional**), code **ISR-C002-SBP**
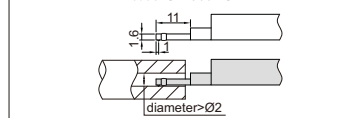
11
1.6
1
diameter>Ø2

heavy duty test stand (**optional**)

the maximum workpiece height is 310mm

deep groove probe (**optional**), code **ISR-C002-DGP**

22
10
2.5
width>3
depth≤10

software (included)

control the roughness tester by computer, display roughness values, profile and curve

screen display

Roughness
Ra= 1.586 um
Rz= 9.741 um
Rq= 1.990 um

measurement result

C(Rt)	Rmr		0 Rmr 100%
5%	0.9%		
10%	1.6%		
15%	2.5%		
20%	2.8%		
		C(Rt)>100%	

Rmr analysis

roughness profile
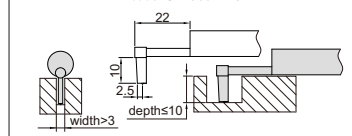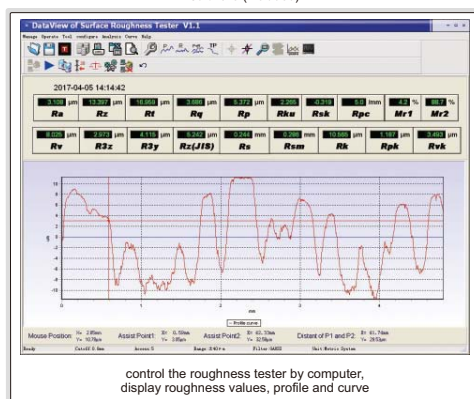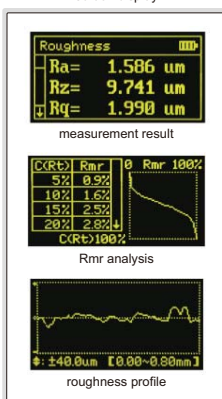
SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, RS, R3z, R3y, Rt, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry (JIS), Rmax
Range		160µm
Accuracy		±10%
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1 to 5
Traverse speed		0.5mm/s, 1mm/s
Memory		100 measurement results
Output		USB
Power		built-in rechargeable battery
Dimension (L×W×H)		141×55×40mm
Weight		400g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Adjustable stand	1 pc
Probe cover	1 pc
Software	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Transverse rod	ISR-C002-TR
Deep groove probe	ISR-C002-DGP
Small hole probe	ISR-C002-SBP
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND
Printer	ISR-C002-PRINTER

ROUGHNESS TESTER (SEPARABLE TYPE)
CODE ISR-C300

probe and main unit can be combined together

CAN BE OPERATED BY COMPUTER OR MOBILE PHONE **DATA OUTPUT** **BLUETOOTH**

VIDEO

- Roughness tester can be operated by mobile phone (only android system) or computer
- Data can be output to Excel by connecting with computer via bluetooth or USB cable
- Support bluetooth printer
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Automatic power off

software CD (included)

Unit: mm

79.4
21.9
2 7 1

cable length: 1000
27
32 115×23(length×width)
158
52

roughness tester screen display

measurement result

roughness profile

Rmr analysis
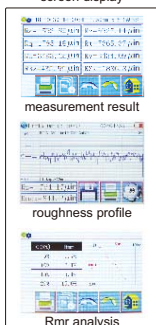
connect mobile phone via bluetooth (only android system)

operate roughness tester by mobile phone, display roughness values, profile and curve

connect computer via USB cable (software is included)
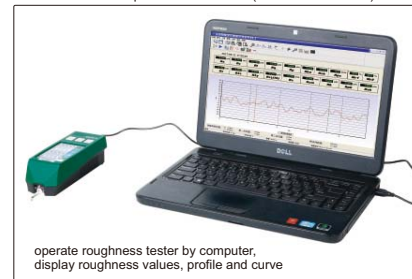
operate roughness tester by computer, display roughness values, profile and curve

magnetic stand adapter (included)

Ø8mm

can be installed on magnetic stands
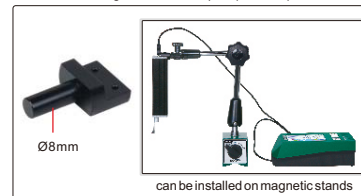
height gage adapter (**optional**)

9×9mm

can be installed on height gages

data can be output to Excel by connecting computer via bluetooth or USB cable

bluetooth receiver (**optional**)

adjustable stand (included)

height is adjustable (40mm)
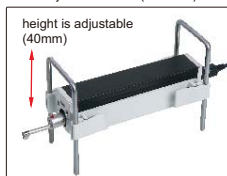
bluetooth printer (**optional**)

NOTE: Please confirm whether the adapter can fit your height gages. When using **INSIZE** height gages, please use the dial test indicator holder of height gages

optional probes
Unit: mm

extension rod (**optional**), code **ISR-C002-ER**
50
9.5
probe extension rod

small hole probe (**optional**), code **ISR-C002-PROBE**
23
4.5
diameter>Ø5

tiny hole probe (**optional**), code **ISR-C002-SBP**
11
1.6
1
diameter>Ø2

deep groove probe (**optional**), code **ISR-C002-DGP**
22
10
2.5
width>3 depth≤10
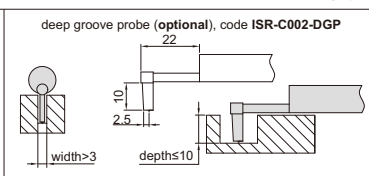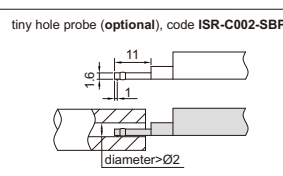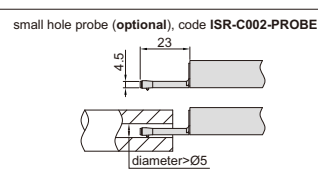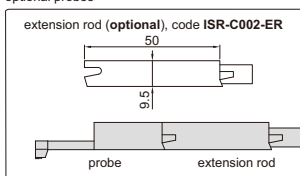
SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	X axis	17.5mm
	Z axis	320µm(-160µm~160µm)
Accuracy		±10%
Resolution (Ra)		0.002µm/±20µm 0.004µm/±40µm 0.006µm/±80µm 0.02µm/±160µm
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1~5
Traverse speed		0.135mm/s, 0.5mm/s, 1mm/s
Memory		100 measurement results
Output		USB and bluetooth
Power		built-in rechargeable battery
Dimension (L×W×H)		158×64×52mm
Weight		400g

STANDARD DELIVERY

Main unit	1pc
Standard probe	1pc
Calibration block and support	1pc of each
Connecting cable (long and short)	1pc of each
Magnetic stand adapter	1pc
Adjustable stand	1pc
Touch pen	1pc
USB cable and software	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Bluetooth printer	ISR-C002-PRINTER
Height gage adapter	ISR-C300-LB1
Bluetooth receiver	ISR-C300-RECEIVER
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2

probe support (**optional**)

support for flat surface
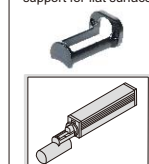
support for cylindrical surface
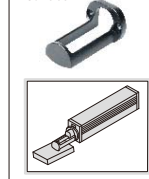
ROUGHNESS TESTER
CODE ISR-C003

calibration block (included)

- Unit: μm, μin
- Automatic power off

No. ISR-C003

STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 pc
AC/DC adapter	1 pc

VIDEO

SPECIFICATION

Parameters		Ra, Rz, Rq, Rt
Range		Ra, Rq: 0.05~15μm Rz, Rt: 0.1~50μm
Accuracy		±10%
Resolution (Ra)		0.01μm
Probe	type	piezoelectric
	stylus radius/angle	10μm/90°
	stylus material	diamond
Measuring force		5mN
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Evaluation length		1.25mm for cut off 0.25mm 4mm for cut off 0.8mm 5mm for cut off 2.5mm
Traverse speed		0.75mm/s
Power		built-in rechargeable battery
Dimension (L×W×H)		106×70×24mm
Weight		200g

SURFACE ROUGHNESS SPECIMEN SET
CODE ISR-CS130-W

INSIZE PLUS
MADE IN UK

- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel

Machining method	Roughness (Ra)	Roughness (Rz)	Quantity
Flat lapping	0.05, 0.1, 0.2μm	0.55, 1, 1.6μm	3 pcs
	2, 4, 8μin		
Reaming	0.4, 0.8, 1.6μm	3, 6, 10μm	3 pcs
	16, 32, 63μin		
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6μm	0.55, 1, 1.6, 3, 6, 10μm	6 pcs
	2, 4, 8, 16, 32, 63μin		
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm	2.5, 4, 8, 16, 32, 50μm	6 pcs
	16, 32, 63, 125, 250, 500μin		
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm	2.5, 4, 8, 16, 32, 50μm	6 pcs
	16, 32, 63, 125, 250, 500μin		
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm	2.5, 4, 8, 16, 32, 50μm	6 pcs
	16, 32, 63, 125, 250, 500μin		

DIGITAL SOUND LEVEL METER
CODE 9351-130

DATA OUTPUT

VIDEO
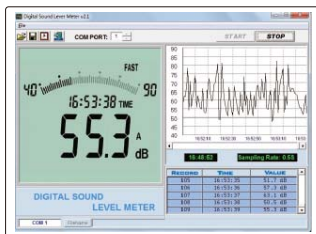
software (included), display measurement values and graph, save and output data

- Automatically select best range: 30~80dB, 40~90dB, 50~100dB,60~110dB, 70~120dB, 80~130dB
- Over range indicator
- Real time, average, maximum modes
- Memory 16000 measurement values
- AC signal output: 0.707 Vrms at FS, impedance approx. 600Ω
  DC signal output: 10mV/dB, impedance approx.100Ω
- Automatic power off

software CD (included)

SPECIFICATION

Measuring range	30~130dB
Accuracy	±2dB
Resolution	0.1dB
Sampling time	0.5s for digital, 0.05s for analogue
Response time	fast: 125ms, slow: 1s
Frequency	30Hz~8KHz
Frequency weighting	A/C
Microphone	electret condenser type
Output	RS232, AC/DC
Power supply	6×AAA batteries
Dimension	265×80×69mm
Weight	317g

STANDARD DELIVERY

Main unit	1 pc
RS232 cable and software	1 pc
Output connector	1 pc
Battery (AAA)	6 pcs

INFRARED THERMOMETER
CODE 9120-550

front view

VIDEO

- With maximum reading
- Low and high limits with judgement
- Automatic power off

SPECIFICATION

Measuring range	-30~550°C/-22~1022°F
Accuracy	-30~0°C (-22~32°F): ±3°C 0~550°C (32~1022°F): ±(1.5%+2°C)
Resolution	0.1°C/0.1°F
Distance to spot ratio (D:S)	12:1
Emissivity	0.1~1 (adjustable)
Laser type	630~670nm, Class II, <1mW
Response time	<0.5s
Power supply	2×1.5V AAA batteries
Dimension	155×110×45mm
Weight	126g (without batteries)

STANDARD DELIVERY

Main unit	1 pc
1.5V AAA battery	2 pcs

DIGITAL ANEMOMETER
CODE 9331-40

DATA OUTPUT

VIDEO
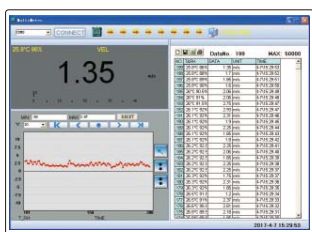
software (included), display measurement values and graph, save and output data

- Measure velocity, flow, temperature and relative humidity
- Velocity unit: m/s, km/h,mil/h, ft/m, ft/s, knots
- Flow unit: CMS (cubic meter per second), CMM (cubic meter per minute), CFM (cubic feet per minute)
- Temperature type: ambient, dew point, wet bulb
- Maximum and minimum modes
- Automatic power off

STANDARD DELIVERY

Main unit	1 pc
USB cable and software	1 pc
9V battery	1 pc

software CD (included)

SPECIFICATION

Measuring range	velocity	0.8~30m/s, 1.4~108km/h, 0.9~67.2mil/h, 1.3~98.5ft/s, 78~5900ft/m, 0.8~58.3knots
	flow	0~9999CMS, 0~99990CMM, 0~99990CFM
	temperature	-20~60°C/-4~140°F
	relative humidity	0~100%RH
Accuracy	velocity	±(2%+0.5) for m/s, km/h,mil/h, ft/s, knots ±(2%+50) for ft/m
	temperature	±1.5°C/±2.7°F
	relative humidity	±3% (20~80%RH), ±5% (<20%RH or >80%RH)
Resolution	velocity	0.01m/s, 0.01km/h, 0.01mil/h, 0.01ft/s, 1ft/m, 0.01knots
	flow	0.01CMS, 0.1CMM, 0.1CFM
	temperature	0.1°C/0.1°F
	relative humidity	0.1%RH
Flowing area range		0~9.999m²/0~9.999ft²
Sampling time		0.4s
Maximum working height		2000m
Output		USB
Power supply		9V battery
Dimension		165×85×38mm
Weight		200g

DIGITAL MOISTURE METER
CODE 9341-50

cover (included)

- Suitable for wood, smooth cement, hard gypsum, mixed mortar, brick, etc.
- Measure moisture, temperature and relative humidity
- Temperature type: ambient, dew point, wet bulb
- Maximum and minimum modes
- Automatic power off

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

VIDEO

SPECIFICATION

Measuring depth		0~50mm
Measuring range	Moisture	0~60%
	temperature	-10~50°C/14~122°F
	relative humidity	0~100%RH
Accuracy	Moisture	±2%
	temperature	±2%
	relative humidity	±5%RH
Resolution	Moisture	0.1%
	temperature	0.1°C/0.1°F
	relative humidity	0.1%RH
Sampling time		0.5s for moisture
		1s for temperature and relative humidity
Power supply		2×AAA batteries
Dimension		130×56×29mm
Weight		206g

LASER DISTANCE METERS

- Large display with backlight
- Unit: m, ft, in
- Distance, area, volume and height measurement
- Continuos measuring mode to track maximum and minimum value
- Memory of 99 measurement values
- Automatic power off: laser 20s, main unit 150s

VIDEO

level
9561-80

SPECIFICATION

Code	9561-40	9561-80
Measuring range	0.05~40m	0.05~80m
Accuracy	±3mm	
Resolution	1mm, 10mm, 0.1", 0.01ft	
Measuring speed	0.5 second	
Laser type	635nm, Class II, <1mW	
Power supply	3×AAA batteries, for 4000 measurements	
Dimension (L×W×H)	120×60×28mm	
Weight	175g	
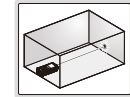
distance measurement   area measurement   volume measurement   height measurement
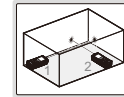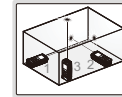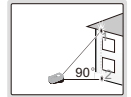
STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs

PEN-TYPE DIGITAL MULTIMETER
CODE 9241-ML200

VIDEO

- Auto/manual ranging
- Maximum mode
- Data hold
- Non contact voltage
- Low battery display
- Auto power off
- Safety rating: CAT III 600V

SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200mV/2V/20V/200V/600V	0.1mV/1mV/10mV/0.1V/1V	±(0.7%+2)
AC Voltage	200mV/2V/20V/200V	0.1mV/1mV/10mV/0.1V	±(0.8%+3)
	600V	1V	±(1.0%+3)
DC Current	20mA/200mA	10μA/0.1mA	±(1.5%+3)
AC Current	20mA/200mA	10μA/0.1mA	±(2.0%+3)
Resistance	200Ω	0.1Ω	±(1.0%+3)
	2kΩ/20kΩ/200kΩ/2MΩ	1Ω/10Ω/0.1kΩ/1kΩ	±(1.0%+1)
	20MΩ	10kΩ	±(1.0%+5)
NCV	>50V AC		
Logic level test	<1.5V (green LED on) 1.5~3.5V (green & red LED off) >3.5V (red LED on)		
Diode	open circuit voltage 1.5V		
Continuity buzzer	<60Ω		
Power supply	2×1.5V AAA batteries		

probe (included)

clips (included)

STANDARD DELIVERY

Main unit	1 pc
Probe	1 pc
Clip	2 pcs
1.5V battery	2 pcs

DIGITAL MULTIMETER
CODE 9242-ML100

VIDEO

SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200mV/2V/20V/200V	0.1mV/1mV/10mV/0.1V	±(0.5%+3)
	600V	1V	±(0.8%+5)
AC Voltage	200V/600V	0.1V/1V	±(1.2%+10)
DC Current	200μA/2mA	0.1μA/1μA	±(1.0%+3)
	20mA	10μA	±(1.0%+5)
	200mA	0.1mA	±(1.5%+5)
	10A	10mA	±(3.0%+10)
Resistance	200Ω	0.1Ω	±(0.8%+5)
	2kΩ/20kΩ/200kΩ	1Ω/10Ω/0.1kΩ	±(0.8%+2)
	2MΩ	1kΩ	±(1.0%+5)
Diode	open circuit voltage 3.0V		
Continuity buzzer	<70±30Ω		
Transistor hFE	measuring range 0~1000		
Power supply	1×9V 6F22/NEDA 1604 battery		

- Data hold
- Display backlight
- Low battery display
- Safety rating: CAT II 600V

probes (included)

STANDARD DELIVERY

Main unit	1 pc
Probe	2 pcs
9V battery	1 pc

AC DIGITAL CLAMP METER
CODE 9243-CA600

VIDEO

SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200mV/2V/20V/200V	0.1mV/1mV/10mV/0.1V	±(0.8%+2)
	600V	1V	±(1.0%+2)
AC Voltage	200mV	0.1mV	±(1.0%+10)
	2V/20V/200V	1mV/10mV/0.1V	±(1.0%+5)
	600V	1V	±(1.2%+5)
AC Current	2A(≤0.5A)	1mA	±(3.5%+20)
	2A	1mA	±(3.0%+10)
	20A	10mA	±(3.0%+10)
	200A	0.1A	±(2.5%+10)
	600A	1A	±(1.5%+5)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ	0.1Ω/1Ω/10Ω/0.1kΩ/1kΩ	±(1.2%+2)
	20MΩ	10kΩ	±(2.0%+5)
Diode	open circuit voltage 1.5V		
Continuity buzzer	<50Ω		
Power supply	3×1.5V AAA batteries		

- Auto/manual ranging
- Maximum mode
- Data hold
- Display backlight
- Work light
- Low battery display
- Auto power off
- Safety rating: CAT III 600V

STANDARD DELIVERY

Main unit	1 pc
Probe	2 pcs
1.5V battery	3 pcs

probes (included)

NON-CONTACT DIGITAL TACHOMETER
CODE 9221-999

reflection sticker (included)

reflection sticker

- Maximum and minimum modes
- Memory 100 measurement values
- Automatic power off

VIDEO

STANDARD DELIVERY

Main unit	1 pc
Reflection sticker	1 roll
Battery (AAA)	4 pcs

SPECIFICATION

Measuring range	50~99999RPM
Accuracy	±(0.03%+2) RPM
Resolution	0.01RPM (range 50~99.99RPM)
	0.1RPM (range 100~9999.9RPM)
	1RPM (range 10000~99999RPM)
Measuring distance	50~250mm
Power supply	4×AAA batteries
Dimension	155×60×27mm
Weight	118g

CONTACT DIGITAL TACHOMETER
CODE 9222-199

wheel with 6" perimeter (included) wheel with 0.1m perimeter (included) cone cavity head (included) cone head (included)

- Unit: RPM, m/min, m/sec, ft/min, ft/sec, in/min
- Maximum and minimum modes
- Memory 100 measurement values
- Automatic power off

VIDEO

STANDARD DELIVERY

Main unit	1 pc
Wheel with 0.1m perimeter	1 pc
Wheel with 6" perimeter	1 pc
Cone cavity head	1 pc
Cone head	1 pc
Extension rod	1 pc
Battery (AAA)	4 pcs

Extension rod (included)

SPECIFICATION

Measuring range	50~19999RPM
Accuracy	±(0.03%+2) RPM
Resolution	0.01RPM (range 50~99.99RPM)
	0.1RPM (range 100~9999.9RPM)
	1RPM (range 10000~19999RPM)
Power supply	4×AAA batteries
Dimension	183×60×27mm
Weight	122g

PORTABLE REFRACTOMETER
CODE ISQ-RM30

SUITABLE FOR WATER BASED COOLANT

- Quickly measure the concentration of coolant
- Refer to the refraction factor of coolant, for example:
  the refraction factor of grinding emulsion is 2.1,
  the reading value is 6%, so the actual concentration is (2.1×6%)=12.6%

calibration screw

eyepiece

lens and cover plate

SPECIFICATION

Measuring range	0~32%
Graduation	0.2%
Dimension	27×40×160mm
Weight	175g

VIDEO

60° GLOSS METER
CODE ISQ-DG6

- To test the gloss of coating, such as painting, varnish, printing ink, etc.
- To test the material surfaces, such as metal, granite, ceramic, plastic, paper, etc.
- According to ISO 2813, ASTM D2457, ASTM D523
- Automatic power off

VIDEO

SPECIFICATION

Incidence angle	60°
Measuring range	0~150GU
Resolution	0.1GU
Accuracy	±1.2GU
Repeatability	0.4GU
Zero set error	0.2GU
Measuring area	20×10mm
Power suppy	1×1.5V AA battery
Dimension	123×38×65mm
Weight	300g

base with calibration block (included)

STANDARD DELIVERY

Main unit	1 pc
Base with calibration block	1 pc
Spare calibration block	1 pc

CROSS-LINE LASER LEVEL
CODE 4917-30

IP54 WATERPROOF

"OUT OF ±3°" AUDIBLE AND VISUAL WARNING

- Red horizontal and vertical cross laser lines
- Self-leveling within ±3°, self-leveling time within 4s,
  "out of ±3°" audible and visual warning
- Folding legs for angle and height adjustment
- Outdoor use can be combined with the detector
  (code **4917-DETECTOR**)

folding legs for angle and height adjustment

180⁰

application examples

VIDEO

outdoor detector (optional)
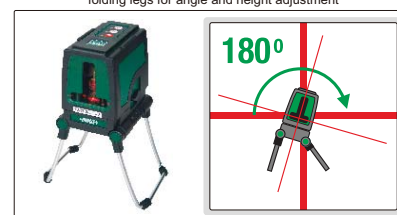
SPECIFICATION

Laser line width	2±0.5mm (within 5m)
Laser type	630~660nm, class II, <1mW
Beam angle	120±0.5°
Self-leveling range	±3°
Working distance	indoor: 30m, outdoor: 50m with detector (optional)
Accuracy	0.2mm/m
Operation temperature	-10~40°C
Power supply	3×AA batteries, for 3 hours continuous operation
Dimension	100×82×104mm
Weight	620g

OUTDOOR DETECTOR CODE 4917-DETECTOR (OPTIONAL)

Detecting distance	horizontal 1~50m, vertical 1~30m
Detecting accuracy *	high accuracy ±1.5mm, low accuracy ±2.5mm
Power supply	9V battery
Dimension	168×58×30mm
Weight	140g (battery included)

*Use high accuracy detection mode within 15m, use low accuracy detection mode over 15m

STANDARD DELIVERY

Main unit	1 pc
1/4" to 5/8" tripod adaptor	1 pc
Battery (AA)	3 pcs

DIGITAL LEVEL AND SLOPE METER

| WORKING TEMPERATURE -5°C~50°C | IP67 WATERPROOF | ABSOLUTE LEVEL | BUZZER ALARM AT 0° AND 90° |

| BACKLIGHT |

2175-360

measuring the slope — sea level

measure the angle of two separate surfaces — step 2 — step 1

202 — Unit: mm — 64 — 27
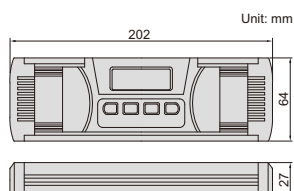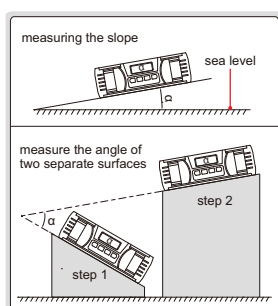
- IP67 dust/waterproof
- Can be used as level and slope meter, measure the angle of two separate surfaces
- Aluminum frame, shock absorbing rubber end caps
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, backlight/buzzer alarm, absolute and incremental measurement, unit (mm/m, %, °), HOLD (keep the reading)
- Three AAA batteries, automatic power off

VIDEO

Code	Range	Resolution	Accuracy
2175-360	0-360° (90°x4)	0.05° (=0.873mm/m)	at 0°: ±0.05°; others: ±0.1°

DIGITAL LEVEL AND SLOPE METER

| WORKING TEMPERATURE -5°C ~ 50°C | IP54 WATERPROOF | ABSOLUTE LEVEL | BUZZER ALARM AT 0° AND 90° |

| BACKLIGHT |

2179-360

measuring the slope — sea level

measure the angle of two separate surfaces — step 2 — step 1

150 — Unit: mm — 60 — 33
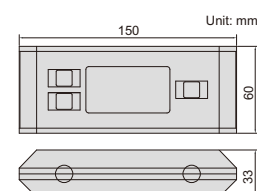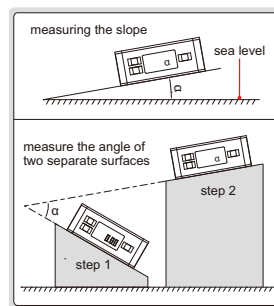
- IP54 dust/waterproof
- Used as level and slope meter to measure the angle of two separate surfaces
- Aluminum frame
- Magnetic bottom with V-groove for plane and cylinder
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft),conversion, backlight
- Two AAA batteries, automatic power off

VIDEO

Code	Range	Resolution	Accuracy
2179-360	0-360° (90°x4)	0.05° (=0.873mm/m)	at 0° and 90°: ±0.1°; others: ±0.2°

DIGITAL LEVEL AND SLOPE METER

Unit: mm

60 — 60 — 28

2170-1

- Can be used as level and slope meter, measure the angle of two separate surfaces
- Aluminum frame, magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 minutes after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, absolute and incremental measurement
- One AAA battery, automatic power off in 5 minutes

VIDEO

| WORKING TEMPERATURE -5°C~50°C | DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP |

| ABSOLUTE LEVEL | MAGNETIC BOTTOM | BACKLIGHT |

measuring the slope — sea level

measure the angle of two separate surfaces — step 2 — step 1
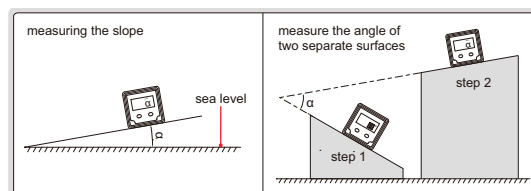
Code	Range	Resolution	Accuracy
2170-1	4x90°	0.1° (= 1.745 mm/m)	at 0°and 90°: ±0.1°; others: ±0.2°

DIGITAL LEVELS AND SLOPE METERS

both angle and slope are displayed

| WORKING TEMPERATURE 0°C ~ 50°C | BACKLIGHT | ABSOLUTE LEVEL |

measure slope

sea level

measure the angle of two separate surfaces

step 2

α

step 1
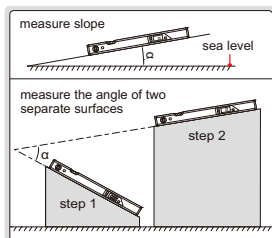
4910-400

4910-600

- With transverse and longitudinal vials
- Used as level and slope meter to measure the angle of two separate surfaces
- Aluminum frame, magnetic bottom
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm (not for **4910-400**), unit (mm/m, %, in/ft), conversion (not for **4910-400**), backlight
- The display flips over when the bottom faces up
- Two AAA batteries, automatic power off

Unit: mm
600
60
25
585
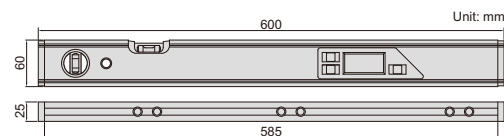
Code	Range	Resolution	Accuracy	Remark	L	L1	a	b
4910-400	0~360° (90°×4)	angle: 0.1°; slope: 1mm/m	±0.2°	both angle and slope are displayed	416mm	400mm	50mm	21mm
4910-600	0~360° (90°×4)	at 0° and 90°: 0.05° (=0.8725mm/m); at others: 0.1° (=1.745mm/m)	at 0° and 90°: ±0.1°; at others : ±0.2°	at 0° and 90° buzzer alarm	600mm	585mm	60mm	25mm

ALUMINUM LEVELS

| LIFETIME WARRANTY VIALS | MAGNETIC BASE |

magnetic base

4914-600
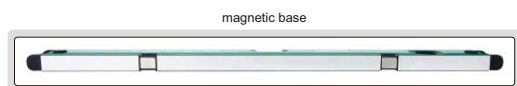
Unit: mm
50
20
L

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C
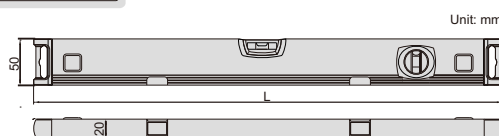
Code	Size (L)	Accuracy
4914-300	300mm	0.5mm/m
4914-600	600mm	0.5mm/m
4914-800	800mm	0.5mm/m
4914-1000	1000mm	0.5mm/m
4914-1200	1200mm	0.5mm/m

HANDY LEVEL

| LIFETIME WARRANTY VIALS |
| MAGNETIC BASE |

packaging

PORTABLE LEVEL

4912-100

Unit: mm
50
20
L

magnetic base

- Shockproof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

Code	Size (L)	Accuracy
4912-100	100mm	0.5mm/m
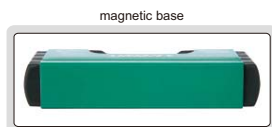
CAST ALUMINUM LEVEL

| MAGNETIC BASE | LIFETIME WARRANTY VIALS |

packaging

4913-250

magnetic base

Unit: mm
45
24
L
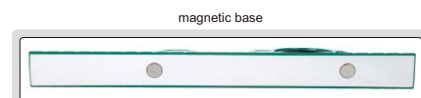
- Shockproof horizontal and vertical vials
- Magnetic base
- Working temperature: -15°C~55°C
- Cast aluminum body

Code	Size (L)	Accuracy
4913-250	250mm	0.5mm/m
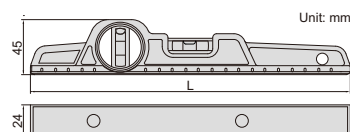
ALUMINUM ALLOY LEVELS

LIFETIME WARRANTY VIALS

working surface

working surface

4911-600

bottom surface (non-magnetic)

- Top and bottom working surfaces
- Shock-proof and UV-proof vials
- Die casting aluminum alloy frame
- Zero position of horizontal vial can be set
- One graduation of horizontal vial is 2% slope
- Working temperature: -15°C~55°C

Unit: mm

52

L

26

Code	Length (L)	Accuracy
4911-600	600mm	0.5mm/m (.006in/ft)
4911-800	800mm	0.5mm/m (.006in/ft)
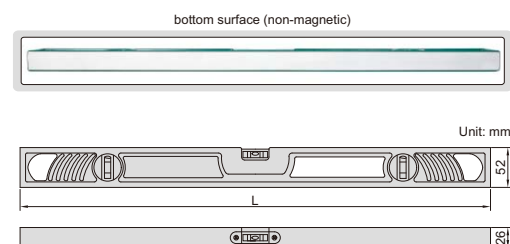
AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-MRD200**

INSPECTION CERTIFICATE

DATA OUTPUT

VIDEO

preliminary test force loading

preliminary test force alarm

testing value

scale

lock for hardness value

indentation chart

finished testing times/total times

average value

difference of max. and min. value

bar graph

charger port

USB port

operation panel

indenter

stage

test force dial

load dwell time adjustment

start button

Ø60mm flat anvil (included)

Ø150mm flat anvil (included)

wireless printer (**optional**)

small V-type anvil (**optional**) for cylinders with diameter Ø2~4mm

V-type anvil (included) for cylinders with diameter Ø4~60mm

software CD (included)

- Low and high limits with judgement
- Set testing times (2~10) to have average value and the difference of max. and min. value
- Convert to other Rockwell scales, HV or HB automatically
- Memory of 500 testing values for browsing and output
- Testing value can be sent to wireless printer automatically
- Calibration function compensates the testing value for high accuracy
- The hardness value of soft materials like plastic is not stable.
- The lock function can obtain the value automatically
- Display unit is automatic power off

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG (with standard indenters)
	HRE, HRH, HRK (with optional indenter)
Preliminary test force	98N
Test force	588N, 980N, 1471N
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~99 second
Resolution	0.1HR
Output	wireless and USB
Memory	500
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Power supply of the display unit	built-in rechargeable battery
Power supply	220V, 50/60Hz **
Dimension	520×160×700mm
Weight	60kg

Add "-U**" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Anti-dust cover	1 pc
USB cable and software	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Small V-type anvil	ISH-SMALL ANVIL

DIGITAL ROCKWELL AND SUPERFICIAL ROCKWELL HARDNESS TESTERS (DOLPHIN-NOSE TYPE)

AUTOMATIC TESTING, CONTINUOUS TESTING IS AVAILABLE

FORCE LOADING BY CLOSE-LOOP SYSTEM (WITHOUT WEIGHTS)

HIGH TEST SPEED

HIGH ACCURACY

The preliminary and total test force are loaded by high speed close-loop system automatically, faster and more stable than traditional motor loading. Loading process is smooth, no overshoot. Loading speed and accuracy are improved greatly

Traditional force loading curve

ISHR-T400/500/600 force loading curve

indenter

stage

handwheel

printer

temperature and humidity
test value
scale
dwell time
conversion
indenter type

data and time
back to menu
test force and indentation depth
stop
start

tolerance with judgment

hardness data statistics

ISHR-T600

- Automatic testing, the preliminary and total test force are loaded by high speed close-loop system automatically
- High accuracy (0.5HR)
- Dolphin-nose indenter for easy reach of the internal wall of pipes and grooves, the minimum internal diameter is 40mm
- Can be connected to PLC controller
- LCD touch screen
- Tolerance with judgement
- Memory of 120 test values for browsing and output
- Provide the maximum, minimum and average value of measurements
- The test process curve shows the material property
- Test force is selected automatically according to hardness scale

measure the internal wall of pipes and grooves, the minimum internal diameter is 40mm

SPECIFICATION

Code		ISHR-T400	ISHR-T500	ISHR-T600
Type		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell
Hardness scale	with standard indenters	HRA, HRB, HRC, HRD, HRF, HRG	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T	HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
	with optional indenters	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV	HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y
Preliminary test force		Rockwell: 98N (10kg)	Superficial Rockwell: 29.4N (3kg)	Rockwell: 98N (10kg) Superficial Rockwell: 29.4N (3kg)
Total test force		588N (60kg), 980N (100kg), 1471N (150kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg), 588N(60kg), 980N(100kg), 1471N(150kg)
Conversion scale		HR, HB, HK, HV		
Stage elevation		manual		
Load control		high speed close-loop system automatic loading (load/dwell/unload)		
Load dwell time		0~99 second		
Resolution		0.1HR		
Data output		built-in printer, RS232		
Max. workpiece height		260mm		
Max. workpiece depth		150mm (from the center of indenter to the main body)		
Power supply		110/220V, 50/60Hz		
Dimension		700×260×700mm		
Weight		85kg		

Ø60mm flat anvil (included)

Ø150mm flat anvil (included)

V-type anvil (included) for cylinders with diameter Ø4~60mm

STANDARD DELIVERY

Code	ISHR-T400	ISHR-T500	ISHR-T600
Main unit	1 pc	1 pc	1 pc
Ø60mm flat anvil	1 pc	1 pc	1 pc
Ø150mm flat anvil	1 pc	1 pc	1 pc
V-type anvil	1 pc	1 pc	1 pc
Ø1.5875mm carbide ball indenter	1 pc	1 pc	1 pc
Diamond indenter	1 pc	1 pc	1 pc
Hardness test block HRB88~95	1 pc	—	1 pc
Hardness test block HRC20~30	1 pc	—	1 pc
Hardness test block HRC40~50	1 pc	—	1 pc
Hardness test block HRC60~65	1 pc	—	1 pc
Hardness test block 78~88HR15N	—	1 pc	1 pc
Hardness test block 55~73HR30N	—	1 pc	1 pc
Hardness test block 57~69HR30T	—	1 pc	1 pc

small V-type anvil (**optional**) for cylinders with diameter Ø2~4mm

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC20~30	ISH-BHRC1
Hardness test block HRC40~50	ISH-BHRC2
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block 78~88HR15N	ISH-BHR15N1
Hardness test block 55~73HR30N	ISH-BHR30N1
Hardness test block 57~69HR30T	ISH-BHR30T1
Small V-type anvil	ISH-SMALL ANVIL

MANUAL ROCKWELL HARDNESS TESTER
CODE ISH-R150

INSPECTION CERTIFICATE

indenter

stage

test force dial

load/unload handle

VIDEO

Ø60mm flat anvil (included)

Ø150mm flat anvil (included)

V-type anvil (included) for cylinders with diameter Ø4~60mm

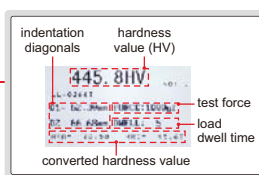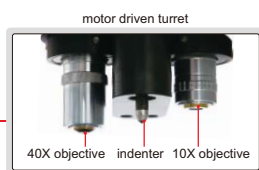small V-type anvil (optional) for cylinders with diameter Ø2~4mm

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	520x160x700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Small V-type anvil	ISH-SMALL ANVIL

DIGITAL MICRO-VICKERS HARDNESS TESTER
CODE ISH-TDV1000A

INSPECTION CERTIFICATE

camera connector

eyepiece

image to eyepiece/ camera switch

X-Y stage

printer

motor driven turret

40X objective   indenter   10X objective

indentation diagonals

hardness value (HV)

445.8HV

test force

load dwell time

converted hardness value

VIDEO

■ Measure hardness of thin or small workpieces
■ Based on Vickers (HV), can be converted to Rockwell (HRA, HRB and HRC)

slice holder (included)

cylinder holder (included)

vice (included)

SPECIFICATION

Test force	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1kgf
Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
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
Power supply	110/220V, 50Hz **
Dimension	540x500x640mm
Weight	50kg

**Add "-B" on code No. when power supply is 110/220V, 60Hz

STANDARD DELIVERY

Main unit	1 pc
10X, 40X objective	1 pc of each
Micro Vickers indenter	1 pc
Hardness test block (400~500HV0.2)	1 pc
Hardness test block (700~800HV1)	1 pc
Slice holder	1 pc
Vice	1 pc
Cylinder holder	1 pc
Level	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

20X objective	ISH-TDV-20X
Hardness test block (400~500HV0.2)	ISH-BHV02A
Hardness test block (700~800HV1)	ISH-BHV1
Measuring system	9631-130
Camera adapter	ISH-TDV-ADAPTER

VICKERS HARDNESS MEASURING SYSTEM
CODE 9631-130

application example

cable length 3m

C-mount
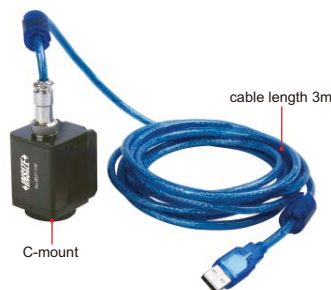
- Connected to computer USB port
- Measure the indentation size automatically or manually
- Multiple measurements to have average value, max. value and min. value
- Low and high limits with judgement
- Convert to HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK, HR15T/30T/45T, HR15N/30N/45N, HK, HV, HB, HS, HSD
- Calibration with standard test block
- Measurement result can be exported to Word or Excel

software (included)

indentation measurment
automatically measurement
manually measurement
export to Word
result
conversion
indentation list
result list
statistics

VIDEO

SPECIFICATION

Sensor	1/2" CMOS
Pixel	1.3M (resolution1280×1024)
Hardness measurement resolution	0.1HV
Length measurement resolution	0.1µm
Hardness measurement accuracy	±3%
Test force	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1, 2, 2.5, 3, 5, 10, 20, 30, 50, 100kgf
Dimension	36×33×32mm
Weight	500g

STANDARD DELIVERY

Main unit	1 pc
USB dongle	1 pc
USB cable and software	1 pc
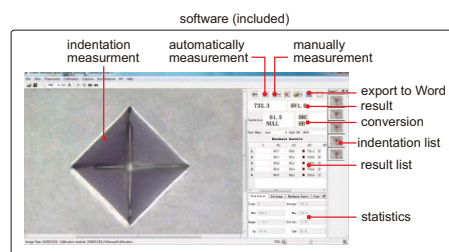
software CD (included)

ULTRASONIC HARDNESS TESTER
CODE ISHU-330

VIDEO

INSPECTION CERTIFICATE

HARDNESS BLOCKS FOR CALIBRATION ARE OPTIONAL

DATA OUTPUT

Application:
1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces

steel
alloy steel
stainless steel
aluminum
user material

user scale

	ST	AST	SST	AL	U1
HRC	■				
HB	■				
HV	■				
U1					

BACK   SELECT

select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (calibration of HRC, HB and HV for steel are already made, calibration is needed before use other materials and scales)

cover

SPECIFICATION OF MAIN UNIT

Hardness scale	HV, HB, HRC, MPa	
Range	100~940HV, 80~650HB, 20~70HRC, 370~1740MPa	
Resolution	1HV, 1HB, 0.1HRC, 1MPa	
Accuracy	HB	±3%
	HV	±3%
	HRC	±1.5%
Data output	USB	
Operating temperature	-20°C~+40°C	
Power supply	built-in rechargeable battery	
Dimension of main unit	120×60×25mm	
Weight of main unit	200g	

- Small test indentation
- Test force and time are not affected by the operator
- Quick test, only 2 seconds
- Average and statistics test modes
- Memory of 1024 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof

test narrow areas (remove the cover)

test cylinder surfaces (use V-groove on the cover)

test flat surfaces (with the cover)

STANDARD DELIVERY

Main unit	1 pc
Probe A	1 pc
Rechargeable battery	2 pcs
Charger	1 pc
USB cable and software	1 pc

software CD (included)

SPECIFICATION OF PROBE

Type	A (standard)	B (optional)
Test force	50N	10N (small force)
Application	general use	plating
Maximum roughness of workpiece (Ra)	2.5µm	1.5µm
Minimum weight of workpiece (direct measurement)	0.1kg*	0.1kg*
Minimum thickness of workpiece (direct measurement)	1mm*	1mm*
Minimum radius of workpiece	5mm	5mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm
Minimum test area	Ø1mm	Ø1mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g

*If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support

OPTIONAL ACCESSORY

Probe B	ISHU-460-B
Couplant	ISH-COUPLANT
Hardness block HRC20~30	ISH-BHRC1
Hardness block HRC45~50	ISH-BHRC2
Hardness block HRC60~65	ISH-BHRC3
Hardness block 150~250HV5	ISH-BHV5A
Hardness block 400~500HV5	ISH-BHV5B
Hardness block 650~750HV5	ISH-BHV5C
Hardness block 75~125HBW10/1000	ISH-BHB10A
Hardness block 175~250HBW10/3000	ISH-BHB10B
Hardness block 400~500HBW10/3000	ISH-BHB10C

PORTABLE LEEB HARDNESS TESTER
CODE ISH-SPHA

INSPECTION CERTIFICATE

DATA OUTPUT

- Based on Leeb (HL), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 800 test results can be saved
- Low and high limits with judgement
- Touch screen operation, large display with backlight
- Language: English, Chinese, Italian, German, French and Portuguese
- Automatic power off
- According to ASTM A 956

VIDEO

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

software CD (included)

hardness test block D (included)

small support ring (included)

wireless printer (**optional**)

STANDARD DELIVERY

Main unit	1 pc
Impact device D	1 pc
Printer	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
AC/DC adapter	1 pc
USB cable and software disc	1 pc
Pen for touch screen	1 pc

OPTIONAL ACCESSORY

Impact device DC	ISH-SPHA-DC
Impact device C	ISH-SPHA-C
Impact device D+15	ISH-SPHA-D15
Impact device DL	ISH-SPHA-DL
Impact device G	ISH-SPHA-G
Hardness test block D *	ISH-BHLD
Hardness test block G *	ISH-BHLG
Couplant	ISH-COUPLANT
Support rings	see details

* Hardness test block G (ISH-BHLG) is for impact device G (ISH-SPHA-G). Hardness test block D (ISH-BHLD) is for all others impact devices.

PORTABLE LEEB HARDNESS TESTER
CODE ISH-PHB

INSPECTION CERTIFICATE

- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Memory of 99 measurement values for browsing
- Set measurement times (1~9) to have average value
- Connected with printer via bluetooth
- Automatic power off
- According to ASTM A 956

VIDEO

hardness test block D (included)

small support ring (included)

wireless printer (**optional**)

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				

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±6HLD (when HLD=800)	
Display	Leeb (HLD), converted hardness, material, impact direction, test times, average value, date	
Output	bluetooth	
Applicable workpiece	minimum weight	5kg
		2kg (on solid support)
		0.1kg(coupled on plate)
	minimum thickness: 5mm	
	minimum radius of curved surface: 30mm	
	maximum roughness (Ra): 1.6µm	
Power supply	3×AAA batteries	
Dimension	150×84×28mm	
Weight	200g	

STANDARD DELIVERY

Main unit	1 pc
Impact device D	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Couplant	ISH-COUPLANT
Support rings	see details
Hardness test block D	ISH-BHLD

WEBSTER HARDNESS TESTERS

- According to ASTM B647-84 (2000)

reading dial

indenter

anvil

ISHW-L20

SPECIFICATION

Code	ISHW-L20
Application	for aluminum alloy general use
Thickness requirement of flat workpiece	0.6~6mm
Internal diameter requirement of tube workpiece	>Ø10mm
Wall thickness requirement of tube workpiece	0.6~6mm
Hardness range	0~20HW
Min. reading	1HW
Accuracy	±0.5HW (at 5~17HW)
Dimension	205x30x85mm
Weight	500g

STANDARD DELIVERY

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

DIGITAL SHORE DUROMETERS

DATA OUTPUT

- According to ISO868, ISO7619, ASTM D 2240
- Average and peak (max.) mode
- Dwell time is adjustable
- Low and high limits with judgement
- 500 memories
- Wireless connection to printer
- Handhold use or work with test stand (code **ISH-DS-STANDA**)
- Automatic power off

35°

Ø0.79mm
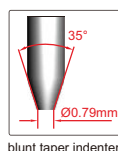
blunt taper indenter

ISH-DSA

30°

SR0.1mm
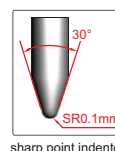
sharp point indenter

ISH-DSD

software CD (included)

calibration block (included)

printer (**optinal**)

SPECIFICATION

Code	ISH-DSA	ISH-DSD
Unit	Shore A	Shore D
Test material	soft plastic, soft rubber, etc.	hard plastic, hard rubber, etc.
Measuring range *	0~100HA	0~100HD
Resolution	0.1HA	0.1HD
Accuracy	±1HA	±1HD
Indenter protrusion	2.5mm	
Output	wireless and USB	
Power supply	built-in rechargeable battery	
Dimension	153x50x29mm	
Weight	170g	

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Printer	ISH-DS-PRINTER
Test stand	ISH-DS-STANDA
Weight block D (for ISH-DSD)	ISH-DS-W4

*Use **ISH-DSD** when measuring result is higher than 90HA
Use **ISH-DSA** when measuring result is lower than 20HD

TEST STAND FOR DIGITAL SHORE DUROMETERS
CODE ISH-DS-STANDA

- For digital shore durometers (code **ISH-DSA** and **ISH-DSD**)
- Can perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- Special structure for stable loading
- Weight block A is for **ISH-DSA**, weight block D is for **ISH-DSD**

weight block A

load handle

lifting screw

column

durometer is optional

stage

SPECIFICATION

Stage diameter	Ø115mm
Maximum workpiece height	45mm
Weight block	weight block A (for **ISH-DSA**)
Dimension	Ø195×370mm
Weight	5.61kg

OPTIONAL ACCESSORY

Weight block D (for ISH-DSD)	ISH-DS-W4

weight block D (**optional**)
for **ISH-DSD**

SHORE DUROMETERS
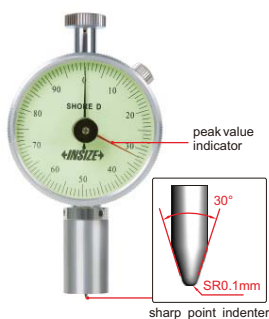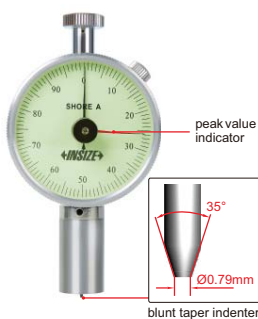
- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Optional accessory: test stand **ISH-STAC** and **ISH-STD**

VIDEO

peak value indicator

35°
Ø0.79mm
blunt taper indenter

ISH-SAM

peak value indicator

30°
SR0.1mm
sharp point indenter

ISH-SDM

SPECIFICATION

Code	ISH-SAM	ISH-SDM
Scale	Shore A	Shore D
Application	natural rubber, soft elastomer, etc.	hard elastomer, plastic, hard rubber, etc.
Measuring range*	10~90HA	20~90HD
Graduation	1HA	1HD
Indenter protrusion	2.5mm	2.5mm
Dimension	115x60x25mm	
Net weight	160g	

*Use **ISH-SDM** when measuring result is higher than 90HA
Use **ISH-SAM** when measuring result is lower than 20HD

TESTING STAND FOR SHORE DUROMETERS

- For shore durometers weight block (code **ISH-SAM** and **ISH-SDM**)
- Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations

weight block

durometer is optional

SPECIFICATION

Code	ISH-STAC
Applicable durometer	ISH-SAM
Stage diameter	Ø100mm
Maximum workpiece height	75mm
Weight block	1kg

ISH-STAC

DIGITAL FORCE GAGES

INSPECTION CERTIFICATE

DATA OUTPUT
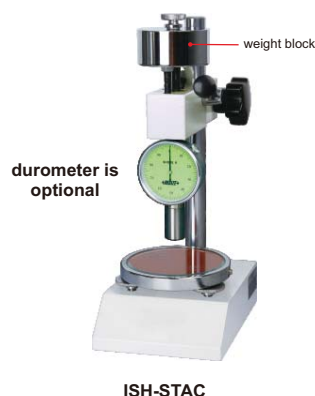
- Push and pull test
- Units: lbf, ozf, N, gf, kgf
- 500 memories
- Automatic power off
- Metal case
- LCD display with backlight
- The display flips over when the bottom faces up
- Overload alarm

software CD (included)

printer (**optional**)

26.9

ISF-1DF100

VIDEO

SPECIFICATION

Code	ISF-1DF10	ISF-1DF50	ISF-1DF100	ISF-1DF500	ISF-1DF1000
Load capacity (N)	10	50	100	500	1000
Resolution (N)	0.01	0.01	0.1	0.1	1
Accuracy	±0.3% (of load capacity)				
Measuring mode	tracking, peak (max.), low and high limits with judgement				
Power supply	built-in rechargeable battery				
Dimension	150×73×33mm				
Weight	450g				

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
USB cable and software	1 pc
Push/pull accessory	6 pcs (flat push tip, V push tip, knife-edge push tip, point push tip, pull clamp, extension rod)

accessory (included)

flat push tip   V push tip

knife-edge push tip   point push tip   pull clamp   extension rod

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

DIGITAL FORCE GAGES (HIGH ACCURACY)

INSPECTION CERTIFICATE

DATA OUTPUT

VIDEO

ISF-DF100A

- Push and pull test
- Peak (max.) and tracking mode
- Units: mN, N, gf, kgf, ozf, lbf, MPa (only for type B)
- Low and high limits with judgement
- 1000 memories
- Automatic power off
- Metal case, touch buttons
- LCD display with backlight
- The display flips over whenthe bottom faces up
- Overload alarm

software CD (included) printer (**optional**)

accessory (included)

| flat push tip | V push tip | | |
| knife-edge push tip | point push tip | pull clamp | extension rod |

SPECIFICATION

Code	ISF-DF50A	ISF-DF100A	ISF-DF200A	ISF-DF500A	ISF-DF1KA
Type	internal sensor				
Load capacity (N)	50	100	200	500	1000
Resolution (N)	0.005	0.01	0.05	0.05	0.1
Accuracy	±0.2% (of load capacity)				
Power supply	built-in rechargeable battery				

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
USB cable and software	1 pc
Push/pull accessory	6 pcs (flat push tip, V push tip, knife-edge push tip, point push tip, pull clamp, extension rod)

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

TEST STAND FOR DIGITAL FORCE GAGE CODE ISF-MT1K

- For digital force gages (code **ISF-1DFxx** and **ISF-DFxx**)
- To be used in vertical and horizontal orientation

SPECIFICATION

Load capacity	1000N
Travel	200mm (3mm vertical movement per revolution of handwheel)
Dimension	196x250x446mm
Weight	13kg

OPTIONAL ACCESSORY

Digital scale (range: 200mm, resolution: 0.01mm/0.0005")	ISF-MT1K-SCALE

VIDEO

force gages are optional

horizontal orientation test digital scale (**optional**)

FORCE GAGES

- Push and pull test
- Peak (max.) or tracking mode

VIDEO

ISF-F500

accessory (included)

| flat push tip | V 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
Capacity	N	10	20	30	50	100	200	300	500
	kgf	1	2	3	5	10	20	30	50
Graduation	N	0.05	0.1	0.2	0.25	0.5	1	2	2.5
Accuracy		±1% (of load capacity)							

STANDARD DELIVERY

Main unit	1 pc
Push tip	4 pcs (flat, V type, knife-edge, point)
Pull clamp	1 pc
Extension rod	1 pc

OPTIONAL ACCESSORY

Test stand	ISF-MT500

TEST STAND FOR FORCE GAGE
CODE ISF-MT500

- For force gages (code **ISF-FXX**)
- To be used in vertical and horizontal orientation

horizontal orientation test
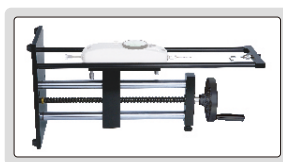
force gages are optional

SPECIFICATION

Load capacity	500N
Travel	150mm (3mm vertical movement per revolution of handwheel)
Dimension	160×240×460mm
Weight	12kg

VIDEO

DIAL TENSION GAGES

- Clockwise and counter-clockwise use
- For electronic and precision mechanical industry, such as test the contact pressure of relay, adjust the tension or compression of spring

1mm
29mm

SPECIFICATION (Unit: N)

Code	ISF-TGD1	ISF-TGD3	ISF-TGD5	ISF-TG1	ISF-TG1D5	ISF-TG3	ISF-TG5
Range (N)	0.01~0.1	0.03~0.3	0.05~0.5	0.1~1	0.15~1.5	0.3~3	0.5~5
Graduation (N)	0.002	0.005	0.01	0.02	0.025	0.05	0.1
Accuracy	±2% (full scale)						
Dimension (L×W×H)	90×47×19mm						
Weight	60g						
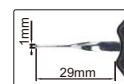
ISF-TG3

SPECIFICATION (Unit: gf)

Code	ISF-TG10	ISF-TG30	ISF-TG50	ISF-TG100	ISF-TG150	ISF-TG300	ISF-TG500
Range (gf)	1~10	3~30	5~50	10~100	15~150	30~300	50~500
Graduation (gf)	0.2	0.5	1	2	2.5	5	10
Accuracy	±2% (full scale)						
Dimension (L×W×H)	90×47×19mm						
Weight	60g						

DIGITAL TORQUE SCREWDRIVERS

INSPECTION CERTIFICATE

- Clockwise and counter-clockwise operation
- Unit: cN.m, in.lb, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
  - Green LED light on and buzzer sounds when target torque value is 90%~100% of target torque
  - Red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations

quick release clamp calibration port
crosshead LCD display
red alarm LED
with 1/4" hex socket
buttons
buzzer
green alarm LED
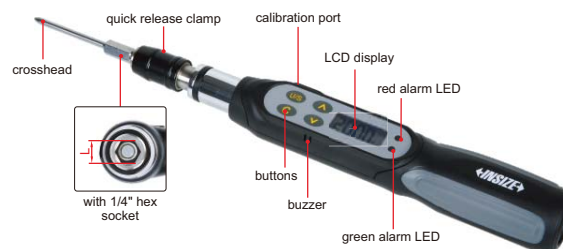
IST-SD200

SPECIFICATION

Code		IST-SD50	IST-SD200
Range		10~50cN.m	40~200cN.m
Accuracy	clockwise	±3%	±2.5%
	counter-clockwise	±4%	±3.5%
Resolution		0.1cN.m	0.1cN.m
Size of shank (L)		1/4"	1/4"
Power supply		1xAAA battery	
Length		193mm	203mm
Weight		190g	200g

software CD (included)

VIDEO

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE

PRESET TORQUE SCREWDRIVERS

ATTENTION: CLOCKWISE OPERATION ONLY

- Meet DIN ISO 6789
- Torque value can be preset within the adjust range (torque adjustment tool **IST-P-TOOL** and torque tester are needed)

IST-PS2
square driver

IST-PS4B
hex socket

IST-PS6 and **IST-PS6B** have T-Bar

torque adjust tool (**optional**)

SPECIFICATION

Code	IST-PS06	IST-PS06B	IST-PS2	IST-PS2B	IST-PS4	IST-PS4B	IST-PS6	IST-PS6B
Adjust range*	0.2~0.6N.m	0.2~0.6N.m	0.6~2N.m	0.6~2N.m	0.4~4N.m	0.4~4N.m	0.4~6N.m	0.4~6N.m
Accuracy	±6%	±6%	±6%	±6%	±6%	±6%	±6%	±6%
Head type	1/4" square driver	1/4" hex socket	1/4" square driver	1/4" hex socket	1/4" square driver	1/4" hex socket	1/4" square driver	1/4" hex socket
Length	155mm	155mm	155mm	155mm	155mm	155mm	185mm	185mm
Weight	180g	180g	185g	185g	260g	260g	330g	330g

OPTIONAL ACCESSORY

Torque adjust tool	IST-P-TOOL

*Adjust and set a fixed torque value according to requirements

DIGITAL TORQUE WRENCHES

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
  - Green LED light on and buzzer sounds when torque value is 90%~100% of target torque
  - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations
- Non-slip grip handle
- With damp record
- With overload record
  (once the torque reaches 110% of the maximum range)

clockwise/counter-clockwise switch
calibration port
LCD display
buzzer
red alarm LED
green alarm LED
buttons
square driver
L

OPTIONAL ACCURACY: CLOCKWISE: ±1% COUNTER-CLOCKWISE: ±2% ONLY FOR RANGE FOR 6~850N.m

IST-W135A

SPECIFICHE

Code	Range	Accuracy	Resolution	Square driver (L)	Power supply	Length	Weight
IST-W30A	6~30N.m	clockwise: ±2% counter-clockwise: ±3%	0.01N.m	1/4"	2×AA batteries	390mm	830g
IST-W135A	27~135N.m		0.1N.m	3/8"		415mm	950g
IST-W500A	100~500N.m	clockwise: ±2.5% counter-clockwise: ±3.5%	0.1N.m	3/4"		950mm	2.1kg

OPTIONAL ACCESSORY

Calibration cable	IST-W-CABLE

TORQUE WRENCHES

ATTENTION: CLOCKWISE OPERATION ONLY

- According to DIN ISO 6789, ASME B107.300
- All-metal construction, sturdy and durable

square driver

torque set lock ring
torque value

IST-9WM335

SPECIFICATION

Code	IST-9WM30	IST-9WM60	IST-9WM100	IST-9WM200	IST-9WM335	IST-9WM500	IST-9WM800	IST-9WM1000
Range (clockwise)	6~30N.m	10~60N.m	20~100N.m	40~200N.m	65~335N.m	100~500N.m	160~800N.m	200~1000N.m
Accuracy	±4%	±4%	±4%	±4%	±4%	±4%	±4%	±4%
Graduation	0.1N.m	0.25N.m	0.5N.m	1N.m	1N.m	2.5N.m	4N.m	5N.m
Square driver (D)	3/8"	3/8"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"
Length	318mm	388mm	443mm	468mm	528mm	855mm	1055mm	1055mm
Weight	820g	960g	1040g	1160g	1300g	5000g	5900g	5900g

DIAL TORQUE WRENCHES

ACCURACY ±3%

INSPECTION CERTIFICATE

- Clockwise and counter-clockwise operation
- According to DIN ISO 6789, ASME B107.300

VIDEO

dial with metric and inch scales

peak value indicator

square driver

SPECIFICATION

Code	IST-DW18	IST-DW35	IST-DW70	IST-DW140
Range	3.6~18N.m 30~150in.lb	7~35N.m 60~300in.lb	14~70N.m 120~600in.lb	28~140N.m 20~100ft.lb
Accuracy	±3%	±3%	±3%	±3%
Graduation	0.2N.m 2in.lb	0.5N.m 5in.lb	1N.m 10in.lb	2N.m 1ft.lb
Square driver (D)	3/8"	3/8"	3/8"	1/2"
Length	254mm	254mm	378mm	546mm
Weight	480g	480g	820g	1300g
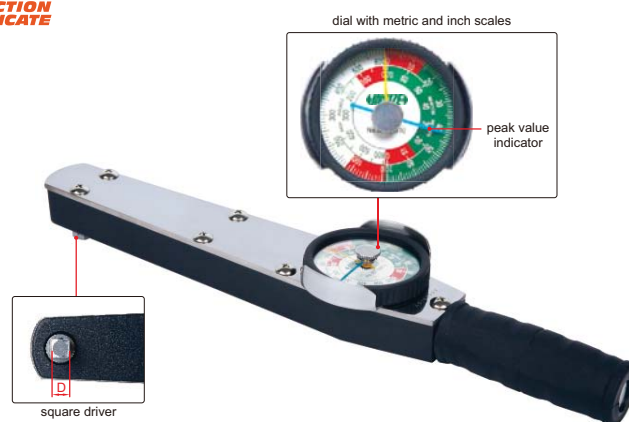
IST-DW70

WEIGHING SCALES (HIGH PRECISION)

ATTENTION: NO DATA OUTPUT

8001-30

Unit: mm

- LCD display, with backlight
- Zero-setting, subtracting tare value
- Overload alarm
- Automatic power off

Code	8001-6	8001-15	8001-30
Capacity	6kg	15kg	30kg
Minimum capacity	4g	10g	20g
Readout	0.2g	0.5g	1g
Resolution	30000d		
Operating temperature	-10~40°C		
Power	rechargeable battery (6V/3.2Ah) power adapter (12V/500mA)		
Dimensions of pan	263×204mm		

WEIGHING SCALES (OIML CERTIFICATE)

OIML

ATTENTION: NO DATA OUTPUT

8002-30M

Unit: mm

- LCD display, with backlight
- Zero-setting, subtracting tare value
- Overload alarm
- Automatic power off
- OIML certificate (No. 0200-NAWI-04601)
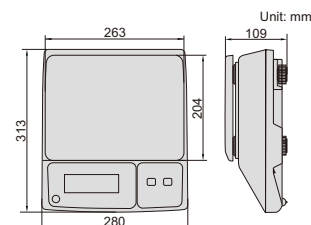
Code	8002-6M	8002-15M	8002-30M
Capacity	3/6kg	6/15kg	15/30kg
Minimum capacity	20g	40g	100g
Readout	1g/2g	2g/5g	5g/10g
Resolution	2×3000e		
Operating temperature	-10~40°C		
Power	rechargeable battery (6V/3.2Ah) power adapter (12V/500mA)		
Dimensions of pan	263×204mm		

COUNTING SCALES

ATTENTION: NO DATA OUTPUT

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting, accumulation, checking alarm
- Overload alarm

Code	8101-6	8101-15	8101-30
Capacity	6kg	15kg	30kg
Minimum capacity	4g	10g	20g
Readout	0.2g	0.5g	1g
Resolution	3000d		
Operating temperature	-10~40°C		
Power	rechargeable battery (6V/3.2Ah) power adapter (12V/500mA)		
Dimensions of pan	263×204mm		

8101-30

Unit: mm
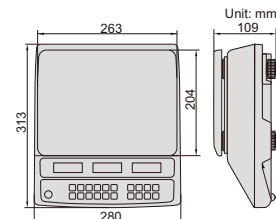
ELECTRONIC BALANCES

Unit: mm

- Automatic zero when power on
- Unit: g (gram), ct (carat), ozt (troy ounce)
- Weighing, counting, taring
- Overload alarm
- Data output
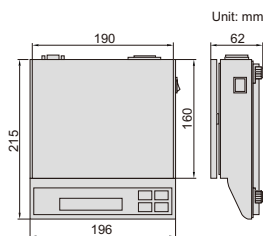
DATA OUTPUT

8301-3000

calibration weight
(included in **8301-300**,
8301-600 and **8301-1200**)

Code	8301-300	8301-600	8301-1200	8301-3000	8301-6000
Maximum weighing	300g	600g	1200g	3000g	6000g
Minimum weighing	0.2g	0.2g	0.2g	2g	2g
Resolution	0.01g	0.01g	0.01g	0.1g	0.1g
Pan size	Ø135mm			190×160mm	
Verification scale interval	10d				
Working temperature	0~40°C				
Working humidity	≤80% RH				
Power supply	power adapter				

OPTIONAL ACCESSORY

RS232 CABLE	8301-CABLE

windshield
(included in **8301-300**,
8301-600 and **8301-1200**)

ELECTRONIC CRANE SCALES

IP65 WATERPROOF

Remote controller
(included)

8201-150KG
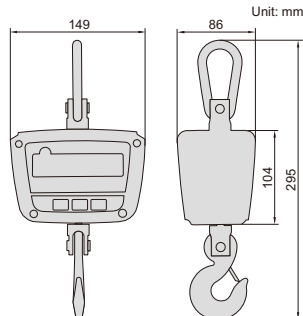
- Dust/waterproof level: IP65
- LED display, remote control
- Low voltage indicator
- Unit: kg, lb
- Automatic power off, overload alarm
- 360° safe rotary hook and shackle
- Aluminum alloy die casting case
  with high strength

Unit: mm

SPECIFICATION

Code	8201-50KG	8201-150KG	8201-300KG
Maximum capacity	50kg	150kg	300kg
Minimum capacity	0.4kg	1.0kg	2.0kg
Resolution	0.02kg/0.01kg	0.05kg/0.02kg	0.10kg/0.05kg
Operating temperature	-10~40°C		
Operating humidity	30%~90% RH		
Overload alarm	100%F.S.+9e		
Maximum safe load	125%F.S.		
Limited overload	400%F.S.		
Power supply	rechargeable battery 6V/3Ah (for 40 hours working)		
Stable reading time	≤8s		

STANDARD DELIVERY

Main unit	1 pc
Remote controller	1 pc
Battery charger	1 pc

ELECTRONIC CRANE SCALES (ECONOMIC TYPE)
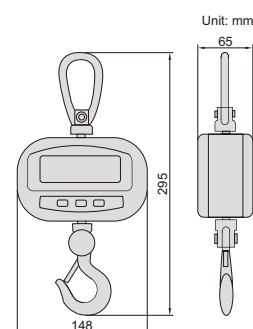
Remote controller
(included)

8202-150KG

- LED display, remote control
- Low voltage indicator
- Unit: kg, lb
- Automatic power off
- Overload alarm
- 360° safe rotary hook and shackle
- Plastic case

Unit: mm

SPECIFICATION

Code	8202-50KG	8202-150KG	8202-300KG
Maximum capacity	50kg	150kg	300kg
Minimum capacity	0.4kg	1.0kg	2.0kg
Resolution	0.02kg/0.01kg	0.05kg/0.02kg	0.10kg/0.05kg
Operating temperature	-10~40°C		
Operating humidity	30%~90% RH		
Overload alarm	100%F.S.+9e		
Maximum safe load	125%F.S.		
Limited overload	400%F.S.		
Power supply	4×1.5V AA batteries (for 40 hours working)		
Stable reading time	≤8s		

STANDARD DELIVERY

Main unit	1 pc
Remote controller	1 pc

CODE NO. INDEX

INSIZE

www.insize-eu.com

The products with this mark are supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

INSIZE   Inspection Certificate

Product name	Digital Caliper	Traceable to	USA NIST No.821/279484-10
Code No.	1108-150		Germany DKD No.D-K-15190-01-00
Measuring range	0-150mm / 0-6"	Inspector	
Resolution	0.01mm / 0.0005"		
Serial No.	0910120004	Judgement	Passed
Standard temperature	20°C / 68°F		

Unit: inch

Measuring Length	Permissible Error	Error	
		External	Internal
0.4 DIA	+0.0005 -0.0010	/	0.0005
2	±0.0010	-0.0005	/
4		-0.0005	/
6		-0.0010	/
8	±0.0015	/	/
10		/	/
12		/	/

Unit: mm

Measuring Length	Permissible Error	Error	
		External	Internal
Φ10	+0.01 -0.02	/	0.01
50	±0.02	-0.01	/
100		-0.01	/
150		-0.02	/
200	±0.03	/	/
250		/	/
300		/	/

VIDEO

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

Obtain information about our complete line of product from our website or general catalogue

2019

Distributed by:

Printed on May 6th, 2019