



2018  
2019

# MEASURING INSTRUMENTS

CATALOGUE NO. EU257



All products in this catalogue are available from stock of INSIZE Europe at Spain (subject to our final confirmation)

## WATERPROOF DIGITAL CALIPERS

**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD

**ATTENTION: NO DATA OUTPUT**

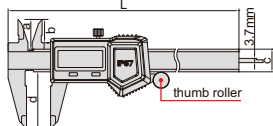
**ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME**



1118-150B

**IP67 WATERPROOF**

- 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

## DIGITAL CALIPERS (STANDARD MODEL)

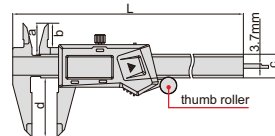


1108-150

**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD

**DATA OUTPUT**

- 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

## HEAVY DUTY 300mm DIGITAL CALIPERS

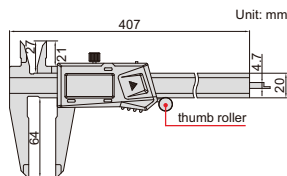


1196-300W

**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD

**DATA OUTPUT**

- 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



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

## DIGITAL CALIPERS

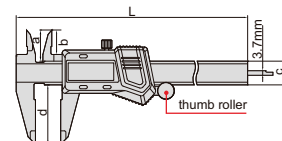
**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD

**ATTENTION: NO DATA OUTPUT**



1114-150A

- 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

## METRIC DIGITAL CALIPERS



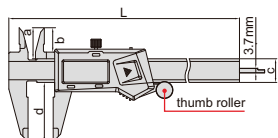
1109-150W

**DATA OUTPUT**

**LOCK READING WITH "HOLD" BUTTON**

**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD

- 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



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

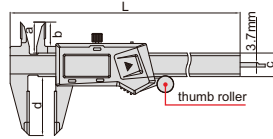
**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD

**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



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

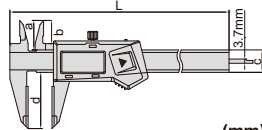
**DATA OUTPUT**

**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD



1193-150W

- 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



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

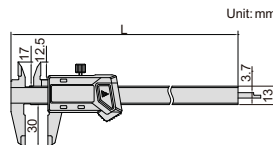
## MINI DIGITAL CALIPERS

**ATTENTION:**  
NO DATA OUTPUT



1111-100A

- 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

**DATA OUTPUT**

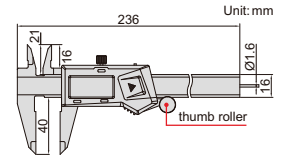
**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD



1119-150W



- 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



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

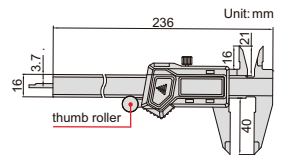
**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD



1130-150W

**DATA OUTPUT**

- 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



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

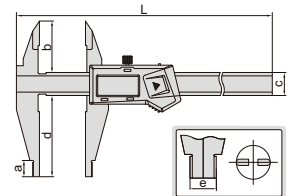
## DIGITAL CALIPERS

**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



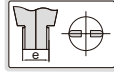
Code	Range	Accuracy	L	a	b	c	d	e
1171-200	0-200mm/0-8"	±0.03mm	320	12	38	17	60	10
1171-306	0-300mm/0-12"	±0.04mm	420	12	38	17	60	10
1171-300	0-300mm/0-12"	±0.04mm	420	12	38	17	90	10

### DIGITAL CALIPERS

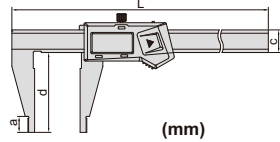
DATA OUTPUT



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



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

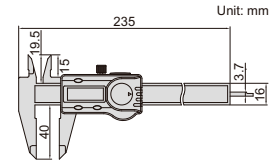
### PLASTIC DIGITAL CALIPER

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



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

### DIAL CALIPERS

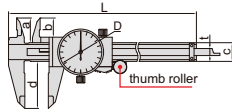
INSPECTION CERTIFICATE TRACEABLE TO DKD

SHOCK PROOF



1312-150A

- Shockproof dial indicator
- Made of stainless steel



Dial indicator graduation: 0.02mm

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

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

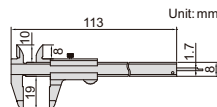
### MINI VERNIER CALIPER



1204-70

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

Code	Range	Graduation	Accuracy
1204-70	0-70mm	0.05mm	±0.05mm



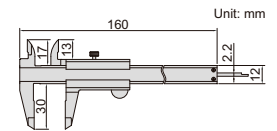
### MINI VERNIER CALIPER



1203-1003

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

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



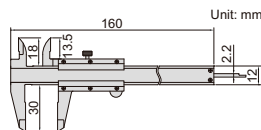
### MINI VERNIER CALIPER



1201-1003

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

Code	Range	Graduation	Accuracy
1201-1003	0-100mm	0.05mm	±0.05mm



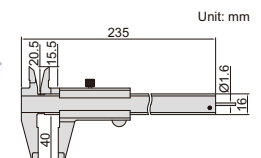
### VERNIER CALIPER WITH ROUND DEPTH BAR



1202-150

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

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

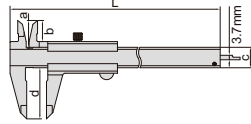


## VERNIER CALIPERS



1205-1502S

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



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)

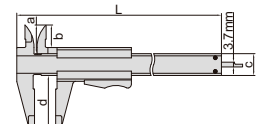
Code	Range	Accuracy	L	a	b	c	d
1205-1501S	0-150mm	±0.03mm	235	20.5	15.5	16	40
1205-2001S	0-200mm	±0.03mm	290	23.5	19	17	50
1205-3001S	0-300mm	±0.03mm	414	27.5	22	20	64

## VERNIER CALIPERS WITH THUMB CLAMP



1223-150

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



Graduation 0.05mm/1/128" (mm)

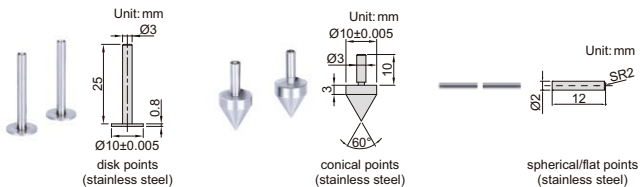
Code	Range	Accuracy	L	a	b	c	d
1223-150	0-150mm/0-6"	±0.05mm	230	20.5	16.5	16	40
1223-200	0-200mm/0-8"	±0.05mm	295	23.5	19	16	50

Graduation 0.02mm/0.001" (mm)

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

Sizes available up to 300mm

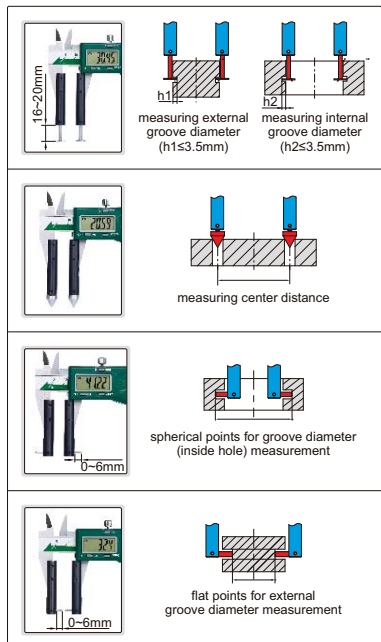
## ACCESSORY SET FOR DIGITAL CALIPERS CODE 6144



disk points (stainless steel)

conical points (stainless steel)

spherical/flat points (stainless steel)

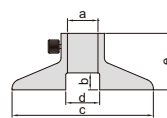


- Suitable for 0-150mm/0-6" and 0-200mm/0-8" digital calipers (thickness of lower jaws ≤ 3.7mm)

Code

6144

## DEPTH BASE ATTACHMENTS



6140



VIDEO



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

(mm)

Code	a	b	c	d	e	Application
6140	16.5	9	7.5	18	30	Suitable for calipers with beam width (w) 16mm
6140-300A	20	15	12.5	22	34	Suitable for calipers with beam width (w) 20mm

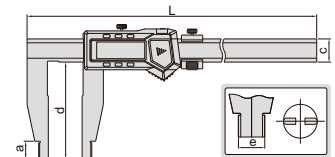
## DIGITAL CALIPERS

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

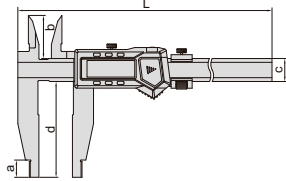
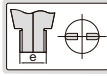
**DIGITAL CALIPERS**

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

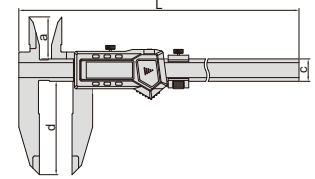
**DIGITAL CALIPERS**

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)

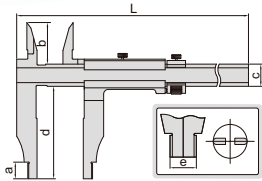
Code	Range	Accuracy	a	c	d	L
1135-451	0-450mm/0-18"	±0.05mm	45	24	100	625
1135-601	0-600mm/0-24"	±0.05mm	45	24	100	770
1135-1002	0-1000mm/0-40"	±0.08mm	60	31	150	1220

**VERNIER CALIPERS (SOLID TYPE)**



1236-511

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



(mm)

Graduation 0.05mm/1/128"

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)

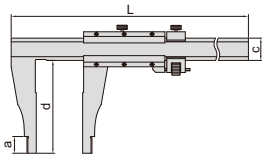
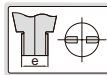
Code	Range	Accuracy	a	b	c	d	e	L
1236-511	0-500mm	±0.05mm	18	45	24	100	20	670
1236-1021	0-1000mm	±0.08mm	24	60	31	150	20	1230

**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

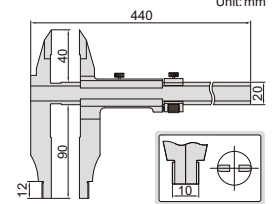
Sizes available up to 2000mm

**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

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

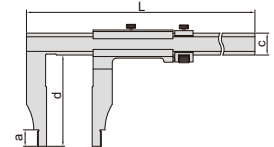
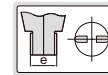
Sizes available up to 1000mm

**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

## UNIVERSAL CALIPER CODE 1125-600

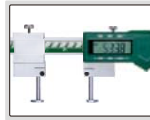
DATA  
OUTPUT



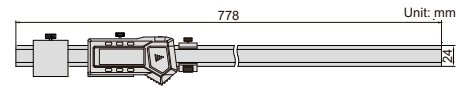
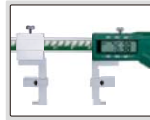
1125-600

- 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



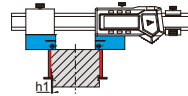
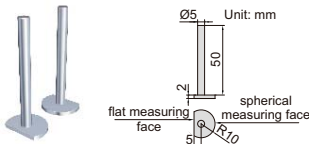
working with measuring jaws



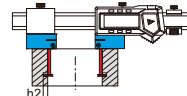
Code	Range*	Resolution	Accuracy
1125-600	0-600mm/0-24"	0.01mm/0.0005"	±0.05mm

\*The range changes according to different points

### Half disk points (included)

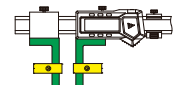
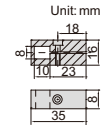


Measuring external groove diameter with flat measuring face (depth  $h_1 \leq 2.5\text{mm}$ )

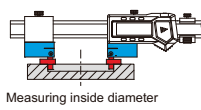
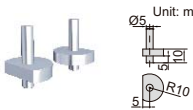


Measuring internal groove diameter with spherical measuring face (depth  $h_2 \leq 7.5\text{mm}$ )

### Depth stop (included)



### Round shoulder points (optional)

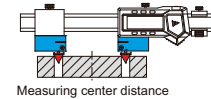
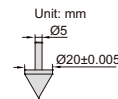


Measuring inside diameter

Code

1125-T102

### Conical points (optional)

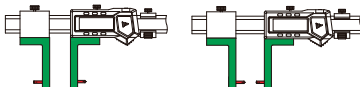
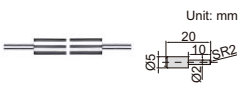


Measuring center distance

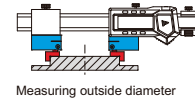
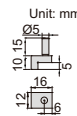
Code

1125-T101

### Spherical points (included)



### Flat shoulder points (optional)

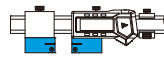


Measuring outside diameter

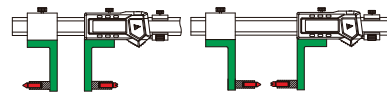
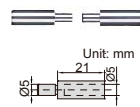
Code

1125-T103

### Stands (included)



### Point sleeve (optional)

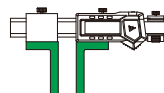
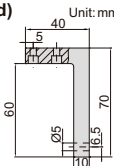


Working with multifunctional points, ball points and screw thread points

Code

1125-T104

### Measuring jaws (included)



### Multifunctional points 7392 (optional)



### Ball points 7391 (optional)



### Screw thread points 7381, 7321 (optional)

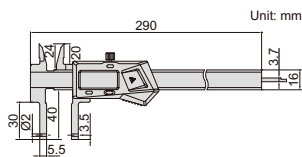


## DIGITAL CALIPER WITH INTERCHANGEABLE POINTS CODE 1526-200

DATA  
OUTPUT



1526-200



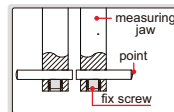
depth stop 6143  
(optional)



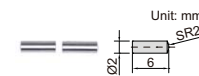
zero setting block for  
external measurement  
(included)



install points



### Short spherical points (included)



### Long spherical/flat points (included)



### Spherical blade points (included)



- 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 CODE 1124-300A

DATA  
OUTPUT

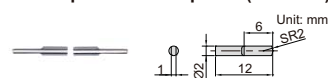
Short spherical/flat points (included)



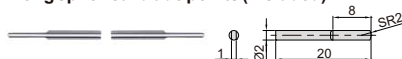
Long spherical/flat points (included)



Short spherical blade points (included)



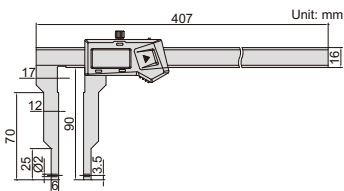
Long spherical blade points (included)



preset buttons



1124-300A



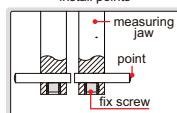
depth stop 6143  
(optional)



zero setting block for  
external measurement  
(included)



install points



- 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 CALIPERS

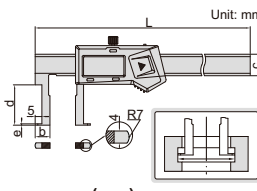
DATA  
OUTPUT



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



(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 POINT CALIPERS

DATA  
OUTPUT



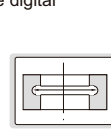
1121-150A



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

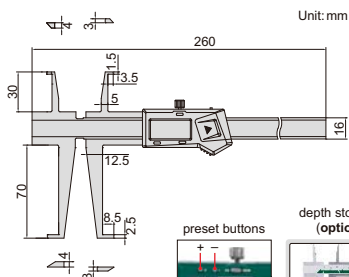
## DIGITAL INSIDE GROOVE CALIPER

DATA  
OUTPUT



1176-150

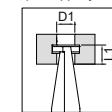
- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable



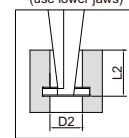
depth stop 6143  
(optional)



sizes to be measured  
(use upper jaws)



sizes to be measured  
(use lower jaws)



(mm)		(mm)	
D1	L1	D2	L2
Ø9	<8	Ø15	<10
Ø10	<15	Ø16	<18
Ø11-150	<30	Ø17	<26
		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 GROOVE CALIPER

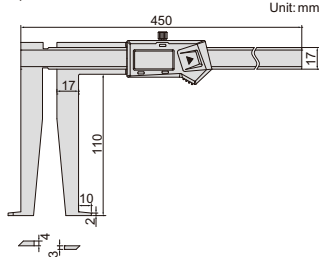
DATA  
OUTPUT



1178-300

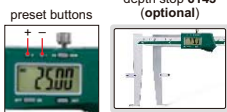


- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable



sizes to be measured

(mm)	
D1	L1
Ø25	<50
Ø26	<60
Ø27~300	<110



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

## DIGITAL INSIDE GROOVE CALIPER

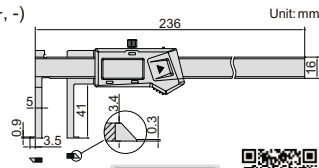
DATA  
OUTPUT



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



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

## DIGITAL OUTSIDE POINT CALIPER

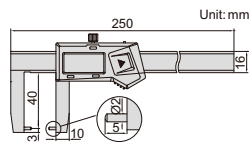
DATA  
OUTPUT



1185-150A



- Measure wall thickness inside bores and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- 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 OUTSIDE NECK CALIPER

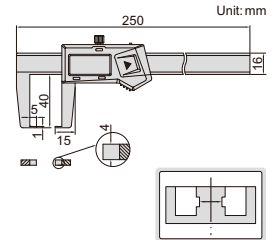
DATA  
OUTPUT

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



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

## DEPTH STOP FOR CALIPERS

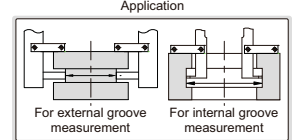
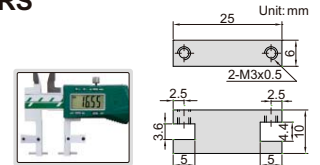


6143



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

Code  
6143



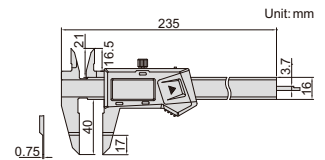
## DIGITAL BLADE CALIPERS

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



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

Sizes available up to 300mm

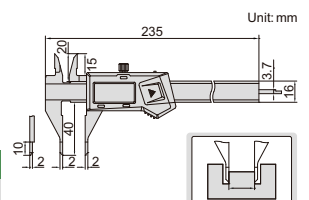
## DIGITAL SMALL POINT CALIPER

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



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

### DIGITAL OFFSET CENTERLINE CALIPER

DATA OUTPUT

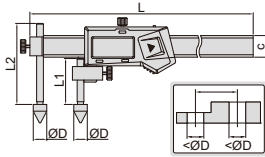


VIDEO



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

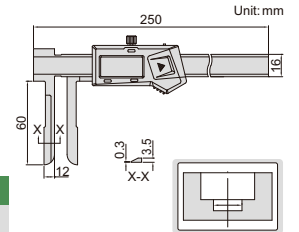
### DIGITAL INSIDE KNIFE-EDGE CALIPER

DATA OUTPUT



1123-150A

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



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

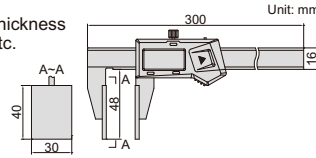
### DIGITAL CALIPER WITH LARGE MEASURING FACES

DATA OUTPUT



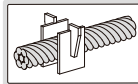
1172-200

- 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



measure diameter of wire ropes

measure thickness of rubber, sponge, etc.



Code	Range	Accuracy
1172-200	0-200mm/0-8"	±0.07mm

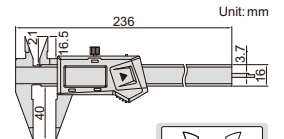
### DIGITAL POINT CALIPER

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



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

### DIGITAL CENTERLINE/EDGE TO CENTER CALIPER

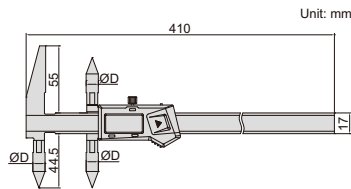
DATA OUTPUT



1525-300

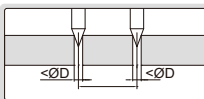
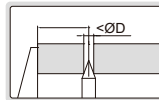


VIDEO



measure edge to hole center distance

measure hole center distance



- 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

Code	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy	ØD
1525-300	5-300mm/0.2-12"	10-300mm/0.4-12"	±0.08mm	10mm

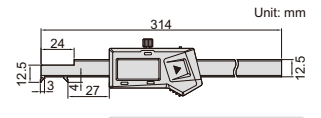
### DIGITAL HOOK CALIPER

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



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

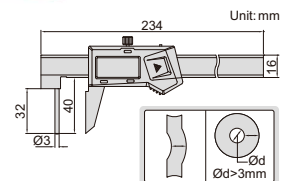
### DIGITAL TUBE THICKNESS CALIPER

DATA OUTPUT



1161-150A

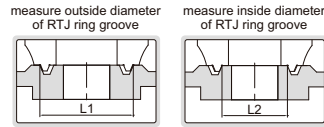
- Measure wall thickness of tubes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable



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

## DIGITAL RTJ RING GROOVE CALIPERS

- 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



1179-600

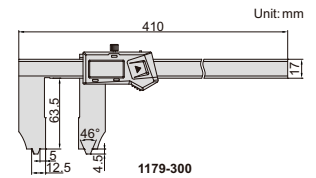
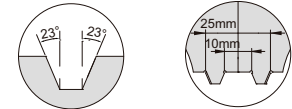
DATA OUTPUT



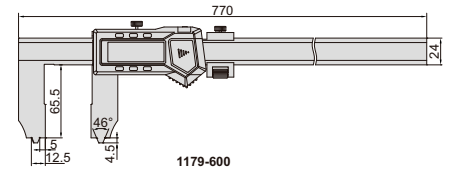
1179-300 preset buttons

applicable for RTJ ring grooves with angle 23°

10mm and 25mm need to be added on the reading



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

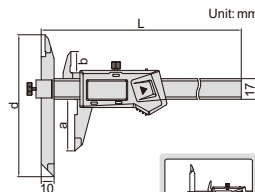
## DIGITAL OFFSET CALIPERS

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



(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 DISK BRAKE CALIPER

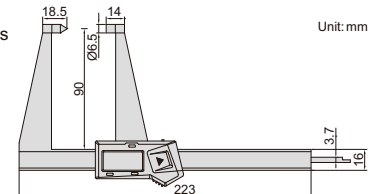
DATA OUTPUT

RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)



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

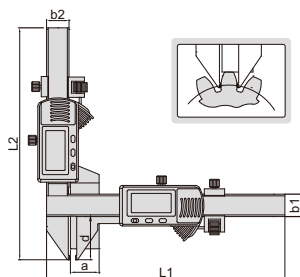


Unit: mm

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

## DIGITAL GEAR TOOTH CALIPERS

ATTENTION: NO DATA OUTPUT



1181-M25A

- 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

(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 AND PAD CALIPER

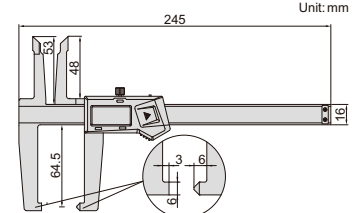
RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DATA OUTPUT



1167-150A

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



Unit: mm

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



## WATERPROOF DIGITAL DEPTH GAGES

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

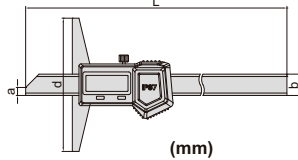
ATTENTION: NO DATA OUTPUT

**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



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

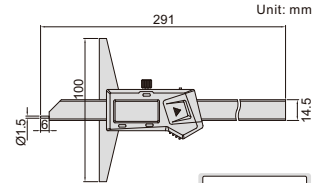
## DIGITAL POINT DEPTH GAGE

DATA OUTPUT

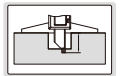


1143-200A

- 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



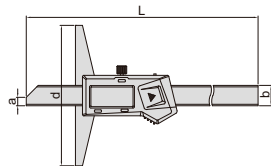
## DIGITAL DEPTH GAGES (STANDARD MODEL)

DATA OUTPUT



1141-150A

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



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

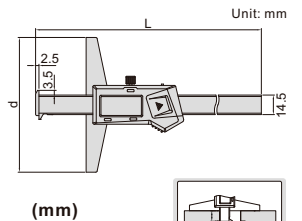
## DIGITAL DOUBLE HOOK DEPTH GAGES

DATA OUTPUT

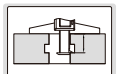
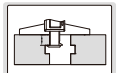


1144-150A

- 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



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



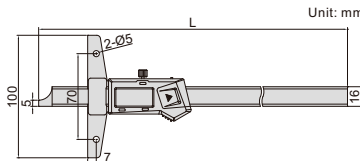
## DIGITAL DEPTH GAGES WITH MOUNTING HOLES FOR EXTENSION BASE

DATA OUTPUT



1147-300

- 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)



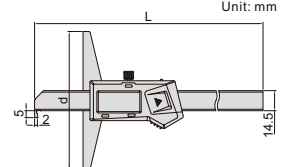
## DIGITAL HOOK DEPTH GAGES

DATA OUTPUT

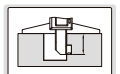
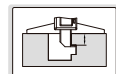
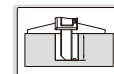


1142-150A

- 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



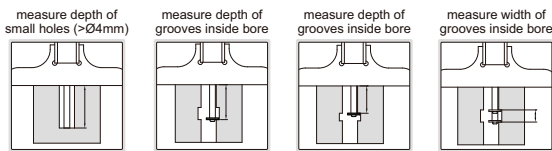
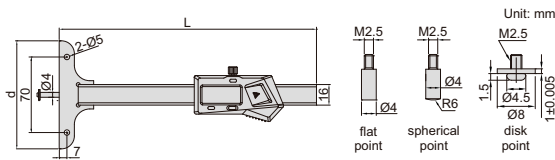
Code	Range	Accuracy	L	d
1142-150A	0-150mm/0-6"	±0.03mm	230mm	100mm
1142-200A	0-200mm/0-8"	±0.03mm	280mm	100mm



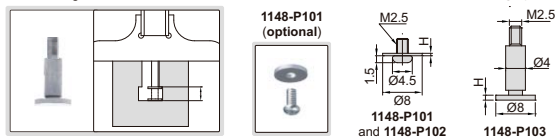
Sizes available up to 300mm

## DIGITAL DEPTH GAGES WITH ROUND DEPTH BAR

- 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)



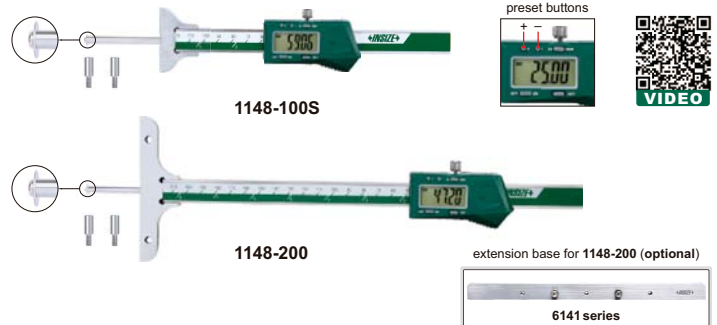
1148-P103 (optional), measure width of bottom grooves inside blind hole



MEASURE WIDTH AND DEPTH OF GROOVES INSIDE BORE

MEASURE DEPTH OF SMALL HOLES (>Ø4mm)

DATA OUTPUT



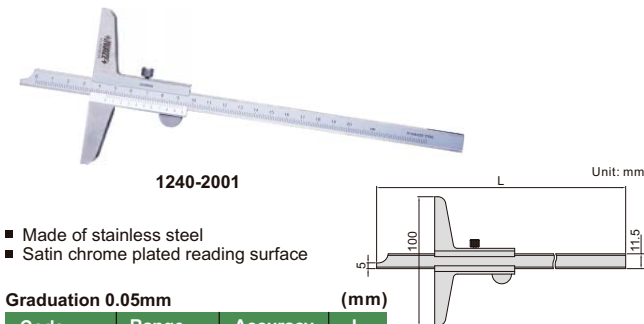
Code	Range*	Accuracy	L	d	Remark
1148-100S	0-100mm/0-4"	±0.02mm	200	45	
1148-100	0-100mm/0-4"	±0.02mm	200	85	
1148-200	0-200mm/0-8"	±0.03mm	300	101	with mounting holes for extension base

\*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

## VERNIER DEPTH GAGES (STANDARD MODEL)



- Made of stainless steel
- Satin chrome plated reading surface

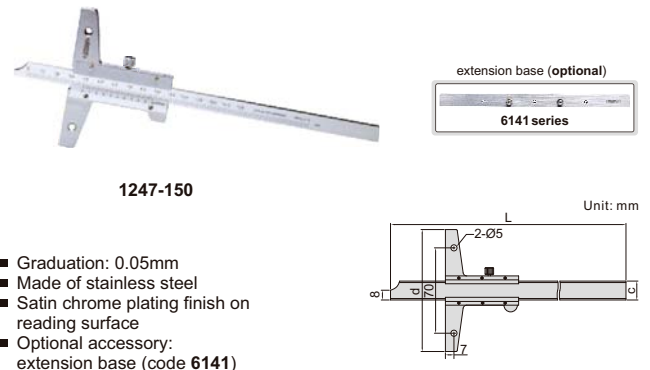
Code	Range	Accuracy	L
1240-150	0-150mm	±0.05mm	245
1240-200	0-200mm	±0.05mm	282
1240-300	0-300mm	±0.08mm	382

Code	Range	Accuracy	L
1240-1501	0-150mm	±0.03mm	245
1240-2001	0-200mm	±0.03mm	282
1240-3001	0-300mm	±0.04mm	382

Sizes available up to 500mm

## VERNIER DEPTH GAGES

WITH MOUNTING HOLES FOR EXTENSION BASE

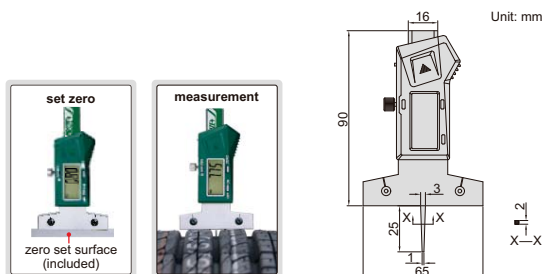


- Graduation: 0.05mm
- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

Code	Range	Accuracy	L	c	d
1247-150	0-150mm	±0.05mm	240	11	100
1247-200	0-200mm	±0.05mm	290	11	100
1247-300	0-300mm	±0.08mm	390	11	100

Sizes available up to 1000mm

## MINI DIGITAL DEPTH GAGE



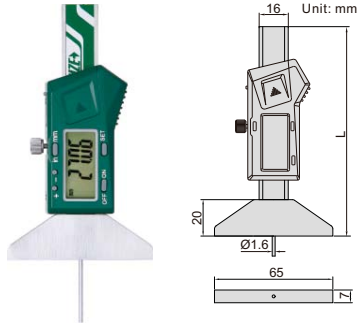
- Measure depth of small groove and hole, also measure depth of tire tread
- Buttons: on/off, zero, mm/inch
- Supplied with zero set surface
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable

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

## MINI DIGITAL DEPTH GAGES WITH ROUND BAR

DATA OUTPUT

- 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

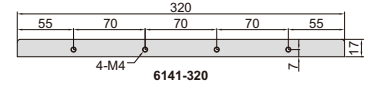
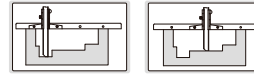
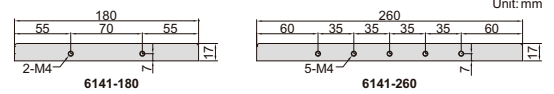


Code	Range	Accuracy	L
1140-25	0-25mm/0-1"	±0.02mm	114mm
1140-50	0-50mm/0-2"	±0.02mm	140mm

## EXTENSION BASES



6141-260



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



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

## DIGITAL DEPTH GAGES

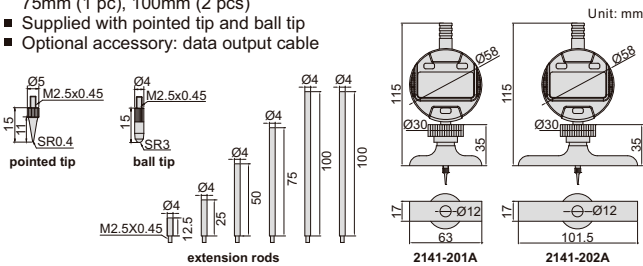
DATA OUTPUT



- Accuracy: ±20µm
- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery
- Automatic power off
- Data output
- 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

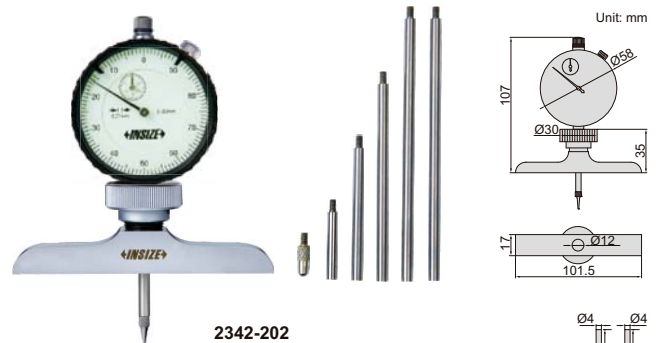


2141-202A



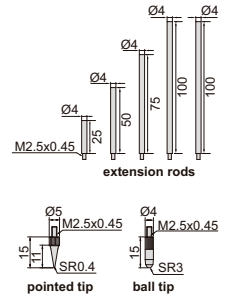
Code	Range	Digital indicator stroke	Digital indicator resolution	Base
2141-201A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	63x17mm
2141-202A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	101.5x17mm

## DIAL DEPTH GAGE



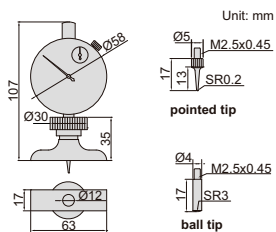
2342-202

- 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



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

## DIAL DEPTH GAGE

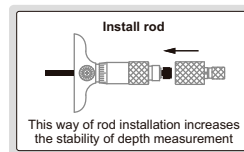


2341-101A

- 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

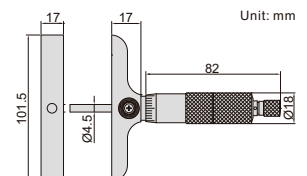
## DEPTH MICROMETERS



3241-100

- 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





## DIGITAL HEIGHT GAGES WITH DRIVING WHEEL

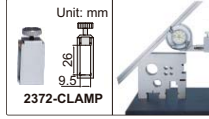
DATA OUTPUT



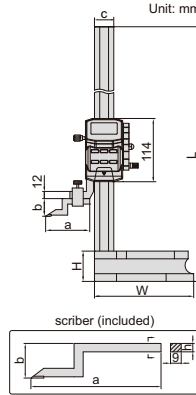
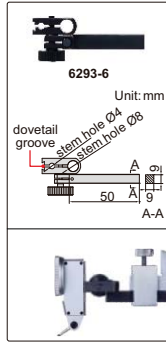
dust cover (included)



clamp for protractors (optional)



dial test indicator holder (optional)



- 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)

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



1156-300



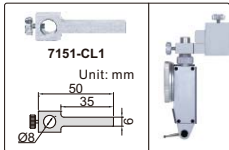
1156-1000

## DIGITAL HEIGHT GAGE (LIGHT DUTY)

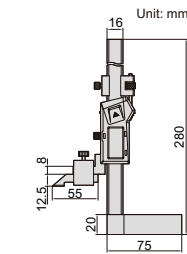
ATTENTION: CAN NOT USE CLAMP FOR PROTRACTORS (CODE 2372-CLAMP)

DATA OUTPUT

dial test indicator holder (optional)



1154-150



- 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)

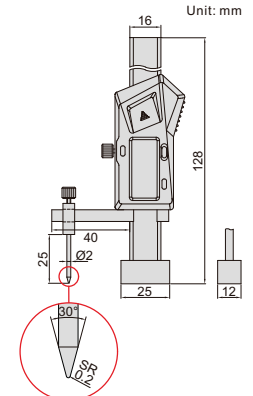
Code	Range	Resolution	Accuracy
1154-150	0-150mm/0-6"	0.01mm/0.0005"	±0.03mm

## MINI DIGITAL HEIGHT GAGE

DATA OUTPUT

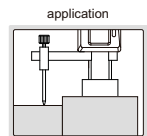


1146-20A



- 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

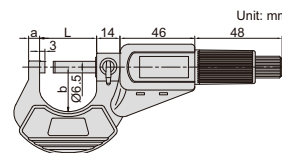


## DIGITAL OUTSIDE MICROMETERS

INSPECTION CERTIFICATE TRACEABLE TO DKD



3109-25A



ATTENTION: NO DATA OUTPUT

- 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")



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)

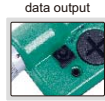


**IP65**  
WATERPROOF

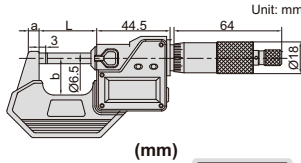
**DATA**  
OUTPUT



3101-25A



- 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



(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



spherical anvil (included)

measure tube wall thickness

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

## DIGITAL OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)

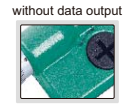


**ATTENTION: NO**  
**DATA OUTPUT**

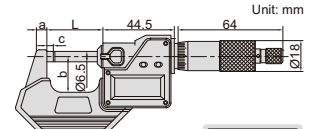
**IP65**  
WATERPROOF



3108-25A



- 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")



(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



spherical anvil (included)

measure tube wall thickness

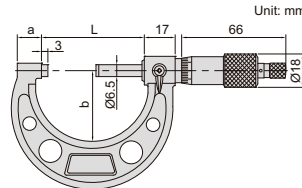
\* Supplied with manufacturer inspection certificate traceable to DKD Germany  
- Sizes available up to 200mm

## 1µm GRADUATION OUTSIDE MICROMETERS

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



3210-25A



Unit: 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

## OUTSIDE MICROMETERS

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

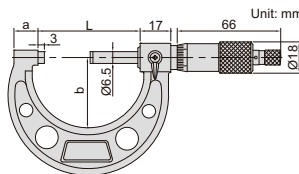
Code	Range	Accuracy	L	a	b
3203-25A*	0-25mm	±2µm	32	9	28
3203-50A*	25-50mm	±2µm	57	14	38
3203-75A*	50-75mm	±2µm	82	15	49
3203-100A*	75-100mm	±3µm	107	15	60
3203-125A	100-125mm	±3µm	133	16.5	73
3203-150A	125-150mm	±3µm	158	16.5	85
3203-175A	150-175mm	±4µm	183	19.4	104
3203-200A	175-200mm	±4µm	209	19.4	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

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



3203-50A

3203-25A



Unit: mm



3203-1004A



3203-3006A

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

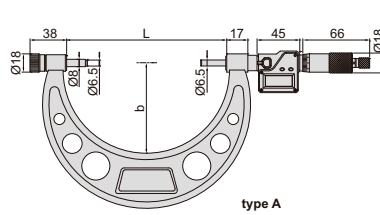
## DIGITAL OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

IP65  
WATERPROOF

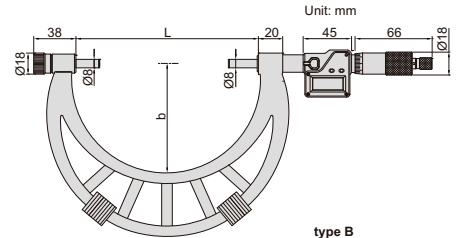
DATA  
OUTPUT



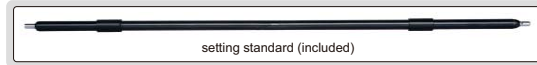
3506-400A



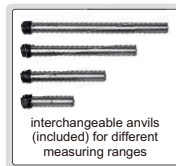
type A



type B



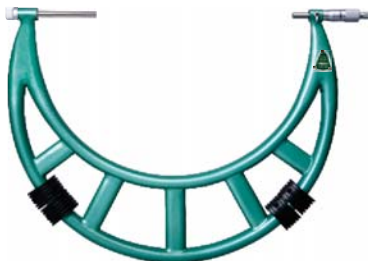
- Resolution 0.001mm/0.0001"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable



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

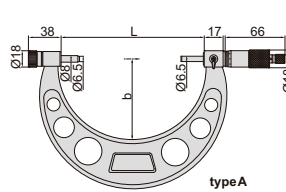
## OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS



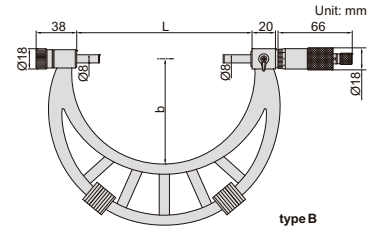
3206-400



3206-150A



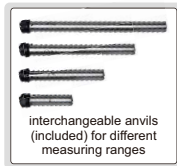
type A



type B



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



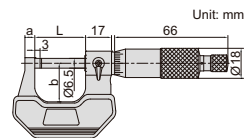
Code	Range	Type	Accuracy	L	b	Setting standard (included)
3206-150A	0-150mm	A	6µm	158	82	25, 50, 75, 100, 125
3206-200A	100-200mm	A	7µm	208	114	100, 125, 150, 175
3206-300A	150-300mm	A	9µm	308	165	150, 175, 200, 225, 250, 275
3206-301A	200-300mm	A	9µm	308	165	200, 225, 250, 275
3206-400	300-400mm	B	11µm	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



3202-25A



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

### 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

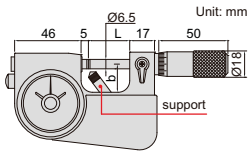
### Set

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

INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

## INDICATING MICROMETERS



3332-25

- Meet DIN863-3
- Dial indicator: range  $\pm 0.04\text{mm}$ , graduation  $0.001\text{mm}$ , accuracy  $0.001\text{mm}$
- 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	$4\mu\text{m}$	$0.002\text{mm}$	28.5	19
3332-50	25-50mm	$4\mu\text{m}$	$0.002\text{mm}$	53.5	30

Sizes available up to 100mm

## DIGITAL CRIMP HEIGHT MICROMETER

RELATIVE PRODUCT: DIGITAL CRIMP HEIGHT CALIPER (CODE 1165-150A)

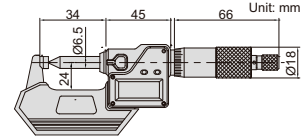


3566-25BA

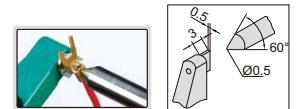
IP65 WATERPROOF

DATA OUTPUT

- Measure the height of crimp contact
- Resolution  $0.001\text{mm}/0.00005"$
- 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



Code	Range	Accuracy
3566-25BA	0-25mm/0-1"	$\pm 4\mu\text{m}$



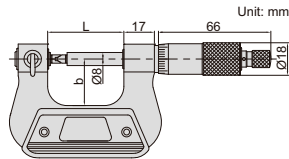
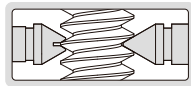
## SCREW THREAD MICROMETERS

NON-ROTATING SPINDLE

measuring tips are not included



3281-25A

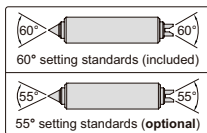


- Measure pitch diameter of screw threads
- Graduation  $0.01\text{mm}$
- Non-rotating spindle
- Ratchet stop
- Supplied with  $60^\circ$  setting standards
- Optional accessory:  $55^\circ$  setting standards, measuring tips (code 7381)

accuracy of micrometers with tips (mm)

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

(mm)



Code	Range	L	b	$55^\circ$ 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

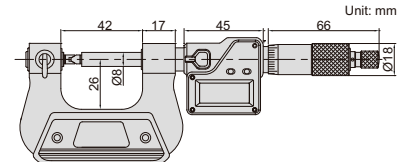
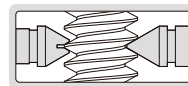
NON-ROTATING SPINDLE

measuring tips are not included

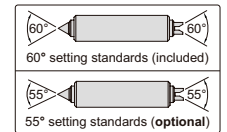


3581-25A

DATA OUTPUT



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



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

Sizes available up to 100mm

accuracy of micrometers with tips

Pitch	Range
0.4-0.5	$\pm 0.01\text{mm}$
0.6-0.8	$\pm 0.01\text{mm}$
1-1.25	$\pm 0.012\text{mm}$
1.5-2.0	$\pm 0.014\text{mm}$
2.5-3.5	$\pm 0.016\text{mm}$

## MEASURING TIPS FOR SCREW THREAD MICROMETERS



7381-T13

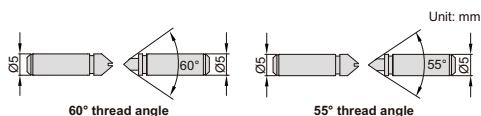
- Supplied in pairs
- Suitable for 3281, 3581 series micrometers

### Whitworth thread ( $55^\circ$ 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 ( $60^\circ$ 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

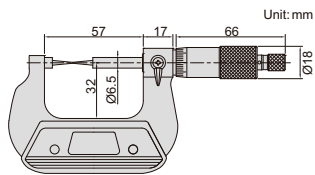


### POINT MICROMETER



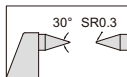
**3230-25A**

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



Code	Range	Graduation	Accuracy
3230-25A	0-25mm	0.01mm	4µm

Sizes available up to 100mm



### DIGITAL POINT MICROMETERS

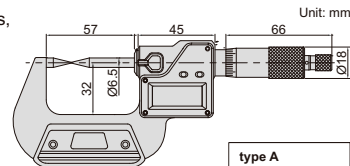
**IP65 WATERPROOF**

**DATA OUTPUT**



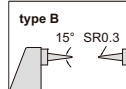
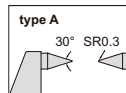
**3530-25A**

- 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



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



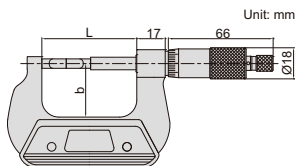
### BLADE MICROMETERS

**NON-ROTATING SPINDLE**



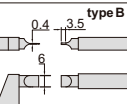
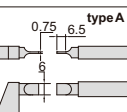
**3232-25A**

- 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)



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

Sizes available up to 175mm



### DIGITAL BLADE MICROMETERS

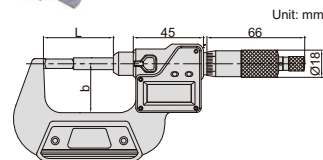
**NON-ROTATING SPINDLE**

**DATA OUTPUT**



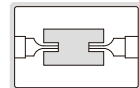
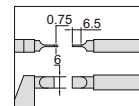
**3532-25A**

- 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



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

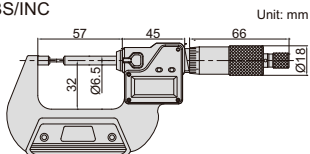
**IP65 WATERPROOF**

**DATA OUTPUT**



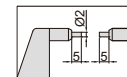
**3533-25A**

- 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



### DISK MICROMETERS

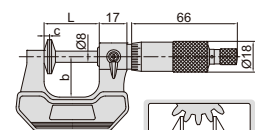


Unit: mm



**3282-25**

- Meet DIN863-3
- Measure root tangent length of gear
- Graduation: 0.01mm
- Ratchet stop
- Supplied with setting standards



Code	Range	Accuracy	Parallelism	L	b	c
3282-25	0-25mm	4µm	5µm	34	24	3.3
3282-50	25-50mm	4µm	5µm	59	32	3.3
3282-75	50-75mm	5µm	5µm	85	45	3.3
3282-100	75-100mm	5µm	5µm	110	57	3.3

## DIGITAL NON-ROTATING SPINDLE DISK MICROMETER



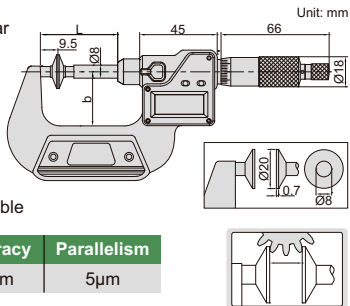
3594-25A

DATA  
OUTPUT

NON-ROTATING  
SPINDLE



- Measure root tangent length of gear
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, ABS/INC
- Data output, LR44 battery
- Automatic power off
- Ratchet stop
- Supplied with setting standards
- Optional accessory: data output cable



Code	Range	Accuracy	Parallelism
3594-25A	0-25mm/0-1"	±4µm	5µm

Sizes available up to 100mm

## DIGITAL SPHERICAL ANVIL TUBE MICROMETERS

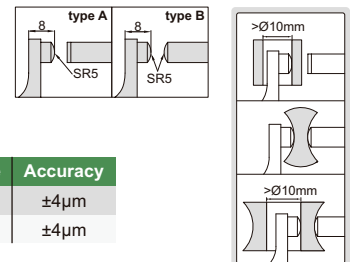
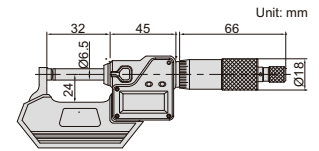


3560-25A

IP65  
WATERPROOF

DATA  
OUTPUT

- 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



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

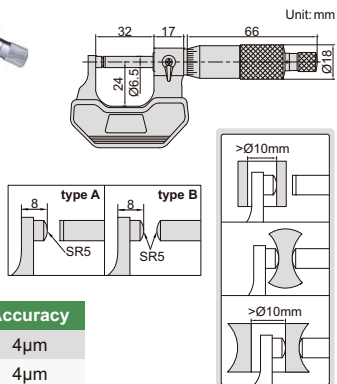
Sizes available up to 100mm

## SPHERICAL ANVIL TUBE MICROMETERS



3260-25A

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



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

Sizes available up to 100mm

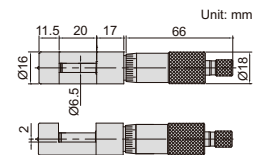
## WIRE MICROMETER



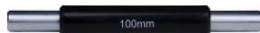
3285-10

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

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



## MICROMETER SETTING STANDARDS



6310-100



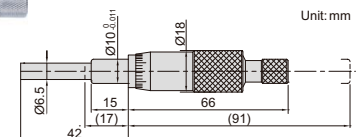
Code	Length	Accuracy	D (mm)
6310-25	25	±1.5µm	Ø7
6310-50	50	±2µm	Ø7
6310-75	75	±2.5µm	Ø7
6310-100	100	±3µm	Ø8

## MICROMETER HEAD



6381-25W

- Meet DIN863-2
- Ratchet stop



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

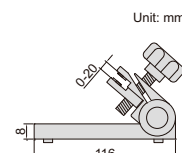
## MICROMETER STAND

- Suitable for micrometers up to 100mm

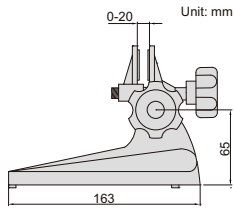
Code
6300



6300



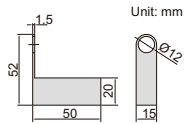
## MICROMETER STAND



6301

Code  
6301

- Suitable for micrometers up to 100mm



6301-1

- Suitable for inside micrometers

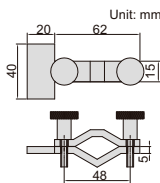
Code	Description	Applicable products
6301-1	clamp for inside micrometers	all sizes of 3220 series



6301-2

- Suitable for three points internal micrometers

Code	Description	Applicable products
6301-2	clamp for three points internal micrometers	up to 100mm of 3127 and 3227 series

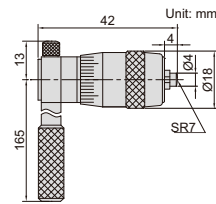


## TUBULAR INSIDE MICROMETERS



3221-50

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



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

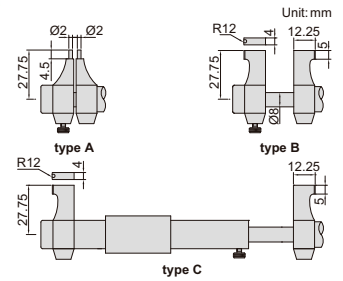
Sizes available up to 1000mm

## INSIDE MICROMETERS



3220-50

- Graduation: 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting ring (code 6312), micrometer stand and clamp (code 6301 and 6301-1)



Code	Range	Type	Setting ring	Accuracy
3220-30	5-30mm	A	5mm (included)	7 $\mu\text{m}$
3220-50	25-50mm	B	25mm (included)	8 $\mu\text{m}$
3220-75	50-75mm	B	50mm (optional)	9 $\mu\text{m}$
3220-100	75-100mm	C	75mm (optional)	10 $\mu\text{m}$

micrometer stand with clamp (optional)



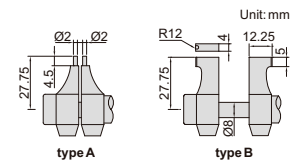
## DIGITAL INSIDE MICROMETERS

DATA OUTPUT



3520-30

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

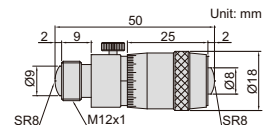


Code	Range	Type	Setting ring	Accuracy
3520-30	5-30mm/0.2-1.2"	A	5mm (included)	$\pm 5\mu\text{m}$
3520-50	25-50mm/1-2"	B	25mm (included)	$\pm 6\mu\text{m}$

Sizes available up to 100mm

## TUBULAR INSIDE MICROMETERS

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



3222-150

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

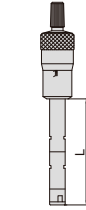


- Meet DIN863-4
- 6-12mm: graduation 0.001mm, 12-100mm: graduation 0.005mm
- Ratchet stop
- Optional accessory: setting rings (code 6312), micrometer stand and clamp (code 6301 and 6301-2)

micrometer stand with clamp (optional)



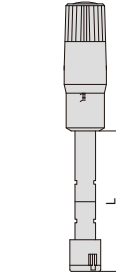
3227-8



Type A  
6-12mm, steel measuring points



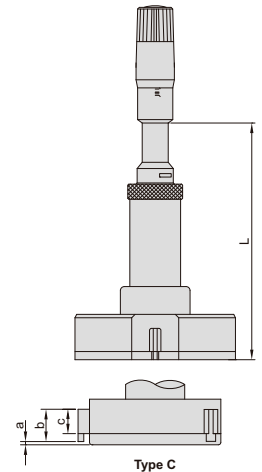
3227-16



Type B  
12-50mm, carbide measuring points



3227-125



Type C  
50-150mm, carbide measuring points

### Individual

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c	(mm)
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



3227-504

### 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

## WIDE RANGE THREE POINTS INTERNAL MICROMETERS

- 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)



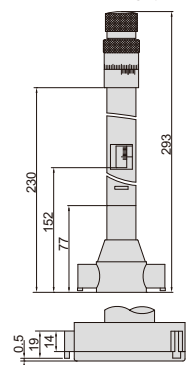
setting ring



3228-70



Unit: mm



\*Supplied with manufacturer inspection certificate

- Sizes available up to 300mm

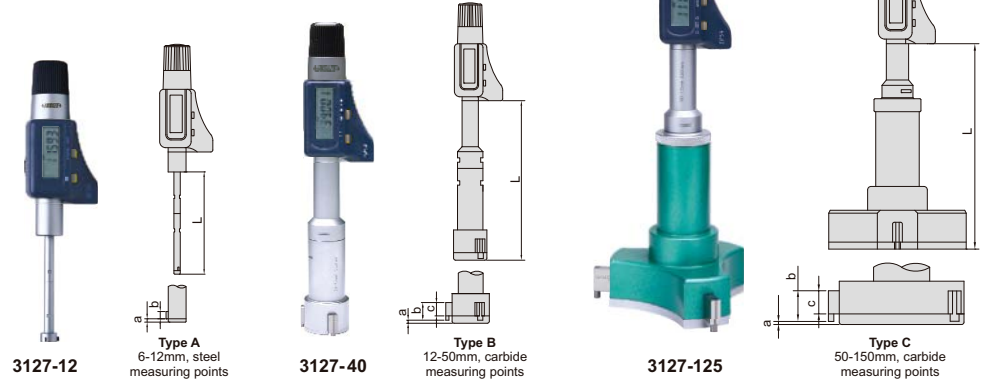
## DIGITAL THREE POINTS INTERNAL MICROMETERS



**IP54**  
WATERPROOF

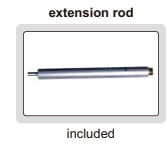
**DATA**  
OUTPUT

- 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
- Ratchet stop
- Optional accessory: data output cable, setting ring (code 6312), micrometer stand and clamp (code 6301 and 6301-2)



### Individual

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



3127-504

### Set

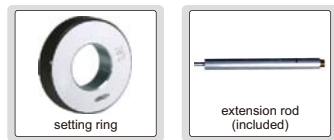
Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3127-123 *	6-12mm/0.24-0.47"	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
3127-202 *	12-20mm/0.47-0.79"	12-16mm, 16-20mm	Ø16mm	150mm
3127-504 *	20-50mm/0.79-1.97"	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3127-1004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

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

## DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETERS

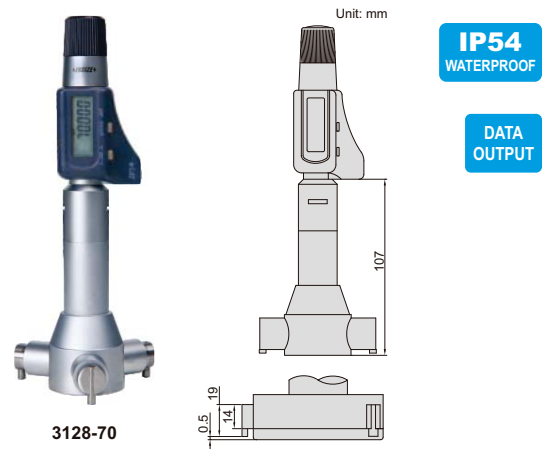


- Meet DIN863-4
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output, LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Setting rings are included (except 200-300mm)
- Optional accessory: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



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

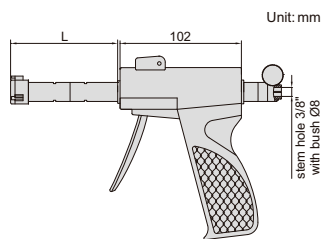


3128-70

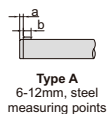


## PISTOL GRIP THREE POINTS BORE GAGES

INSPECTION  
CERTIFICATE



Unit: mm

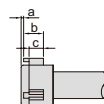


**Type A**  
6-12mm, steel  
measuring points



2124-8

digital indicator  
is not included

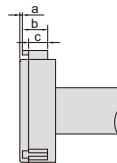


**Type B**  
12-50mm, carbide  
measuring points



2124-25

digital indicator  
is not included



**Type C**  
50-100mm, carbide  
measuring points



2124-125

digital indicator  
is not included

- Optional accessory: digital indicators (code 2103-10F, resolution 0.001mm/0.00005"), setting rings (code 6312)

### Individual

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

setting ring (included)



extension rod (included)



2124-S504

### 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

- \* 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)

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



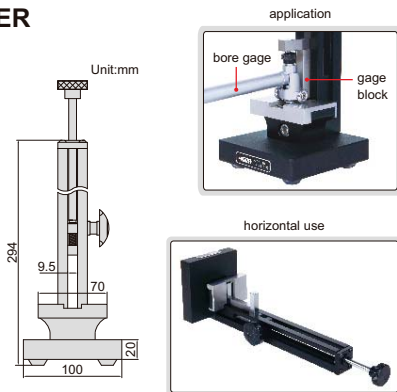
2824-S160

2824-S3



## BORE GAGE SETTER

7353-160



gage blocks for 7353-160



Gage block set for 7353-160

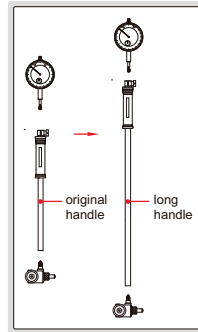
Blocks per set	Size (mm)	Step (mm)	Quantity (pcs)	Remark
33	1.005	0.01	1	grade 2 (ISO3650)
	1.01-1.09		9	
	1.1-1.9		9	
	1-9	1	9	
	10-30	10	3	
	50	1	1	
	100		1	

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

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

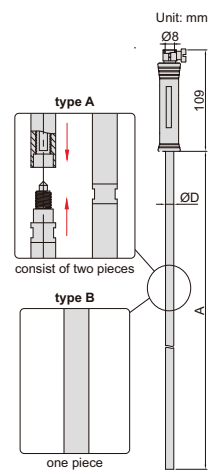
## LONG HANDLES

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



- To assist deep-hole measurement
- Can be used for bore gages 2322, 2122, 2824 and 2827

7351-EX11



Code	Applicable bore gages	A	ØD	Type
7351-EX11	35-60mm, 50-100mm,	475	13	B
7351-EX12		980	13	
7351-EX13	50-160mm, 100-160mm	1480	14.5	A
7351-EX14		1980	14.5	
7351-EX21	160-250mm, 250-450mm	480	14.5	B
7351-EX22		980	14.5	
7351-EX23		1480	14.5	A
7351-EX24		1980	14.5	

## SETTING RINGS

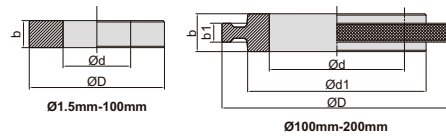
- For zero setting of inside micrometers, three points internal micrometers and bore gages
- Deviation (difference between the ordered size and the size marked on the setting ring when supplied): For example, the ordered size is Ø10.125mm, the size marked on the setting ring when supplied may be Ø10.127mm
- Meet DIN2250-1:2008



6312-20

INSPECTION CERTIFICATE

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



Diameter d **	b	D	Deviation	Roundness and cylindricity
Ø3-5	5	22	±2.0µm	0.4µm
Ø5-10	8	32	±2.0µm	0.4µm
Ø10-15	10	38	±3.0µm	0.5µm
Ø15-18	12	45	±3.0µm	0.5µm
Ø18-20	12	45	±3.0µm	0.6µm
Ø20-25	14	53	±3.0µm	0.6µm
Ø25-30	16	63	±4.0µm	0.6µm
Ø30-32	16	63	±4.0µm	0.7µm
Ø32-40	18	71	±4.0µm	0.7µm
Ø40-50	20	85	±4.0µm	0.7µm
Ø50-60	20	100	±4.0µm	0.8µm
Ø60-70	24	112	±4.0µm	0.8µm
Ø70-80	24	125	±4.0µm	0.8µm
Ø80-90	24	140	±4.0µm	1.0µm
Ø90-100	24	160	±4.0µm	1.0µm

Diameter d **	b	b1	d1	D	Deviation	Roundness and cylindricity
Ø100-110	28	14	132	170	±5.0µm	1.0µm
Ø110-120	28	16	140	180	±5.0µm	1.0µm
Ø120-130	28	16	150	190	±6.0µm	1.2µm
Ø130-140	28	18	160	200	±6.0µm	1.2µm
Ø140-150	28	18	170	212	±6.0µm	1.2µm
Ø150-160	28	20	180	224	±6.0µm	1.2µm
Ø160-170	32	20	190	236	±6.0µm	1.2µm
Ø170-180	32	20	200	250	±6.0µm	1.2µm
Ø180-190	32	22	212	265	±7.0µm	1.4µm
Ø190-200	32	22	224	280	±7.0µm	1.4µm

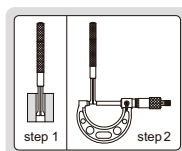
\*\* For example Ø3-5mm means Ø3mm < diameter d < Ø5mm

(mm)		(mm)		(mm)	
Code	Size	Code	Size	Code	Size
6312-3 *	Ø3	6312-24 *	Ø24	6312-48 *	Ø48
6312-4 *	Ø4	6312-25 *	Ø25	6312-49 *	Ø49
6312-5 *	Ø5	6312-27 *	Ø27	6312-50 *	Ø50
6312-6 *	Ø6	6312-28 *	Ø28	6312-55 *	Ø55
6312-7 *	Ø7	6312-29 *	Ø29	6312-60 *	Ø60
6312-8 *	Ø8	6312-30 *	Ø30	6312-62 *	Ø62
6312-9 *	Ø9	6312-31 *	Ø31	6312-65 *	Ø65
6312-10 *	Ø10	6312-32 *	Ø32	6312-70 *	Ø70
6312-11 *	Ø11	6312-33 *	Ø33	6312-75 *	Ø75
6312-12 *	Ø12	6312-34 *	Ø34	6312-80 *	Ø80
6312-13 *	Ø13	6312-35 *	Ø35	6312-85 *	Ø85
6312-14 *	Ø14	6312-36 *	Ø36	6312-87 *	Ø87
6312-15 *	Ø15	6312-37 *	Ø37	6312-90 *	Ø90
6312-16 *	Ø16	6312-39 *	Ø39	6312-95 *	Ø95
6312-17 *	Ø17	6312-40 *	Ø40	6312-100 *	Ø100
6312-18 *	Ø18	6312-42 *	Ø42	6312-125 *	Ø125
6312-20 *	Ø20	6312-43 *	Ø43	6312-150 *	Ø150
6312-21 *	Ø21	6312-44 *	Ø44	6312-175 *	Ø175
6312-22 *	Ø22	6312-45 *	Ø45	6312-200 *	Ø200
6312-23 *	Ø23	6312-47 *	Ø47		

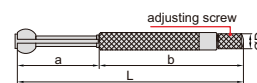
\* Supplied with manufacturer inspection certificate

## SMALL HOLE GAGE SET

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



4208-1

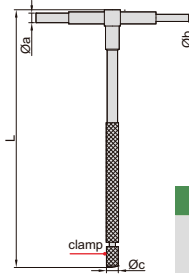
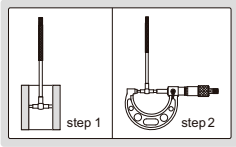


Range	L	a	b	ØD
3-5mm	76	24	52	5
5-7.5mm	79	27	52	5
7.5-10mm	88	30	58	6
10-13mm	91	34	58	6

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

### TELESCOPING GAGE SET

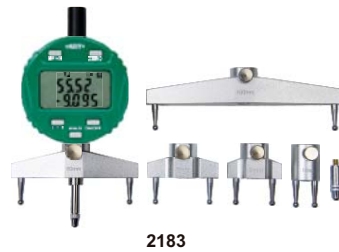
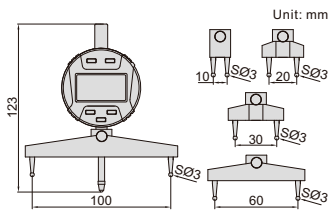
- 6 gages per set
- For quick measurement of inside diameter of holes and width of slots
- Satin chrome finish



Range	L	$\varnothing a$	$\varnothing b$	$\varnothing c$
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

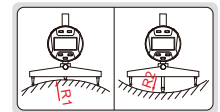
### DIGITAL RADIUS GAGE



2183

**ATTENTION: NO DATA OUTPUT**

- Resolution: 0.005mm/0.0005"
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Measure radius of internal or external arcs
- Display can be rotated by 320°
- Supplied with 5 jaws for different sizes of arc
- Battery CR2032, automatic power off



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"	$\pm 0.01R^*$

\*R is the radius to be measured

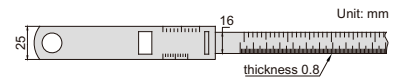
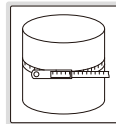
### CIRCUMFERENCE TAPES

**ATTENTION: BASIC MODEL**

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



7114-950

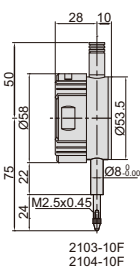


Code	Circumference range	Diameter range	Accuracy	
			Circumference	Diameter
7114-950	150-950mm	$\varnothing 50-300$ mm	$\pm 1.5$ mm	$\pm 0.5$ mm
7114-2200	940-2200mm	$\varnothing 300-700$ mm	$\pm 1.5$ mm	$\pm 0.5$ mm
7114-3460	2190-3460mm	$\varnothing 700-1100$ mm	$\pm 1.5$ mm	$\pm 0.5$ mm

### DIGITAL INDICATORS (ADVANCED MODEL)



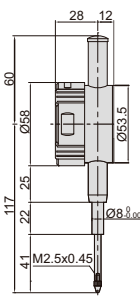
**DATA OUTPUT**



2103-10F  
2104-10F



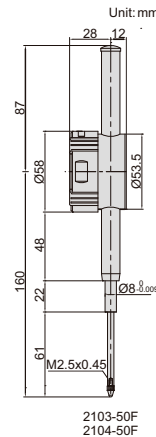
2103-10F



2103-25F  
2104-25F



2104-25F

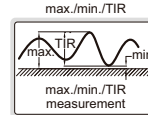


2103-50F  
2104-50F



2103-50F

- Reading in digital and analog
- Display can be rotated by 320°
- 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



Resolution 0.001mm/0.0005"

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

Resolution 0.01mm/0.0005"

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

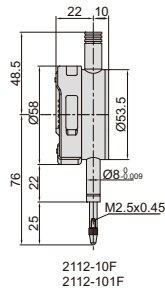
\*Supplied with manufacturer inspection certificate traceable to NIST USA

## DIGITAL INDICATORS (STANDARD MODEL)

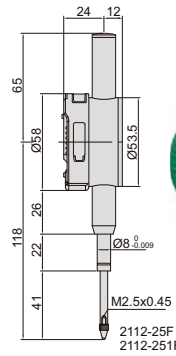
**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**DATA OUTPUT**

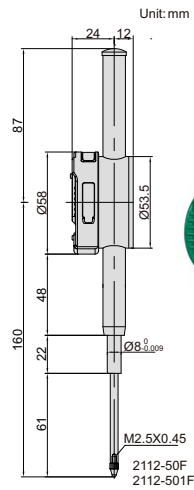
spindle lift knob is included



2112-101F



2112-251F



2112-501F

- Button function: on/off, inch/mm, zero
- 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
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

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

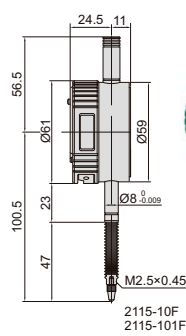
\*Supplied with manufacturer inspection certificate traceable to NIST USA

## WATERPROOF DIGITAL INDICATORS

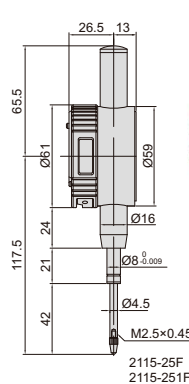
**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**DATA OUTPUT WATERPROOF**

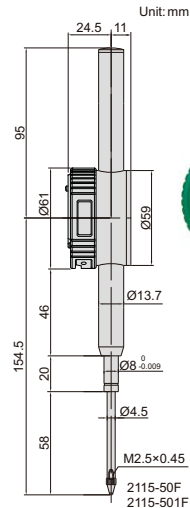
spindle lift knob is included  
(except 2115-101F, 2115-10F)



2115-10F



2115-25F



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"

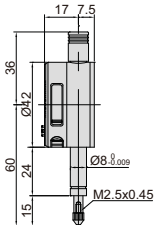
Code	Range	Dust/waterproof	Accuracy	Hysteresis	Remark
2115-10F*	12.7mm/0.5"	IP65	20µm	10µm	flat back
2115-25F*	25.4mm/1"	IP54	20µm	10µm	flat back
2115-50F*	50.8mm/2"	IP54	30µm	10µm	flat back

\*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

## COMPACT DIGITAL INDICATOR

Unit: mm



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
  - O/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

**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**DATA OUTPUT**

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

### NO AUTO POWER OFF DIGITAL INDICATORS



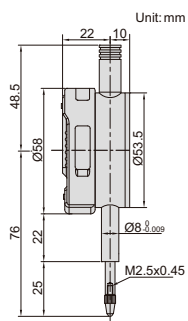
DATA OUTPUT

- Range: 12.7mm/0.5"
- 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



2113-10F

ONE BATTERY FOR 4000 WORKING HOURS



Unit: mm



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

\*Supplied with manufacturer inspection certificate traceable to NIST USA

### DIGITAL INDICATOR FOR BORE GAGES

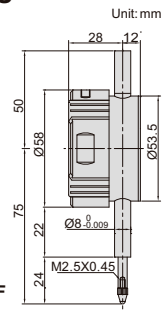


DATA OUTPUT

- Specially designed for bore gages
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after inputting the size of setting ring
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: minimum value tracking, calibration, data preset, 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



2108-10F



Unit: mm



Code	Range	Resolution	Accuracy	Hysteresis
2108-10F*	12.7mm/0.5"	0.002mm/0.0001"	20µm	10µm

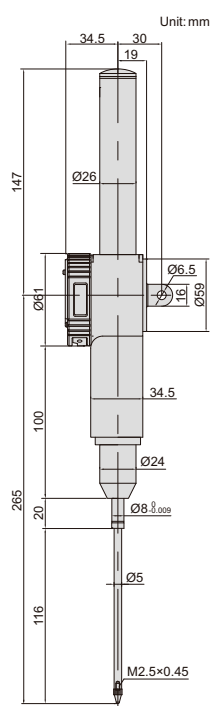
\*Supplied with manufacturer inspection certificate traceable to NIST USA

### LARGE STROKE DIGITAL INDICATORS

DATA OUTPUT



2117-100



Unit: mm

- 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"

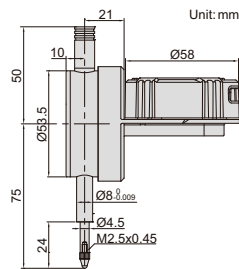
Code	Range	Accuracy	Hysteresis	Remark
2117-1001	100mm/4"	9µm	3µm	lug back

### BACK PLUNGER TYPE DIGITAL INDICATOR

- Display can rotate 320°, 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



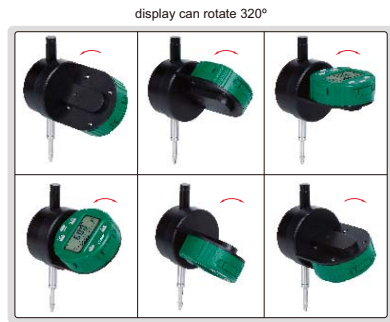
2118-10



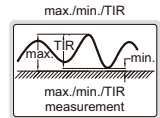
Unit: mm



DATA OUTPUT



display can rotate 320°



display direction is changeable

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

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

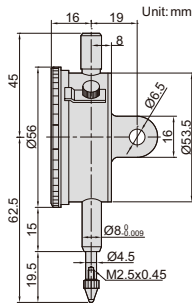
## PRECISION DIAL INDICATORS

**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**JEWELLED BEARING**



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

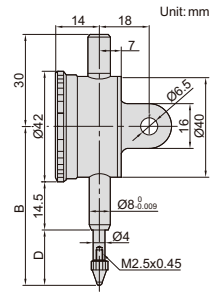
## COMPACT DIAL INDICATORS

**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**JEWELLED BEARING**



2311-5



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

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

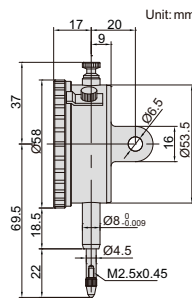
\*Supplied with manufacturer inspection certificate traceable to NIST USA

## DIAL INDICATORS (PROMOTION MODEL)

**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST



2301-10



- 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



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

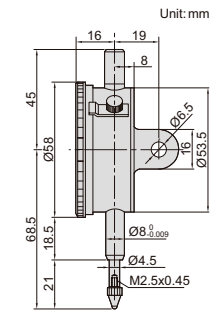
## DIAL INDICATORS (STANDARD MODEL)

**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**JEWELLED BEARING**



2308-10A



- 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

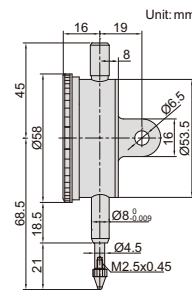
**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**JEWELLED BEARING**

**SHOCK PROOF**



2314-10A



- 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	20µm	3µm	1mm	flat back
2314-10A*	10mm	20µm	3µm	1mm	lug back

\*Supplied with manufacturer inspection certificate traceable to NIST USA

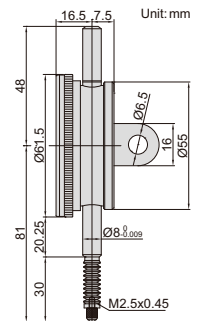
## WATERPROOF DIAL INDICATORS

**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**IP54 WATERPROOF**



2324-10A



- Hysteresis: 3µm
- Dial reading: 0-100
- Meet DIN878
- IP54 dust/waterproof
- With limit pointers
- Optional accessory: back, contact points

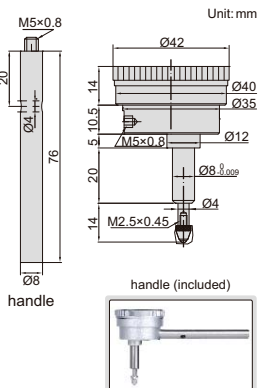
Code	Range	Graduation	Accuracy	Range/rev	Remark
2324-10FA*	10mm	0.01mm	17µm	1mm	flat back
2324-10A*	10mm	0.01mm	17µm	1mm	lug back

\*Supplied with manufacturer inspection certificate traceable to NIST USA

### BACK PLUNGER TYPE DIAL INDICATOR



2357-5



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

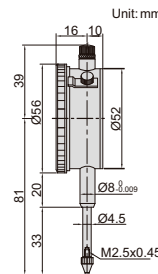
Code	Range	Graduation	Accuracy	Hysteresis	Range/rev
2357-5*	5mm	0.01mm	15µm	5µm	1mm

\*Supplied with manufacturer inspection certificate traceable to NIST USA

### DIAL INDICATOR (PROMOTION MODEL)



2302-25F



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

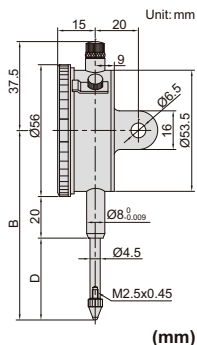
Code	Range	Accuracy	Hysteresis	Range/rev	Remark
2302-25F*	25mm	35µm	7µm	1mm	flat back

\*Supplied with manufacturer inspection certificate traceable to NIST USA

### DIAL INDICATORS (LONG STROKE)



2310-30A



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

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

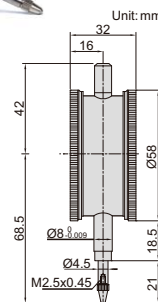
### DOUBLE FACE DIAL INDICATOR



front

back

2328-10



- 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)



2309-50

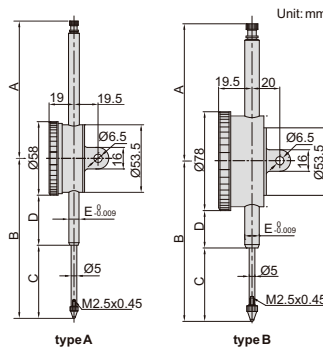
- Range/rev: 1mm
- Dial reading: 0-100
- Shockproof
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: backs, contact points



back of type B



stem clamp Ø10mm of 2309-100D



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

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

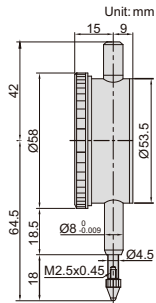
**INSPECTION CERTIFICATE**  
TRACEABLE TO NIST

**SHOCK PROOF**

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



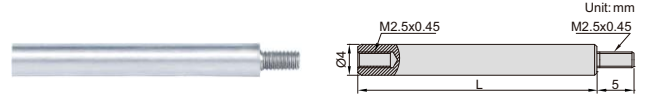
2316-05F



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

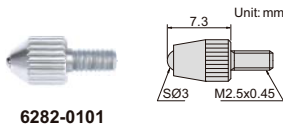
## EXTENSION RODS



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			

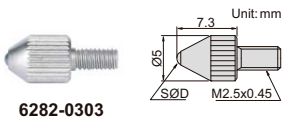
## CONTACT POINTS



6282-0101

### BALL POINT

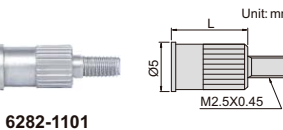
Code	Material of measuring face	L (mm)
6282-0101	carbide	7.3
6282-0103	ceramic	7.3
6282-0104	carbide	8.3



6282-0303

### BALL POINT

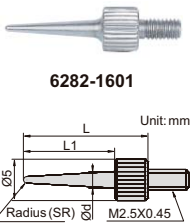
Code	Material of measuring face	SØD
6282-0301	steel	1mm
6282-0302	carbide	1.5mm
6282-0303	carbide	1.8mm
6282-0304	carbide	2.5mm
6282-0305	carbide	4mm



6282-1101

### FLAT POINT

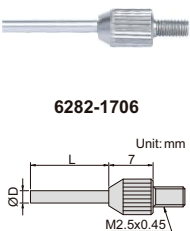
Code	Material of measuring face	L
6282-1101	steel	8mm



6282-1601

### NEEDLE POINT

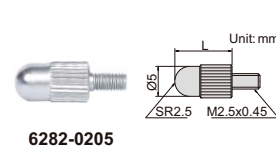
Code	Material of measuring face	L1	L	SR	Ød (mm)
6282-1601	steel	11	15	0.4	2
6282-1602	steel	13	17	0.2	2
6282-1603	steel	21	25	0.4	3
6282-1604	steel	31	35	0.4	3



6282-1706

### NEEDLE POINT

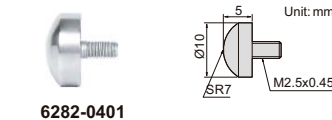
Code	Material of measuring face	ØD	L
6282-1705	carbide	1mm	8mm
6282-1706	carbide	1mm	10mm
6282-1707	carbide	1mm	20mm
6282-1708	carbide	1mm	40mm
6282-1712	carbide	1.5mm	20mm
6282-1713	carbide	1.5mm	40mm
6282-1714	carbide	2mm	8mm
6282-1715	carbide	2mm	18mm
6282-1716	carbide	2mm	28mm
6282-1717	carbide	2mm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



6282-0205

### SHELL TYPE POINT

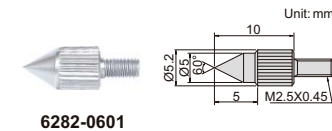
Code	Material of measuring face	L
6282-0205	steel	15mm
6282-0210	steel	30mm



6282-0401

### SPHERICAL POINT

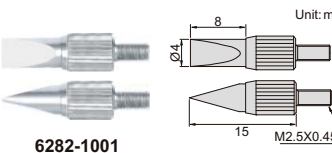
Code	Material of measuring face
6282-0401	steel



6282-0601

### CONICAL POINT

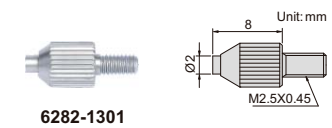
Code	Material of measuring face
6282-0601	steel



6282-1001

### KNIFE EDGE POINT

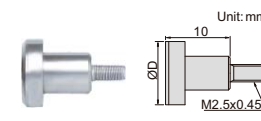
Code	Material of measuring face
6282-1001	steel



6282-1301

### FLAT POINT

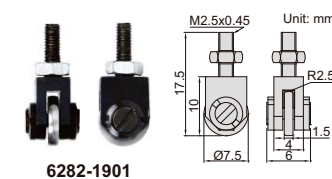
Code	Material of measuring face
6282-1301	carbide



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

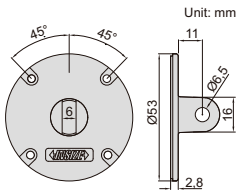
### ROLLER POINT

Code	Material of measuring face
6282-1901	steel

**LUG BACKS**



7330-L2



7330-L2 and 7330-L10

Code	For digital/dial indicators
7330-L1	2311
7330-L2	2301
	2302
	2308
	2309 (except 2309-30, 2309-30F)
	2313
	2314
7330-L5	2103
	2104
	2108
	2112
	2113
	2115
2118	
7330-L10	2310

**SPINDLE LIFT KNOB**



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

Code
7332

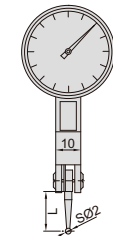
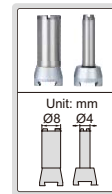
7332

**DIAL TEST INDICATORS**



2380-08

clamps (included)



Unit: mm

- 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

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

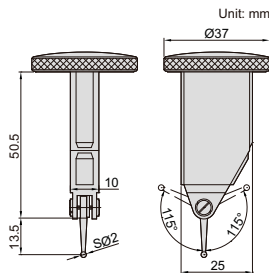
Graduation: 0.002mm (mm)						
Code	Range	Accuracy	Hysteresis	Dial reading	A	L
2380-02*	0.2mm	6µm	2µm	0-100-0	Ø30	12.5
2381-02*	0.2mm	6µm	2µm	0-100-0	Ø37	12.5

\*Supplied with manufacturer inspection certificate traceable to NIST USA

**BACK PLUNGER TYPE DIAL TEST INDICATOR**

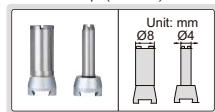


2398-08



Unit: mm

clamps (included)



- 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
2398-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

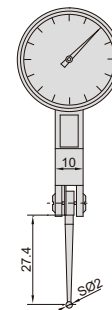
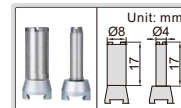
\*Supplied with manufacturer inspection certificate traceable to NIST USA

**LONG STYLI DIAL TEST INDICATOR**



2383-08A

clamps (included)



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

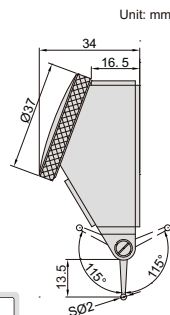
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2383-08A*	0.8mm	0.01mm	13µm	3µm	0-40-0

\*Supplied with manufacturer inspection certificate traceable to NIST USA

**TILTED FACE TYPE DIAL TEST INDICATOR**

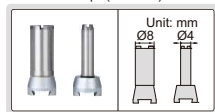


2399-08



Unit: mm

clamps (included)



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

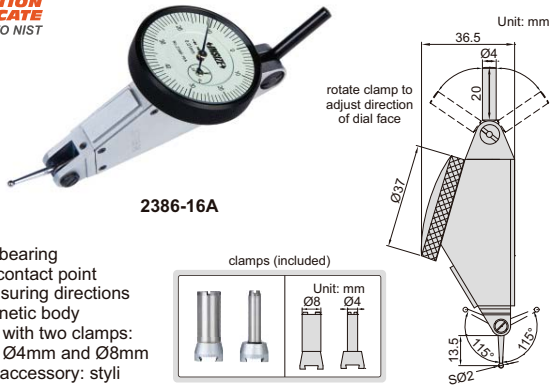
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2399-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

\*Supplied with manufacturer inspection certificate traceable to NIST USA

## LARGE RANGE DIAL TEST INDICATOR

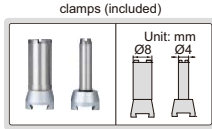


**JEWELLED BEARING**



2386-16A

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



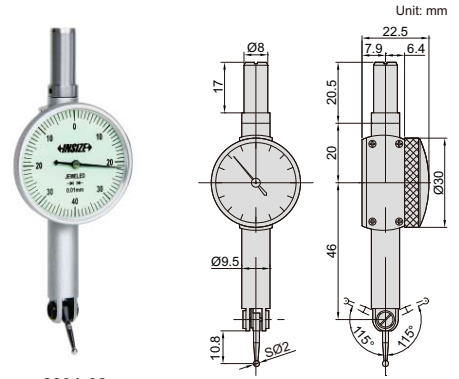
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2386-16A*	1.6mm	0.01mm	25µm	8µm	0-40-0

\*Supplied with manufacturer inspection certificate traceable to NIST USA

## ROUND BODY DIAL TEST INDICATOR

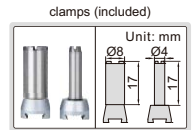


**JEWELLED BEARING**



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



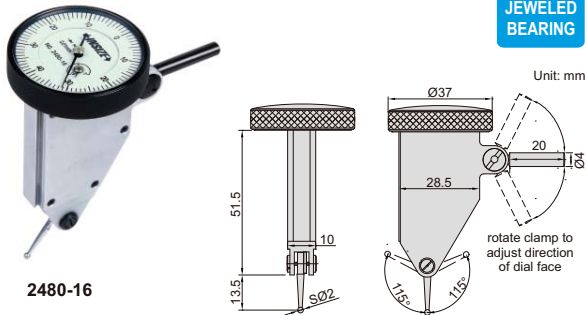
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2391-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

\*Supplied with manufacturer inspection certificate traceable to NIST USA

## LARGE RANGE BACK PLUNGER TYPE DIAL TEST INDICATOR

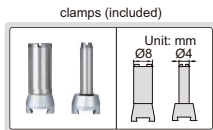


**JEWELLED BEARING**



2480-16

- 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

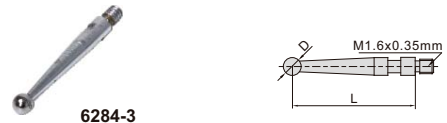
\*Supplied with manufacturer inspection certificate traceable to NIST USA

## CLAMPS FOR DIAL TEST INDICATORS

Code	ØD
6298-1	Ø4mm
6298-2	Ø8mm



## STYLI FOR DIAL TEST INDICATORS



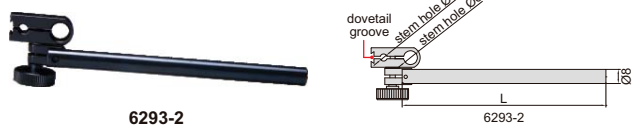
6284-3

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 HOLDERS



6293-1



6293-2

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



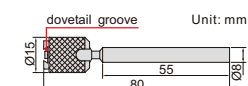
## DIAL TEST INDICATOR UNIVERSAL HOLDER



6297-1

- Set the indicators at the desired attitude to the workpiece

Code
6297-1



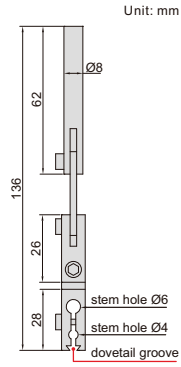
**DIAL TEST INDICATOR HOLDER**



6296-1

- Supplied with hex key

**Code**  
6296-1



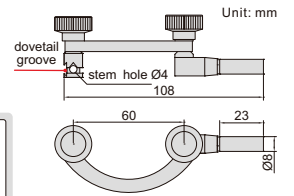
**DIAL TEST INDICATOR CENTERING HOLDER**



6291-1

- Center cylinders or holes on machine tools

**Code**  
6291-1



**DIAL GAGE TESTER  
CODE 2396-25A**

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

**Micrometer head**

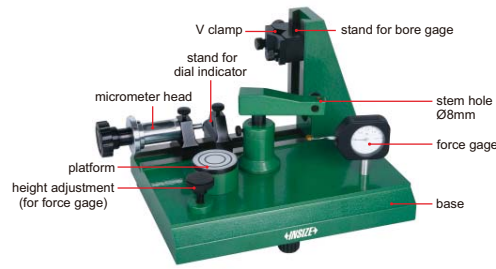
Range	Sampling interval	Accuracy	Hysteresis
0-25mm	0.1mm	4µm (0-25mm), 3µm (0-10mm), 2µm (0-1mm)	1µm

**Force gage**

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

**Platform**

Diameter	Flatness	Roughness
50mm	1µm	0.05µm



2396-25A

**ATTENTION: NOT SUITABLE FOR GAGES WITH GRADUATION 0.001MM**



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



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



Inspect accuracy of test indicators



half round gage block  
code 2396-block (optional)



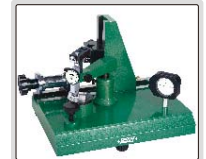
Test force of dial indicators



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)

**Half round gage block (optional)**

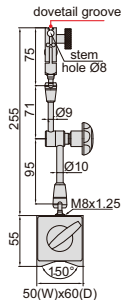
Code	Parallelism
2396-block	1µm

**UNIVERSAL MAGNETIC STANDS**

- For digital/dial indicators and dial test indicators



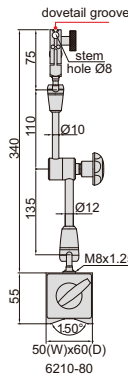
6210-81



6210-81



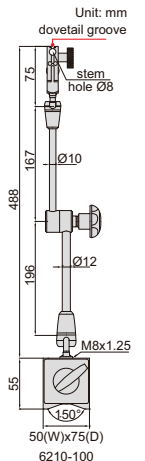
6210-80



6210-80



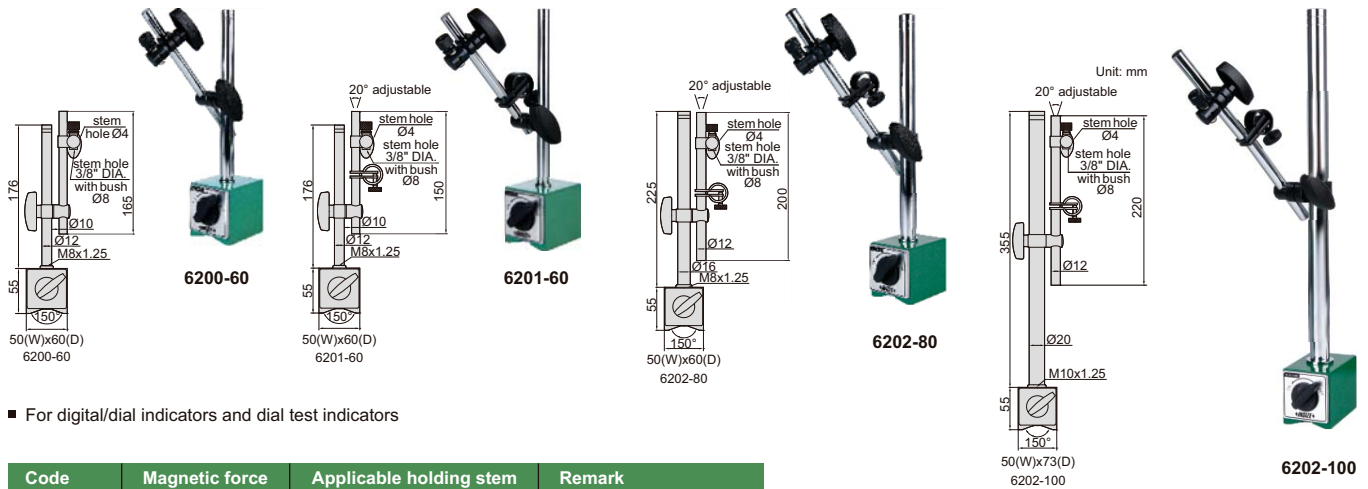
6210-100



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



■ 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 (LIGHT DUTY)

ATTENTION: LOW LOCKING FORCE

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



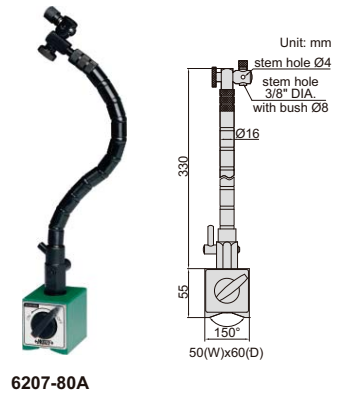
6208-80A

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

## FLEX ARM MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators

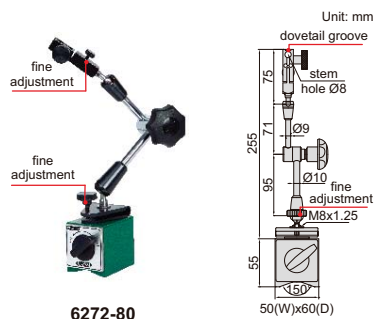


6207-80A

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

## MAGNETIC STAND WITH DOUBLE FINE ADJUSTMENT

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



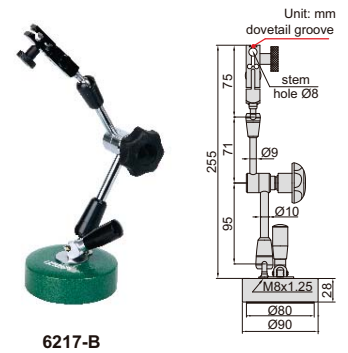
6272-80

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

## VACUUM STAND



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



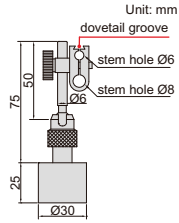
6217-B

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**

- For dial test indicators
- With dovetail groove



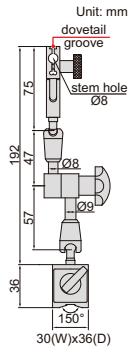
6211-10

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

### MINI MAGNETIC STAND

**ATTENTION: FOR DIAL TEST INDICATORS ONLY**

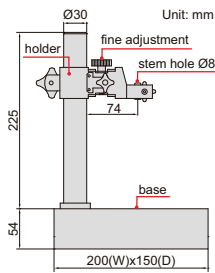
- For dial test indicators
- With fine adjustment and dovetail groove



6224-40

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

### GRANITE DIAL INDICATOR STAND



dust cover (included)

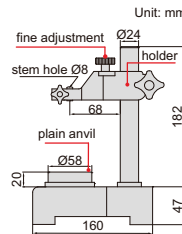


- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover

6866-150

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

### DIAL INDICATOR STAND



dust cover (included)

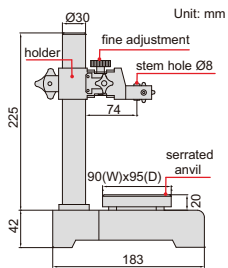


- Vertical travel of holder: 100mm
- Fine adjustment range: 2mm
- Applicable holding stem: Ø8mm
- Supplied with dust cover

6862-1002

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

### DIAL INDICATOR STAND



6863-150



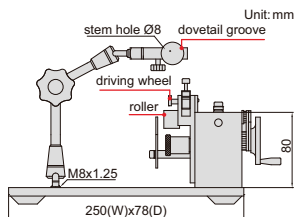
dust cover (included)



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

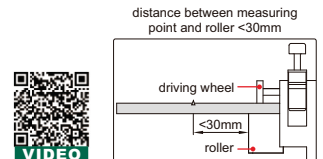
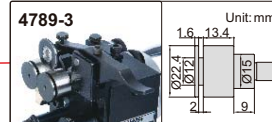
Code	Applicable holding stem	Anvil
6863-150	Ø8mm	serrated, flatness 1.5µm, hardness HRC60±2

### CONCENTRICITY GAGES

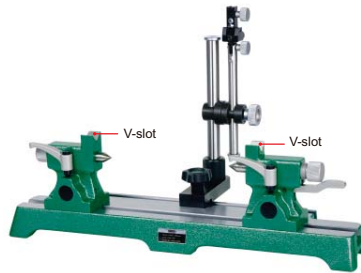
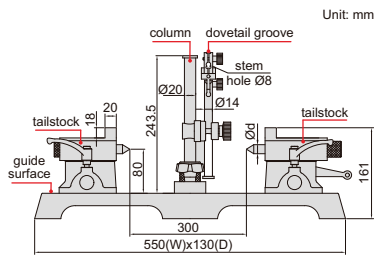


- Optional accessory: dial test indicator, mini magnetic stand (code 6224-40)

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



## BENCH CENTER (BASIC MODEL)



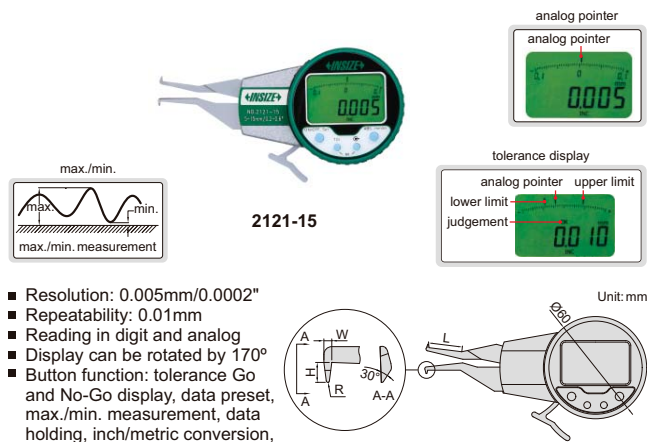
4782-300

- Runout accuracy: 2µm
- Center height: 80mm
- Distance between two centers: 300mm
- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder Ø4-Ø22mm

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

\*Parallelism of two centers to the guide surface

## DIGITAL INTERNAL CALIPER GAGES



2121-15

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

(mm)

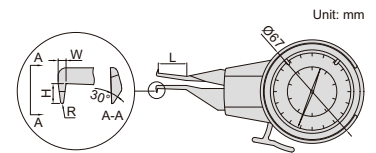
Code	Range	Accuracy	Repeatability	L	H	W	R
2121-15	5-15mm/0.2-0.6"	±0.03mm	0.01mm	20	2	1.5	R0.3
2121-25	5-25mm/0.2-1.0"	±0.03mm	0.01mm	35	1.5	1.0	R0.3
2121-31	10-30mm/0.4-1.2"	±0.03mm	0.01mm	55	5.5	2.5	R0.5
2121-41	20-40mm/0.8-1.6"	±0.03mm	0.01mm	80	6.0	3.0	R0.5

Sizes available up to 60mm

## INTERNAL DIAL CALIPER GAGES



2222-15



Unit: mm

(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

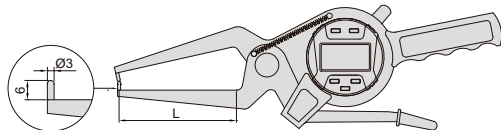
## DIGITAL EXTERNAL CALIPER GAGE

DATA OUTPUT



2132-20

Unit: mm



- Carbide measuring tips
- Reading in digit and analog
- Display can be rotated by 320°
- 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

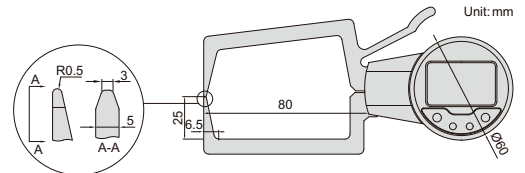
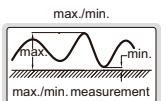
Code	Range	Resolution	Accuracy	L (mm)
2132-20	0-20mm/0-0.8"	0.01mm/0.0005"	±0.04mm	60

Sizes available up to 100mm

## DIGITAL EXTERNAL CALIPER GAGE



2131-21

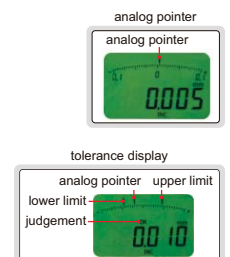


Unit: mm

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

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

Sizes available up to 60mm



**EXTERNAL DIAL CALIPER GAGE**

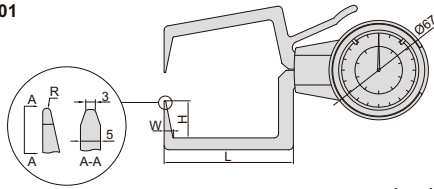


2333-201

Unit: mm



VIDEO



(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

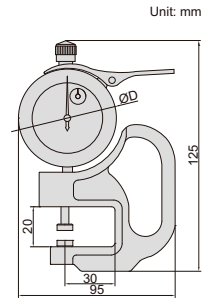
**THICKNESS GAGES**



2364-10

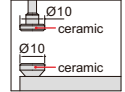


2364-1



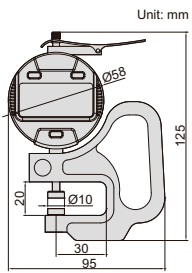
Unit: mm

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



**DIGITAL THICKNESS GAGES**

DATA OUTPUT



Unit: mm



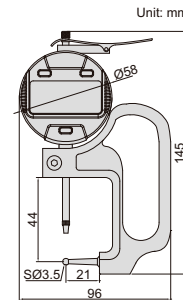
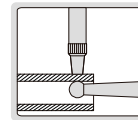
2871-101

- 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 TUBE THICKNESS GAGE**

DATA OUTPUT



Unit: mm



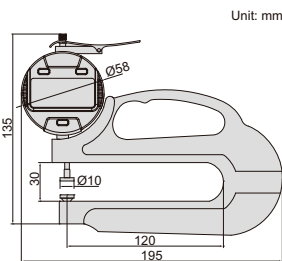
2876-10

- 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

**DIGITAL THICKNESS GAGE**

DATA OUTPUT



Unit: mm

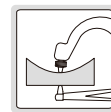


2872-10

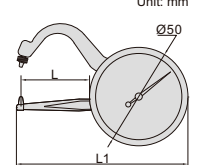
- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable

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

**THICKNESS GAGE**



2862-101

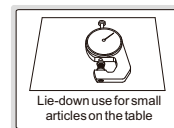


Unit: mm

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

**THICKNESS GAGE**

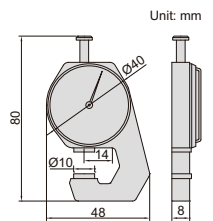
SUITABLE FOR JEWELLERY



Lie-down use for small articles on the table



2361-10



Unit: mm

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





## INDIVIDUAL STEEL GAGE BLOCKS

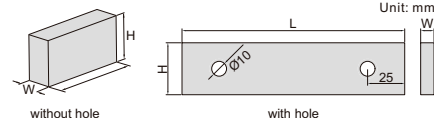
**CUSTOM SIZES**  
CAN SUPPLY ANY SIZES FROM 0.5-1000MM,  
SUCH AS 72.672MM

- Made of alloy steel
- Meet ISO3650
- These sizes are with holes: 125, 150, 175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000mm
- Supplied with manufacturer inspection certificate



4101-A70

4101-A200



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

**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

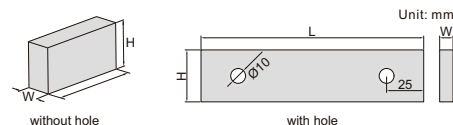
Sizes available up to 1000mm

## STEEL GAGE BLOCK SETS



4100-87

- Made of alloy steel
- Meet ISO3650
- With holes (L≥125mm)
- Supplied with manufacturer inspection certificate



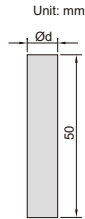
**Dimension:**

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

Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 1	Grade 2
122	1.0005		1	4100-1122	
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	1.6-1.9	0.1	4		
	0.5-24.5	0.5	49		
112	30-100	10	8	4100-1112	4100-2112
	25-75	50	2		
	1.0005		1		
	1.001-1.009	0.001	9		
103	1.01-1.49	0.01	49	4100-1113	4100-2103
	0.5-24.5	0.5	49		
	25-100	25	4		
	1.005		1		

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	0.001	9	4100-87	4100-187	4100-287
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19			
	10-100	10	10			
47	1.005		1	4100-47	4100-147	4100-247
	1.01-1.19	0.01	19			
	1.2-1.9	0.1	8			
	1-9	1	9			
	10-100	10	10			
32	1.005		1	4100-32	4100-132	4100-232
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-9	1	9			
	10-30	10	3			
	50		1			
8	125-175	25	3	4100-18		
	200-250	50	2			
	300-500	100	3			

## PIN GAGE SETS



- Meet DIN2267, grade 1
- Made of alloy steel
- Hardness HRC62-65
- Diameter accuracy:  $\pm 1\mu\text{m}$

4166-6D

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

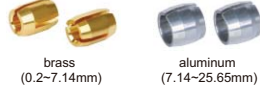
Code	Diameter Ød (mm)	Step	Pin gages per set
4166-411	1.0, 1.1, 1.2, ... 5.0	0.1mm	41
4166-511	5.0, 5.1, 5.2, ... 10.0	0.1mm	51
4166-512	10.0, 10.1, 10.2, ... 15.0	0.1mm	51

Code	Diameter Ød (mm)	Step	Pin gages per set
4166-0D	0.20, 0.21, 0.22, ... 0.50	0.01mm	31
4166-1	0.50, 0.51, 0.52, ... 1.00	0.01mm	51
4166-1D	1.00, 1.01, 1.02, ... 1.50	0.01mm	51
4166-2	1.50, 1.51, 1.52, ... 2.00	0.01mm	51
4166-2D	2.00, 2.01, 2.02, ... 2.50	0.01mm	51
4166-3	2.50, 2.51, 2.52, ... 3.00	0.01mm	51
4166-3D	3.00, 3.01, 3.02, ... 3.50	0.01mm	51
4166-4	3.50, 3.51, 3.52, ... 4.00	0.01mm	51
4166-4D	4.00, 4.01, 4.02, ... 4.50	0.01mm	51
4166-5	4.50, 4.51, 4.52, ... 5.00	0.01mm	51
4166-5D	5.00, 5.01, 5.02, ... 5.50	0.01mm	51
4166-6	5.50, 5.51, 5.52, ... 6.00	0.01mm	51
4166-6D	6.00, 6.01, 6.02, ... 6.50	0.01mm	51
4166-7	6.50, 6.51, 6.52, ... 7.00	0.01mm	51
4166-7D	7.00, 7.01, 7.02, ... 7.50	0.01mm	51
4166-8	7.50, 7.51, 7.52, ... 8.00	0.01mm	51
4166-8D	8.00, 8.01, 8.02, ... 8.50	0.01mm	51
4166-9	8.50, 8.51, 8.52, ... 9.00	0.01mm	51
4166-9D	9.00, 9.01, 9.02, ... 9.50	0.01mm	51
4166-10	9.50, 9.51, 9.52, ... 10.00	0.01mm	51
4166-10D	10.00, 10.01, 10.02, ... 10.50	0.01mm	51

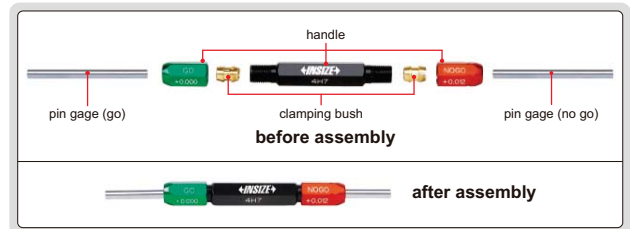
## PIN GAGE HANDLES



handle



brass (0.2-7.14mm)  
aluminum (7.14-25.65mm)  
clamping bush



- 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)

**PLAIN PLUG GAGES**

**CUSTOM-MADE**  
 OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9  
 OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm  
 OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm



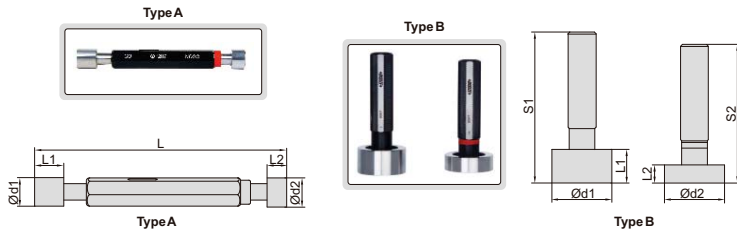
4124-12

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

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 RING GAGES**



**ATTENTION: BASIC MODEL**



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*		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*		M20x0.5		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*		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*		M11x0.75	4129-22R*	4129-22RN*	M22x1.5	4129-42T*	4129-42TN*	M42x2
4129-11P*	4129-11PN*	M11x1	4129-22T*		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

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

## METRIC FINE THREAD PLUG GAGES

INSPECTION  
CERTIFICATE

ATTENTION:  
BASIC MODEL



4139-20G

- Supplied with Go and No-Go end
- Class 6H
- Standard ISO1502

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 THREAD RING GAGES

INSPECTION  
CERTIFICATE

ATTENTION:  
BASIC MODEL

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

### Individual

Code (GO)	Code (NOGO)	Size (mm)	Code (GO)	Code (NOGO)	Size (mm)
4120-2*	4120-2N*	M2x0.4	4120-11*	4120-11N*	M11x1.5
4120-2D2*	4120-2D2N*	M2.2x0.45	4120-12*	4120-12N*	M12x1.75
4120-2D5*	4120-2D5N*	M2.5x0.45	4120-14*	4120-14N*	M14x2
4120-3*	4120-3N*	M3x0.5	4120-16*	4120-16N*	M16x2
4120-3D5*	4120-3D5N*	M3.5x0.6	4120-18*	4120-18N*	M18x2.5
4120-4*	4120-4N*	M4x0.7	4120-20*	4120-20N*	M20x2.5
4120-5*	4120-5N*	M5x0.8	4120-22*	4120-22N*	M22x2.5
4120-6*	4120-6N*	M6x1	4120-24*	4120-24N*	M24x3
4120-7*	4120-7N*	M7x1	4120-27*	4120-27N*	M27x3
4120-8*	4120-8N*	M8x1.25	4120-30*	4120-30N*	M30x3.5
4120-9*	4120-9N*	M9x1.25	4120-33*	4120-33N*	M33x3.5
4120-10*	4120-10N*	M10x1.5			



4120-16



4120-16N

### 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

## METRIC THREAD PLUG GAGES

INSPECTION  
CERTIFICATE

ATTENTION:  
BASIC MODEL



4130-10

- Supplied with Go and No-Go end
- Class 6H
- Standard ISO1502

### 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		

\*Supplied with manufacturer inspection certificate

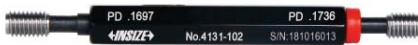
### Set

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)

## AMERICAN STANDARD THREAD PLUG GAGES

**INSPECTION  
CERTIFICATE**

**ATTENTION:  
BASIC MODEL**



4131-102

- Supplied with Go and No-Go end
- Class 2B
- Standard ANSI B1.2

Code	Size	Code	Size	Code	Size
4131-41*	4-40UNC	4131-5D1*	5/16-18UNC	4131-1A2*	1/2-20UNF
4131-61*	6-32UNC	4131-5D2*	5/16-24UNF	4131-9D2*	9/16-18UNF
4131-81*	8-32UNC	4131-3C1*	3/8-16UNC	4131-5C1*	5/8-11UNC
4131-102*	10-32UNF	4131-3C2*	3/8-24UNF	4131-5C2*	5/8-18UNF
4131-1B1*	1/4-20UNC	4131-7D2*	7/16-20UNF	4131-3B1*	3/4-10UNC
4131-1B2*	1/4-28UNF	4131-1A1*	1/2-13UNC	4131-3B2*	3/4-16UNF

\*Supplied with manufacturer inspection certificate

## AMERICAN STANDARD THREAD RING GAGES

**INSPECTION  
CERTIFICATE**

**ATTENTION:  
BASIC MODEL**

- Class 2A
- Standard ANSI B1.2



front

4121-1B1



back



front

4121-1B1N



back

Code (GO)	Code (NOGO)	Size	Code (GO)	Code (NOGO)	Size	Code (GO)	Code (NOGO)	Size
4121-41*	4121-41N*	4-40UNC	4121-5D1*	4121-5D1N*	5/16-18UNC	4121-1A2*	4121-1A2N*	1/2-20UNF
4121-61*	4121-61N*	6-32UNC	4121-5D2*	4121-5D2N*	5/16-24UNF	4121-9D2*	4121-9D2N*	9/16-18UNF
4121-81*	4121-81N*	8-32UNC	4121-3C1*	4121-3C1N*	3/8-16UNC	4121-5C1*	4121-5C1N*	5/8-11UNC
4121-102*	4121-102N*	10-32UNF	4121-3C2*	4121-3C2N*	3/8-24UNF	4121-5C2*	4121-5C2N*	5/8-18UNF
4121-1B1*	4121-1B1N*	1/4-20UNC	4121-7D2*	4121-7D2N*	7/16-20UNF	4121-3B1*	4121-3B1N*	3/4-10UNC
4121-1B2*	4121-1B2N*	1/4-28UNF	4121-1A1*	4121-1A1N*	1/2-13UNC	4121-3B2*	4121-3B2N*	3/4-16UNF

\*Supplied with manufacturer inspection certificate

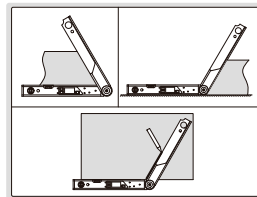
## WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

**AUTOMATIC  
BACKLIGHT**

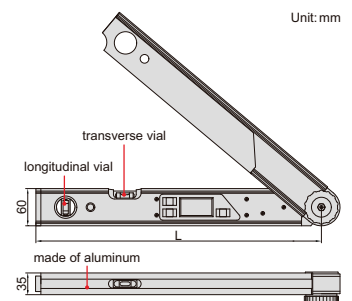
**ABSOLUTE  
LEVEL**

**IP54  
WATERPROOF**

- 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



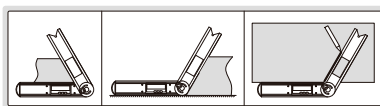
2174-225



Unit: mm

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

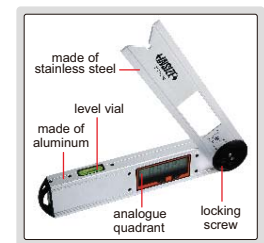
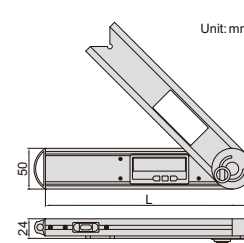
## DIGITAL PROTRACTOR



- 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

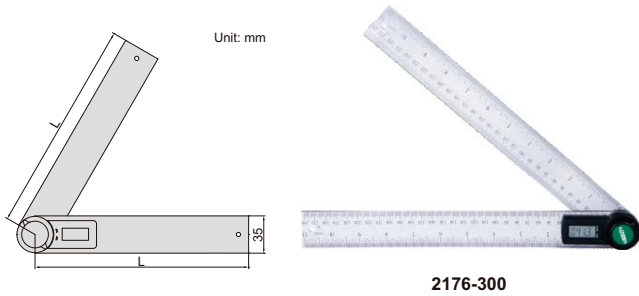


2171-250



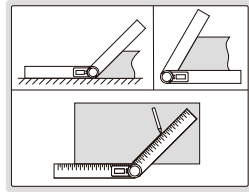
Code	Size (L)	Range	Resolution	Accuracy
2171-250	250mm	0-360°	0.05°	±0.15°

## 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

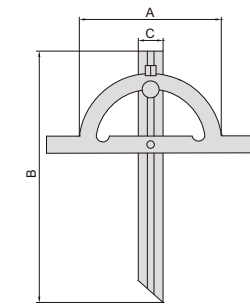
Code	Size (L)	Range	Accuracy
2176-200	200mm	0-360°	±0.3°
2176-300	300mm	0-360°	±0.3°



## PROTRACTORS

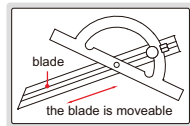


- Graduation: 1°
- Made of carbon steel
- Satin chrome plated
- With clamping screw
- The blade is moveable



(mm)

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

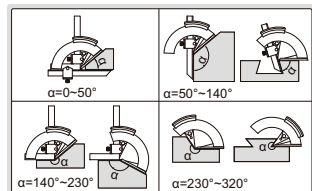
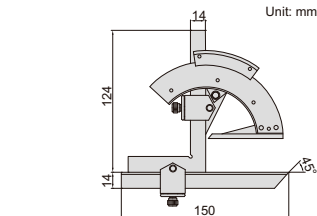


## PROTRACTOR

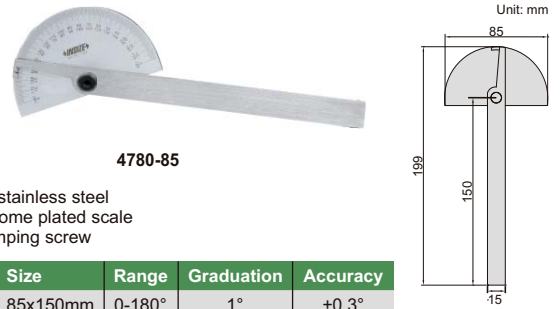


- Graduation: 2'
- Made of stainless steel
- Satin chrome plated scale

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



## PROTRACTOR



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

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

## PROTRACTORS

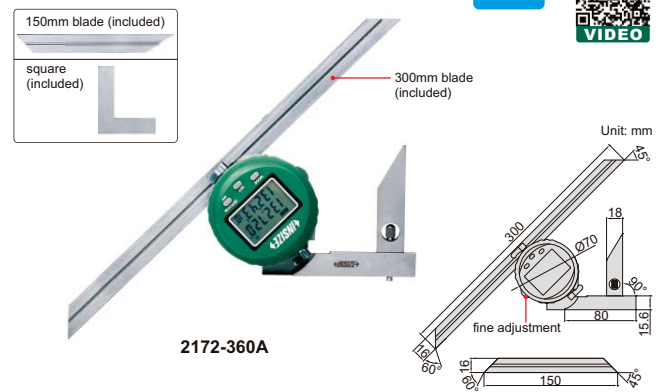


- Made of stainless steel (4799-1300 is made of carbon steel)
- Satin chrome plated scale
- With clamping screw

(mm)

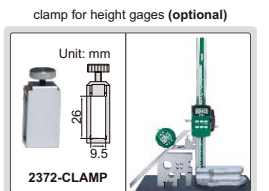
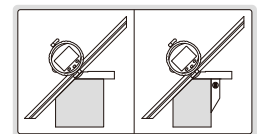
Code	Size (AxB)	Range	Accuracy	Graduation	L	C
4799-180	80x120mm	0-180°	±0.3°	1°	168	11
4799-1120	120x150mm	0-180°	±0.3°	1°	220	14
4799-1150	150x200mm	0-180°	±0.3°	1°	285	16
4799-1200	200x300mm	0-180°	±0.3°	1°	413	20
4799-1300	300x500mm	0-180°	±0.3°	1°	675	30

## DIGITAL PROTRACTOR

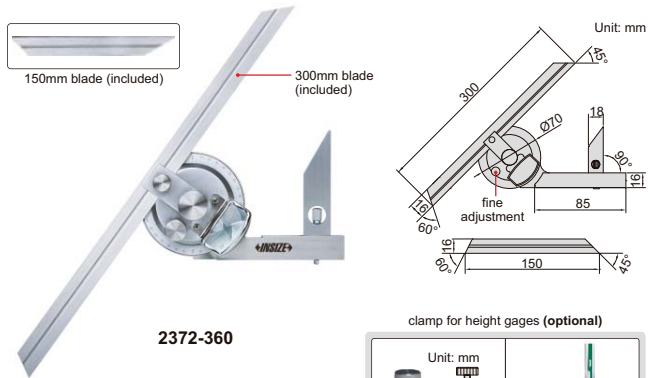


- Display in degree (for example 32.655°) and degree/minute/second (for example 32°39'30")
- SET button: preset the reading, change measuring direction
- MODE button: choose 0-90°, 0-180° or 0-360° display
- ZERO/ON/OFF button: zero and power on/off
- Battery CR2032, automatic power off
- Data output
- 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

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



## UNIVERSAL PROTRACTOR



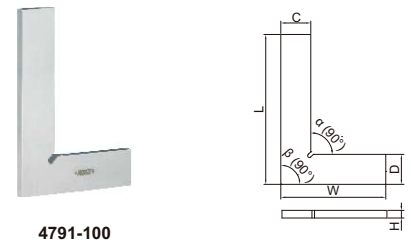
2372-360

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

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

## 90° FLAT EDGE SQUARES

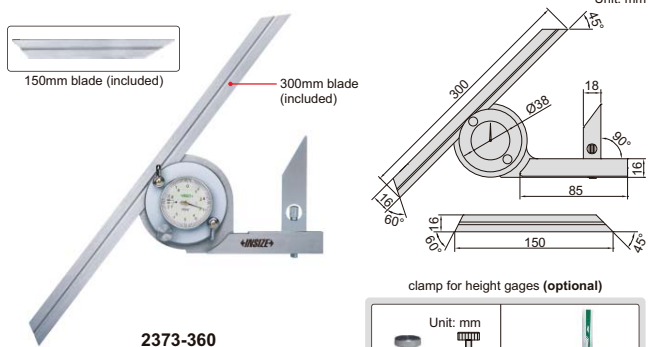
- DIN875 grade 0
- Made of hardened stainless steel



4791-100

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

## DIAL PROTRACTOR



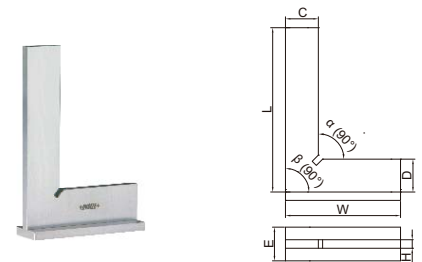
2373-360

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

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

## 90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

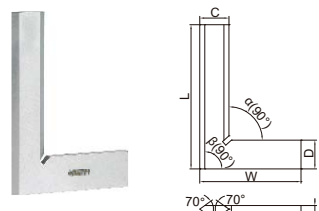


4793-100

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

## 90° BEVELED EDGE SQUARES

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

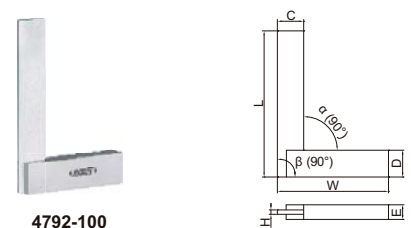


4790-0100

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 WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel



4792-100

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

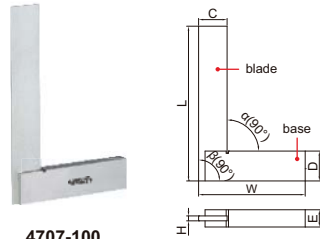


## MACHINIST SQUARES WITH WIDE BASE

**ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDENED**

**ATTENTION: LOW ACCURACY**

- Economic model
- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardened



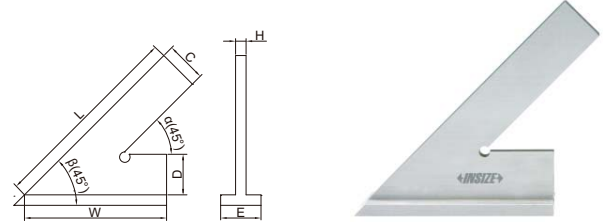
4707-100

(mm)

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

Sizes available up to 1000x550mm

## 45° SQUARES WITH WIDE BASE



- Made of hardened stainless steel

4747-150

(mm)

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4747-150	150x100mm	32 $\mu$ m	36 $\mu$ m	20	20	5	20
4747-200	200x130mm	36 $\mu$ m	41 $\mu$ m	25	25	5	25

## STRAIGHT EDGES

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



4700-100

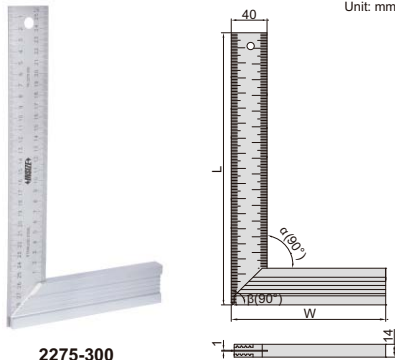
(mm)

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

Sizes available up to 500mm

## TRY SQUARE

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



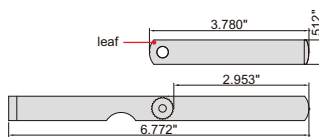
2275-300

Code	Size (LxW)	Squareness	
		Inside ( $\alpha$ )	Outside ( $\beta$ )
2275-300	300x170mm	0.5mm	0.5mm

## FEELER GAGE



4608-31



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

Code	Range	Quantity of Leaves
4608-31	.0015" - .035"	32

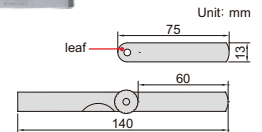
Thickness of leaves included	Accuracy
.010" (brass)	$\pm$ .00039"
.0015", .002"	$\pm$ .0002"
.0025", .003", .004", .005", .006", .007"	$\pm$ .00028"
.008", .009"	$\pm$ .00035"
.010", .011"	$\pm$ .00039"
.012", .013"	$\pm$ .00047"
.014", .015"	$\pm$ .00051"
.016", .017"	$\pm$ .00055"
.018", .019"	$\pm$ .00059"
.020", .021"	$\pm$ .00067"
.022", .023"	$\pm$ .00071"
.024", .025", .026"	$\pm$ .00075"
.028"	$\pm$ .00091"
.030"	$\pm$ .00094"
.032", .035"	$\pm$ .00102"

## FEELER GAGE



4601-25

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



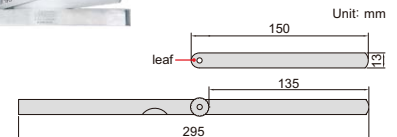
Code	Thickness of leaves included (mm)	Quantity of leaves
4601-25	0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	25

## LONG FEELER GAGE



4605-20

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



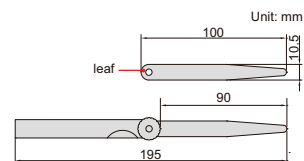
Code	Thickness of leaves included (mm)	Quantity of leaves
4605-20	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20

## FEELER GAGES

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



4602-20



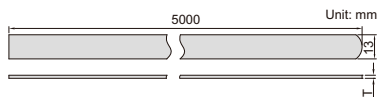
Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4602-13A	0.03-0.50mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	13
4602-13	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13
4602-17	0.02-1.00mm	0.02, 0.03, 0.04, 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



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	$\pm 4\mu\text{m}$	4621-12	0.12mm	$\pm 5\mu\text{m}$	4621-50	0.50mm	$\pm 14\mu\text{m}$
4621-03	0.03mm	$\pm 4\mu\text{m}$	4621-15	0.15mm	$\pm 6\mu\text{m}$	4621-55	0.55mm	$\pm 14\mu\text{m}$
4621-04	0.04mm	$\pm 4\mu\text{m}$	4621-18	0.18mm	$\pm 7\mu\text{m}$	4621-60	0.60mm	$\pm 14\mu\text{m}$
4621-05	0.05mm	$\pm 4\mu\text{m}$	4621-20	0.20mm	$\pm 8\mu\text{m}$	4621-65	0.65mm	$\pm 14\mu\text{m}$
4621-06	0.06mm	$\pm 4\mu\text{m}$	4621-25	0.25mm	$\pm 9\mu\text{m}$	4621-70	0.70mm	$\pm 17\mu\text{m}$
4621-07	0.07mm	$\pm 5\mu\text{m}$	4621-30	0.30mm	$\pm 9\mu\text{m}$	4621-75	0.75mm	$\pm 17\mu\text{m}$
4621-08	0.08mm	$\pm 5\mu\text{m}$	4621-35	0.35mm	$\pm 11\mu\text{m}$	4621-80	0.80mm	$\pm 19\mu\text{m}$
4621-09	0.09mm	$\pm 5\mu\text{m}$	4621-40	0.40mm	$\pm 12\mu\text{m}$	4621-90	0.90mm	$\pm 22\mu\text{m}$
4621-10	0.10mm	$\pm 5\mu\text{m}$	4621-45	0.45mm	$\pm 12\mu\text{m}$			

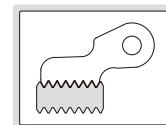
## PITCH GAGES

ATTENTION:  
LOW ACCURACY

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

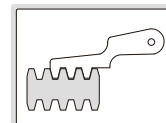
Code	Range	Pitch of leaves included	Quantity of leaves
4820-552	0.4-7mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	52
	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40,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

## PITCH GAGE



4824-12

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



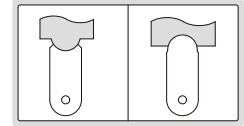
Code	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-12	2-20mm	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12

## RADIUS GAGES

**ATTENTION:**  
LOW ACCURACY



4801-17

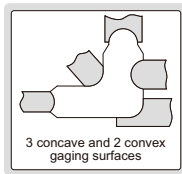


- Made of medium carbon steel

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

**ATTENTION:**  
LOW ACCURACY

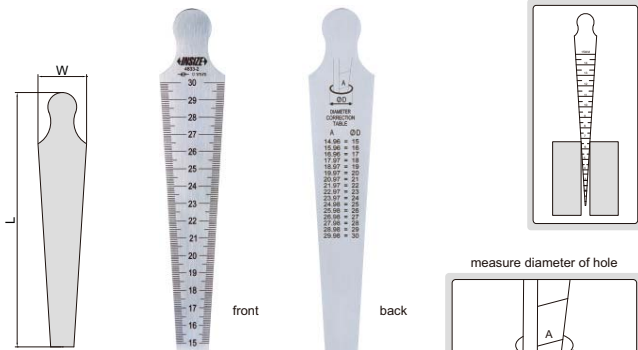


4804-26

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

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

## TAPER GAGES



4833-2

- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (only for 4833-1, 4833-2)
- Made of stainless steel

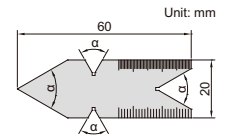
When measuring diameter of holes, correction on reading is needed due to the thickness of taper gage. For example, when reading A is 14.95mm, diameter  $\varnothing$ D is 15mm.

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

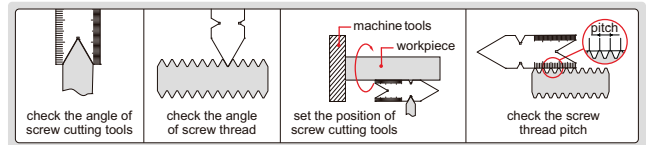
## CENTER GAGES



4810-602

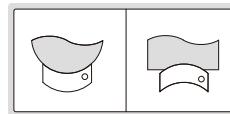


- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: ±30min.
- Made of stainless steel



Code	Thread type	Angle ( $\alpha$ )	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

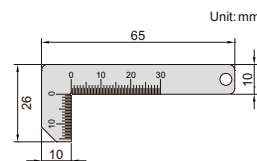


4802-31

- Accuracy: ±0.06mm
- Made of stainless steel

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

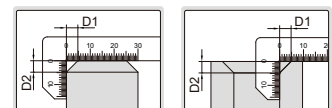
## CHAMFER GAGE



4844-1

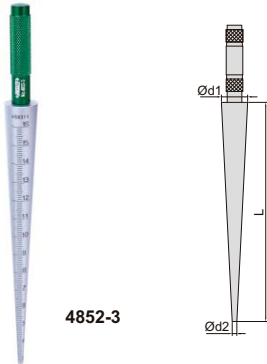
- To measure internal and external chamfers
- Made of stainless steel

Code	Graduation	Accuracy
4844-1	0.5mm	±0.25mm



**TAPER BORE GAGES**

- Quick measurement of bore diameter
- Hardened steel, HRC50-58
- Satin chrome plated surface
- Aluminium oxidized handle



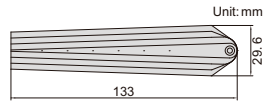
4852-3

(mm)						
Code	Range	Graduation	Accuracy	L	Ød1	Ød2
4852-1	1-6.5mm	0.1mm	±0.05mm	62.5	7	0.8
4852-3	3-16mm	0.1mm	±0.05mm	143	17	2.8

**TAPER GAGE SET**

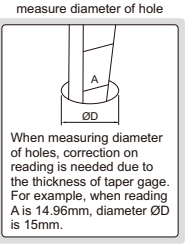
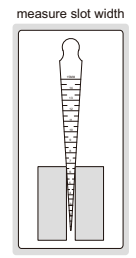


4837-1



- 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

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

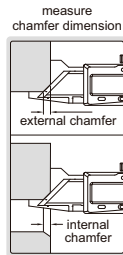
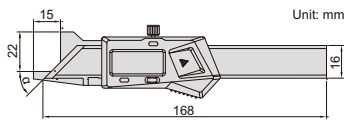


**DIGITAL CHAMFER GAGE**

DATA OUTPUT



1180-6



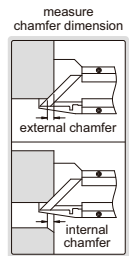
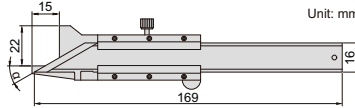
- Measure 30°/45°/60° chamfer dimension
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable

Code	Range	Accuracy	Chamfer (α)
1180-6	0-10mm/0-0.39"	±0.06mm	45°

**CHAMFER GAGE**



1267-6



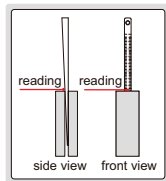
- Measure 30°/45°/60° chamfer dimension
- Made of stainless steel
- Satin chrome plated reading surface

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

**TAPER GAGES**



4630-1



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



(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

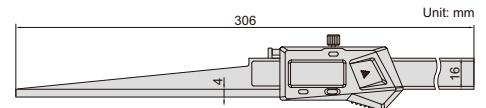
**DIGITAL TAPER GAGE**

ACTUAL SLOT WIDTH IS 1/10 OF THE READING

DATA OUTPUT

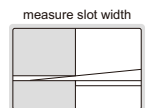


1160-10



- 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

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

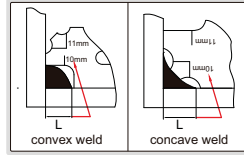
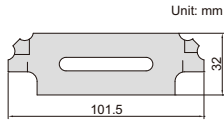


### FILLET WELDING GAGE



4836-1

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



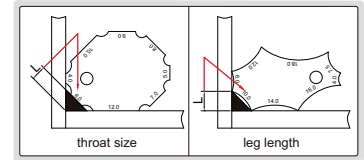
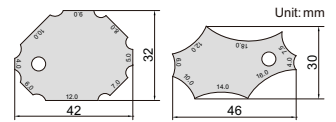
Code	Size (mm)	Accuracy
4836-1	3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 19, 22, 25	±0.5mm

### FILLET WELDING GAGE



4832-1

- Made of stainless steel
- Sizes marked on both faces



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

### DIGITAL WELDING GAGE

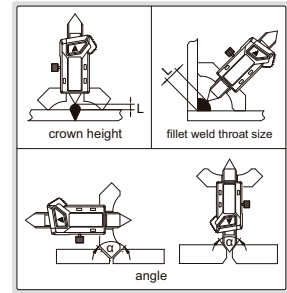
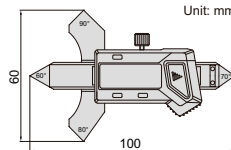
- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel



4831-20A

**ATTENTION:**  
NO DATA OUTPUT

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°



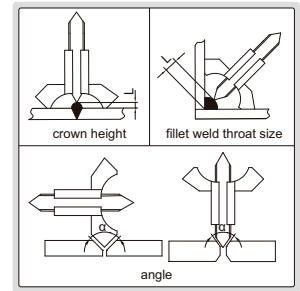
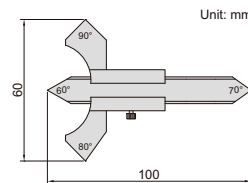
### WELDING GAGE

- Made of stainless steel
- Stain chrome plated reading surface

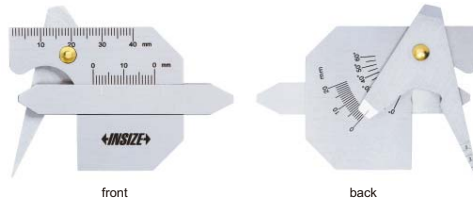
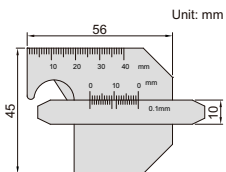


4830

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



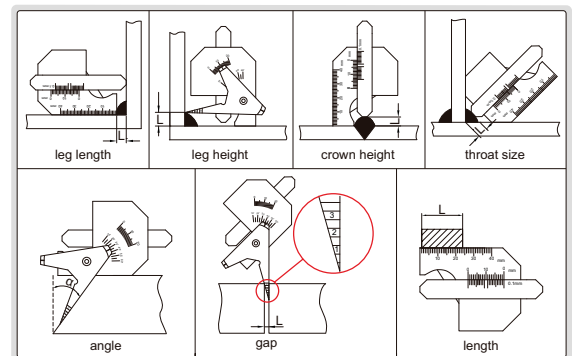
### WELDING GAGE



6832-1

- Made of stainless steel
- Stain chrome plated surface

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

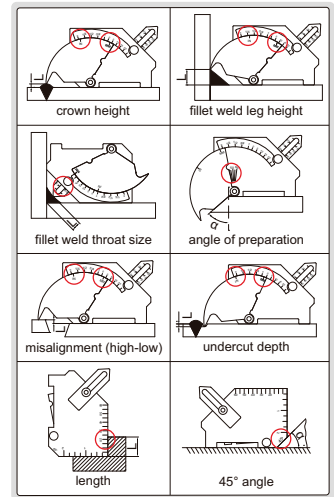


### WELDING GAGE

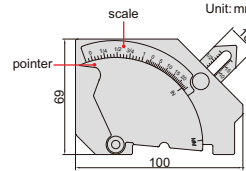
- Adjustable scale to compensate pointer wear
- Made of stainless steel



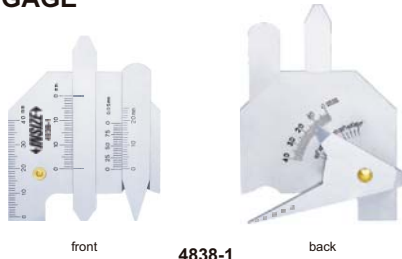
4835-1



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°

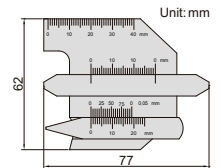


### WELDING GAGE

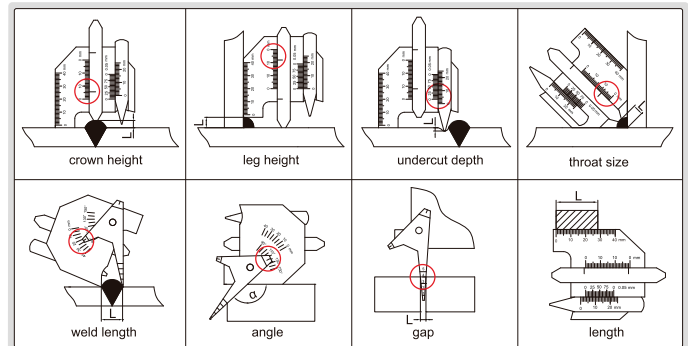


4838-1

- Made of stainless steel



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

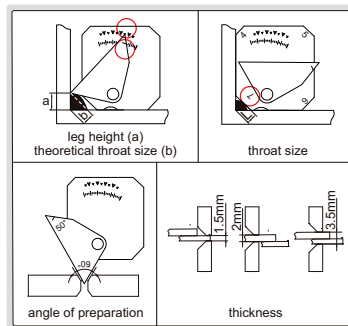
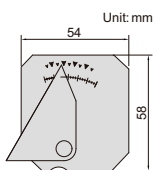


### WELDING GAGE



4850-1

- Made of stainless steel



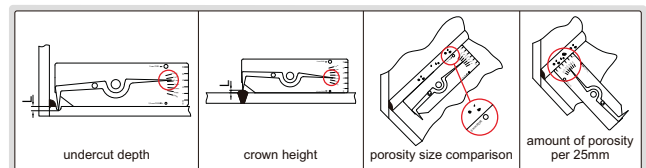
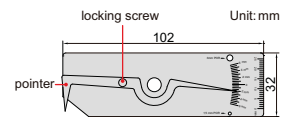
Code	Measurement	Range	Graduation	Accuracy
4850-1	leg height (a)	2-12mm	1mm	±0.5mm
	theoretical throat size (b)	0-18mm	1mm	±0.5mm
	throat size	4, 5, 6, 7mm	—	±0.5mm
	angle of preparation	50°, 60°	—	±1°
	thickness	1.5, 2, 3.5mm	—	±0.2mm

### WELDING GAGE



4834-1

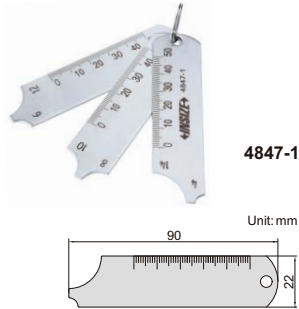
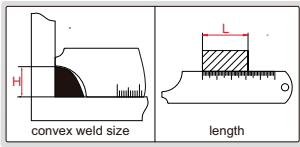
- Pointer can be locked for later reference
- Made of stainless steel



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

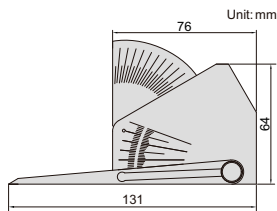
### FILLET WELDING GAGE

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



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

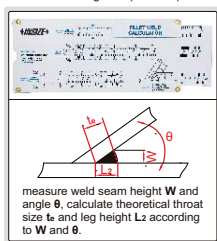
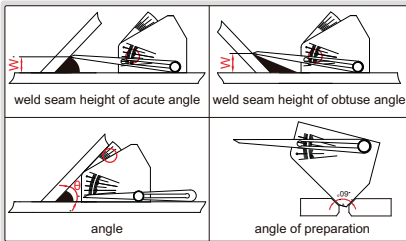
### FILLET WELDING GAGE



- Calculating card is included
- Made of stainless steel

4846-1

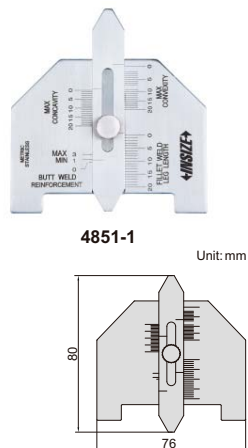
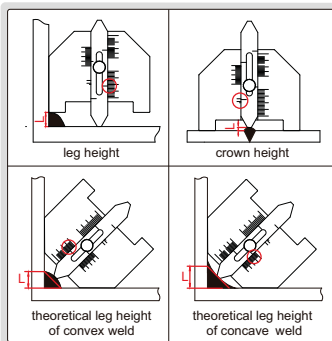
calculating card (included)



Code	Measurement	Range	Graduation	Accuracy
4846-1	weld seam height <b>W</b>	0-50mm/0-2"	2mm/.050"	±1mm
	angle $\theta$	30°-90°	2.5°	±1°
	60° angle	—	—	±0.5°

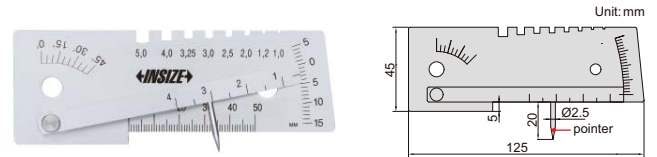
### WELDING GAGE

- Accuracy: ±0.5mm
- Made of stainless steel



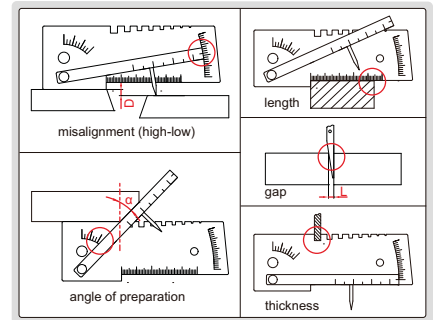
Code	Measurement	Range	Graduation
4851-1	leg height	0-20mm	1mm
	crown height	0-3mm	—
	theoretical leg height of convex weld	0-20mm	1mm
	theoretical leg height of concave weld	0-20mm	1mm

### WELDING GAGE



4848-1

- Made of stainless steel



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

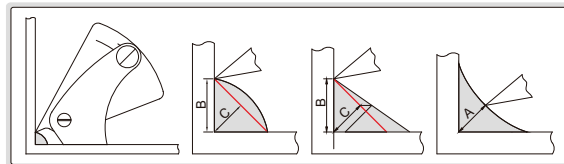
### WELDING GAGE

- Made of stainless steel



4840-1

Code	Graduation	Accuracy
4840-1	0.2mm	±0.3mm



### PIPE WELDING GAGE

- Made of stainless steel



4841-1

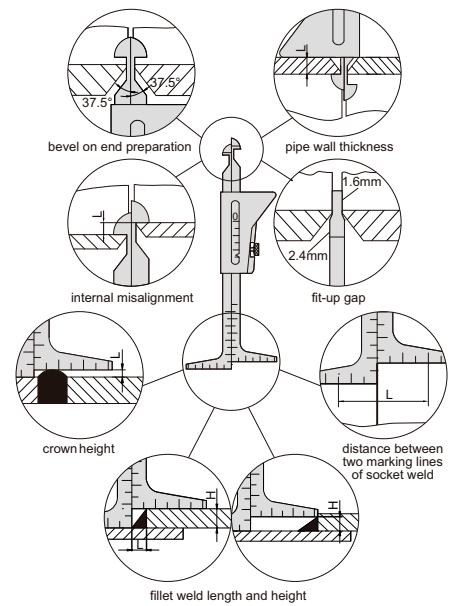
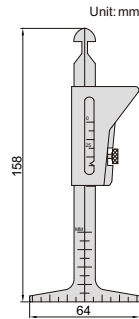
Code	Measurement	Range	Graduation	Accuracy
4841-1	internal misalignment	0-30mm	1mm	±0.5mm
	fit-up gap	0.7-4mm	0.1mm	±0.1mm

## PIPE WELDING GAGE

- Made of stainless steel



4839-1



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



5064

Code  
5064

## 7-PIECE WELDING GAGE SET

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



5072

Code  
5072

## 7-PIECE WELDING GAGE SET

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



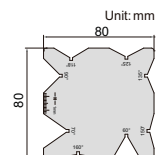
5071

Code  
5071

## DRILL ANGLE GAGE

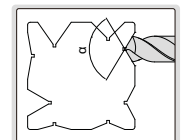


4842-1



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

Code Accuracy  
4842-1 ±0.5°





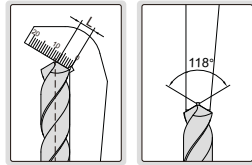
### DRILL POINT GAGE



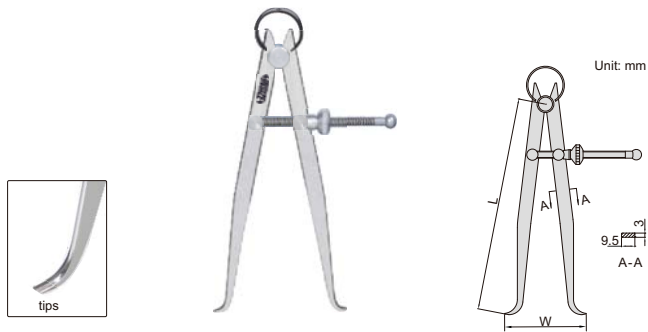
4843-1

- 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



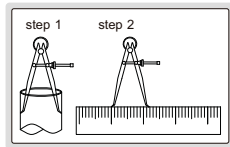
### INSIDE SPRING CALIPERS



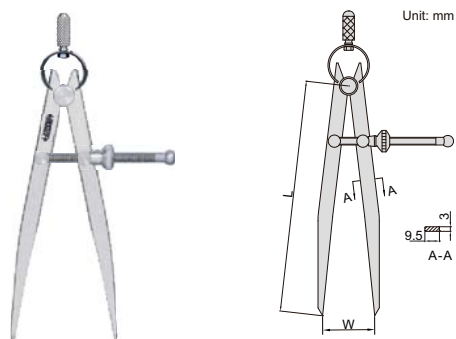
7261-150

- 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



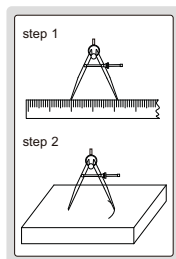
### SPRING DIVIDERS



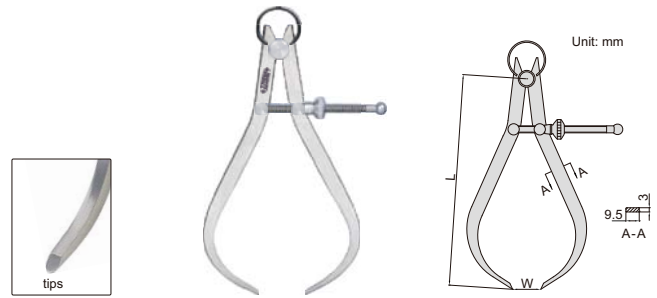
7260-150

- 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



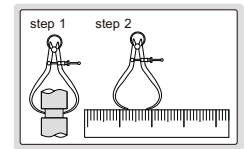
### OUTSIDE SPRING CALIPERS



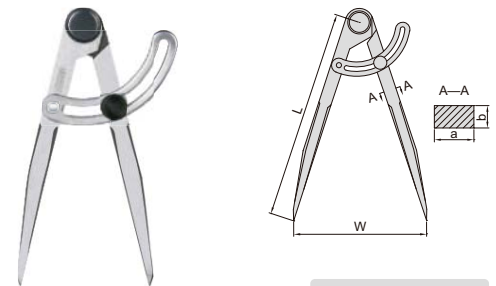
7262-150

- 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



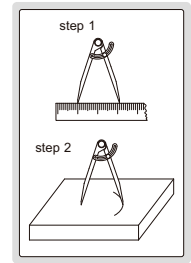
### DIVIDERS



7247-150

- Made of carbon steel
- Hardened points

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

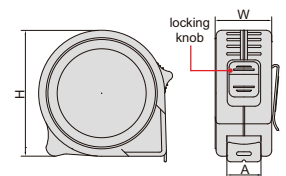


### MEASURING TAPES

EG II



7140-5



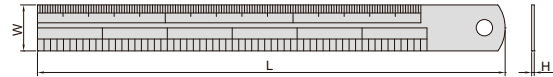
Code	Range	Graduation	Width of tape A	W	H
7140-3	0-3m	1mm	16mm	28mm	62mm
7140-5	0-5m	1mm	19mm	30mm	68mm
7140-8	0-8m	1mm	25mm	38mm	78mm

## STEEL RULES

ATTENTION:  
BASIC MODEL



7110-300



(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

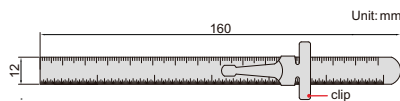
Sizes available up to 2000mm

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

## POCKET RULE WITH SLIDING CLIP



7119-150



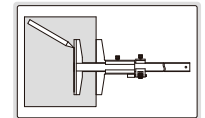
- With sliding clip, clip also can be used as depth gage base
- Inch/metric conversion table on the back
- Made of stainless steel

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

## T-SHAPE MARKING GAGE

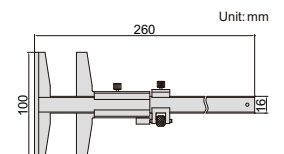


1275-150A



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

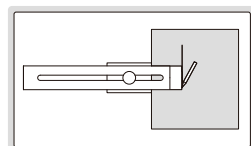
Code	Range	Accuracy
1275-150A	0-150mm	±0.05mm



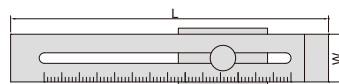
## MARKING GAGES



7120-200A



- Made of carbon steel
- Satin chrome plated

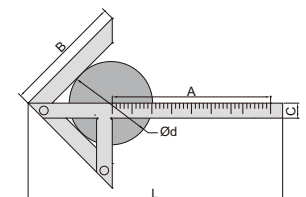


Code	Range	Graduation	Accuracy	L	W
7120-200A	0-200mm	0.1mm	±0.1mm	250mm	40mm
7120-250A	0-250mm	0.1mm	±0.1mm	300mm	40mm
7120-300A	0-300mm	0.1mm	±0.1mm	350mm	40mm

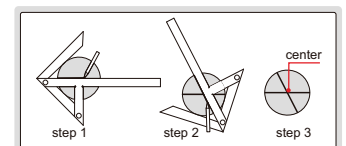
## CENTER MARKING GAGES



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

- 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: ±7min.
- 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)

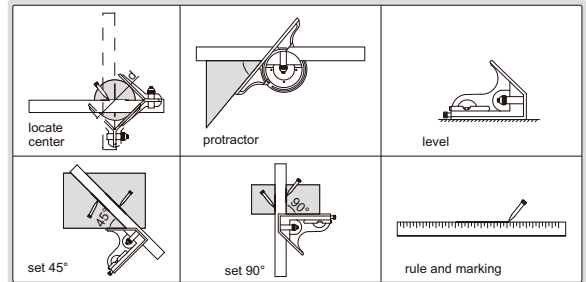
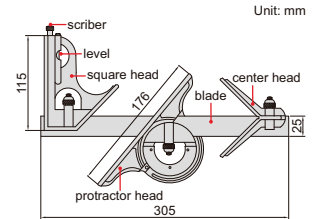


2278-2



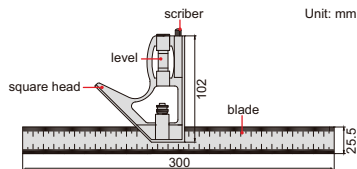
2278-180

Code	Remark
2278-2	2-piece set
2278-180	4-piece set

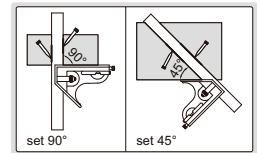


## LIGHT DUTY COMBINATION SQUARE

- 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,  
Graduation: 0.5mm and 1mm on front and back sides



2276-300



Code
2276-300

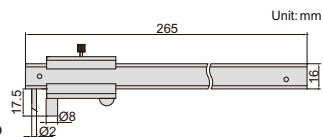
## SCRIBER CALIPER

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

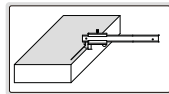
Code	Range	Accuracy
7202-200A	0-200mm/0-8"	±0.1mm



7202-200A



The position of scribe tip can be adjusted



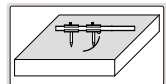
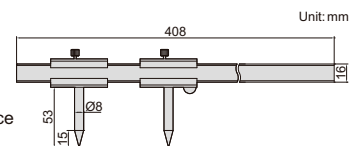
## SCRIBING CALIPER

- Made of stainless steel
- Satin chrome plated reading surface
- Hardened scribe tips

Code	Range	Accuracy	Graduation
7203-300A	51-300mm	±0.1mm	0.1mm

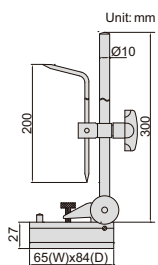


7203-300A



## HEIGHT SCRIBER

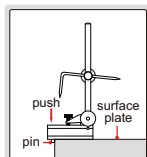
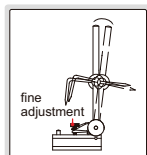
- Grooved bottom for cylinder
- Two pins to be set against the edge of surface plate



6990-300A



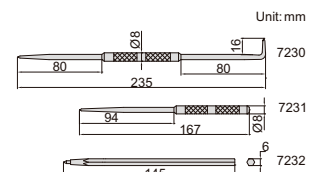
Code
6990-300A



## SCRIBERS

- Nickel plated

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**)



5022-W

Code

5022-W

**2-PIECE MEASURING TOOL SET**

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



5023

Code

5023

**2-PIECE MEASURING TOOL SET**

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



5024

Code

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 <b>1205-150S</b> )
5041-2	Vernier caliper, graduation 0.02mm/0.001" (code <b>1205-1502S</b> )

**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**)



5052-W

Code

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**)



5042-W

Code

5042-W

**6-PIECE MEASURING TOOL SETS**

- Includes:
  - 1) Vernier caliper, range 0-150mm/0-6" graduation 0.01mm (code **3202-25A**)
  - 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 <b>1205-150S</b> )
5063-2	Vernier caliper, graduation 0.02mm/0.001" (code <b>1205-1502S</b> )

**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 <b>1108-150W</b>
5013	Digital caliper, with thumb roller code <b>1108-150</b>

## GRANITE SURFACE PLATES



- 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

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



### 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

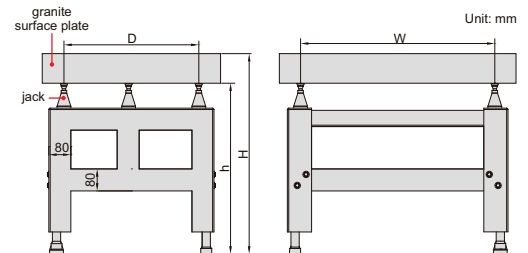
## STANDS FOR GRANITE SURFACE PLATES



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



6902-64A



### Low stands

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

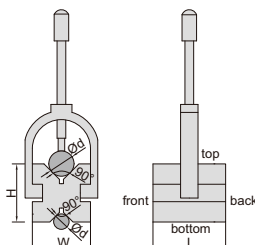
### High stands

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

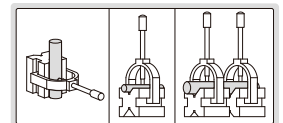
## V-BLOCK SETS



6896-11



- 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

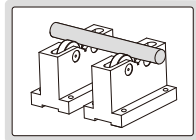
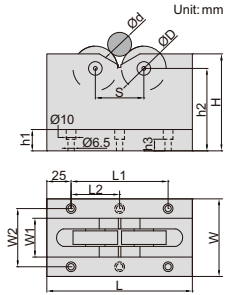


Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of both V grooves to top and bottom sides	Height difference of a matched pair
6896-11	50x40x40mm	5-30mm	5µm	5µm
6896-12	80x63x63mm	7-63mm	5µm	5µm
6896-13	100x80x80mm	7-80mm	5µm	5µm

### ROLLER BEARING V-BLOCK SETS



6888-1



- 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

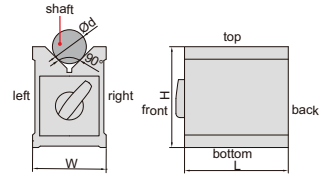
### MAGNETIC V-BLOCK

**ATTENTION:**  
NOT HARDENED

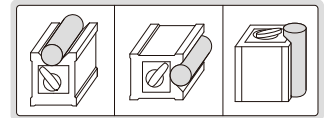
**ATTENTION: NOT SUITABLE**  
FOR STEEL OR IRON SURFACE



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



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-BLOCKS

**HARDENED SURFACES**

**HIGH PRECISION**

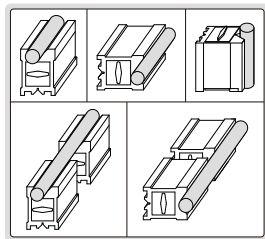
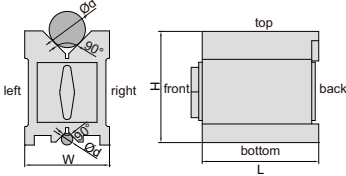
**STRONG MAGNETIC FORCE**



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	75kgf
6889-22	100x70x95mm	5-65mm	100kgf

#### Matched pair

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

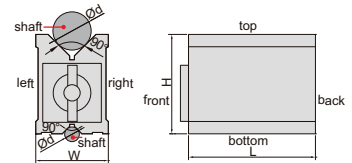
### MAGNETIC V-BLOCK

**ATTENTION:**  
NOT HARDENED

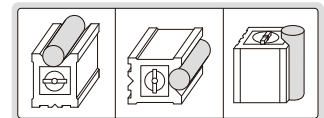
**ATTENTION: NOT SUITABLE**  
FOR STEEL OR IRON SURFACE



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



Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Squareness of V groove to back side
6801-1202	100x70x95mm	6-67mm	80kgf	10µm

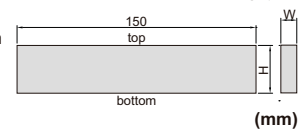
### PARALLEL SETS



6533-144

Unit: mm

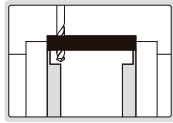
- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Hardened to HRC55-60
- Made of alloy tool steel



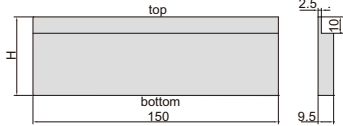
(mm)

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



Unit: mm

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

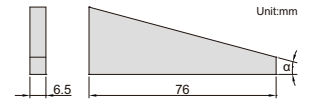
Code	Parallels per set	Parallelism between top and bottom	Height (H)
6534-6	6 pairs	5µm	25, 30, 35, 40, 45, 48mm

## ANGLE PLATE SETS



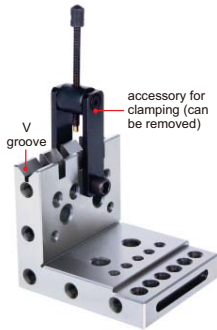
4003-12

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

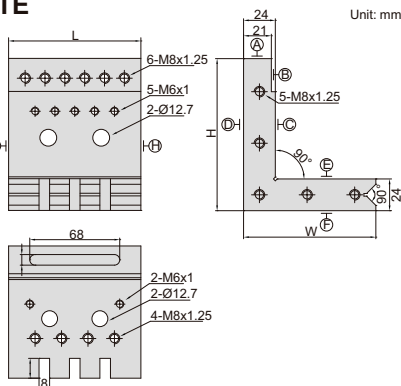


Code	Angle plates included	Angle α
4003-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°
4003-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°

## RIGHT ANGLE PLATE



6547-1



Unit: mm

accessory for clamping (can be removed)

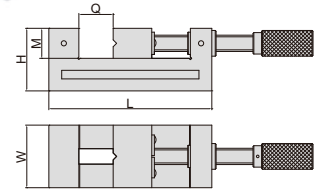
- Made of alloy steel
- Hardened to HRC60±2
- V groove for cylinders
- Parallelism and squareness between A, B, C, D, E, F, G and H: 6µm
- Parallelism and squareness of V groove to A, B, C, D, E, F, G and H: 6µm

Code	Size (LxWxH)
6547-1	100x100x115mm

## PRECISION VISES



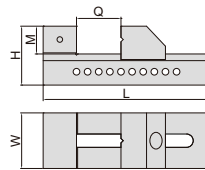
6525-76



- 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

## PRECISION VISES



6526-80

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

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

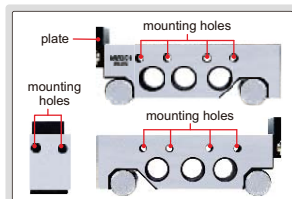
## SINE BARS

HIGH PRECISION

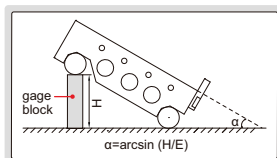


4155-100

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



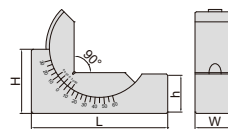
- Made of alloy tool steel



(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

## ADJUSTABLE ANGLE BLOCK



6535-30

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

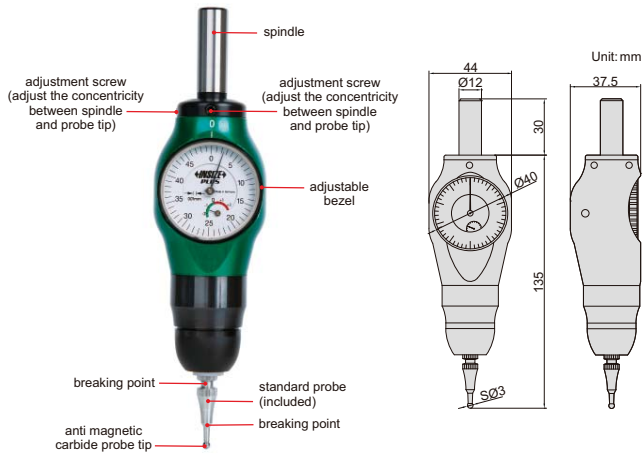
Code	Size (LxWxH)	h	Adjustable angle	Accuracy of angle
6535-30	102x30x49mm	30mm	30°~0°~60°	10'

**3D TESTER**

**INSIZE PLUS**  
MADE IN GERMANY

COMPACT DESIGN

ANTI MAGNETIC CARBIDE CONTACT POINT

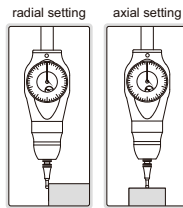
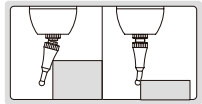


2842-3D



2842-N1 2842-N2

If probe tip is pressed too much, the probe breaks at the breaking point, in order to prevent damage of main body



Code	Range	Graduation	Accuracy
2842-3D	1.5mm	0.01mm	0.01mm

Probe (optional) (mm)

Code	Name	L	D
2842-N1	standard probe	27	SØ3
2842-N2	long probe	62	SØ6



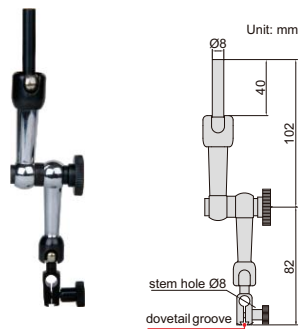
VIDEO

**DIAL TEST INDICATOR CENTERING HOLDER**



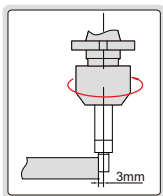
- Center cylinders or holes on machine tools
- Can be used with dial test indicators

Code  
6295-1A



6295-1A

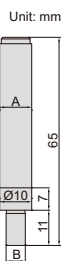
**EDGE FINDER**



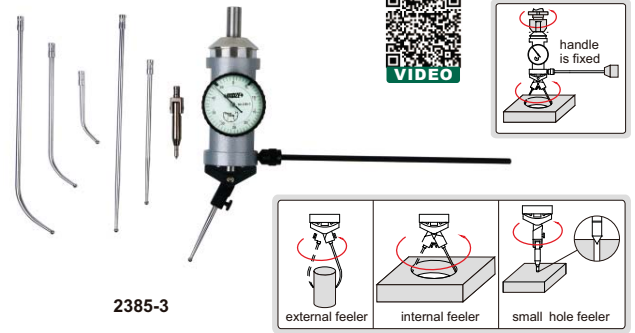
- Hardened shank and contact point
- Suitable for machine speed 400-600rpm

6567-1

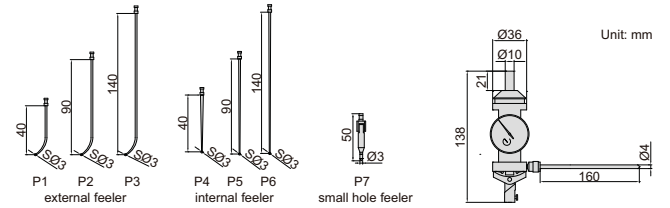
Code	Shank (A)	Contact point (B)	Accuracy
6567-1	Ø10mm	Ø6mm	8µm



**CENTERING INDICATOR**



2385-3

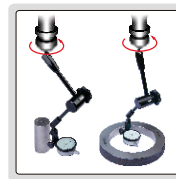


- Provides quick and accurate centering in boring and milling set-up

Code  
2385-3

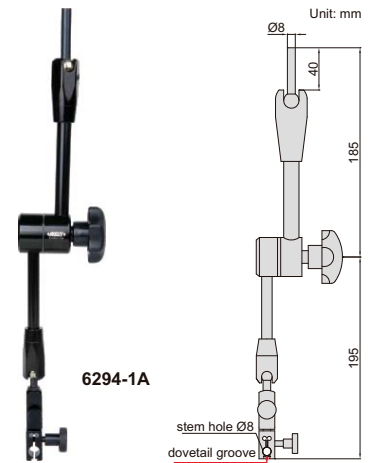
Feeler	Measuring diameter	Accuracy
P1	Ø0-60mm	±0.04mm
P2	Ø0-160mm	±0.06mm
P3	Ø0-250mm	±0.08mm
P4	Ø3.2-80mm	±0.04mm
P5	Ø3.2-180mm	±0.06mm
P6	Ø3.2-280mm	±0.08mm
P7	Ø0-2.8mm	±0.04mm

**INDICATOR CENTERING HOLDER**



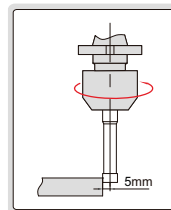
- Center cylinders or holes on machine tools
- Can be used with dial test indicators or dial indicators

Code  
6294-1A



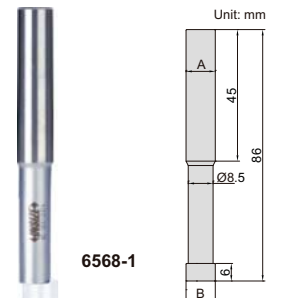
6294-1A

**CERAMIC EDGE FINDER**



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

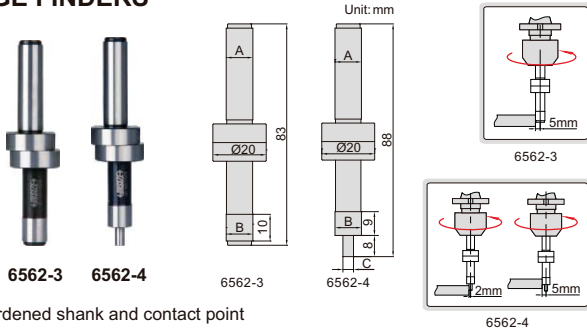
Code	Shank (A)	Contact point (B)	Accuracy
6568-1	Ø10mm	Ø10mm	8µm



6568-1



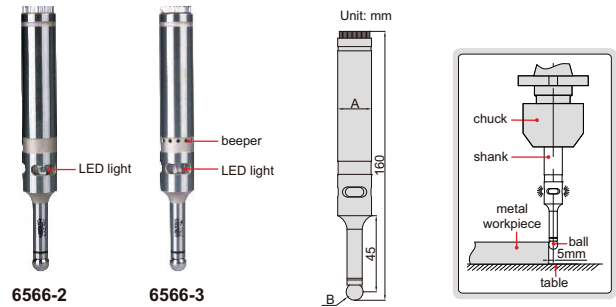
## EDGE FINDERS



- Hardened shank and contact point

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

## ELECTRONIC EDGE FINDERS

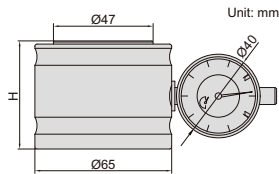


- The shank is electrically conducted to the metal workpiece through the chuck and table, the LED lights up and the beeper sounds (only for 6566-3), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball

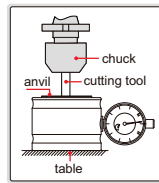
Code	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6566-2	Ø20mm	SØ10mm	5µm	without	23AE, 12Vx1pc
6566-3	Ø20mm	SØ10mm	5µm	with	23AE, 12Vx1pc

## ZERO SETTER

**INSIZE PLUS**  
MADE IN GERMANY



6554-50

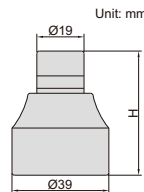


Code	Height (H)	Accuracy	Test force
6554-50	50mm	±10µm	9N (at 50mm)

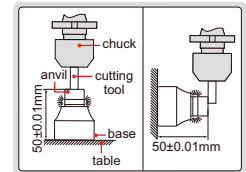
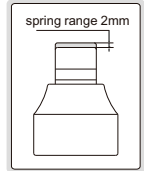
## ELECTRONIC ZERO SETTER

**INSIZE PLUS**  
MADE IN GERMANY

LOW TEST FORCE



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

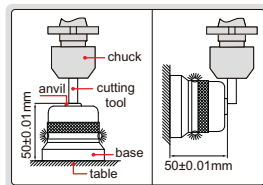
Code	Height (H)	Accuracy	Test force
6553-50	50mm	±10µm	7N (at 49mm)

## ELECTRONIC ZERO SETTER

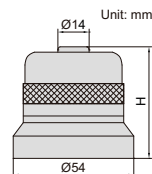
ATTENTION:  
HIGH TEST FORCE



6550-50A



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

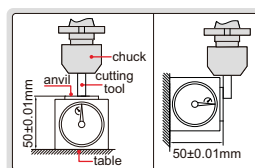
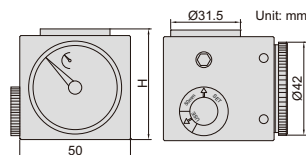


Code	Height (H)	Accuracy	Test force
6550-50A	50mm	±10µm	27N (at 49mm)

## ZERO SETTER



2397-502A



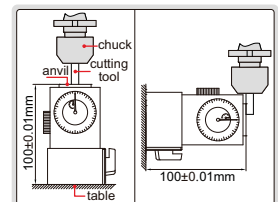
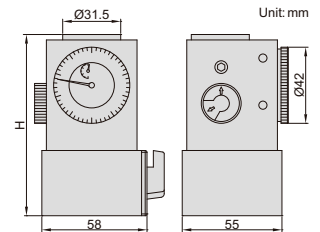
- Magnetic base
- Test force: 9N (at 50mm)

Code	Accuracy	Height (H)
2397-502A	±10µm	50mm

## ZERO SETTER



2394-100A



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

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

**DATA OUTPUT CABLES (KEYBOARD FORMAT)**



7302-SPC3A

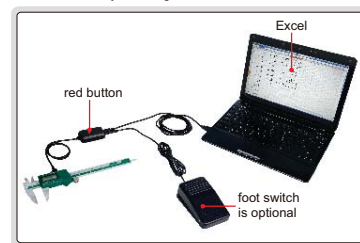


7302-HUB



7304-2

Without software, data can be input as keyboard signal to Excel, Word, etc.



Code	Description	Plug to product	Socket on product	Plug to computer	Applicable products
7302-SPC5A	cable for digital calipers (length 2.5m)				digital calipers
7302-SPC5B					digital depth gages
7302-SPC6	cable for digital micrometers (length 2.5m)				digital micrometers digital three points internal micrometers
7302-SPC3A	cable for digital indicators (length 2.5m)				digital indicators digital protractors
7304-2	foot switch with cable (length 1.5m)				
7302-HUB	HUB converter (length 0.3m, four USB ports to computer)				

**DIGITAL HORIZONTAL SCALES**

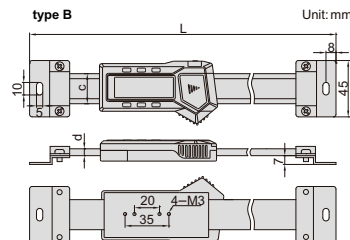
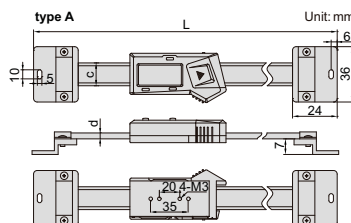
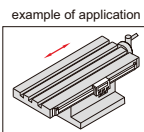
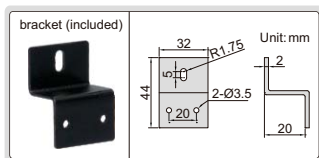
**DATA OUTPUT**



7101-300A



7101-400A



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

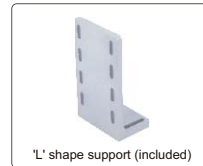
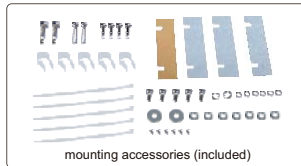
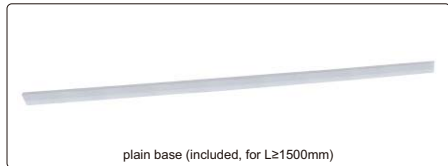
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: data output cable

- 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

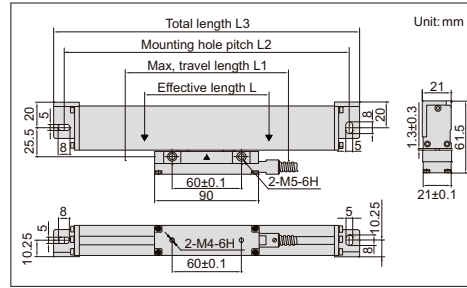
## LINEAR SCALES



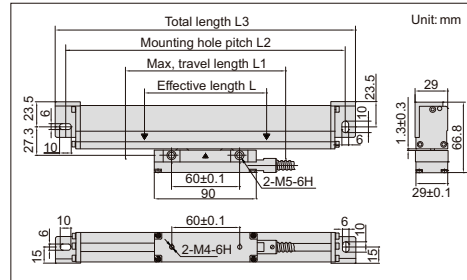
ISL-A5-300



Series ISL-A5



Series ISL-B5



Effective length (L)	Code
Series ISL-A5	
200mm	ISL-A5-200
250mm	ISL-A5-250
300mm	ISL-A5-300
350mm	ISL-A5-350
400mm	ISL-A5-400
450mm	ISL-A5-450
500mm	ISL-A5-500
600mm	ISL-A5-600
750mm	ISL-A5-750
800mm	ISL-A5-800
1000mm	ISL-A5-1000

Effective length (L)	Code
Series ISL-B5	
500mm	ISL-B5-500
600mm	ISL-B5-600
700mm	ISL-B5-700
800mm	ISL-B5-800
900mm	ISL-B5-900
1000mm	ISL-B5-1000
1100mm	ISL-B5-1100
1300mm	ISL-B5-1300
1500mm	ISL-B5-1500
1600mm	ISL-B5-1600
1700mm	ISL-B5-1700
2000mm	ISL-B5-2000

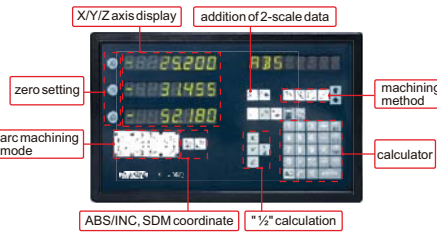
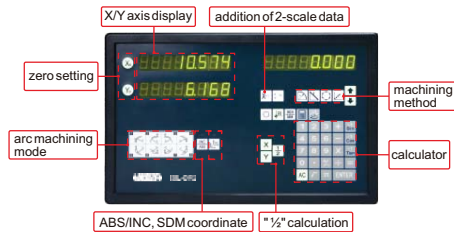
### SPECIFICATION

Code	Series ISL-A5		Series ISL-B5	
L1 (mm)	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+136(L<950)	L+156(L≥950)
L3 (mm)	L+149(L<950)	L+169(L≥950)	L+154(L<950)	L+174(L≥950)
Resolution	5μm		5μm	
Max. response speed	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)			

### 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

## COUNTERS



### 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, "1/2" 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

## VISION MEASURING SYSTEM



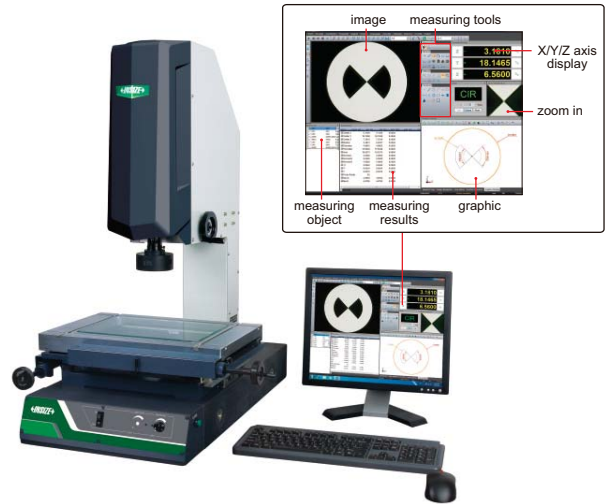
VIDEO



software CD (included)

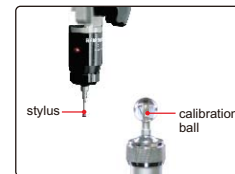
### SPECIFICATION

Code	ISD-V250
Measuring range (X*Y*Z)	250*150*200mm
Stage size	450*280mm
Glass stage size	306*196mm
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)	760*600*900mm
Weight	120kg



ISD-V250

computer is not included



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

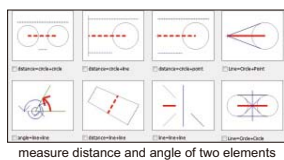
0.5X auxiliary objective	Code: <b>ISD-V-OB05X</b> Working distance: 175mm Magnification: 16.5~97.5X (on 19" monitor)
2X auxiliary objective	Code: <b>ISD-V-OB2X</b> Working distance: 36mm Magnification: 66~390X (on 19" monitor)
Probe	Code: <b>ISD-V-PROBE</b> Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Lens with coaxial light	Code: <b>ISD-V-LENS</b> (must be installed in factory)
Vision measuring system with computer	Code: <b>ISD-V150A, ISD-V250A, ISD-V300A</b>

### SOFTWARE

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

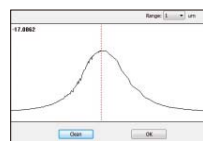
- |   |   |   |   |
|---|---|---|---|
| <input type="checkbox"/> measure coordinate of point                          | <input type="checkbox"/> measure center coordinate, diameter and area of circle | <input type="checkbox"/> measure distance between two points            | <input type="checkbox"/> measure length and diameter of arc |
| <input type="checkbox"/> measure center coordinate and axis length of ellipse | <input type="checkbox"/> measure length, width and area of rectangle            | <input type="checkbox"/> measure length, width and diameter of key slot | <input type="checkbox"/> measure width and diameter of ring |
| <input type="checkbox"/> measure length of open curve                         | <input type="checkbox"/> measure length and area of closed curve                | <input type="checkbox"/> measure angle of two lines                     | <input type="checkbox"/> measure focus distance of surface  |
| <input type="checkbox"/> measure distance of two elements                     |   |   |   |

### Combined measuring tools:

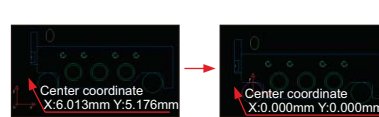


measure distance and angle of two elements

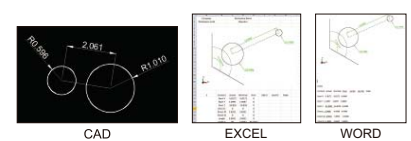
### Focus indicator:



### Coordinate transfer:



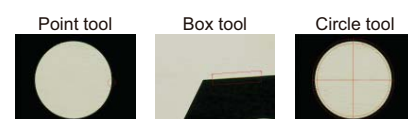
### Data export to CAD, EXCEL and WORD



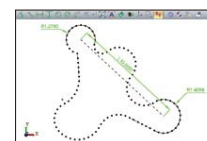
### Profile detection:



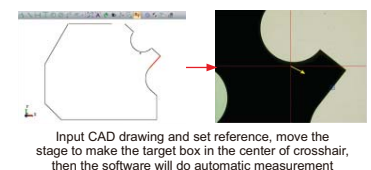
### Edge-detection:



### Contour scanning:

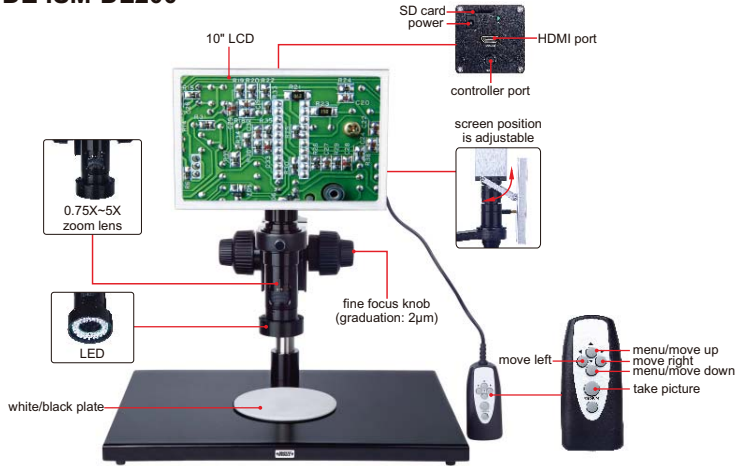


### CAD measuring:



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

## DIGITAL MICROSCOPE (WITH DISPLAY) CODE ISM-DL200



TAKE PICTURES



- Take pictures, saved to memory card
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

### SPECIFICATION

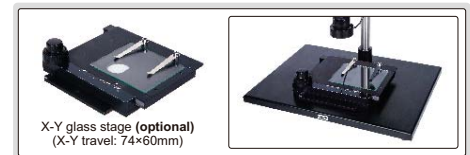
Magnification	18X~112X
Sensor	1/3" CMOS
Pixel	1.3M
Resolution	1280×800
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	400×300×430mm
Weight	6kg

### STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
4G memory card and holder	1 pc
White/black plate	1 pc
HDMI cable	1 pc
Power adapter	1 pc

### OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE



### MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

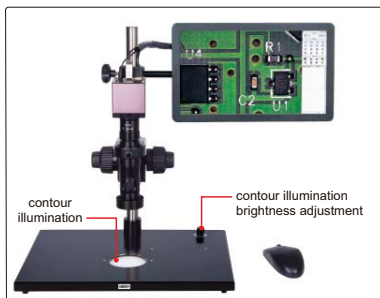
Auxiliary Objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	Magnification	18~112X	36~224X
	Focus distance	70±2mm	70±2mm
	View field	12.8×8.4~2×1.3mm	6.3×4.3~1×0.65mm
2X (optional)	Magnification	36~224X	72~448X
	Focus distance	29±2mm	29±2mm
	View field	6.3×4.3~1×0.65mm	3.3×2~0.51×0.38mm

## DIGITAL MEASURING MICROSCOPE (WITH DISPLAY)

TAKE PICTURES

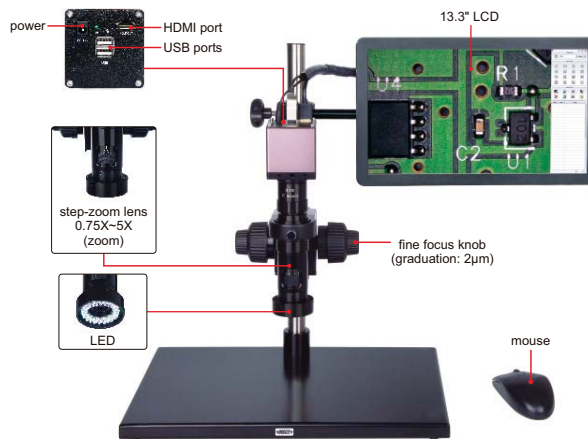
MEASUREMENT

BUILT-IN SOFTWARE  
WITHOUT COMPUTER



ISM-DL301 (with contour illumination)

- 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



ISM-DL300 (without contour illumination)



To be continued

Continued from previous page



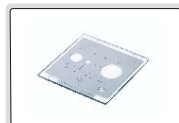
1X camera adapter (optional)



2X auxiliary objective (optional)



16G USB flash disk (included)



calibration plate (included)



1X auxiliary objective (included)



0.5X camera adapter (included)

## 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

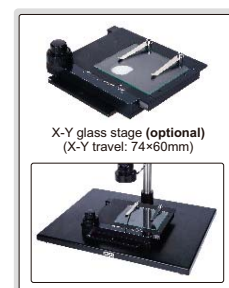
## STANDARD DELIVERY

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

## 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.



## 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 field	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

## OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE

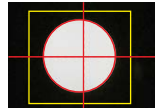
## SOFTWARE

- Language: English
- Output to Excel
- Edge-detection:

Point tool



Box tool



Click tool

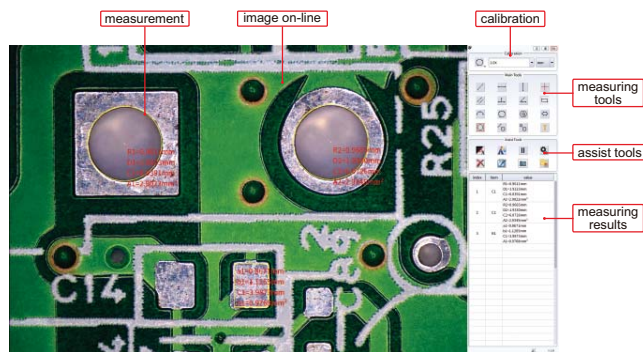


### Measurement tools:

- measure length of line or distance between two points
- measure angle from horizontal line
- measure distance between two parallel lines
- measure distance between point and line
- measure radius, diameter, girth and area of circle with three points
- measure minimum distance between point and circle
- measure minimum distance between line and circle
- measure minimum distance between two circles
- add text

- measure length of line or distance between two points in horizontal direction
- measure angle from vertical line
- measure distance between three parallel lines
- measure radius, length and angle of arc
- measure radius, diameter, girth and area concentric of circles
- measure distance between point and center of circle
- measure distance between line and center of circle
- measure center distance between two circles
- measure radius, diameter, girth and area of circle with two points

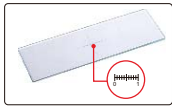
- measure length of line or distance between two points in vertical direction
- measure angle of two lines
- measure distance between multiple parallel lines
- measure girth and area of polygon
- measure length, width, girth and area of rectangle
- measure maximum distance between point and circle
- measure maximum distance between line and circle
- measure maximum distance between two circles
- cross hair



# WiFi DIGITAL MEASURING MICROSCOPE CODE ISM-WF200



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

## 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

## OPTIONAL ACCESSORY

Stand	ISM-PM-STAND
Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE



stand (code ISM-PM-STAND, optional)



filter (optional)



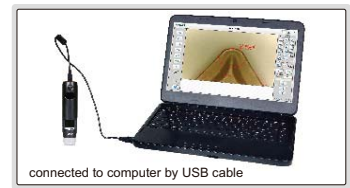
connected to iPad by WiFi



connected to Android device by WiFi



connected to computer by WiFi

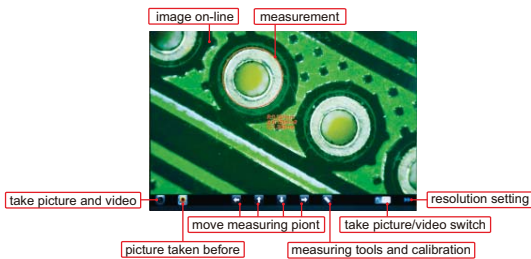


connected to computer by USB cable

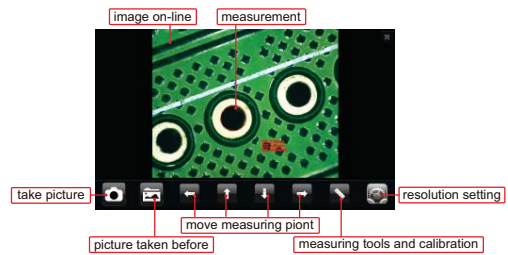
## MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

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

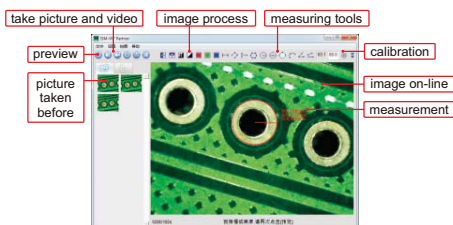
### 1 Software ISM-PAD (for iPad by WiFi)



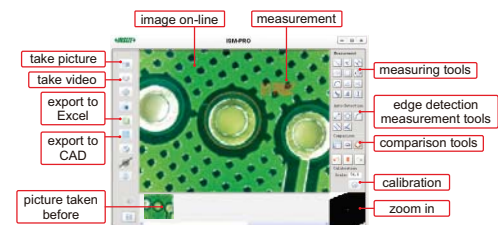
### 2 Software ISM-APK (for Android devices by WiFi)



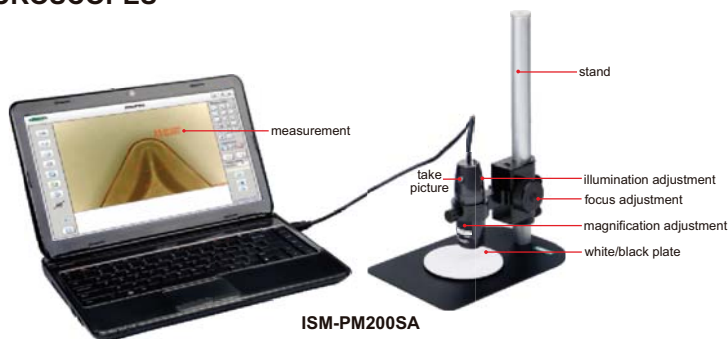
### 3 Software ISM-WF Partner (for computer by WiFi)



### 4 Software ISM-PRO (for computer by USB cable)



## DIGITAL MEASURING MICROSCOPES



- Can take pictures and videos
- Supplied with software

**ISM-PM200SA**  
computer is not included

universal stand (included in ISM-PM200SB)

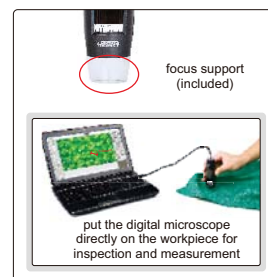


### SPECIFICATION

Code	ISM-PM200SA	ISM-PM200SB	ISM-PM600SA
Magnification	10X~200X	10X~200X	450X~600X
Focus distance	short focus distance	short focus distance	short focus distance
Stand	standard	universal	standard
Focus support	included	included	not included
Calibration rule	graduation 0.1 and 1mm	graduation 0.1 and 1mm	graduation 0.1mm
Pixel	2M (resolution: 1600×1200)		
Illumination	built-in adjustable LED		
Power supply	USB 2.0 cable (voltage required: 5±0.1V)		



filter (optional)



### MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

ISM-PM200SA/ISM-PM200SB			
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

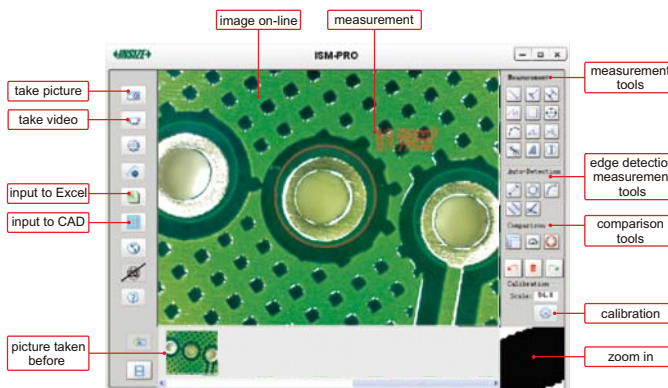
### SOFTWARE

- **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



#### ■ Comparison tools:

Create line, angle or circle with desired size, to compare with workpieces.

- create line
- create angle
- create circle with tolerance

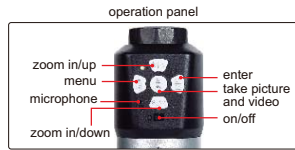


#### ■ Data export to CAD or Excel:





# DIGITAL MEASURING MICROSCOPE CODE ISM-DM40



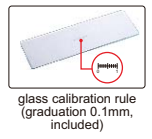
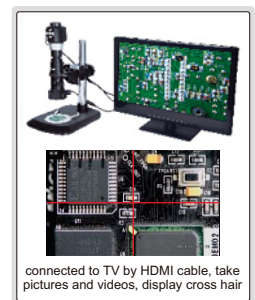
- Connected to TV and computer
- Take pictures and videos, saved to memory card
- Measurement on computer with accuracy  $\pm 0.01\text{mm}$
- Large working distance because focus distance of camera is adjustable
- Automatic white balance and exposure, white-black display mode
- Automatic power off



TAKE PICTURES AND VIDEOS

MEASUREMENT (ON COMPUTER)

FOCUS DISTANCE OF CAMERA IS ADJUSTABLE



## SPECIFICATION

Magnification	15X~205X (on 19" monitor)	
Pixel	1.3M	
Sensor	1/3" CMOS	
Resolution	HDMI output	1920×1080, 1280×720, 640×480
	picture	2304×1536, 2304×1296, 1920×1080, 1280×720, 800×480
	video	1920×1080, 1280×720, 800×480
Output	USB/HDMI	
Power supply	5V (>500mA)	
Dimension (L×W×H)	273×205×310mm	
Weight	3.5kg	



## STANDARD DELIVERY

Main unit	1 pc
8G memory card and holder	1 pc
HDMI cable (for TV)	1 pc
USB cable and software (for computer)	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc
Plastic calibration rule (graduation 1mm)	1 pc

## LENS SCALE, MAGNIFICATION AND FOCUS DISTANCE

Lens scale	Magnification (on 19" monitor)	Focus distance (mm)
0.7X	15~40X	24~252
1X	30~50X	27~155
2X	70~80X	81~117
3X	110~120X	94~111
4X	140~160X	101~110
5X	180~205X	103~109

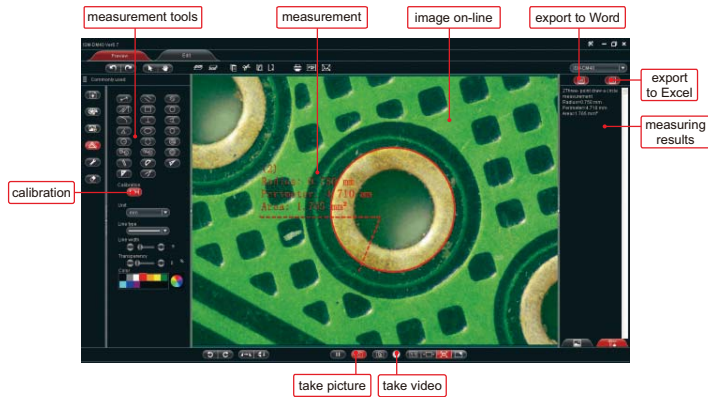
## MAGNIFICATION, VIEW FIELD AND FOCUS DISTANCE

Magnification (on 19" monitor)	View field (mm)	Focus distance
15X	28×16	252mm
30X	13.5×7.5	155mm
50X	8×4.8	124mm
100X	4.2×2.4	110mm
150X	2.7×1.5	108mm
200X	2.1×1.2	105mm

## OPTIONAL ACCESSORY

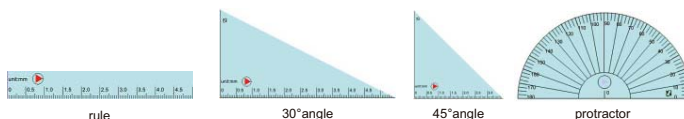
Measuring stage	ISM-DM40-STAGE
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## SOFTWARE FOR COMPUTER



### ■ Comparison tools:

Create rule, angle or protractor, to compare with workpieces.

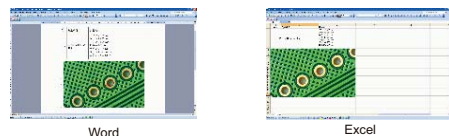


- **Language:** Chinese, English, Japanese, German, French
- **Operation system:** Windows XP/7/8/10

### ■ Measurement tools:

- measure length of line or distance between two points
- measure length of continuous line
- measure radius, length and angle of arc
- measure angle with three points
- measure distance between two circles
- measure distance between two parallel lines
- measure length, width, girth and area of rectangle
- measure distance between point and line
- measure axis lengths, girth and area of ellipse
- measure center distance between parallel lines
- measure circumference and area of polygon
- measure angle with two lines
- measure radius, girth and area of circle

### ■ Data export to Word or Excel:



## ZOOM STEREO MICROSCOPES

### 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	



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

## ZOOM STEREO MICROSCOPE CODE ISM-ZS30

### 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



### 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

## PORTABLE MEASURING MICROSCOPE



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

## DIGITAL CAMERA CODE ISM-D500

- Insert into eyepiece tube or camera connector of microscopes
- Supplied with software



adapter 0.45X

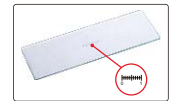


VIDEO

### application



### software CD (included)



calibration rule (graduation 0.1mm, included)



connector Ø23.2/Ø30mm (included)

### SPECIFICATION

Sensor	1/2.5" CMOS
Pixel	5M
Resolution	2592×1944 or 1296×972
Frame rate	3fps (2592×1944) 12fps (1296×972)
Exposure	manual or auto, exposure time is adjustable
SNR	41dB
Power supply	USB
Weight	400g

### STANDARD DELIVERY

Main body	1 pc
Adapter 0.45X	1 pc
Calibration rule (graduation 0.1mm)	1 pc
Connector Ø23.2/Ø30mm	1 pc
USB cable	1 pc
Software disc	1 pc

### OPTIONAL ACCESSORY

Connector Ø23.2/Ø30.5mm	ISM-DCA-CON
-------------------------	-------------

## FOLDING MAGNIFIER WITH ILLUMINATION

- Glass lens
- Powered by 3xLR927 batteries (included)

Code	Magnification	Lens diameter (ØD)
7515-10	10X	Ø21mm



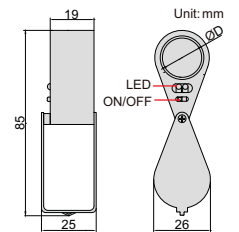
2pcs LED



closed

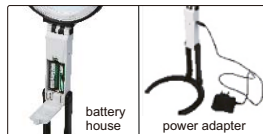


7515-10



## THREE WAYS MAGNIFIER WITH ILLUMINATION

### three ways use



battery house

power adapter

- Plastic lens
- Powered by 2xAAA batteries (included) or power adapter (110~240V, 50~60Hz)

Code	Magnification	Lens diameter (ØD)	Lens diameter (Ød)
7512-1	2X/4X	Ø120mm	Ø28mm



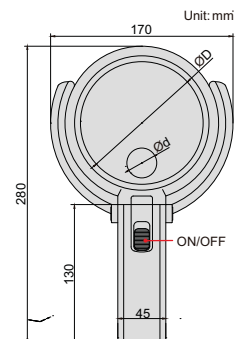
10pcs LED



VIDEO



7512-1



### MAGNIFIERS WITH ILLUMINATION



7513-2

7513-4

- Glass lens
- Powered by 3xAAA batteries (included)

(mm)

Code	Magnification	Lens diameter (ØD)	L	h
7513-2	2X	Ø75mm	170	90
7513-4	4X	Ø50mm	145	90



### TABLE MAGNIFIER WITH ILLUMINATION CODE 7516-5D



- LED illumination, working life 20000h

#### SPECIFICATION

Magnification	2.25X
Diopter	5D
Lens diameter	Ø122mm
Illumination	power: 7W, illuminance: 420lm
Power supply	100~240V, 50~60Hz

european power plug

### FOLDING MAGNIFIER



7511-8

- Glass lens

Code	Magnification	Lens diameter (ØD)
7511-8	8X	Ø21mm

### FOLDING MAGNIFIER WITH ILLUMINATION



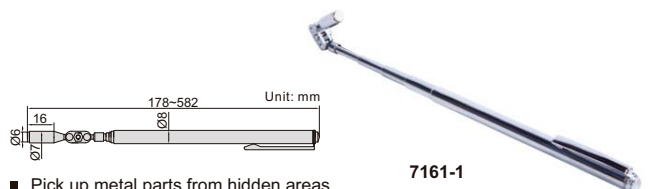
7514-1

- Plastic lens
- Powered by 2xCR1620 batteries (included)
- LED lights up automatically when  $\alpha$  is over 130°

Code	Magnification	Lens diameter (ØD)
7514-1	2.5X	Ø45mm



### TELESCOPING MAGNETIC PICK-UP

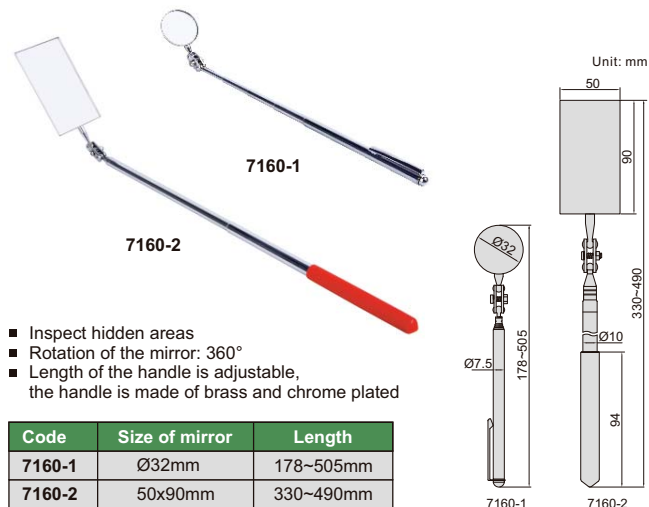


7161-1

- 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

Code	Size of magnetic tip	Magnetic force	Length
7161-1	Ø6mm	0.45kgf	178~582mm

### TELESCOPING INSPECTION MIRRORS



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

## MANUAL 360° SWIVEL VIDEOSCOPE

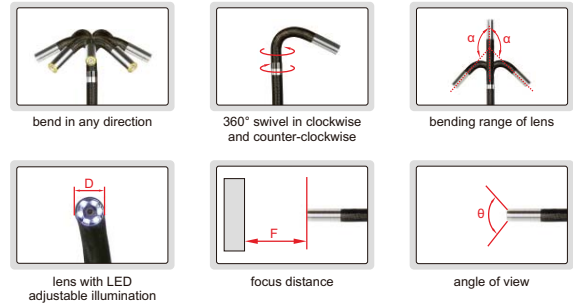
TUNGSTEN WIRE WEAVED CABLE  
RESISTANCE TO BREAK AND WEAR

**IP64**  
WATERPROOF



ISV-2000DS

the cable is interchangeable

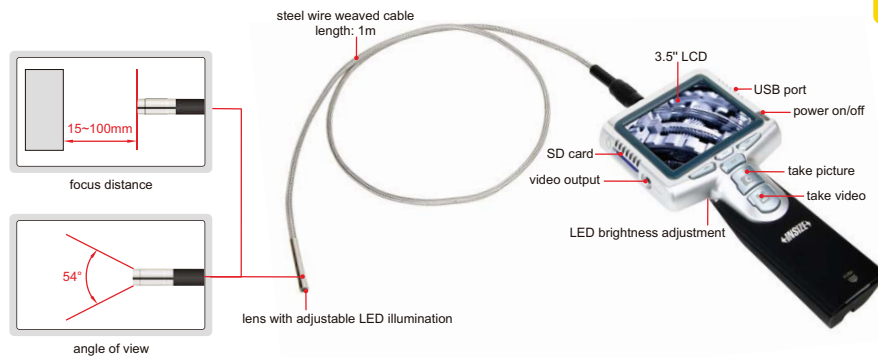


Code		ISV-2000DS
Lens	diameter (D)	6.5mm
	focus distance (F)	15mm~∞
	bending range (α)	±160°
	angle of view (θ)	90°
	illumination	8 pcs LED
	pixel	0.44M
	resolution	800×480
	dust/waterproof	IP64
Cable	bend control	manual joystick
	length	1.5m
Main unit	type	tungsten wire weaved cable
	function	take picture, 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	

### 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

## 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

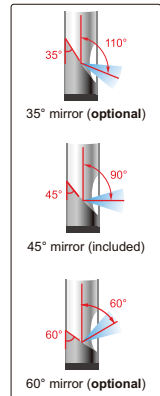
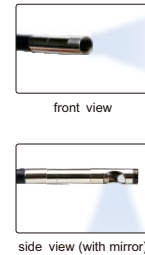


### SPECIFICATION

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
Main unit	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



### 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



- 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

### 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	$\pm(3\%L+1)\mu\text{m}$ (range<1250µm) $\pm(3\%L+10)\mu\text{m}$ (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			



### 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

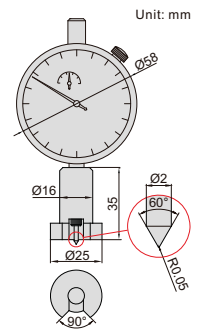
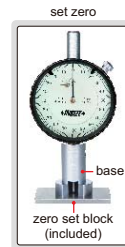
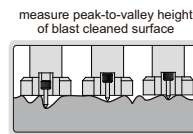
### OPTIONAL ACCESSORY

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

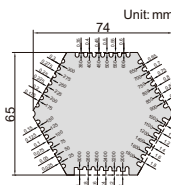
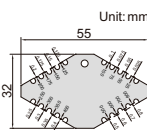


- Measure peak-to-valley height of blast cleaned surface.  
If the profile is too low, the adhesion of the coating to the surface will be reduced.  
If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Stainless steel base



Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy
2344-1	0-1mm	1mm	0.001mm	±0.005mm

## WET FILM GAGES



- 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 CODE ISU-250C



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
- Memory of maximum 5000 readings with location number



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-COUPPLANT

### SPECIFICATION OF TRANSDUCERS

Code	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipe for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T08	5.0MHz	10.8mm	0.8~300mm	20×1.2mm	<60°C	general use
ISU-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 MODEL) CODE ISU-100D



ATTENTION: NOT SUITABLE  
FOR CASTING WORKPIECES



- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice



### 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

# 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)



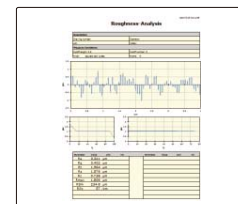
heavy duty test stand (optional)



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



measuring software (optional), can control the roughness tester,  
display roughness values, profile and curve, data statistics



adjustable stand (included)



transverse measurement

## 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)



adjustable stand (included)



probe cover (included)



put the small workpieces  
directly under the probe  
for measurement

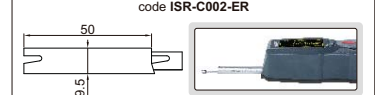
light duty test stand (optional)



the maximum workpiece  
height is 220mm

Unit: mm

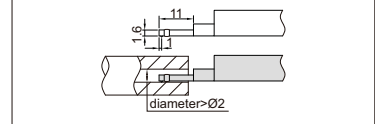
extension rod (optional),  
code ISR-C002-ER



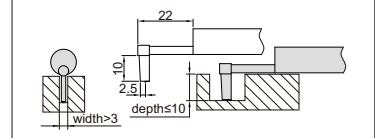
transverse rod (optional),  
code ISR-C002-TR



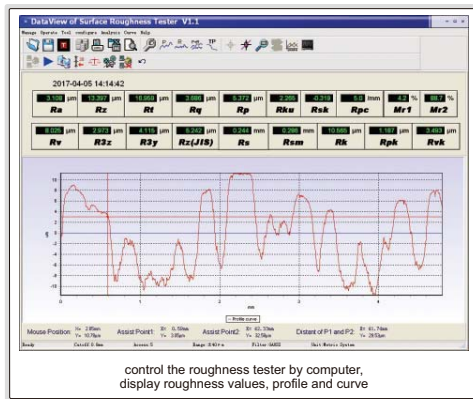
small hole probe (optional),  
code ISR-C002-SBP



deep groove probe (optional),  
code ISR-C002-DGP

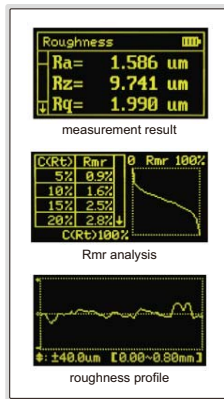


software (included)



control the roughness tester by computer,  
display roughness values, profile and curve

screen display



measurement result

Rmr analysis

roughness profile

heavy duty test stand (optional)



the maximum workpiece  
height is 310mm

## 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 CODE ISR-C003



calibration block (included)



- Unit:  $\mu\text{m}$ ,  $\mu\text{in}$
- Automatic power off

### STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 pc
AC/DC adapter	1 pc



### SPECIFICATION

Parameters	Ra, Rz, Rq, Rt	
Range	Ra, Rq: 0.05~15 $\mu\text{m}$ Rz, Rt: 0.1~50 $\mu\text{m}$	
Accuracy	$\pm 10\%$	
Resolution (Ra)	0.01 $\mu\text{m}$	
Probe	type	piezoelectric
	stylus radius/angle	10 $\mu\text{m}/90^\circ$
	stylus material	diamond
Measuring force	5mN	
Measuring unit	$\mu\text{m}/\mu\text{in}$	
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-CS2

ATTENTION: PLEASE APPLY  
ANTI-RUST OIL AFTER USE



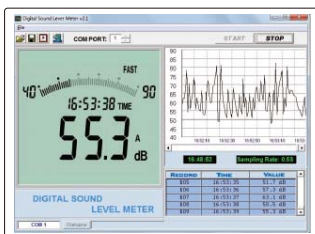
ISR-CS2

- For checking, identifying and specifying the roughness by symbol
- Made of carbon steel

Machining method	Roughness (Ra)	Roughness (Rz)	Quantity
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	1.6, 3.2, 6.3, 12.5, 25, 50 $\mu\text{m}$	6 pcs
	16, 32, 63, 125, 250, 500 $\mu\text{in}$		
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	1.6, 3.2, 6.3, 12.5, 25, 50 $\mu\text{m}$	6 pcs
	16, 32, 63, 125, 250, 500 $\mu\text{in}$		
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	1.6, 3.2, 6.3, 12.5, 25, 50 $\mu\text{m}$	6 pcs
	16, 32, 63, 125, 250, 500 $\mu\text{in}$		
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 $\mu\text{m}$	0.2, 0.4, 0.8, 1.6, 3.2, 6.3 $\mu\text{m}$	6 pcs
	2, 4, 8, 16, 32, 63 $\mu\text{in}$		
Flat lapping	0.05, 0.1 $\mu\text{m}$	0.2, 0.4 $\mu\text{m}$	2 pcs
	2, 4 $\mu\text{in}$		
External grinding	0.2, 0.4, 0.8, 1.6 $\mu\text{m}$	0.8, 1.6, 3.2, 6.3 $\mu\text{m}$	4 pcs
	8, 16, 32, 63 $\mu\text{in}$		

## DIGITAL SOUND LEVEL METER CODE 9351-130

DATA  
OUTPUT



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. 600 $\Omega$
- DC signal output: 10mV/dB, impedance approx. 100 $\Omega$
- Automatic power off



software CD  
(included)

### SPECIFICATION

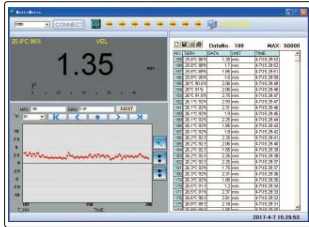
Measuring range	30~130dB
Accuracy	$\pm 2\text{dB}$
Resolution	0.1dB
Sampling time	0.5s for digital, 0.05s for analogue
Response time	fast: 125ms, slow: 1s
Frequency	30Hz~8KHz
Frequency weighting	A/C
Microphone	electret condenser type
Output	RS232, AC/DC
Power supply	6×AAA batteries
Dimension	265×80×69mm
Weight	317g

### STANDARD DELIVERY

Main unit	1 pc
RS232 cable and software	1 pc
Output connector	1 pc
Battery (AAA)	6 pcs

## DIGITAL ANEMOMETER CODE 9331-40

DATA  
OUTPUT



software (included), display measurement values and graph, save and output data



### 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
Accuracy	relative humidity	0~100%RH
	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
Resolution	relative humidity	±3% (20~80%RH), ±5% (<20%RH or >80%RH)
	velocity	0.01m/s, 0.01km/h, 0.01mil/h, 0.01ft/s, 1ft/m, 0.01knots
	flow	0.01CMS, 0.1CMM, 0.1CFM
Resolution	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	

- 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)



## DIGITAL MOISTURE METER CODE 9341-50

### 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	

- 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

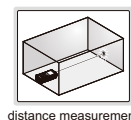


## LASER DISTANCE METER CODE 9561-80

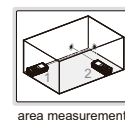
- Large display with backlight
- Unit: m, ft, in
- Distance, area, volume and height measurement
- Continuous measuring mode to track maximum and minimum value
- Memory of 99 measurement values
- Automatic power off: laser 20s, main unit 150s

### SPECIFICATION

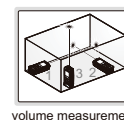
Measuring range	0.05~80m
Accuracy	±3mm
Resolution	1mm, 10mm, 0.1", 0.01ft
Measuring speed	0.5 second
Laser type	635nm, Class II, <1mW
Power supply	3×AAA batteries, for 4000 measurements
Dimension (L×W×H)	120×60×28mm
Weight	175g



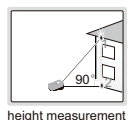
distance measurement



area measurement



volume measurement



height measurement

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs

## NON-CONTACT DIGITAL TACHOMETER CODE 9221-999

### 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



- Maximum and minimum modes
- Memory 100 measurement values
- Automatic power off



reflection sticker (included)



### STANDARD DELIVERY

Main unit	1 pc
Reflection sticker	1 roll
Battery (AAA)	4 pcs

## CONTACT DIGITAL TACHOMETER CODE 9222-199



### 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



- Unit: RPM, m/min, m/sec, ft/min, ft/sec, in/min
- Maximum and minimum modes
- Memory 100 measurement values
- Automatic power off

### 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



## 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  $(2.1 \times 6\%) = 12.6\%$

### SPECIFICATION

Measuring range	0~32%
Graduation	0.2%
Dimension	27×40×160mm
Weight	175g



## 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



### 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 supply	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

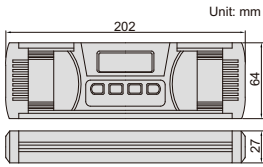
## DIGITAL LEVEL AND PROTRACTOR

**IP67**  
WATERPROOF

**ABSOLUTE**  
LEVEL

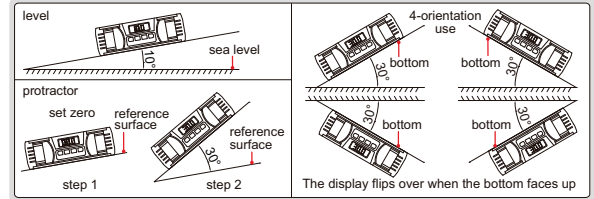
**BACKLIGHT**

**BUZZER ALARM**  
AT 0° AND 90°



2175-360

- IP67 dust/waterproof
- 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



Code	Range	Resolution	Accuracy
2175-360	0-360° (90°x4)	0.05° (=0.873mm/m)	at 0°: ±0.05°; others: ±0.1°

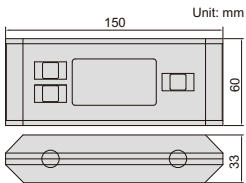
## DIGITAL LEVEL AND PROTRACTOR

**IP54**  
WATERPROOF

**ABSOLUTE**  
LEVEL

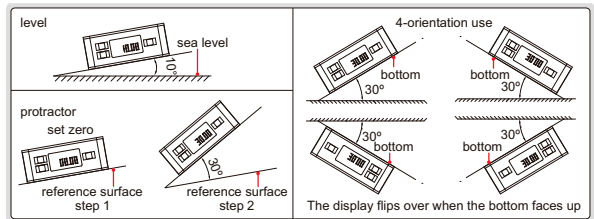
**BACKLIGHT**

**BUZZER ALARM**  
AT 0° AND 90°



2179-360

- IP54 dust/waterproof
- Aluminum frame
- 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, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft), backlight
- Two AAA batteries, automatic power off



Code	Range	Resolution	Accuracy
2179-360	0 - 360° (90°x4)	0.05° (=0.873mm/m)	at 0° and 90°: ±0.1°; others: ±0.2°

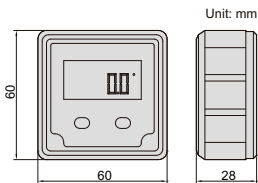
## DIGITAL LEVEL AND PROTRACTOR

**BACKLIGHT**

**ABSOLUTE**  
LEVEL

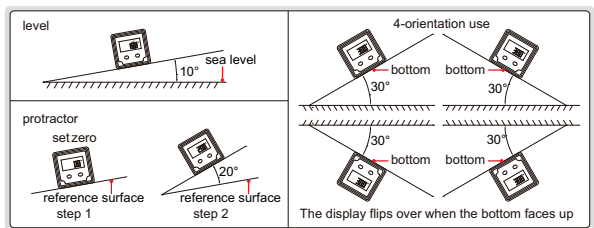
**MAGNETIC**  
BOTTOM

**DISPLAY FLIPS OVER WHEN**  
THE BOTTOM FACES UP



2170-1

- 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



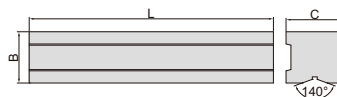
Code	Range	Resolution	Accuracy
2170-1	4x90°	0.1° (= 1.745 mm/m)	at 0° and 90°: ±0.1°; others: ±0.2°

## BLOCK LEVELS



4903-200A

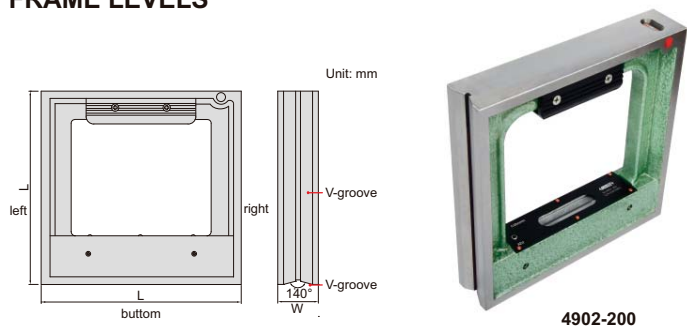
- V-groove on bottom for shafts (shafts dia. 15-70mm)
- With transverse vial
- Supplied with adjusting wrench



**ATTENTION:**  
BASIC MODEL

Code	Length (L)	Sensitivity	B	C
4903-150A	150mm	0.02mm/m(=0.001°)	40mm	45mm
4903-200A	200mm	0.02mm/m(=0.001°)	42mm	47mm
4903-300A	300mm	0.02mm/m(=0.001°)	45mm	50mm
4903-C200	200mm	0.05mm/m(=0.0029°)	42mm	47mm

## FRAME LEVELS



4902-200

ATTENTION:  
BASIC MODEL

- V-groove on bottom and left for shafts (shafts dia. 15~70mm)
- With transverse vial
- Supplied with adjusting wrench

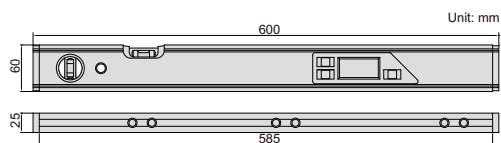
Code	Sensitivity	Size (LxL)	W
4902-200	0.02mm/m (=0.001°)	200x200mm	40mm
4902-300	0.02mm/m (=0.001°)	300x300mm	45mm



## DIGITAL LEVEL



4910-600



- With transverse and longitudinal vials
- Used as level and protractor
- 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, unit (mm/m, %, in/ft) conversion, backlight
- The display flips over when the bottom faces up
- Two AAA batteries
- Automatic power off

BUZZER ALARM  
AT 0° AND 90°

BACKLIGHT

ABSOLUTE  
LEVEL

Code	Range	Resolution	Accuracy
4910-600	0-360° (90°x4)	0.1° (=1.745mm/m)	at 0° and 90°: ±0.1°; others: ±0.2°

## ALUMINUM LEVELS

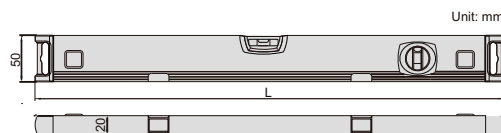


4914-600

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

VIALS MADE IN ISRAEL  
LIFETIME WARRANTY

MAGNETIC  
BASE



Code	Size (L)	Accuracy
4914-600	600mm	0.5mm/m
4914-1000	1000mm	0.5mm/m

## PORTABLE LEVEL

MAGNETIC  
BASE

VIALS MADE IN ISRAEL  
LIFETIME WARRANTY



4912-100

- 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

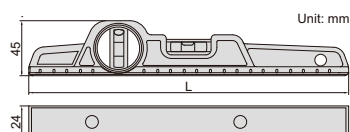
VIALS MADE IN ISRAEL  
LIFETIME WARRANTY

MAGNETIC  
BASE



4913-250

- 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



## MANUAL ROCKWELL HARDNESS TESTER CODE ISH-R150



### 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

### 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

## ULTRASONIC HARDNESS TESTER CODE ISHU-330



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



	alloy steel	steel	stainless steel	aluminum	user material
HRC	ST	AST	SST	AL	U1
HB					
HV					
user scale					

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)



### 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



### STANDARD DELIVERY

Main unit	1 pc
Probe A	1 pc
Rechargeable battery	2 pcs
Charger	1 pc
USB cable and software	1 pc

### 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-COULPLANT
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

- 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

### SPECIFICATION

Min. reading	1HL, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	±6HL (when HL=800)
Display	Leeb(HL), converted hardness, material, impact direction, test times, average value, deviation, time
Output	bluetooth and USB
Power supply	built-in rechargeable battery
Dimension	135×83×24mm
Weight	350g

### STANDARD DELIVERY

Main unit	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



INSPECTION  
CERTIFICATE

DATA  
OUTPUT



software CD  
(included)



hardness test block D  
(included)



small support ring  
(included)



wireless printer  
(optional)

### 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-COUPPLANT
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

- 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



hardness test block D  
(included)



small support ring  
(included)



wireless printer  
(optional)

### 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	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



INSPECTION  
CERTIFICATE



### 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				

### 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-COUPPLANT
Support rings	see details
Hardness test block D	ISH-BHLD



## WEBSTER HARDNESS TESTERS



■ According to ASTM B647-84 (2000)

ISHW-L20



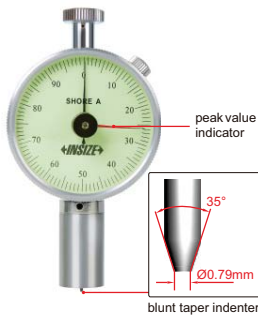
### SPECIFICATION

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

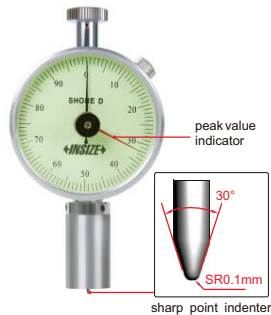
### STANDARD DELIVERY

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

## SHORE DUROMETERS



ISH-SAM



ISH-SDM

- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Optional accessory: test stand ISH-STAC and ISH-STD

### 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 DUROMETER

- 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

### SPECIFICATION

Code	ISH-STAC
Applicable durometer	ISH-SAM
Stage diameter	Ø100mm
Maximum workpiece height	75mm
Weight block	1kg



durometer is not included

ISH-STAC

## DIGITAL FORCE GAGES

- 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



ISF-1DF100



### 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				

software CD (included)



printer (optional)



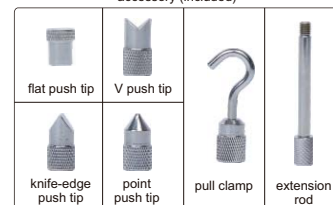
### STANDARD DELIVERY

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

accessory (included)



## DIGITAL FORCE GAGES (HIGH ACCURACY)

- 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 when the bottom faces up
- Overload alarm



ISF-DF100A



### 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				

software CD (included)



printer (optional)



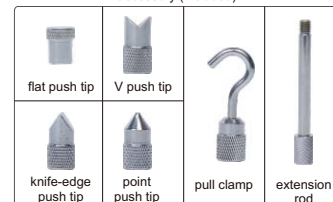
### STANDARD DELIVERY

Code	ISF-DF50A	ISF-DF100A	ISF-DF200A	ISF-DF500A	ISF-DF1KA
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

accessory (included)



## TEST STAND FOR DIGITAL FORCE GAGES 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
--	----------------

force gages are not included



horizontal orientation test



digital scale (optional)



## FORCE GAGES

- Push and pull test
- Peak (max.) or tracking mode



ISF-F500



### 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)							

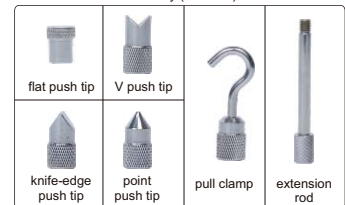
### STANDARD DELIVERY

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
------------	-----------

### accessory (included)



## TEST STAND FOR FORCE GAGES CODE ISF-MT500

- For force gages (code ISF-FXX)
- To be used in vertical and horizontal orientation



horizontal orientation test

force gages is not included



### SPECIFICATION

Load capacity	500N
Travel	150mm (3mm vertical movement per revolution of handwheel)
Dimension	160x240x460mm
Weight	12kg



## DIAL TENSION GAGES

- Clockwise and counter-clockwise use
- For electronic and precision mechanical industry, such as measure contact pressure of relay, adjust the tension or compression of spring



ISF-TG3

### 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						

### 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						



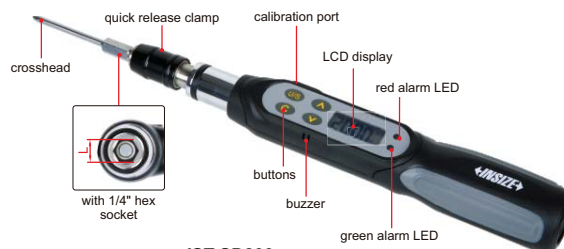
VIDEO

## DIGITAL TORQUE SCREWDRIVERS

- 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

### SPECIFICATION

Code	IST-SD50	IST-SD200
Range	10~50cN.m	40~200cN.m
Accuracy	clockwise	±3%
	counter-clockwise	±4%
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



IST-SD200



software CD (included)



VIDEO

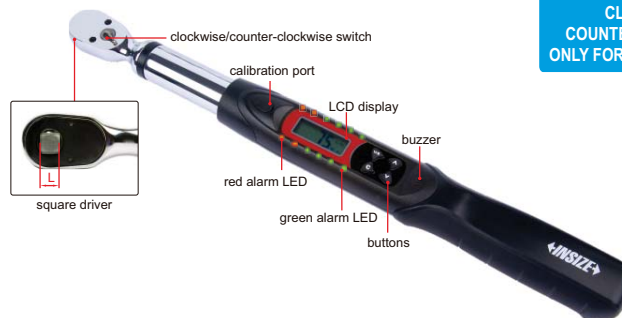
### OPTIONAL ACCESSORY

Calibration cable IST-SD-CABLE



## 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)



IST-W135A

OPTIONAL ACCURACY:  
CLOCKWISE: ±1%  
COUNTER-CLOCKWISE: ±2%  
ONLY FOR RANGE FOR 6~850N.m



VIDEO

### 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

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

## CLASSIC TORQUE WRENCHES

ACCURACY ±4%

LOUD CLICK SOUND



- Clockwise and counter-clockwise operation
- Unit: N.m, kgf.m, lbf.in, lbf.ft
- Loud click sound when target torque value is reached
- According to DIN ISO 6789, ASME B107.300-2010

IST-7WM135

### SPECIFICATION

Code	IST-7WM33	IST-7WM68	IST-7WM135	IST-7WM225	IST-7WM330	IST-7WM560
Range	N.m	5~33	12~68	25~135	50~225	70~330
	kgf.m	0.5~3.4	1.2~7	3~14	5~23	7~35
	lbf.in	40~300	100~600	200~1200	400~2000	60~3000
	lbf.ft	4~24	10~50	20~100	40~160	50~250
Accuracy	±4%	±4%	±4%	±4%	±4%	±4%
Graduation	N.m	1	2	5	5	10
	kgf.m	0.1	0.2	1	1	1
	lbf.in	10	20	50	50	100
	lbf.ft	1	2	2	5	10
Square driver (D)	1/4"	3/8"	1/2"	1/2"	1/2"	3/4"
Length	425mm	500mm	556mm	600mm	805mm	996mm
Weight	720g	1050g	1600g	2300g	2600g	7410g

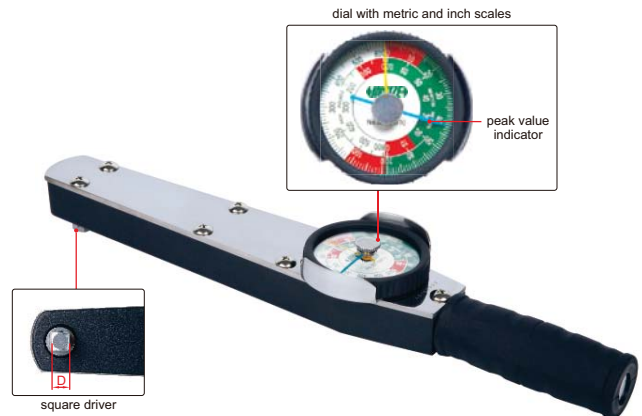


## DIAL TORQUE WRENCHES

ACCURACY ±3%



- Clockwise and counter-clockwise operation
- According to DIN ISO 6789, ASME B107.300



IST-DW70

### 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

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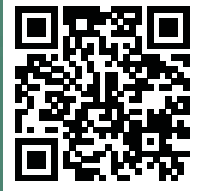


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Website: www.insize-eu.com



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The products with this mark are supplied with manufacturer inspection certificate

INSIZE Inspection Certificate							
Product name	Digital Caliper	Traceable to	USA NIST No.821/279484-10 Germany DKD No.D-K-15190-01-00				
Code No.	1108-150	Inspector	<i>Jose</i>				
Measuring range	0-150mm / 0-6"	Judgement	Passed				
Resolution	0.01mm / 0.0005"						
Serial No.	0910120004						
Standard temperature	20°C / 68°F						
		Unit: inch	Unit: mm				
Measuring Length	Permissible Error	Error		Measuring Length	Permissible Error	Error	
		External	Internal			External	Internal
0.4 DIA	+0.0005 -0.0010	/	0.0005	φ10	+0.01 -0.02	/	0.01
2		-0.0005	/	50		-0.01	/
4	±0.0010	-0.0005	/	100	±0.02	-0.01	/
6		-0.0010	/	150		-0.02	/
8		/	/	200		/	/
10	±0.0015	/	/	250	±0.03	/	/
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