

2020  
2021



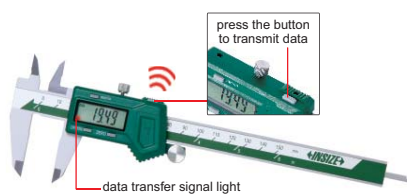
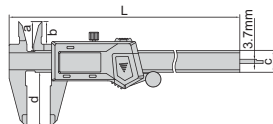
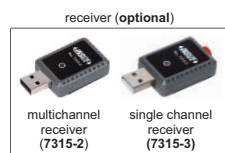
# MEASURING INSTRUMENTS

MINI CATALOGUE NO. 23

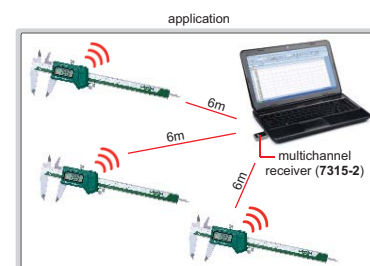


## WIRELESS DIGITAL CALIPERS (NON-WATERPROOF)

**INSPECTION  
CERTIFICATE**  
TRACEABLE TO DKD



1113-150



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

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

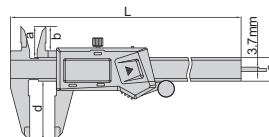
\* Supplied with manufacturer inspection certificate traceable to DKD Germany

## DIGITAL CALIPERS (STANDARD TYPE, NON-WATERPROOF)

**INSPECTION  
CERTIFICATE**  
TRACEABLE TO DKD



1108-150



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

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	17	60

\* Supplied with manufacturer inspection certificate traceable to DKD Germany

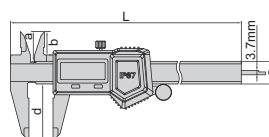
## WATERPROOF DIGITAL CALIPERS

**IP67  
WATERPROOF**

**INSPECTION  
CERTIFICATE**  
TRACEABLE TO DKD



1118-150B



- 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

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

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

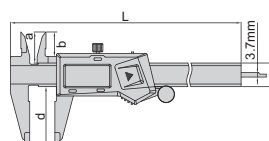
**ATTENTION:  
NO DATA OUTPUT**

## METRIC DIGITAL CALIPERS (NON-WATERPROOF)

**INSPECTION  
CERTIFICATE**  
TRACEABLE TO DKD



1109-150



- 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	L	a	b	c	d
1109-150 *	0-150mm	±0.03mm	236	21	16	16	40
1109-200 *	0-200mm	±0.03mm	286	24	19	16	50

\* Supplied with manufacturer inspection certificate traceable to DKD Germany

**LOCK READING WITH  
"HOLD" BUTTON**

**DATA  
OUTPUT**

## DIGITAL CALIPER WITH ROUND DEPTH BAR (NON-WATERPROOF)

DATA  
OUTPUT

INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

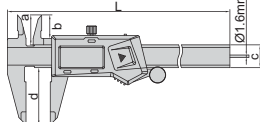


1119-150



round depth  
bar Ø1.6mm

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



(mm)

Code	Range	Accuracy	L	a	b	c	d
1119-150*	0-150mm/0-6"	±0.03mm	236	21	16	16	40

\*Supplied with manufacturer inspection certificate traceable to DKD Germany

## DIGITAL CALIPERS (NON-WATERPROOF)

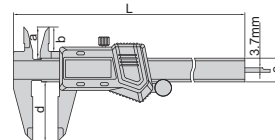
ATTENTION: NO  
DATA OUTPUT

INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD



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



(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

## HEAVY DUTY 300mm DIGITAL CALIPER (NON-WATERPROOF)

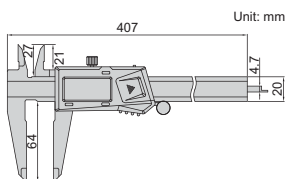
INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

DATA  
OUTPUT



1196-300

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



Unit: mm

Code	Range	Accuracy
1196-300*	0-300mm/0-12"	±0.03mm

\*Supplied with manufacturer inspection certificate traceable to DKD Germany

## DIGITAL CALIPER WITH CARBIDE TIPPED JAWS (NON-WATERPROOF)

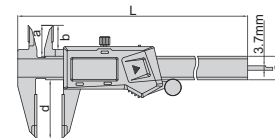
INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

DATA  
OUTPUT



1110-150A

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



(mm)

Code	Range	Accuracy	L	a	b	c	d
1110-150A*	0-150mm/0-6"	±0.03mm	236	21	16	16	40

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

## DIGITAL CALIPER WITH CERAMIC TIPPED JAWS (NON-WATERPROOF)

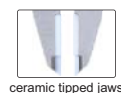
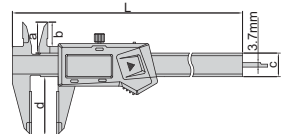
INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

DATA  
OUTPUT



1193-150

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



ceramic tipped jaws

(mm)

Code	Range	Accuracy	L	a	b	c	d
1193-150*	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

## LEFT HAND DIGITAL CALIPER (NON-WATERPROOF)

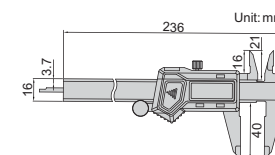
INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

DATA  
OUTPUT



1130-150

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



Unit: mm

Code	Range	Accuracy
1130-150*	0-150mm/0-6"	±0.03mm

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



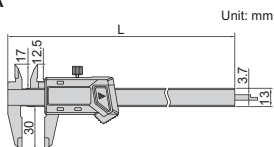
## MINI DIGITAL CALIPERS (NON-WATERPROOF)

**ATTENTION:**  
NO DATA OUTPUT



1111-100A

- 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



Unit: mm

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

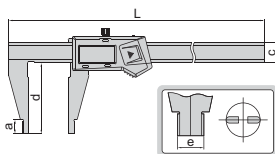
## DIGITAL CALIPERS (NON-WATERPROOF)

**DATA OUTPUT**



1170-300

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



(mm)

Code	Range	Accuracy	a	c	d	e	L
1170-306	0-300mm/0-12"	±0.04mm	12	17	60	10	420
1170-300	0-300mm/0-12"	±0.06mm	12	17	90	10	420

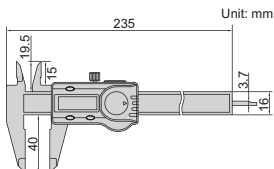
## PLASTIC DIGITAL CALIPER (NON-WATERPROOF)

**ATTENTION:**  
NO DATA OUTPUT



1139-150

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



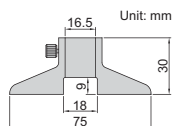
Unit: mm

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

## DEPTH BASE ATTACHMENT



6140



Unit: mm

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



Code	Application
6140	Suitable for calipers with beam width (w) 16mm

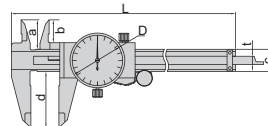
## DIAL CALIPERS

**INSPECTION CERTIFICATE**  
TRACEABLE TO DKD

**SHOCK PROOF**



1312-150A



- Shockproof dial indicator
- Made of stainless steel

### Dial indicator graduation 0.02mm

(mm)

Code	Range	Accuracy	L	a	b	c	d	D	t
1312-150A*	0-150mm	±0.03mm	235	21	16.5	16	40	Ø39	6.5
1312-200A*	0-200mm	±0.03mm	288	24	19	16	48	Ø39	6.5
1312-300A*	0-300mm	±0.03mm	410	28	22	20	62	Ø44.5	7.5

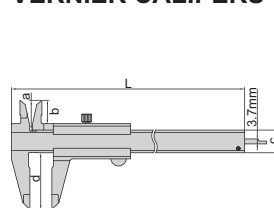
### Dial indicator graduation 0.01mm

(mm)

Code	Range	Accuracy	L	a	b	c	d	D	t
1311-150A*	0-150mm	±0.03mm	235	21	16.5	16	40	Ø39	6.5
1311-200A*	0-200mm	±0.03mm	288	24	19	16	48	Ø39	6.5
1311-300A*	0-300mm	±0.03mm	410	28	22	20	62	Ø44.5	7.5

\* Supplied with manufacturer inspection certificate traceable to DKD Germany

## VERNIER CALIPERS



1205-150S

- 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 0.02mm/0.001"

(mm)

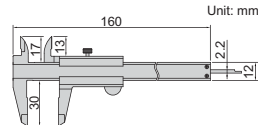
Code	Range	Accuracy	L	a	b	c	d
1205-1502S	0-150mm/0-6"	±0.03mm	235	20.5	15.5	16	40
1205-2002S	0-200mm/0-8"	±0.03mm	290	23.5	19	17	50
1205-3002S	0-300mm/0-12"	±0.03mm	414	27.5	22	20	64

## MINI VERNIER CALIPERS



1203-1003

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

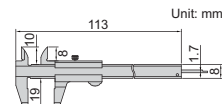


Unit: mm

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



1204-70



Unit: mm

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

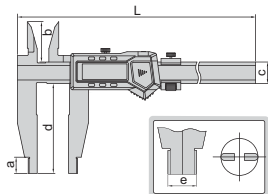


## DIGITAL CALIPERS (NON-WATERPROOF)

DATA  
OUTPUT

1136-501

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



(mm)

Code	Range	Accuracy	a	b	c	d	e	L
1136-501	0-500mm/0-20"	±0.05mm	18	45	24	100	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

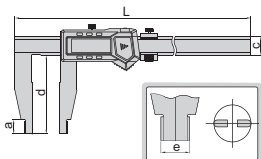
Sizes available up to 2000mm

## DIGITAL CALIPERS (NON-WATERPROOF)

DATA  
OUTPUT

1106-501

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



(mm)

Code	Range	Accuracy	a	c	d	e	L
1106-501	0-500mm/0-20"	±0.05mm	18	24	100	20	675
1106-601	0-600mm/0-24"	±0.05mm	18	24	100	20	770
1106-1002	0-1000mm/0-40"	±0.08mm	24	31	150	20	1220

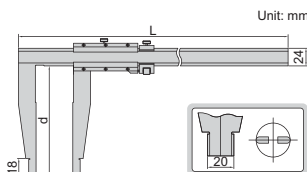
Sizes available up to 3000mm

## LONG JAW VERNIER CALIPERS



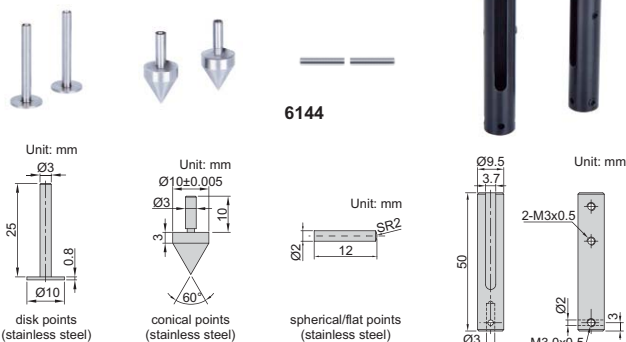
1215-532

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

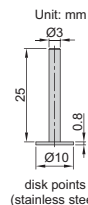
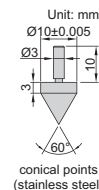
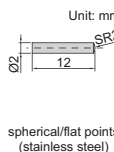
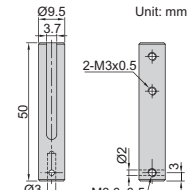


Unit: mm

Code	Range	Accuracy	d	L
1215-532	0-500mm/0-20"	±0.06mm	200mm	670mm
1215-622	0-600mm/0-24"	±0.06mm	150mm	770mm

ACCESSORY SET FOR DIGITAL CALIPERS  
CODE 6144

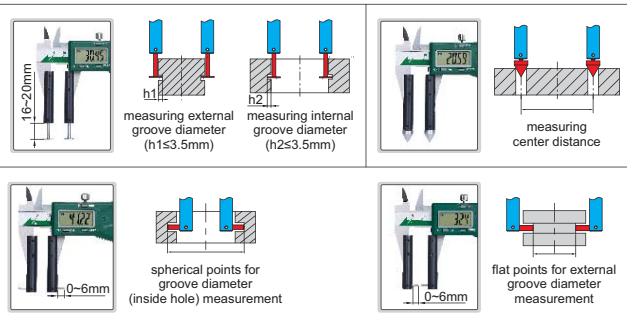
6144

disk points  
(stainless steel)conical points  
(stainless steel)spherical/flat points  
(stainless steel)

Unit: mm

Code  
6144

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



## DIGITAL CALIPER (NON-WATERPROOF)

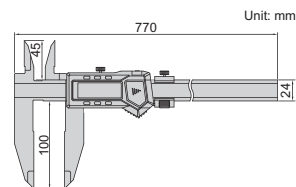
DATA  
OUTPUT

1135-601

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

Code	Range	Accuracy
1135-601	0-600mm/0-24"	±0.05mm

Sizes available up to 1000mm



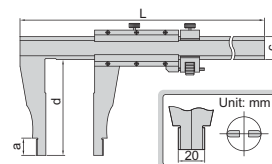
Unit: mm

## VERNIER CALIPERS



1214-600

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



Unit: mm

Code	Range	Accuracy	a	c	d	L
1214-500	0-500mm/0-20"	±0.05mm	18mm	24mm	100mm	670mm
1214-600	0-600mm/0-24"	±0.05mm	18mm	24mm	100mm	770mm
1214-1000	0-1000mm/0-40"	±0.08mm	24mm	32mm	140mm	1216mm



## DIGITAL INSIDE GROOVE CALIPERS (NON-WATERPROOF)

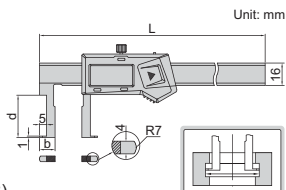
DATA  
OUTPUT

depth stop 6143  
(optional)



1120-150A

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



Unit: mm

(mm)

Code	Range	Accuracy	L	b	d
1120-150A	22-150mm	±0.04mm	250	11	30
1120-200A	25-200mm	±0.04mm	310	12.5	40



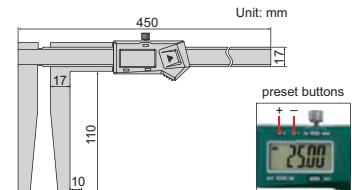
## DIGITAL INSIDE GROOVE CALIPER (NON-WATERPROOF)

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



D1	L1
Ø9	<8
Ø10	<15
Ø11-150	<30
Ø25	<50
Ø26	<60
Ø27-300	<110

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

## DIGITAL INSIDE GROOVE CALIPER (NON-WATERPROOF)

DATA  
OUTPUT

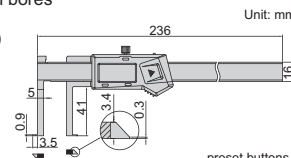


1520-150

depth stop 6143  
(optional)

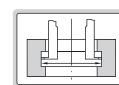


- Measure diameter of grooves inside small bores
- Resolution 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output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



Unit: mm

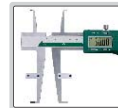
Code	Range	Accuracy
1520-150	11-150mm/0.43-6"	±0.04mm



## DIGITAL INSIDE GROOVE CALIPER (NON-WATERPROOF)

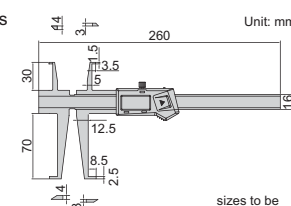
DATA  
OUTPUT

depth stop 6143  
(optional)



1176-150

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



Unit: mm

D1	L1	D2	L2
Ø9	<8	Ø15	<10
Ø10	<15	Ø16	<18
Ø11-150	<30	Ø17	<26
		Ø18	<34
		Ø19	<42
		Ø20	<50
		Ø21	<58
		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

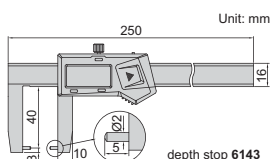
## DIGITAL OUTSIDE POINT CALIPER (NON-WATERPROOF)

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



Unit: mm



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

## DIGITAL INSIDE POINT CALIPER (NON-WATERPROOF)

DATA  
OUTPUT

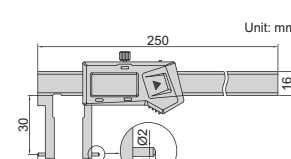


1121-150A

depth stop 6143  
(optional)

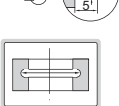


- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable



Unit: mm

Code	Range	Accuracy
1121-150A	24-150mm	±0.04mm





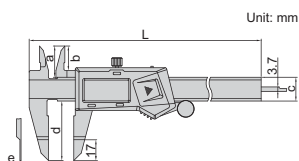
## DIGITAL BLADE CALIPER (NON-WATERPROOF)



1188-150A

DATA  
OUTPUT

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



Unit: mm

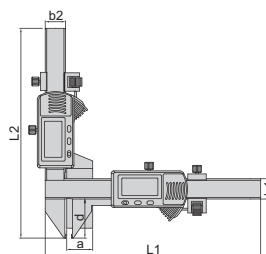
(mm)

Code	Range	Accuracy	L	a	b	c	d	e
1188-150A	0-150mm/0-6"	±0.03mm	235	21	16.5	16	40	0.75

Sizes available up to 300mm

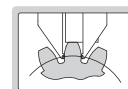
## DIGITAL GEAR TOOTH CALIPER (NON-WATERPROOF)

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

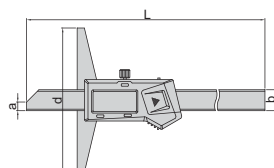
## DIGITAL DEPTH GAGES (STANDARD TYPE, NON-WATERPROOF)

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
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable



(mm)

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

Sizes available up to 500mm

## DIGITAL DEPTH GAGE WITH ROUND DEPTH BAR (NON-WATERPROOF)

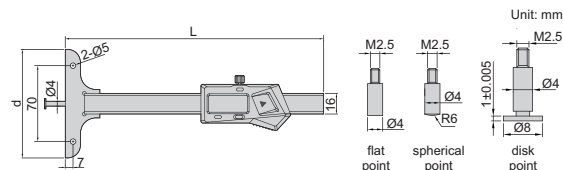
DATA  
OUTPUT

MEASURE DEPTH OF  
SMALL HOLES (>Ø4mm)

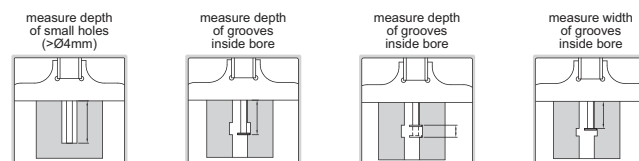
MEASURE WIDTH AND DEPTH  
OF GROOVES INSIDE BORE



1148-200



Unit: mm



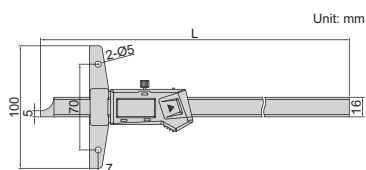
## DIGITAL DEPTH GAGE WITH MOUNTING HOLES FOR EXTENSION BASE (NON-WATERPROOF)

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)



Unit: mm

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)



- 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)

extension base for 1148-200 (optional)



(mm)

Code	Range*	Accuracy	L	d	Remark
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

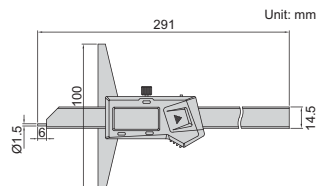
## DIGITAL POINT DEPTH GAGE (NON-WATERPROOF)



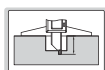
1143-200A

DATA  
OUTPUT

- 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	Resolution	Accuracy
1143-200A	0-200mm/0-8"	0.01mm/0.0005"	±0.03mm



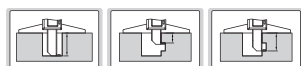
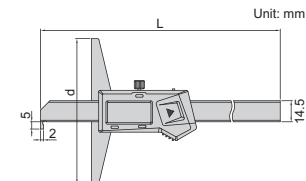
## DIGITAL HOOK DEPTH GAGE (NON-WATERPROOF)



1142-150A

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
- 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

## VERNIER DEPTH GAGES (STANDARD TYPE)



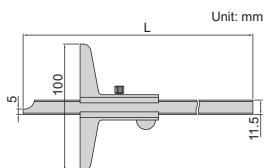
1240-200

Graduation 0.02mm (mm)

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

Graduation 0.05mm (mm)

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



- Made of stainless steel
- Satin chrome plated reading surface

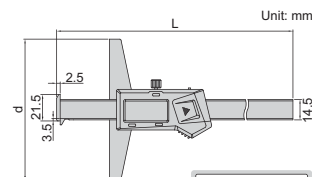
## DIGITAL DOUBLE HOOK DEPTH GAGES (NON-WATERPROOF)

DATA  
OUTPUT

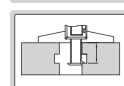
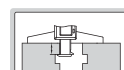


1144-150A

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



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

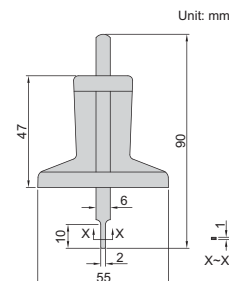


## VERNIER DEPTH GAGE (ECONOMIC TYPE)



1244-30

- Graduation: 0.1mm
- Made of stainless steel



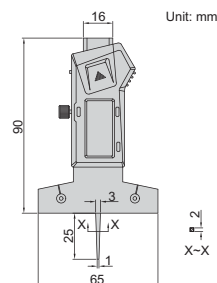
Code	Range	Accuracy
1244-30	0-30mm	±0.10mm

## MINI DIGITAL DEPTH GAGE (NON-WATERPROOF)

DATA  
OUTPUT



1145-25A



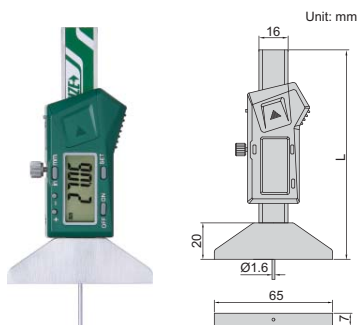
- Measure depth of small groove and hole, also measure depth of tire tread
- Buttons: on/off, zero, mm/inch
- Supplied with zero set surface
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable

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



## MINI DIGITAL DEPTH GAGE WITH ROUND BAR (NON-WATERPROOF)

DATA  
OUTPUT



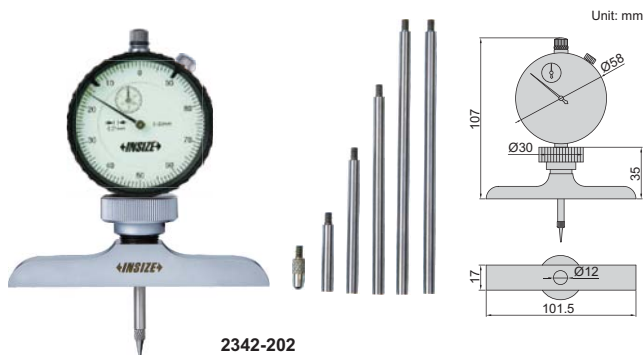
1140-25

- 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

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



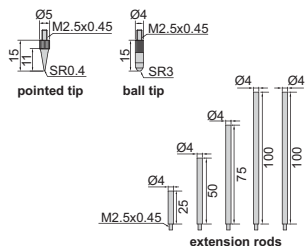
## DIAL DEPTH GAGE



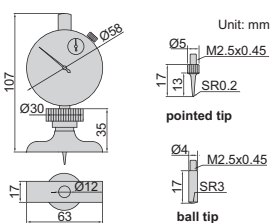
2342-202

- 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

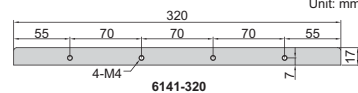
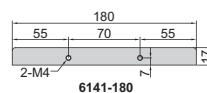
- Dial indicator graduation: 0.01mm
- Stainless steel base
- Supplied with pointed tip and ball tip

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

## EXTENSION BASES



6141-180



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

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

## DIGITAL DEPTH GAGES

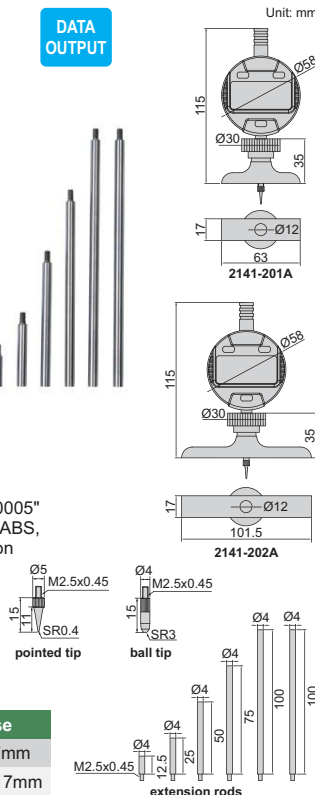
DATA  
OUTPUT



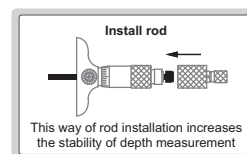
2141-202A

- Accuracy: ±20µm
- Digital indicator stroke: 12.7mm/0.5"
- Digital indicator resolution: 0.01mm/0.0005"
- 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

Code	Range	Base
2141-201A	0-300mm/0-12"	63x17mm
2141-202A	0-300mm/0-12"	101.5x17mm



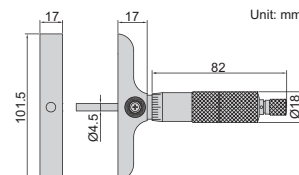
## DEPTH MICROMETERS



3241-100

- Meet DIN863-2
- Graduation: 0.01mm
- Micrometer head accuracy: ±0.3µm
- 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
3241-100	0-100mm	4 pcs
3241-150	0-150mm	6 pcs
3241-300	0-300mm	12 pcs









## DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITHOUT DATA OUTPUT)

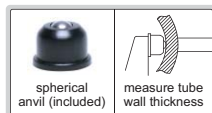
INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

without data output

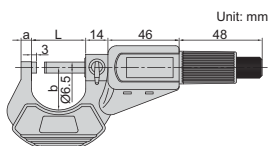


3109-25A

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")



Unit: mm



(mm)

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

\*Supplied with manufacturer inspection certificate traceable to DKD Germany

## DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITH DATA OUTPUT)

INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

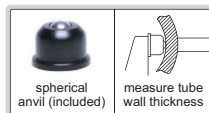
data output



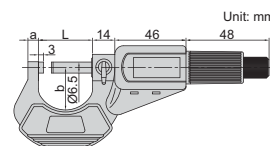
3102-25

IP54  
WATERPROOF

DATA  
OUTPUT



- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- 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")
- Optional accessory: data output cable



Unit: mm



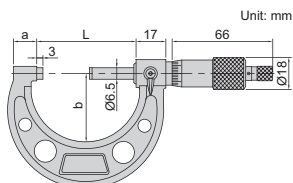
(mm)

Code	Range	Accuracy	L	a	b
3102-25*	0-25mm/0-1"	±2μm	32	6	27.5
3102-50*	25-50mm/1-2"	±2μm	57	8	37
3102-75*	50-75mm/2-3"	±3μm	82	8	50
3102-100*	75-100mm/3-4"	±3μm	107	10	61

\*Supplied with manufacturer inspection certificate traceable to DKD Germany

## 1μm GRADUATION OUTSIDE MICROMETERS

INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD



Unit: mm



3210-25A

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

Code	Range	Accuracy	L	a	b
3210-25A*	0-25mm	4μm	32mm	9mm	28mm
3210-50A*	25-50mm	4μm	57mm	14mm	38mm
3210-75A*	50-75mm	5μm	82mm	15mm	49mm
3210-100A*	75-100mm	5μm	107mm	15mm	60mm

\*Supplied with manufacturer inspection certificate traceable to DKD Germany

## OUTSIDE MICROMETERS

INSPECTION  
CERTIFICATE  
TRACEABLE TO DKD

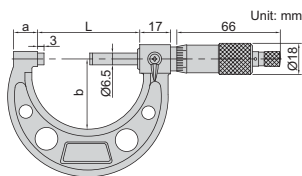


3203-25A



3203-50A

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



Unit: mm



3203-1004A

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

\*Supplied with manufacturer inspection certificate traceable to DKD Germany

Individual (mm)

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



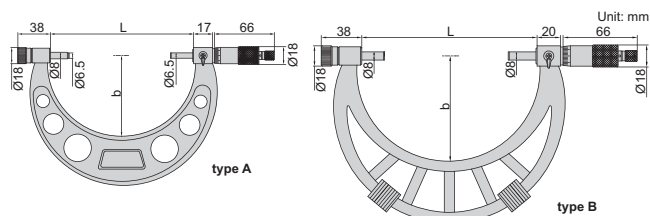
## OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS



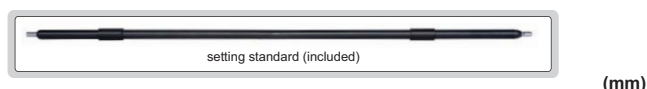
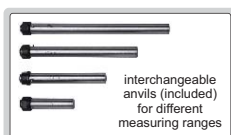
3206-150A



3206-400



- 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
3206-300A	150-300mm	A	9μm	308	165	150, 175, 200, 225, 250, 275
3206-400	300-400mm	B	11μm	409	224	325, 375
3206-500	400-500mm	B	13μm	509	275	425, 475

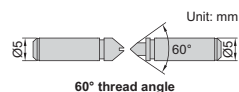
Sizes available up to 1000mm

## MEASURING TIPS FOR SCREW THREAD MICROMETERS



### Metric and unified thread (60° thread angle)

Code	Pitch
7381-TS	6 pairs/set: 0.4-0.5mm/64-48TPI, 0.6-0.9mm/44-28TPI, 1-1.75mm/24-14TPI, 2-3mm/13-9TPI, 3.5-5mm/8-5TPI, 5.5-7mm/4.5-3.5TPI



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

## POINT MICROMETER

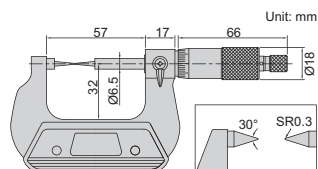
- Measure the web thickness of drills, small grooves and keyways
- Graduation: 0.01mm
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm)



3230-25A

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

Sizes available up to 100mm

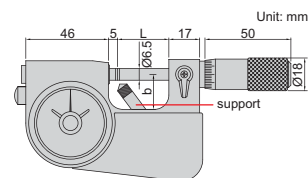


## INDICATING MICROMETER

ATTENTION: SETTING STANDARDS ARE OPTIONAL



3332-25



- Meet DIN863-3
- Micrometer head graduation: 0.002mm
- Micrometer head accuracy: 4μm
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- Carbide measuring faces
- Optional accessory: gage blocks grade 0 (4101-A series), for zero setting

Code	Micrometer head range	L	b	Remark
3332-25	0-25mm	28.5mm	19mm	with support

Sizes available up to 100mm

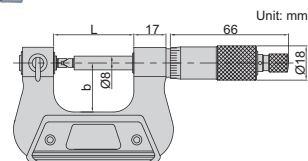
## SCREW THREAD MICROMETER

NON-ROTATING SPINDLE

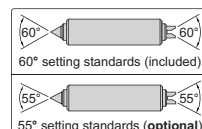
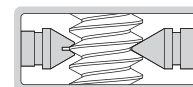
measuring tips are optional



3281-25A



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



accuracy of micrometers with tips

Pitch (mm)	Range
	0-25 mm
0.4~0.5	±0.01mm
0.6~0.8	±0.01mm
1~1.25	±0.012mm
1.5~2.0	±0.014mm
2.5~3.5	±0.016mm

Code	Range	L	b
3281-25A	0-25mm	42mm	26mm

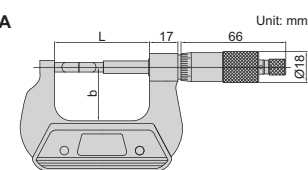
Sizes available up to 200mm

## BLADE MICROMETERS

NON-ROTATING SPINDLE



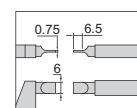
3232-25A



- 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	Accuracy	L	b
3232-25A	0-25mm	4μm	57mm	32mm
3232-50A	25-50mm	4μm	82mm	44.5mm

Sizes available up to 175mm



## DISK MICROMETER (ECONOMIC TYPE)

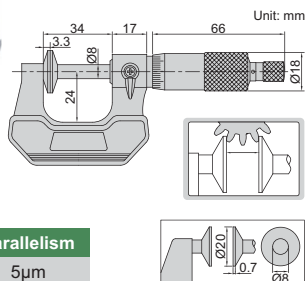


3282-25

ATTENTION: LOW PARALLELISM  
OF TWO MEASURING FACES

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

Code	Range	Accuracy	Parallelism
3282-25	0-25mm	4μm	5μm



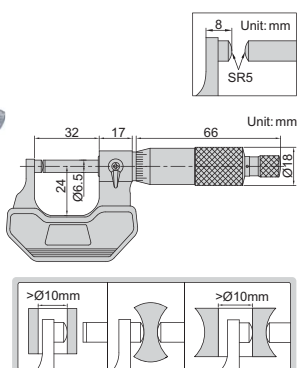
## SPHERICAL ANVIL TUBE MICROMETER



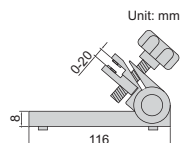
3260-25SA

- 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	Accuracy
3260-25SA	0-25mm	4μm



## MICROMETER STAND



Code  
6300

- Suitable for micrometers up to 100mm



6300



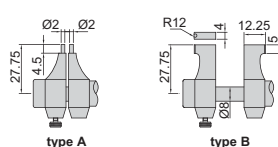
## INSIDE MICROMETERS (ECONOMIC TYPE)

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

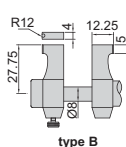
ATTENTION: LOW PARALLELISM  
OF TWO MEASURING FACES



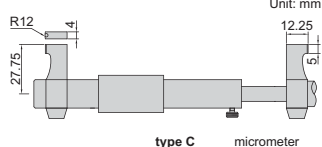
3220-50



type A



type B



type C

micrometer stand with clamp (optional)

Code	Range	Type	Setting ring	Accuracy
3220-30	5-30mm	A	5mm (included)	7μm
3220-50	25-50mm	B	25mm (included)	8μm
3220-75	50-75mm	B	50mm (optional)	9μm
3220-100	75-100mm	C	75mm (optional)	10μm



## DIGITAL CRIMP HEIGHT MICROMETER

DATA  
OUTPUT

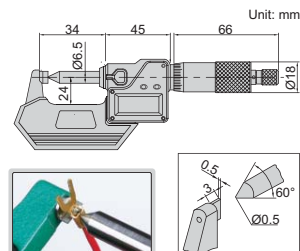
IP65  
WATERPROOF



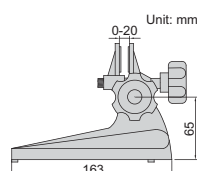
3566-25BA

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

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



## MICROMETER STAND



Code  
6301

- Suitable for micrometers up to 100mm



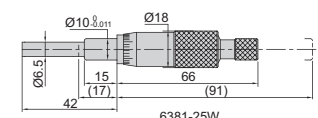
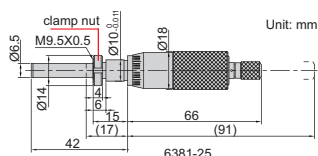
6301

## MICROMETER HEADS



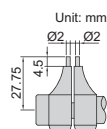
6381-25

- Meet DIN863-2
- Ratchet stop



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

## DIGITAL INSIDE MICROMETER (ECONOMIC TYPE)



Unit: mm

ATTENTION: LOW PARALLELISM  
OF TWO MEASURING FACES

- 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	Setting ring	Accuracy	Resolution
3520-30	5-30mm/0.2-1.2"	5mm (included)	±5μm	0.001mm/0.00005"



3520-30

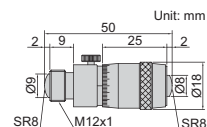
DATA  
OUTPUT

## TUBULAR INSIDE MICROMETERS



3222-300

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



Code	Range	Travel of micrometer head	Extension rods
3222-300	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

Sizes available up to 1500mm

## THREE POINTS INTERNAL MICROMETERS



micrometer stand with clamp (optional)



- Meet DIN863-4
- 6-12mm: graduation 0.001mm, 12-150mm: graduation 0.005mm
- Ratchet stop
- Optional accessory: setting rings (code 6312), micrometer stand and clamp (code 6301 and 6301-2)

3227-8



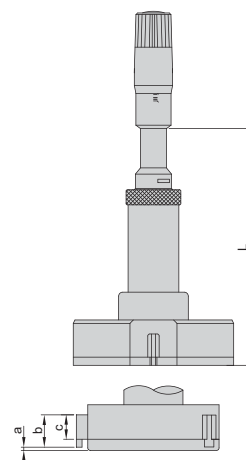
**Type B**  
6-12mm, steel measuring points three points

3227-16



**Type C**  
12-50mm, carbide measuring points three points

3227-100



**Type D**  
50-150mm, carbide measuring points three points

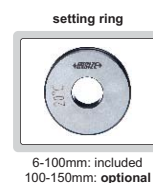
### Individual

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3227-8*	6-8mm	B (three points)	4μm	Ø6 (included)	100	54.5	1.5	2.5	—
3227-10*	8-10mm	B (three points)	4μm	Ø8 (included)	100	54.5	1.5	2.5	—
3227-12*	10-12mm	B (three points)	4μm	Ø10 (included)	100	54.5	1.5	2.5	—
3227-16*	12-16mm	C (three points)	4μm	Ø16 (included)	150	80	0.5	6	4.5
3227-20*	16-20mm	C (three points)	4μm	Ø16 (included)	150	80	0.5	6	4.5
3227-25*	20-25mm	C (three points)	4μm	Ø25 (included)	150	90	0.5	8	6
3227-30*	25-30mm	C (three points)	4μm	Ø25 (included)	150	90	0.5	8	6
3227-40*	30-40mm	C (three points)	4μm	Ø40 (included)	150	97	0.5	14	12
3227-50*	40-50mm	C (three points)	5μm	Ø40 (included)	150	97	0.5	14	12
3227-63*	50-63mm	D (three points)	5μm	Ø62 (included)	150	114	0.5	17.5	14.5
3227-75*	62-75mm	D (three points)	5μm	Ø62 (included)	150	114	0.5	17.5	14.5
3227-88*	75-88mm	D (three points)	5μm	Ø87 (included)	150	114	0.5	17.5	14.5
3227-100*	87-100mm	D (three points)	5μm	Ø87 (included)	150	114	0.5	17.5	14.5
3227-125*	100-125mm	D (three points)	6μm	optional	150	140	0.9	29	25
3227-150*	125-150mm	D (three points)	6μm	optional	150	140	0.9	29	25

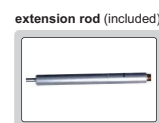
### Set

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



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

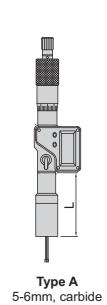


3227-504

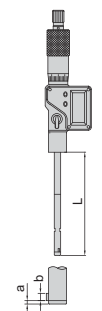
## DIGITAL TWO POINTS/THREE POINTS INTERNAL MICROMETERS

DATA  
OUTPUTIP65  
WATERPROOFINSPECTION  
CERTIFICATE

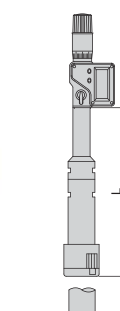
3127-6

Type A  
5-6mm, carbide  
measuring points  
two points

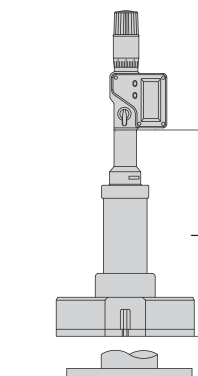
3127-12

Type B  
6-12mm, steel  
measuring points  
three points

3127-40

Type C  
12-50mm, carbide  
measuring points  
three points

3127-100

Type D  
50-100mm, carbide  
measuring points  
three points

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

## Individual

(mm)

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3127-6 *	5-6mm/0.20-0.24"	A (two points)	6μm	Ø6 (included)	—	22	—	—	—
3127-8 *	6-8mm/0.24-0.31"	B (three points)	4μm	Ø6 (included)	100	57	1.5	2.5	—
3127-10 *	8-10mm/0.31-0.39"	B (three points)	4μm	Ø8 (included)	100	57	1.5	2.5	—
3127-12 *	10-12mm/0.39-0.47"	B (three points)	4μm	Ø10 (included)	100	57	1.5	2.5	—
3127-16 *	12-16mm/0.47-0.63"	C (three points)	4μm	Ø16 (included)	150	99	0.5	6	4.5
3127-20 *	16-20mm/0.63-0.79"	C (three points)	4μm	Ø16 (included)	150	99	0.5	6	4.5
3127-25 *	20-25mm/0.79-0.98"	C (three points)	4μm	Ø25 (included)	150	105	0.5	8	6
3127-30 *	25-30mm/0.98-1.18"	C (three points)	4μm	Ø25 (included)	150	105	0.5	8	6
3127-40 *	30-40mm/1.18-1.57"	C (three points)	4μm	Ø40 (included)	150	110	0.5	14	12
3127-50 *	40-50mm/1.57-1.97"	C (three points)	5μm	Ø40 (included)	150	110	0.5	14	12
3127-63 *	50-63mm/1.97-2.48"	D (three points)	5μm	Ø62 (included)	150	127	0.5	17.5	14.5
3127-75 *	62-75mm/2.44-2.95"	D (three points)	5μm	Ø62 (included)	150	127	0.5	17.5	14.5
3127-88 *	75-88mm/2.95-3.46"	D (three points)	5μm	Ø87 (included)	150	127	0.5	17.5	14.5
3127-100 *	87-100mm/3.43-3.94"	D (three points)	5μm	Ø87 (included)	150	127	0.5	17.5	14.5

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

micrometer stand  
with clamp (optional)

setting ring (included)



extension rod (included)



## BORE GAGES FOR SMALL HOLES

ATTENTION: NOT SUITABLE  
FOR 0.001MM DIAL INDICATORS

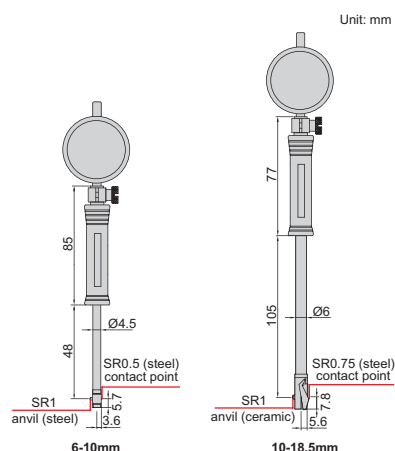
- Repeatability: 0.003mm
- Optional accessory: setting ring (code 6312)



6-10mm 10-18.5mm

## With dial indicator

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



2852-10



## BORE GAGES

ATTENTION: NOT SUITABLE  
FOR 0.001MM DIAL INDICATORS

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

	(mm)						
Range	A	B	C	ØD	ØE	F	L
35-60mm	22	9	27	13	12.8	SR2	141
50-100mm	26	9	35	13	12.8	SR2	141
50-160mm	26	9	35	13	12.8	SR2	141
160-250mm	56.5	13	74.5	15	12.8	SR2	241
250-450mm	86.5	15	101.5	15	14.5	SR2.5	241

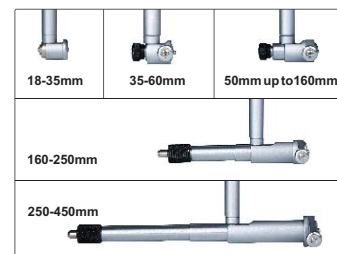
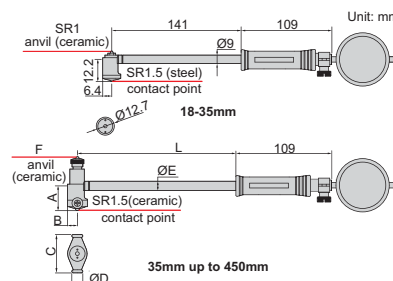


### With dial indicator

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



2322-35A



## BORE GAGE SETS

ATTENTION: NOT SUITABLE  
FOR 0.001MM DIAL INDICATORS

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

### With dial indicator

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 optional) 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 optional) ③ 50-160mm (dial indicator is optional)	18-35mm ±0.015mm 35-60mm ±0.018mm 50-160mm ±0.018mm

packaging (code 2824-S3)



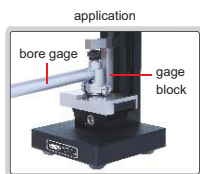
2824-S160



2824-S3

## BORE GAGE SETTER

gage blocks for 7353-160

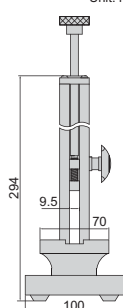


horizontal use



7353-160

Unit: mm



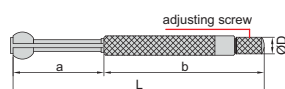
### Gage block set for 7353-160

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

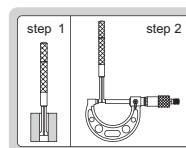
- Vertical and horizontal use
- To be used with gage blocks

Code	Range	Repeatability	Remark
7353-160	0-160mm	1.2µm	with gage block set

## SMALL HOLE GAGE SET



4208-1



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

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

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





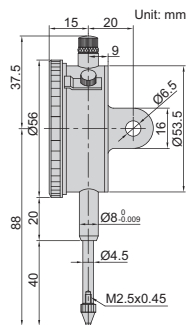
## DIAL INDICATORS (LONG STROKE)

**INSPECTION  
CERTIFICATE**  
TRACEABLE TO NIST



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
2310-30A*	30mm	35µm	7µm	1mm	lug back
2310-30FA*	30mm	35µm	7µm	1mm	flat back

\*Supplied with manufacturer inspection certificate traceable to NIST USA

## DIAL TEST INDICATORS

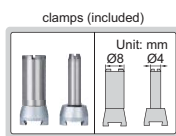
**INSPECTION  
CERTIFICATE**  
TRACEABLE TO NIST

**JEWELLED  
BEARING**



2380-08

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



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

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

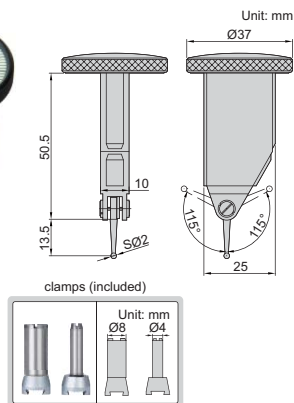
**INSPECTION  
CERTIFICATE**  
TRACEABLE TO NIST

**JEWELLED  
BEARING**



2398-08

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



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

## DIAL INDICATOR (LONG STROKE)

**SHOCK  
PROOF**

**JEWELLED  
BEARING**

**INSPECTION  
CERTIFICATE**  
TRACEABLE TO NIST

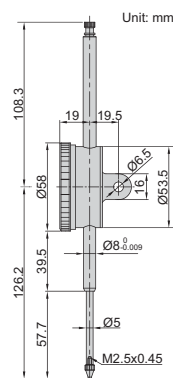


2309-50

- Graduation: 0.01mm
- Range/rev: 1mm
- Dial reading: 0-100
- Shockproof
- Jeweled bearing
- Flat back with spare lug back
- Supplied with limit pointers
- Optional accessory: backs, contact points

Code	Range	Accuracy	Hysteresis
2309-50*	50mm	40µm	8µm

\*Supplied with manufacturer inspection certificate traceable to NIST USA



## LARGE RANGE DIAL TEST INDICATOR

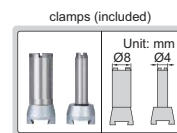
**INSPECTION  
CERTIFICATE**  
TRACEABLE TO NIST

**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

## LONG STYLUS DIAL TEST INDICATOR

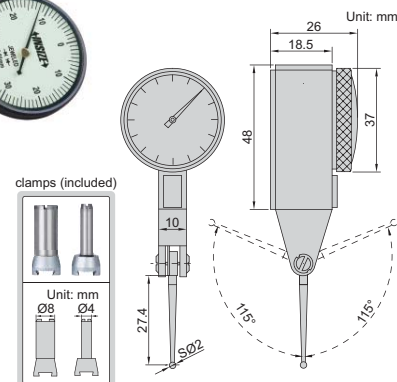
**INSPECTION  
CERTIFICATE**  
TRACEABLE TO NIST

**JEWELLED  
BEARING**



2383-08A

- 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



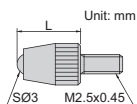
## CONTACT POINTS



6282-0101

### BALL POINT

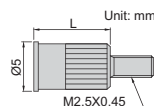
Code	Material of measuring face	L
6282-0101	carbide	7.3mm
6282-0104	carbide	8.3mm



6282-1101

### FLAT POINT

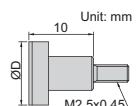
Code	Material of measuring face	L
6282-1101	steel	8mm



6282-1201

### FLAT POINT

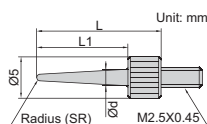
Code	Material of measuring face	ØD
6282-1201	steel	10mm



6282-1601

### NEEDLE POINT

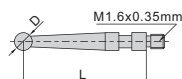
Code	Material of measuring face	L1	L	SR	Ød
6282-1601	steel	11	15	0.4	2
6282-1602	steel	13	17	0.2	2
6282-1603	steel	21	25	0.4	3
6282-1604	steel	31	35	0.4	3



## STYLI FOR DIAL TEST INDICATORS



6284-3



Code	For dial test indicator	Material of contact point	L	D
6284-1	2380-08, 2398-08	steel	13.5mm	SØ1mm
6284-3	2381-08, 2399-08	carbide	13.5mm	SØ2mm
6284-4		ruby	13.5mm	SØ2mm
6284-82	2383-08A	carbide	27.4mm	SØ2mm

## DIAL TEST INDICATOR HOLDER



6296-1

- Supplied with hex key

Code

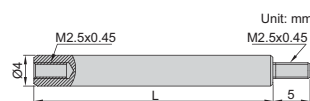
6296-1



## EXTENSION RODS



6282-2011



Code	Material	L
6282-2001	steel	10mm
6282-2002	steel	15mm
6282-2004	steel	25mm
6282-2005	steel	30mm
6282-2007	steel	40mm
6282-2009	steel	50mm
6282-2011	steel	60mm
6282-2017	steel	100mm

## DIAL TEST INDICATOR CENTERING HOLDER



6291-1



Code

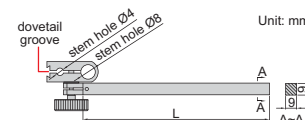
6291-1

- Center cylinders or holes on machine tools

## DIAL TEST INDICATOR HOLDERS



6293-1



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



## DIAL TEST INDICATOR UNIVERSAL HOLDER



6297-1

Code

6297-1

- Set the indicators at the desired attitude to the workpiece

## MINI MAGNETIC STAND

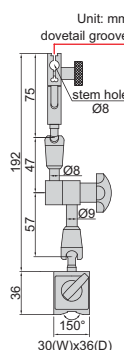
ATTENTION: FOR DIAL TEST INDICATORS ONLY

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

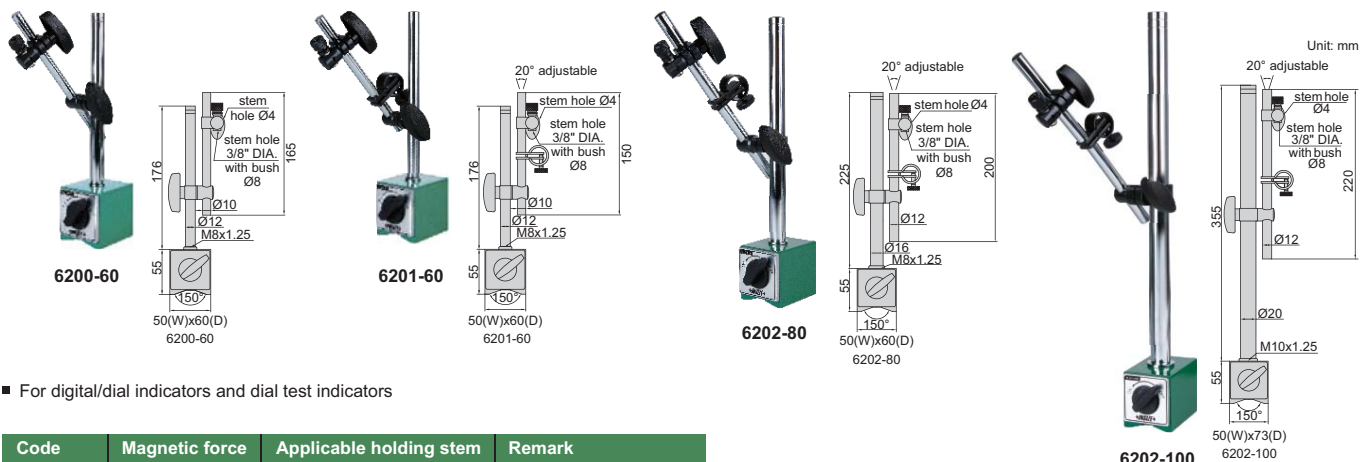


6224-40

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



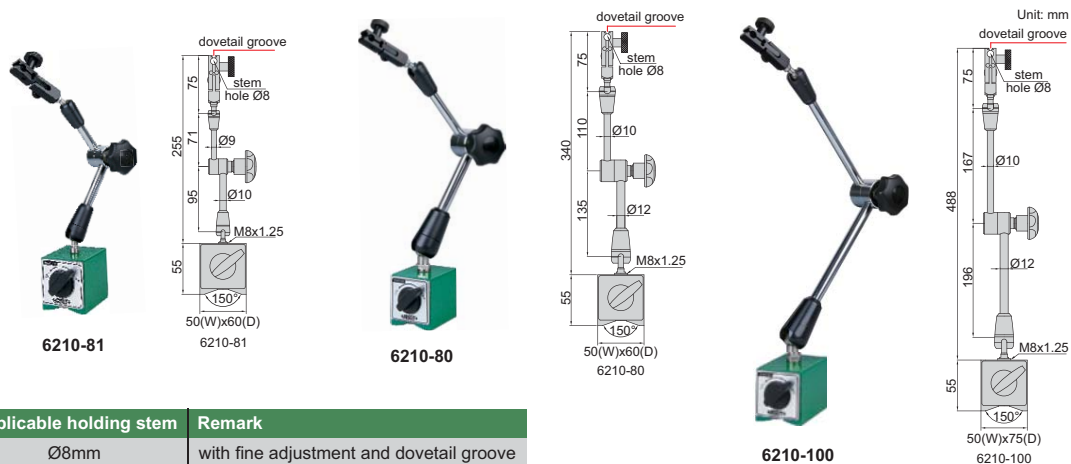
## MAGNETIC STANDS



■ 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 STANDS

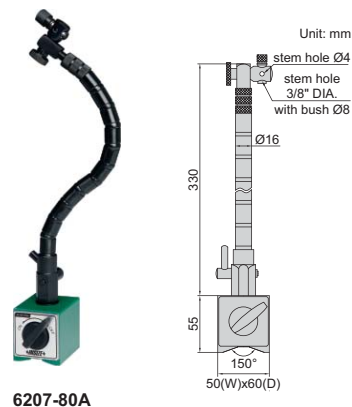


■ For digital/dial indicators and dial test indicators

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

## FLEX ARM MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

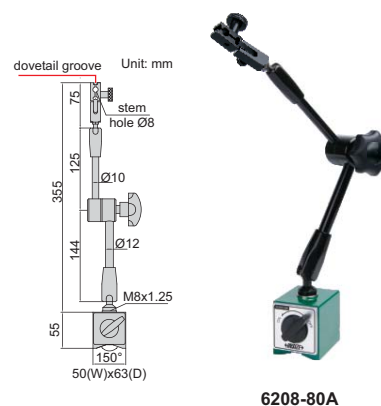


■ For dial test indicators

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

## UNIVERSAL MAGNETIC STAND (ECONOMIC TYPE)

ATTENTION: LOW LOCKING FORCE



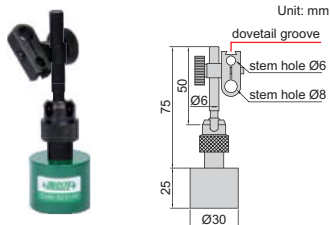
■ Magnetic force: 80kgf  
■ Applicable holding stem: Ø8mm  
■ For digital/dial indicators and dial test indicators

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

## MINI MAGNETIC STAND

**ATTENTION: FOR DIAL  
TEST INDICATORS ONLY**

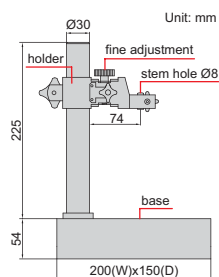
- For dial test indicators
- With dovetail groove



6211-10

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

## GRANITE DIAL INDICATOR STAND

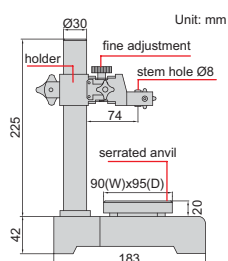


6866-150

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Base: flatness 2.5μm
- Supplied with dust cover

Code	Applicable holding stem
6866-150	Ø8mm

## DIAL INDICATOR STAND

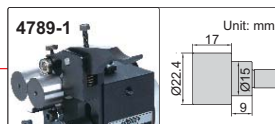


**6863-150**

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

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

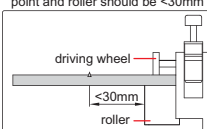
## CONCENTRICITY GAGES



to ensure the accuracy  $2\mu\text{m}$ ,  
the distance between measuring  
point and roller should be  $<30\text{mm}$

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

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

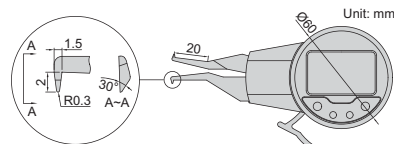
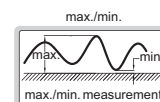


## DIGITAL INTERNAL CALIPER GAGE

- 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

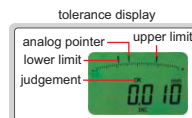
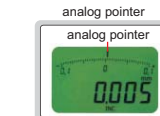


2121-15



Code	Range	Accuracy
2121-15	5-15mm/0.2-0.6"	±0.03mm

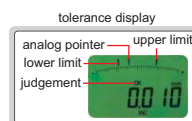
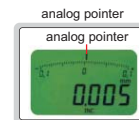
Sizes available up to 60mm



## DIGITAL EXTERNAL CALIPER GAGE



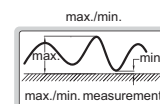
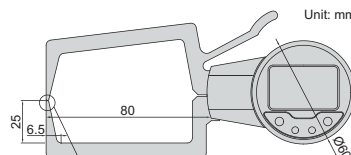
2131-21



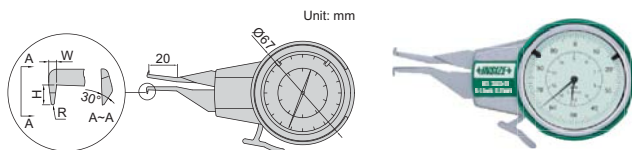
- Resolution: 0.005mm/0.0002"
- Repeatability: 0.01mm
- Reading in digit and analog
- Display can be rotated by 170°
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic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

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

Sizes available up to 60mm



## INTERNAL DIAL CALIPER GAGE

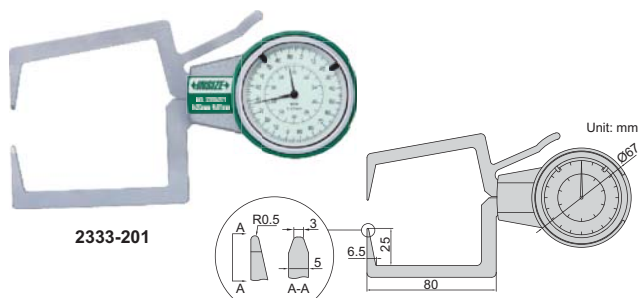


2222-15

Code	Range	Graduation	Accuracy
2222-15	5-15mm	0.01mm	±0.03mm

Sizes available up to 60mm

## EXTERNAL DIAL CALIPER GAGE

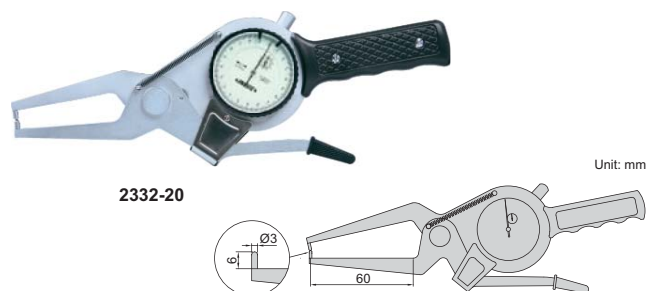


2333-201

Code	Range	Graduation	Accuracy
2333-201	0-20mm	0.01mm	±0.03mm

Sizes available up to 60mm

## EXTERNAL DIAL CALIPER GAGE



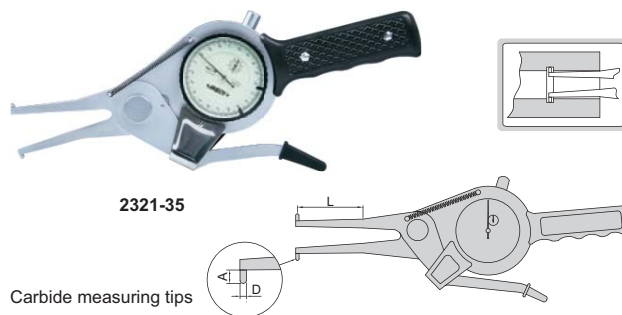
2332-20

■ Carbide measuring tips

Code	Range	Graduation	Accuracy
2332-20	0-20mm	0.01mm	±0.04mm

Sizes available up to 100mm

## INTERNAL DIAL CALIPER GAGES



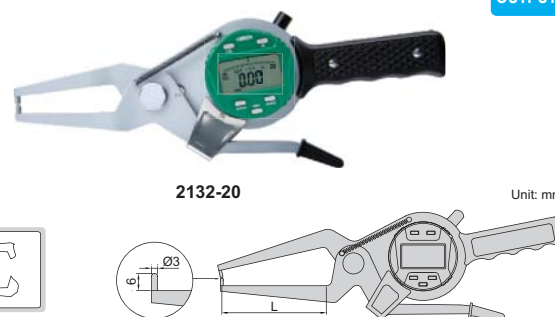
2321-35

■ Carbide measuring tips

Code	Range	Graduation	Accuracy	L	A	D
2321-35	15-35mm	0.01mm	±0.04mm	50mm	3mm	Ø3mm
2321-55	35-55mm	0.01mm	±0.04mm	80mm	6mm	Ø3mm

Sizes available up to 135mm

## 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./range measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable

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

Sizes available up to 100mm

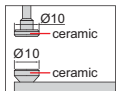
## THICKNESS GAGES



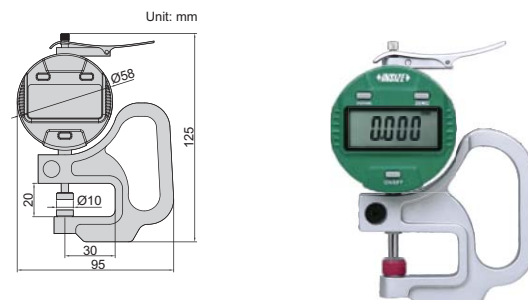
2364-10

2364-1

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



## DIGITAL THICKNESS GAGES

DATA  
OUTPUT

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



## THICKNESS GAGE



2862-101

Code	Range	Graduation	Accuracy
2862-101	0-10mm	0.05mm	±0.1mm

## THICKNESS GAGE



2863-10

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

## PIN GAGE SETS



4166-6D

- Meet DIN2267, grade 1
- Made of alloy steel
- Hardness HRC62-65
- Diameter accuracy: ±1µm

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

## STEEL GAGE BLOCK SETS



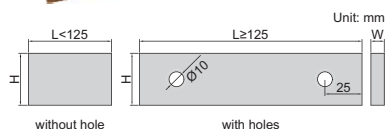
Dimension:

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



4100-287

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



Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 1	Grade 2
112	1.0005	0.001	1	4100-1112	4100-2112
	1.001-1.009	0.01	9		
	1.01-1.49	0.5	49		
	0.5-24.5	25	49		
	25-100		4		
87	1.001-1.009	0.001	9	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	0.01	1	4100-147	4100-247
	1.01-1.19	0.1	19		
	1.2-1.9	1	8		
	1-9	10	9		
	10-100		10		
32	1.005	0.01	1	4100-132	4100-232
	1.01-1.09	0.1	9		
	1.1-1.9	1	9		
	1-9	10	3		
	10-30		1		

## METRIC THREAD RING GAGES



- Go and No-Go gages are supplied separately
- Standard ISO1502
- Class 6g
- Supplied with manufacturer inspection certificate



4120-16

4120-16N

Code (Go)	Code (No Go)	Size (mm)	Code (Go)	Code (No Go)	Size (mm)
4120-2D5*	4120-2D5N*	M2.5x0.45	4120-10*	4120-10N*	M10x1.5
4120-3*	4120-3N*	M3x0.5	4120-12*	4120-12N*	M12x1.75
4120-4*	4120-4N*	M4x0.7	4120-14*	4120-14N*	M14x2
4120-5*	4120-5N*	M5x0.8	4120-16*	4120-16N*	M16x2
4120-6*	4120-6N*	M6x1	4120-20*	4120-20N*	M20x2.5
4120-8*	4120-8N*	M8x1.25	4120-24*	4120-24N*	M24x3

## METRIC THREAD PLUG GAGES



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



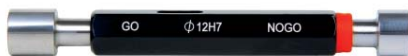
4130-10

Code	Size (mm)	Code	Size (mm)	Code	Size (mm)
4130-2*	M2x0.4	4130-6*	M6x1	4130-16*	M16x2
4130-2D5*	M2.5x0.45	4130-8*	M8x1.25	4130-20*	M20x2.5
4130-3*	M3x0.5	4130-10*	M10x1.5	4130-24*	M24x3
4130-4*	M4x0.7	4130-12*	M12x1.75		
4130-5*	M5x0.8	4130-14*	M14x2		

## 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



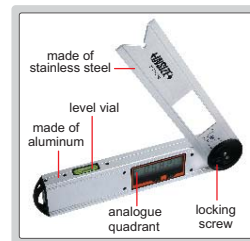
### Size tolerance of H7

(mm)

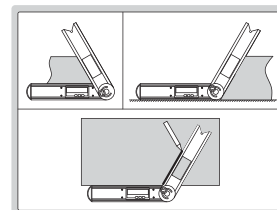
Diameter Ød	Size tolerance of Go gage (µm)	Size tolerance of No-Go gage (µm)	L1	L2	L
≥2, ≤3	+0.5 / +2.5	+9 / +11	6.5	4.5	20
>3, ≤6	+0.75 / +3.25	+10.75 / +13.25	8	6	24
>6, ≤10	+0.75 / +3.25	+13.75 / +16.25	10	7	29
>10, ≤14	+1 / +4	+16.5 / +19.5	12	8	34
>14, ≤18	+1 / +4	+16.5 / +19.5	14	10	36
>18, ≤24	+1 / +5	+19 / +23	16	12	42
>24, ≤30	+1 / +5	+19 / +23	18	14	42
>30, ≤40	+1.5 / +5.5	+23 / +27	20	15	55

Code	Diameter Ød (mm)	Code	Diameter Ød (mm)	Code	Diameter Ød (mm)
4124-3	3	4124-13	13	4124-24	24
4124-4	4	4124-14	14	4124-25	25
4124-5	5	4124-15	15	4124-26	26
4124-6	6	4124-16	16	4124-28	28
4124-7	7	4124-17	17	4124-30	30
4124-8	8	4124-18	18	4124-35	35
4124-9	9	4124-19	19	4124-40	40
4124-10	10	4124-20	20		
4124-11	11	4124-22	22		
4124-12	12	4124-23	23		

## DIGITAL PROTRACTOR



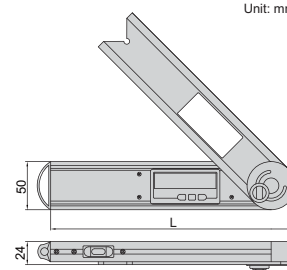
2171-250



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

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

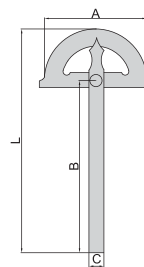
Unit: mm



## PROTRACTORS



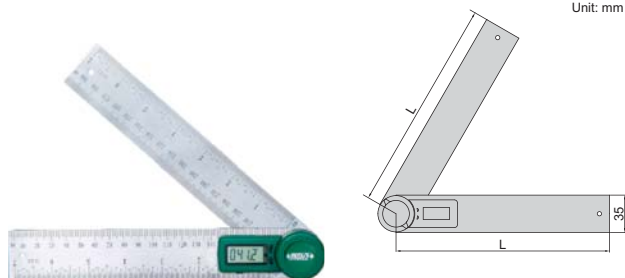
4799-180



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

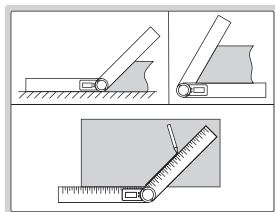
Code	Size (AxB)	Range	Graduation	Accuracy	L	C
4799-180	80x120mm	0-180°	1°	±0.3°	168	11
4799-1120	120x150mm	0-180°	1°	±0.3°	220	14
4799-1150	150x200mm	0-180°	1°	±0.3°	285	16
4799-1200	200x300mm	0-180°	1°	±0.3°	413	20

## DIGITAL PROTRACTORS



2176-200

- 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	Resolution	Accuracy
2176-200	200mm	0-360°	0.1°	±0.3°
2176-300	300mm	0-360°	0.1°	±0.3°

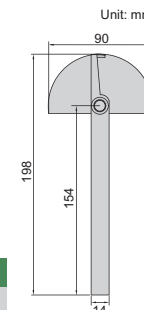
## PROTRACTOR (ECONOMIC TYPE)



4780-85A

- Made of stainless steel
- With clamping screw

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



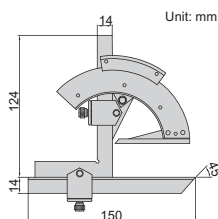
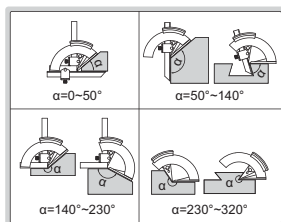
Unit: mm

## PROTRACTOR



2374-320

- Made of stainless steel
- Satin chrome plated scale



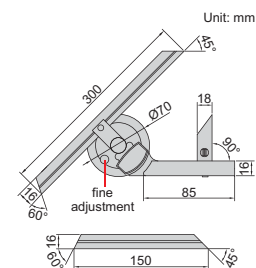
Code	Range	Graduation	Accuracy
2374-320	0-320°	2'	±2'

## UNIVERSAL PROTRACTOR

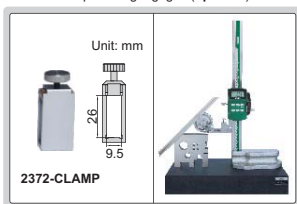


2372-360

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

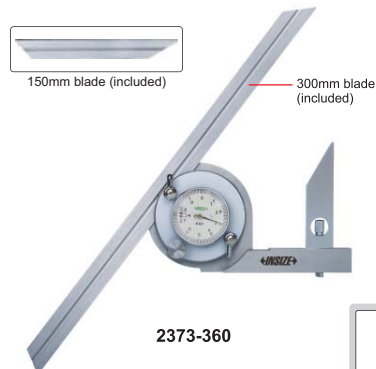


clamp for height gages (optional)



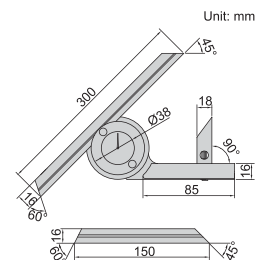
Code	Range	Graduation	Accuracy
2372-360	0-360°	5'	±5'

## DIAL PROTRACTOR

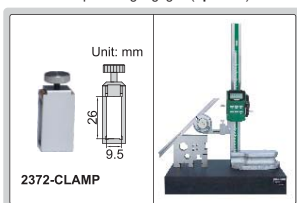


2373-360

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

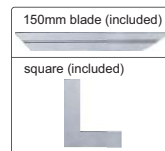


clamp for height gages (optional)

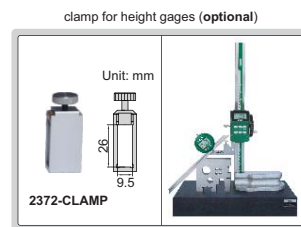


Code	Range	Graduation	Accuracy
2373-360	0-360°	5'	±5'

## DIGITAL PROTRACTOR



2172-360A



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

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

DATA  
OUTPUT



VIDEO

## STRAIGHT EDGES

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



4700-100

Code	Size (L)	Straightness	W	H
4700-100	100mm	2.4μm	5	25
4700-150	150mm	2.6μm	6	30

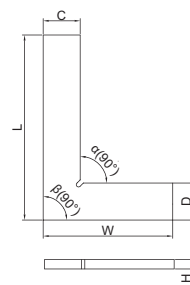
Sizes available up to 500mm

## 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)			
4791-100	100x70mm	7μm	7μm	20	20	5
4791-150	150x100mm	7μm	8μm	30	30	6

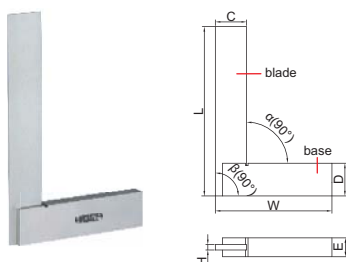
Sizes available up to 300x200mm

## MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

**ATTENTION:**  
LOW ACCURACY

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

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



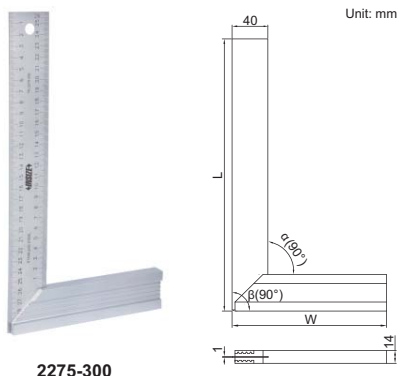
4707-100

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

Sizes available up to 1000x550mm

## TRY SQUARE

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

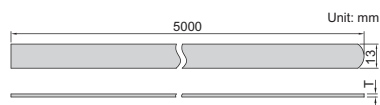


2275-300

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

## FEELER GAGE TAPES

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

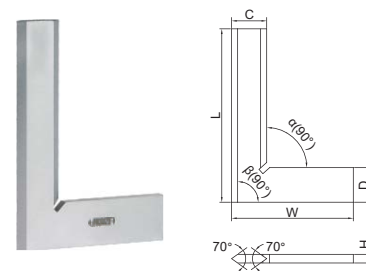


4621-30

Code	Thickness (T)	Accuracy	Code	Thickness (T)	Accuracy
4621-02	0.02mm	±4μm	4621-10	0.10mm	±5μm
4621-03	0.03mm	±4μm	4621-15	0.15mm	±6μm
4621-04	0.04mm	±4μm	4621-20	0.20mm	±8μm
4621-05	0.05mm	±4μm	4621-25	0.25mm	±9μm
4621-06	0.06mm	±4μm	4621-30	0.30mm	±9μm
4621-07	0.07mm	±5μm	4621-40	0.40mm	±12μm
4621-08	0.08mm	±5μm	4621-50	0.50mm	±14μm

## 90° BEVELED EDGE SQUARES

- 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

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-1000	100x70mm	7μm	7μm	20	20	5

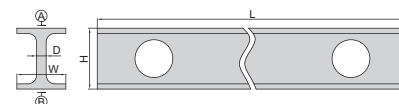
Sizes available up to 300x200mm

## MAGNALIUM STRAIGHT EDGES



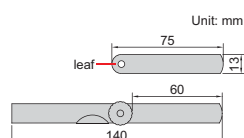
4180-1500

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



Code	Length (L)	Flatness of A and B	Parallelism between A and B	H	W	D	Weight
4180-500	500mm	3μm	4μm	60	30	5	0.8kg
4180-1000	1000mm	5μm	8μm	60	30	5	1.5kg
4180-1500	1500mm	15μm	22μm	100	40	7	2.3kg

## FEELER GAGE



4601-25

- Made of hardened alloy steel
- Meet DIN2275
- Quantity of leaves: 25
- Accuracy:  $\pm(3+T/80)$  μm, 'T' is the thickness of leaves in μm

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

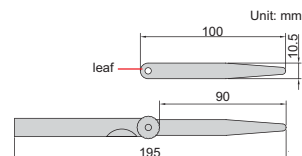


## FEELER GAGES

- Made of hardened alloy steel
- Meet DIN2275
- Accuracy:  $\pm(3+T/80) \mu\text{m}$ ,  
"T" is the thickness of leaves in  $\mu\text{m}$

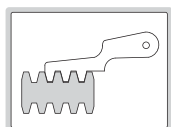


4602-20



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

## PITCH GAGES



4824-12

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

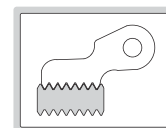
Code	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-12	2-20mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12
4824-16	1-12TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI	16

## PITCH GAGES (ECONOMIC TYPE)

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



4820-124



ATTENTION:  
LOW ACCURACY

### Metric 60° screw

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

### 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	
4820-450	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	50
	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	

### Metric 60° and Unified 60° screw

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

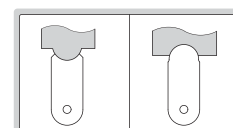
## RADIUS GAGES (ECONOMIC TYPE)

ATTENTION:  
LOW ACCURACY

- Made of medium carbon steel



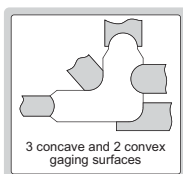
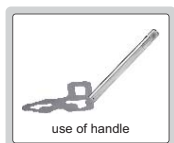
4801-17



Code	Range	Radius of leaves included (mm)	Quantity of leaves (internal+external)	Accuracy
4801-17	1-7mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	17+17	$\pm 0.030\text{mm}$
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	$\pm 0.035\text{mm}$
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	$\pm 0.042\text{mm}$

## RADIUS GAGE SET (ECONOMIC TYPE)

**ATTENTION:**  
LOW ACCURACY



- Accuracy:  $\pm 0.05\text{mm}$
- Each piece has 3 concave and 2 convex gaging surfaces
- Supplied with handle
- Made of medium carbon steel



4804-26

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

## RADIUS GAGE

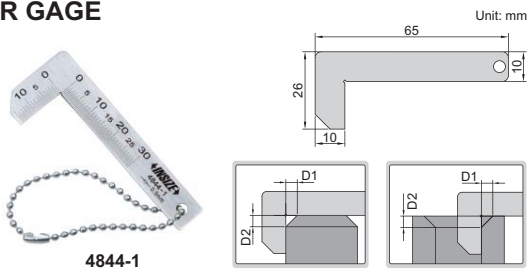
- Quantity of leaves: 31 pcs
- Accuracy:  $\pm 0.06\text{mm}$
- Made of stainless steel



4802-31

Code	Range	Radius of leaves included (mm)
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

## CHAMFER GAGE

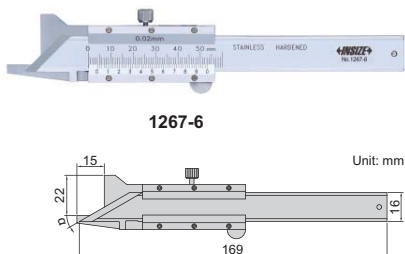
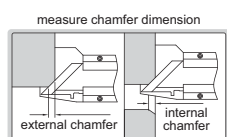


4844-1

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

Code	Graduation	Accuracy
4844-1	0.5mm	$\pm 0.25\text{mm}$

## CHAMFER GAGE



1267-6

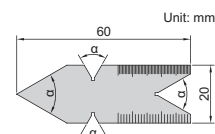
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Accuracy	Graduation	Chamfer ( $\alpha$ )
1267-6	0-10mm	$\pm 0.06\text{mm}$	0.02mm	$45^\circ$

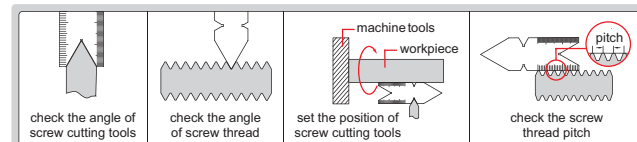
## CENTER GAGES



4810-602



- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy:  $\pm 30\text{min}$ .
- Made of stainless steel



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

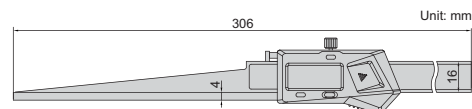
## DIGITAL TAPER SLOT GAGE

DATA  
OUTPUT

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



1160-10



- Measuring opening, slot width
- Resolution:  $0.01\text{mm}/0.0005"$
- 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"	$\pm 0.03\text{mm}$

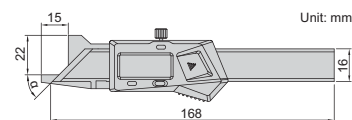


## DIGITAL CHAMFER GAGE

DATA  
OUTPUT

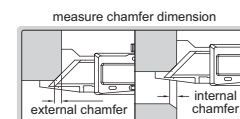


1180-6



- Resolution:  $0.01\text{mm}/0.0005"$
- 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

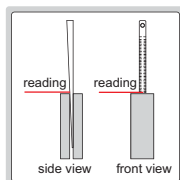
Code	Range	Accuracy	Chamfer ( $\alpha$ )
1180-6	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	$45^\circ$



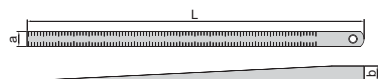
## TAPER SLOT GAGES



4630-1



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



Code	Range	Graduation	Accuracy	L	a	b
4630-1	0.5-10mm	0.05mm	±0.07mm	220mm	10mm	10.5mm

## TAPER GAGES



front

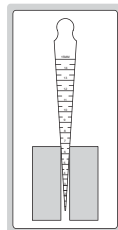


back

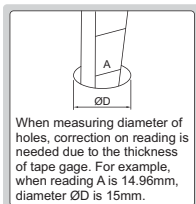
4833-2



measure slot width



measure diameter of hole



- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

Code	Range	Graduation	Accuracy	L	W
4833-1	0.8-15mm	0.1mm	±0.1mm	146mm	17mm
4833-2	15-30mm	0.1mm	±0.1mm	159mm	30.4mm

## TAPER GAGE SET

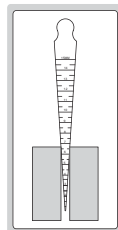


front

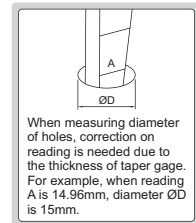
4837-1

back

measure slot width



measure diameter of hole



- Include 4 pcs (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

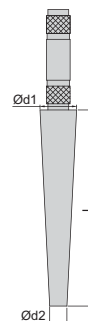
Code	Range	Graduation	Accuracy
4837-1	1-29mm	0.05mm	±0.05mm

## CONE BORE GAGES

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

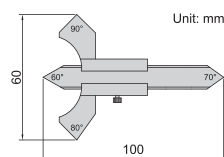


4852-15



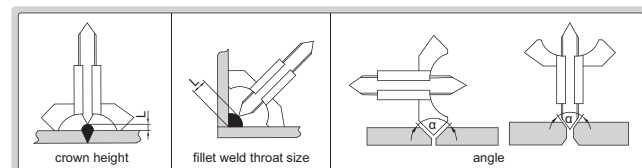
Code	Range	Graduation	Accuracy	L	Ød1	Ød2
4852-1	1-6.5mm	0.1mm	±0.05mm	62.5mm	7mm	0.8mm
4852-3	3-16mm	0.1mm	±0.05mm	143mm	17mm	2.8mm
4852-15	15-30mm	0.1mm	±0.05mm	165mm	31mm	14.7mm

## WELDING GAGE



4830

- Made of stainless steel
- Stain chrome plated reading surface



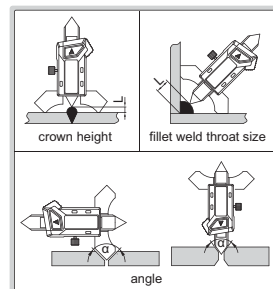
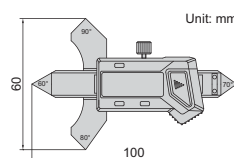
Code	Measurement	Range	Graduation	Accuracy
4830	crown height	0-8mm	0.1mm	±0.1mm
	fillet weld throat size	0-20mm	0.1mm	±0.3mm
	angle	60°, 70°, 80°, 90°	—	±1°

## DIGITAL WELDING GAGE

ATTENTION:  
NO DATA OUTPUT



4831-20A



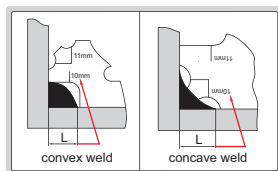
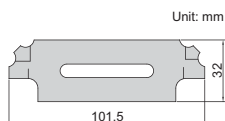
Code	Measurement	Range	Resolution	Accuracy
4831-20A	crown height	0-7mm	0.01mm/0.0005"	±0.03mm
	fillet weld throat size	0-20mm	0.01mm/0.0005"	±0.1mm
	angle	60°, 70°, 80°, 90°	—	±1°

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

## FILLET WELDING GAGE



4836-1



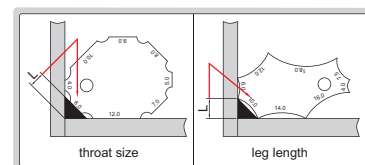
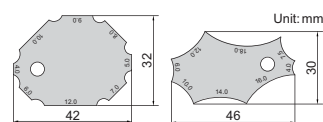
- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel

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

## WELDING GAGE



front

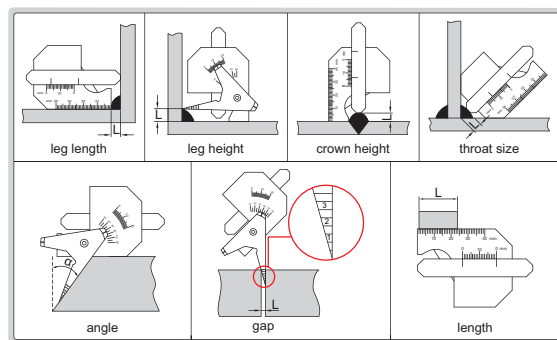
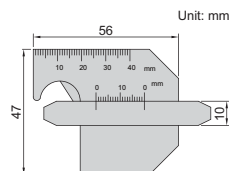


back

6832-1

- Made of stainless steel
- Satin 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



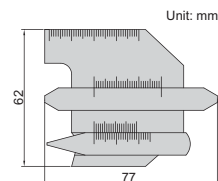
front

4838-1

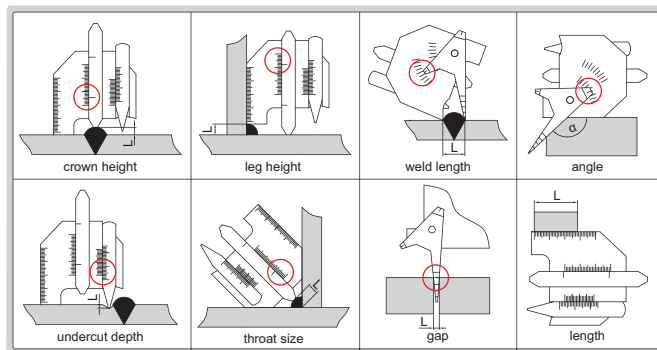


back

- Made of stainless steel



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





## WELDING GAGE

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

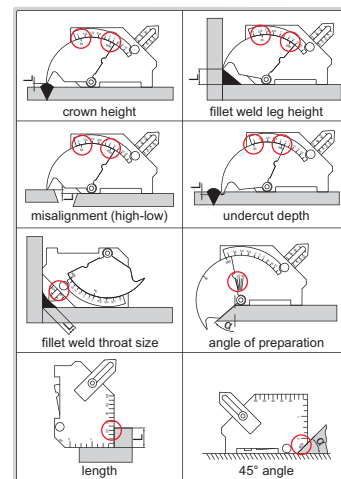
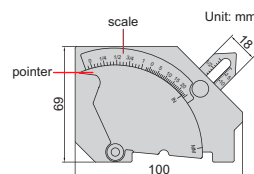


front

4835-1

back

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°

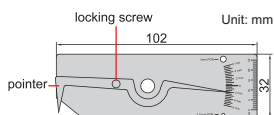
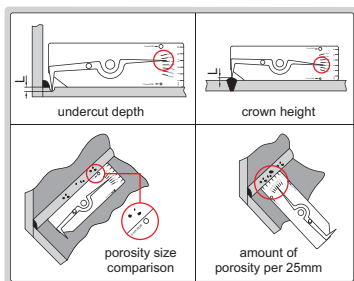


## WELDING GAGE

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

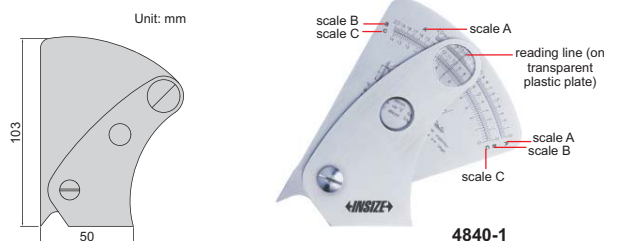


4834-1

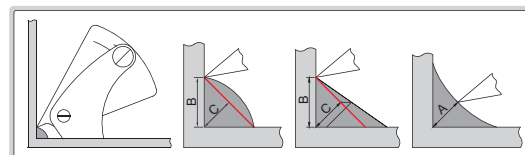


Code	Measurement	Range	Graduation	Accuracy
4834-1	undercut depth	0-6mm	0.5mm	±0.5mm
	crown height	0-6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—

## WELDING GAGE



4840-1



- Made of stainless steel

Code	Graduation	Accuracy
4840-1	0.2mm	±0.3mm

## PIPE WELDING GAGE

- Made of stainless steel

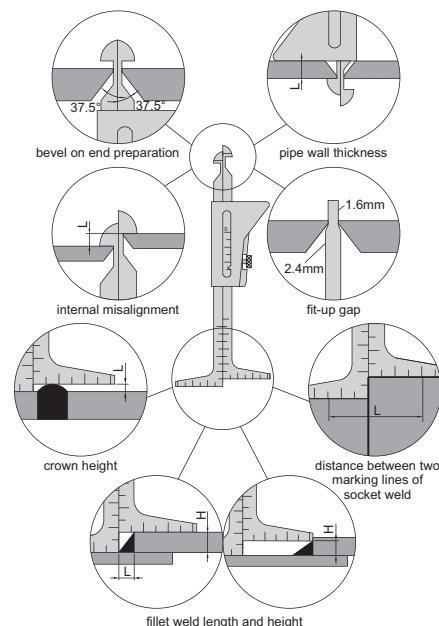


front

4839-1

back

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



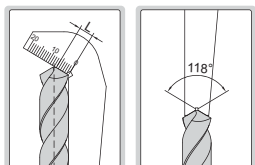
## DRILL POINT GAGE



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



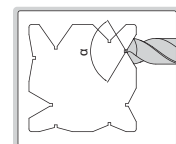
## DRILL ANGLE GAGE



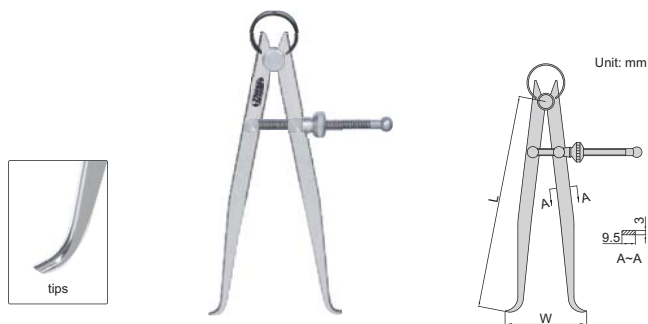
4842-1

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

Code	Accuracy
4842-1	±0.5°



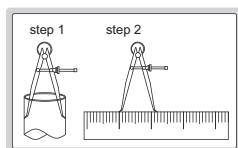
## INSIDE SPRING CALIPERS



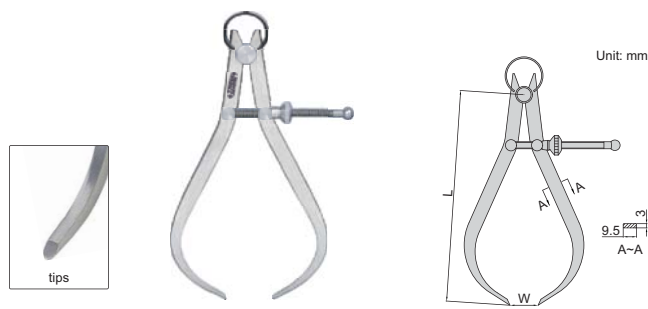
7261-150

- 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



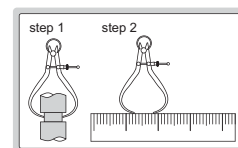
## OUTSIDE SPRING CALIPERS



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

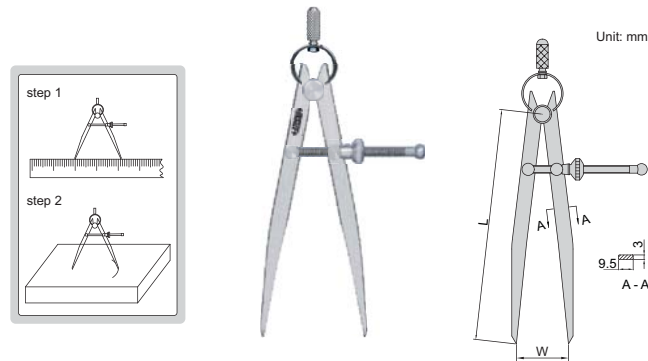


7247-150

- Made of carbon steel
- Hardened points

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

## SPRING DIVIDERS



7260-150

- Made of carbon steel
- Hardened points

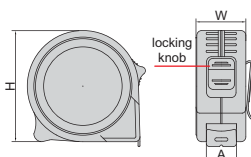
Code	Size (L)	Range (W)
7260-150	150mm	0-150mm
7260-200	200mm	0-210mm
7260-250	245mm	0-260mm
7260-300	300mm	0-320mm

## MEASURING TAPES

EG II

- Graduation: 1mm
- Non-glare nylon surface for wear resistance

7140-5

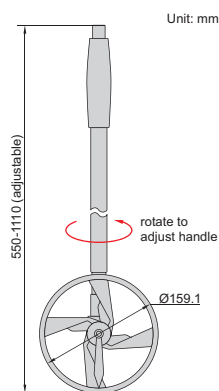


packaging



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

## MEASURING WHEEL (BASIC TYPE)



7144-1

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

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

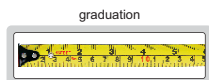
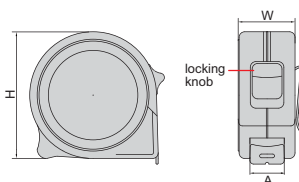
## MEASURING TAPE (BASIC TYPE)

EG II



7142-5

- Non-glare nylon coating tape, wear resistance



packaging



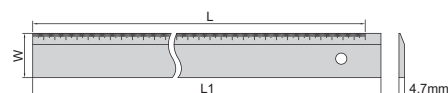
Code	Range	Graduation	Width of tape A	W	H
7142-5	0-5m/0-16ft	1mm, 1/16"	19mm	31mm	64mm

## ALUMINUM RULES



7123-300

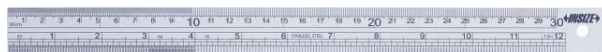
- Made of aluminum, oxidized surface



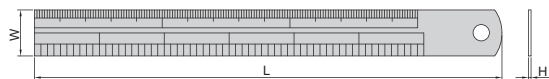
Code	Range (L)	Graduation	Accuracy	L1	W
7123-300	300mm	1mm	±0.5mm	321mm	50mm
7123-600	600mm	1mm	±0.9mm	624mm	50mm
7123-1000	1000mm	1mm	±0.9mm	1024mm	50mm

## STEEL RULES (ECONOMIC TYPE)

ATTENTION:  
LOW ACCURACY



7110-300



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

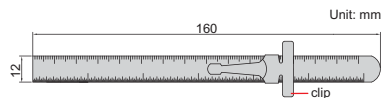
(mm)						
Code	Range	Accuracy	L	W	H	Remark
7110-150	150mm/6"	±0.15mm	170	18	1.0	graduation on front and back
7110-300	300mm/12"	±0.15mm	330	25	1.0	graduation on front and back
7110-3001	300mm/12"	±0.15mm	325	30	1.0	graduation on front and back
7110-500	500mm/20"	±0.15mm	530	30	1.2	graduation on front 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
7110-1200	1200mm/48"	±0.22mm	1240	35	1.8	graduation on front
7110-1500	1500mm/60"	±0.25mm	1550	38	1.8	graduation on front
7110-2000	2000mm/80"	±0.30mm	2065	40	2.0	graduation on front

## 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



Unit: mm

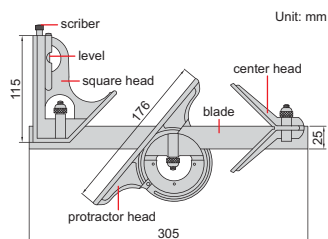
Code	Range	Graduation	Accuracy
7119-150	150mm/6"	1mm, 1/64"	±0.15mm

## COMBINATION SQUARE SET

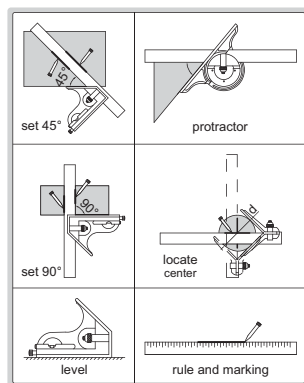


2278-180

- Center head (made of cast iron): to locate center of cylinders with diameter (Ød): 30-100mm accuracy: ±0.15mm
- Protractor head (made of cast iron): set the blade at desired angle to an edge of a workpiece, and can be used to measure angles range: 0-180° accuracy: ±20min.
- Square head (made of cast iron): 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)



Unit: mm

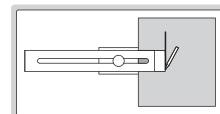
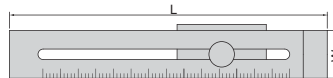


Code	Remark
2278-180	4-piece set

## MARKING GAGES



7120-200A



- Made of stainless steel
- Satin chrome finish

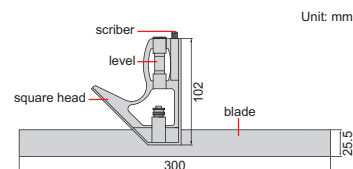
Code	Range	Graduation	Accuracy	L	W
7120-200A	0-200mm	0.1mm	±0.1mm	250mm	40mm
7120-250A	0-250mm	0.1mm	±0.1mm	300mm	40mm
7120-300A	0-300mm	0.1mm	±0.1mm	350mm	40mm

## COMBINATION SQUARE (ECONOMIC TYPE)

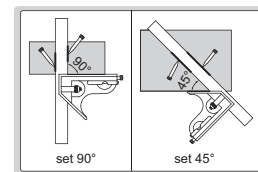


2276-300

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



Unit: mm



Code
2276-300

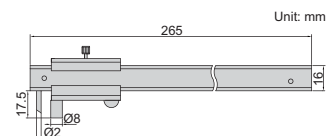
## SCRIBER CALIPER

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

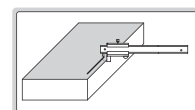
The position of scriber tip can be adjusted



7202-200A



Unit: mm



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



## SCRIBERS

- Nickel plated

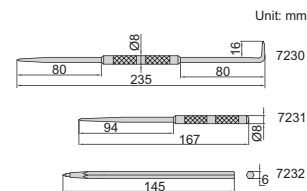
Code	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip



7230

7231

7232

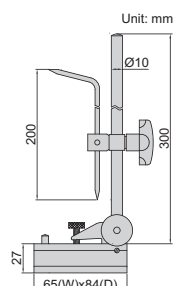


Unit: mm

## HEIGHT SCRIBER

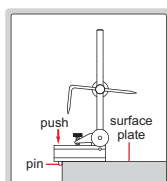
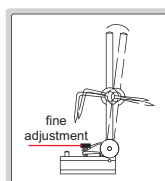


6990-300A



Unit: mm

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



Code

6990-300A

## 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

## GRANITE SURFACE PLATES



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



6900-032



## 13-PIECE MEASURING TOOL SET

- Includes:
  - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code 1108-150)
  - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code 3202-25A)
  - 3) Dial indicator, range 10mm, graduation 0.01mm (code 2308-10A)
  - 4) Magnetic stand (code 6201-60)
  - 5) Protractor, range 0-180°, graduation 1° (code 4799-180)
  - 6) Pitch gauge, range 0.25-7mm, 24 pcs, metric 60° thread (code 4820-124)
  - 7) Radius gauge, range 1-7mm (code 4801-17)
  - 8) Feeler gauge, range 0.05-1.00mm, 20 pcs (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

Code

5013

- 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)

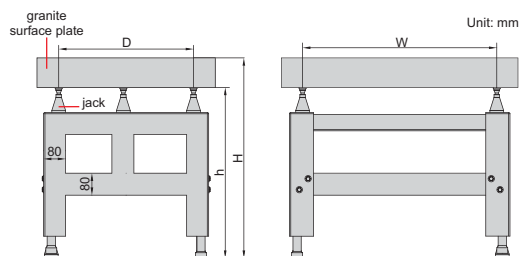
### Grade 0

Code	Size (LxWxH)	Flatness	Weight	Max. load
6900-032*	300x200x60mm	5.4µm	11kg	60kg
6900-042*	400x250x60mm	5.9µm	18kg	100kg
6900-044*	400x400x60mm	6.3µm	29kg	120kg
6900-064*	630x400x80mm	7.0µm	60kg	130kg

\*Supplied with manufacturer inspection certificate

## STANDS FOR GRANITE SURFACE PLATE

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



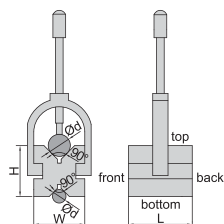
6902-64H

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)	352mm	224mm	1000-1025mm	920-945mm

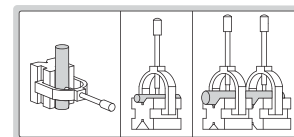
## V-BLOCK SETS



6896-11



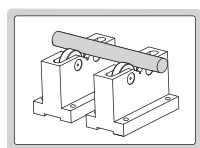
- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Squareness of both V grooves to front and back sides: 5μm



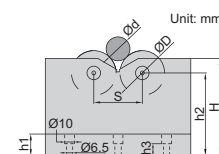
Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of both V grooves to top and bottom sides	Height difference of a matched pair
6896-11	50x40x40mm	5-30mm	5μm	5μm
6896-12	80x63x63mm	7-63mm	5μm	5μm
6896-13	100x80x80mm	7-80mm	5μm	5μm

## ROLLER BEARING V-BLOCK SET

- 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

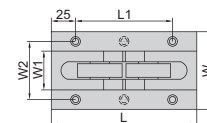


6888-1



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

Code	W1	W2	h1	h2	h3	L1	S
6888-1	22	44	20	85	12	100	60



## MAGNETIC V-BLOCKS (ADVANCED TYPE)

STRONG  
MAGNETIC FORCE

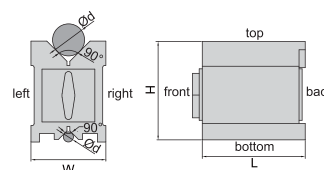
HIGH  
PRECISION

HARDENED  
SURFACES

- Hardened, high accuracy, strong magnetic force, for grinding, light milling, drilling and inspection of round and square workpieces
- 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

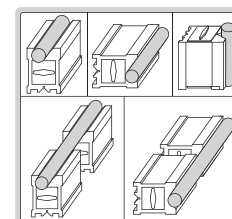


6889-1



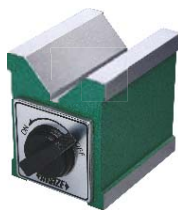
### Matched pair

Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right sides	Squareness of V grooves to back side	Height difference of a matched pair
6889-1	75x56x75mm	5-40mm	85kgf	5μm	5μm	5μm



## MAGNETIC V-BLOCK

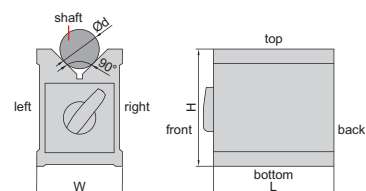
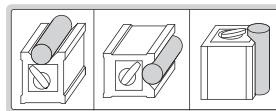
- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surface
- Parallelism of V groove to top, bottom, left and right sides: 10µm



6890-702

ATTENTION:  
NOT HARDENED

ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES,  
OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED



Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Squareness of V groove to back side
6890-702	70x60x73mm	6-44mm	56kgf	10µm

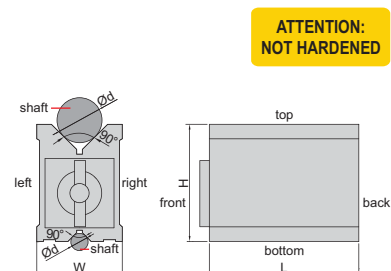
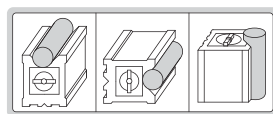
## MAGNETIC V-BLOCK

- 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



6801-1202

ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES,  
OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED



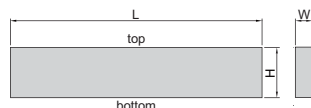
ATTENTION:  
NOT HARDENED

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

## PARALLEL SET



6533-144

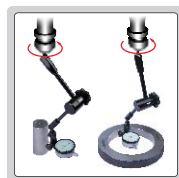


- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Hardened to HRC55-60
- Made of alloy tool steel

(mm)

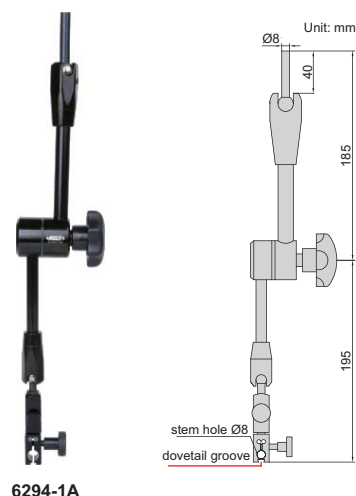
Code	Parallels per set	Length (L)	Thickness (W)	Height (H)
6533-144	14 pairs	150	10	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50

## INDICATOR CENTERING HOLDER



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

Code  
6294-1A

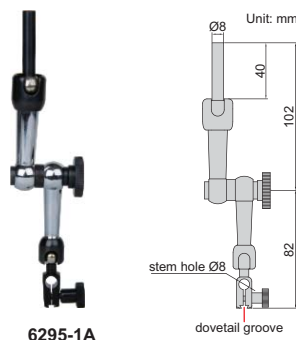


## DIAL TEST INDICATOR CENTERING HOLDER

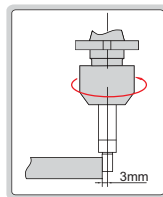


- Center cylinders or holes on machine tools
- Can be used with dial test indicators

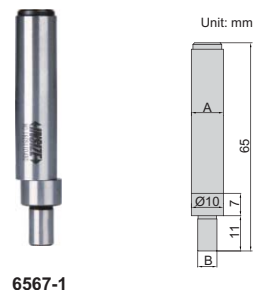
Code  
6295-1A



## EDGE FINDER



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



6567-1

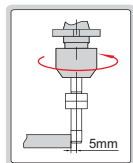
Code	Shank (A)	Contact point (B)	Accuracy
6567-1	Ø10mm	Ø6mm	8µm

## EDGE FINDERS

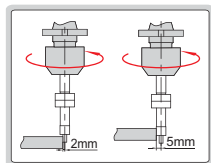


6562-3 6562-4

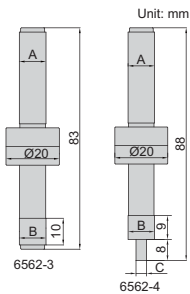
- Hardened shank and contact point
- Suitable for machine speed 400-600rpm



6562-3



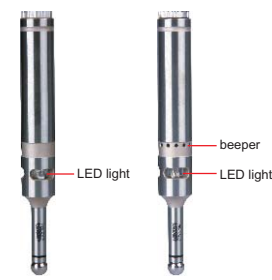
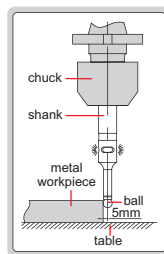
6562-4



Unit: mm

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

## ELECTRONIC EDGE FINDERS



6566-2 6566-3

- Accuracy: 5µm
- 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)	Beeper	Battery
6566-2	Ø20mm	SØ10mm	without	23AE, 12Vx1 pc
6566-3	Ø20mm	SØ10mm	with	23AE, 12Vx1 pc

## CENTERING INDICATOR

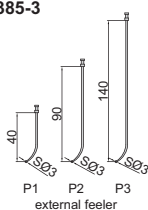
ATTENTION: SCALE DOES NOT INDICATE ANY VALUE



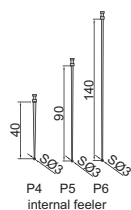
2385-3

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

Code
2385-3



P1 P2 P3  
external feeler



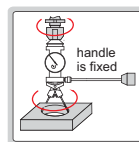
P4 P5 P6  
internal feeler



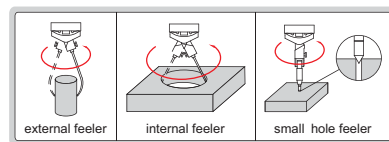
P7  
small hole feeler



VIDEO



Unit: mm



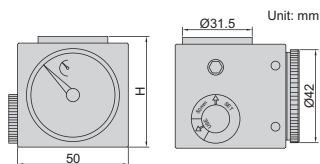
Feeler	Measuring diameter	Accuracy
P1	Ø0-60mm	0.015mm
P2	Ø0-160mm	0.02mm
P3	Ø0-250mm	0.03mm
P4	Ø3.2-80mm	0.015mm
P5	Ø3.2-180mm	0.02mm
P6	Ø3.2-280mm	0.03mm
P7	Ø0-2.8mm	0.015mm

## ZERO SETTER

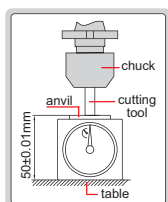


2397-502A

- Magnetic base
- Accuracy: ±10µm



Unit: mm



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

## ELECTRONIC ZERO SETTER

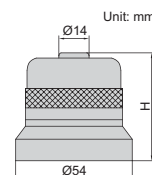
ATTENTION: HIGH TEST FORCE



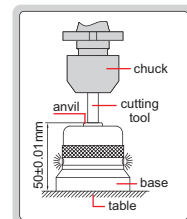
6550-50A

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



Unit: mm



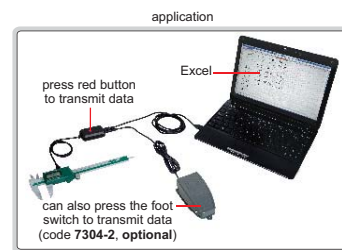



















## DATA OUTPUT CABLES (KEYBOARD FORMAT)

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



**7302-SPC5A**



Code	Description	Plug type to product	Socket type on product	Plug type to computer	Applicable products	
7302-SPC5A	cable for digital calipers (length 2.5m)				 for digital calipers	 for digital height gages
7302-SPC5C					 for digital depth gages	
7302-SPC6	cable for digital micrometers (length 2.5m)				 for digital micrometers	 for digital three points internal micrometers
7302-SPC3A	cable for digital indicators (length 2.5m)				 for digital indicators	
7302-SPC3B					 for digital thickness gages	 for digital internal/external caliper gages

## FOOT SWITCH



**7304-2**

application



- For data transmission

Code	Description	Applicable products
<b>7304-2</b>	data transmission foot switch with cable (length 2m)	<b>7302</b> series data cables <b>7305</b> series data cables (separated button type)

## HUBS

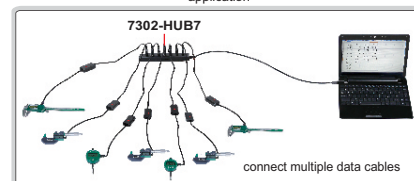


**7302-HUB**



**7302-HUB7**

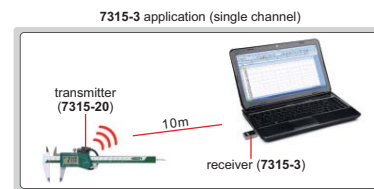
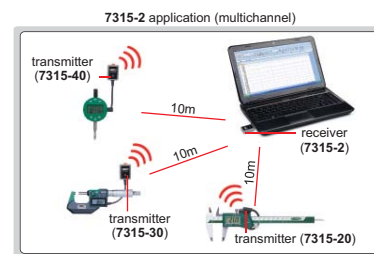
application



- Suitable for USB plug data cable

Code	Description	Applicable products
<b>7302-HUB</b>	4-channel hub (length 0.3m, USB computer plug)	<b>7302</b> series data cables <b>7305</b> series data cables (USB plug type)
<b>7302-HUB7</b>	7-channel hub (length 1m, USB computer plug)	

## WIRELESS DATA TRANSFER SYSTEM



- Transmission distance is 10 meter
- Press the button to transmit data
- 7315-2 is supplied with EXCEL directional input software, each gage is only displayed in the specified area



Excel directional input software (included in 7315-2), application example 1

Set the display area of caliper at B4-B9, the readings of caliper are displayed at B4, B5...B9.  
Set the display area of micrometer at C4-C9, the readings of micrometer are displayed at C4, C5...C9.  
Set the display area of height gage at D4-D9, the readings of height gage are displayed at D4, D5...D9.

Project	Length	Width	Height
Dimension and Tolerance	50±0.05	24±0.01	10±0.05/0.06
Measuring tool	Caliper	Micrometer	Height gage
1	50.02	24.004	9.98
2	50.01	24.010	10.01
3	49.99	23.990	10.02
4	50.00	23.996	9.99
5	50.04	24.000	10.01

Serial of workpieces      The next data display area is indicated in green

Excel directional input software (included in 7315-2), application example 2

Set the display area of micrometer at B4-C9, data input is from the left to the right, the readings of micrometer are displayed at B4, C4, B5, C5...B9, C9.  
Set the display area of caliper at D4-D9, the readings of caliper are displayed at D4, D5...D9.  
Set the display area of depth gage at E4-E9, the readings of depth gage are displayed at E4, E5...E9.

Project	External diameter1	External diameter2	Length	Depth
Dimension and Tolerance	Φ21+0.01/-0.02	Φ21+0.01/-0.02	50±0.04	28±0.05
Measuring tool	Micrometer	Micrometer	Caliper	Depth gage
1	21.010	21.008	49.98	28.01
2	21.010	21.000	49.98	27.98
3	22.999	21.000	50	28
4	23.007	20.998	50	28
5	23.000	20.985	50.01	28.01
	23.008		Channel 1	Channel 2

Serial of workpieces      The next data display area is indicated in green

Code	Description	Plug to product	Remark
7315-2	multichannel receiver		<ul style="list-style-type: none"> <li>■ Connected with maximum 8 transmitters, each of them has unique identification code.</li> <li>■ Text format virtual com port, converted to keyboard format with supplied software (data can be transmitted to EXCEL, WORD etc. and any software which receives keyboard signal)</li> <li>■ Using EXCEL directional input software, the measurement data of different measuring tools can be transmitted to the specified area in the sheet.</li> </ul>
7315-3	single channel receiver		<ul style="list-style-type: none"> <li>■ Connected with 1 transmitter only, transmitter can be changed as needed.</li> <li>■ No need to install drivers and softwares.</li> <li>■ Keyboard format (data can be transmitted to EXCEL, WORD etc. and any softwares which receives keyboard signal)</li> </ul>
7315-20	transmitter		<div>for digital calipers</div> <div>for digital depth gages</div> <div>for 1156 series digital height gages</div>
7315-30	transmitter		<div>for digital micrometers</div> <div>for digital three points internal micrometers</div>
7315-40	transmitter		<div>for digital indicators</div>
7315-50	transmitter		<div>for digital thickness gages</div> <div>for digital internal/external caliper gages</div> <div>for digital protractors</div>

## 106 PCS JIG SET FOR CMM CODE ISY-100



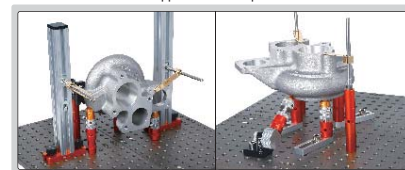
VIDEO



ISY-100

Product	Code	Size (mm)	Quantity	Application
	ISY-100-1001	Ø16×30	5	
	ISY-100-1002	Ø16×50	5	
	ISY-100-1003	Ø16×100	3	
	ISY-100-1004	Ø20×30	5	
	ISY-100-1005	Ø20×50	5	
	ISY-100-1006	Ø20×100	3	
stand with fine adjustment 	ISY-100-2001	Ø16×45~60	2	height adjustment: 45~60mm 
stand with fine adjustment 	ISY-100-2003	Ø20×45~60	2	
horizontal spring stand 	ISY-100-4001	—	2	
horizontal screw stand 	ISY-100-5001	—	2	
magnetic stand (magnetic top surface) 	ISY-100-7001	Ø20×25	3	
stand for slice parts 	ISY-100-8001	Ø20×25	2	ISY-100-8001 and ISY-100-8002 use cooperatively 
clamping stand for slice parts 	ISY-100-8002		1	
clip 	ISY-100-1201	—	2	
clip 	ISY-100-1301	—	2	
clip stand 	ISY-100-1401	Ø6×60	2	
	ISY-100-1402	Ø6×100	2	
sliding support plate 	ISY-100-1801	78×20×10	3	
clamping screw 	ISY-100-2301	Ø8×20	6	

application examples



Product	Code	Size (mm)	Quantity	Application
vertical square column 	ISY-100-3003	30×30×250	2	
screw 	ISY-100-2302	Ø8×20	6	
base plate 	ISY-600-400200	400×400×12	2 pieces /per set	—
wrench 	ISY-100-3701	Ø3.8×70	1	—
wrench 	ISY-100-3801	M2.5	1	—
	ISY-100-3802	M5	1	—
	ISY-100-3803	M6	1	—

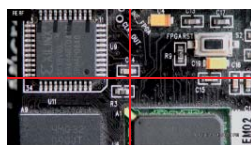
Product	Code	Quantity	Application
45° stand 	ISY-100-9001	2	
V shaped support 	ISY-100-1901	2	
V shaped support 	ISY-100-1902	2	
support head 	ISY-100-2701	4*	
	ISY-100-2702	4*	
	ISY-100-2703	4*	
	ISY-100-2704	4*	
	ISY-100-2705	4*	
	ISY-100-2706	4*	
	ISY-100-2707	4*	
dust cleaner 	ISY-100-3501	1	—
lubricating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

\* 2 pcs in aluminum, 2 pcs in plastic

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

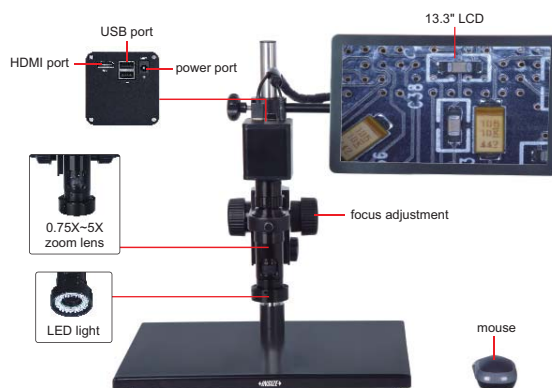
AUTO FOCUS

TAKE PICTURES  
AND VIDEOS



display cross hair  
(blue/green/red/yellow/black/brown colors)

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



0.5X camera adapter  
(included)



2X auxiliary objective  
(optional)



1X auxiliary objective  
(included)



1X camera adapter  
(optional)

### SPECIFICATION

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

### STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	2 pcs



16G USB flash disk  
(included)



X-Y glass stage (optional)  
(X-Y travel: 74×60mm)

### MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	Magnification	20~123X	40~246X
	Focus distance	48~84mm	48~84mm
	View field	13×7~2.2×1mm	6.3×3.5~1.1×0.5mm
2X (optional)	Magnification	40~246X	80~492X
	Focus distance	24~42mm	24~42mm
	View field	6.5×3.5~1.1×0.5mm	3.3×1.8~0.6×0.3mm

### OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED auxiliary illumination	ISM-DL-LED
Coaxial light illumination	ISM-DL-COAXIAL
Auxiliary objective	

### AUTO FOCUS DISTANCE

Zoom objective scale	0.75X	1X	1.5X	2X	2.5X	3X	3.5X	4X	4.5X	5X
Auto focus distance	48~84mm	50~78mm	55~73mm	62~71mm	65~70mm	66~70mm	67~70mm	68~70mm	68~70mm	68~70mm

## DIGITAL MEASURING MICROSCOPE (WITH DISPLAY)

TAKE PICTURES

MEASUREMENT

BUILT-IN SOFTWARE  
WITHOUT COMPUTER

ATTENTION: PLEASE MAKE CONFOCAL ADJUSTMENT AFTER  
CHANGING CAMERA ADAPTERS OR AUXILIARY OBJECTIVES

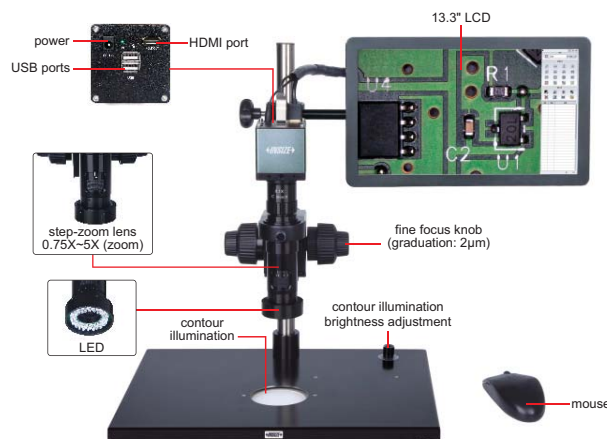
- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable



### SPECIFICATION

Code	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 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



ISM-DL301 (with contour illumination)

To be continued



Continued from previous page



1X camera adapter  
(optional)



2X auxiliary objective  
(optional)



16G USB flash disk  
(included)



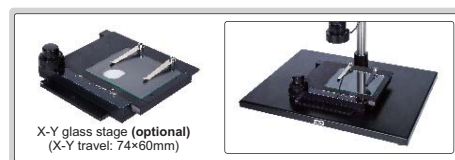
calibration plate  
(included)



1X auxiliary objective  
(included)



0.5X camera adapter  
(included)



## 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

Objective magnification	Image magnification	Measuring accuracy
0.75X	15X	±8μm
1X	20X	±7μm
1.5X	30X	±6μm
2X	40X	±6μm
2.5X	50X	±6μm
3X	60X	±5μm
3.5X	70X	±5μm
4X	80X	±4μm
4.5X	90X	±4μm
5X	100X	±4μm

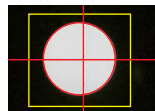
## SOFTWARE

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

Point tool



Box tool



Click tool



## Measurement tools:

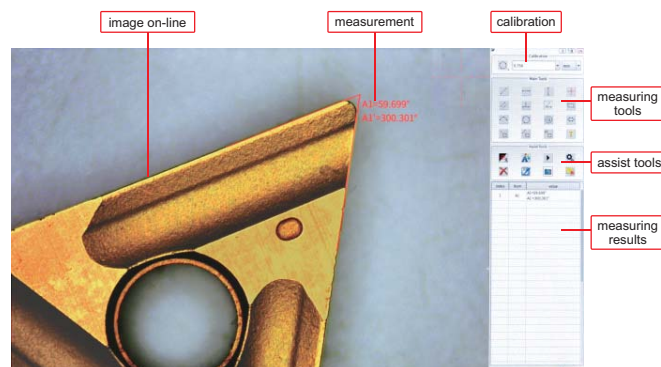
- |  |   |   |
|--|---|---|
| measure length of line or distance between two points                | measure length of line or distance between two points in horizontal direction | measure length of line or distance between two points in vertical direction |
| measure angle from horizontal line                                   | measure angle from vertical line  | measure angle of two lines  |
| measure distance between two parallel lines                          | measure distance between multiple parallel lines                              | measure girth and area of polygon   |
| measure distance between point and line                              | measure radius, length and angle of arc                                       | measure length, width, girth and area of rectangle                          |
| measure radius, diameter, girth and area of circle with three points | measure radius, diameter, girth and area concentric of circles                | measure maximum distance between point and circle                           |
| measure minimum distance between point and circle                    | measure distance between point and center of circle                           | measure maximum distance between line and circle                            |
| measure minimum distance between line and circle                     | measure distance between line and center of circle                            | measure maximum distance between two circles                                |
| measure minimum distance between two circles                         | measure center distance between two circles                                   | cross hair  |
| add text   | measure radius, diameter, girth and area of circle with two points            |   |

## MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	Magnification	15~100X	30~200X
	Focus distance	70±2mm	70±2mm
	View filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	Magnification	30~200X	60~400X
	Focus distance	29±2mm	29±2mm
	View field	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

## OPTIONAL ACCESSORY

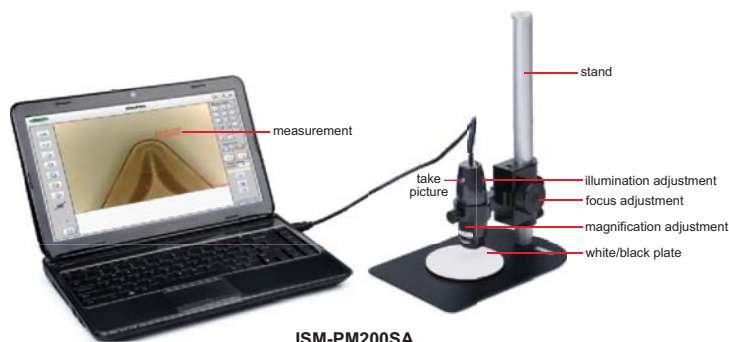
1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED auxiliary illumination	ISM-DL-LED
Coaxial light illumination	ISM-DL-COAXIAL
Auxiliary objective	



## DIGITAL MEASURING MICROSCOPES



- Can take pictures and videos
- Supplied with software



ISM-PM200SA  
computer is optional



software CD (included)



filter (optional)



### SPECIFICATION

Code	ISM-PM200SA	ISM-PM200SB
Magnification	10X~200X	
Focus distance	short focus distance	
Stand	standard	universal
Focus support	included	
Calibration rule	graduation 0.1 and 1mm	
Pixel	2M (resolution: 1600×1200)	
Illumination	built-in adjustable LED	
Power supply	USB 2.0 cable (voltage required: 5±0.1V)	



### 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

### OPTIONAL ACCESSORY

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

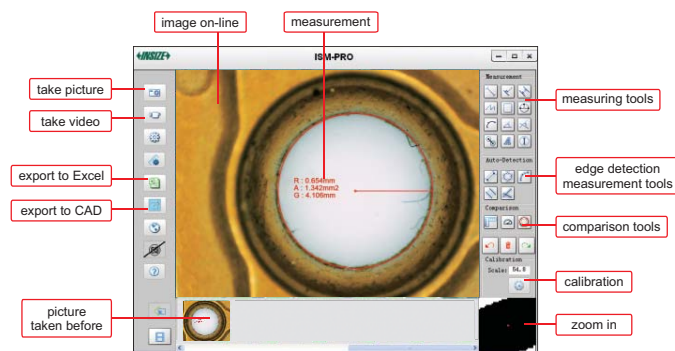
### SOFTWARE

- **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

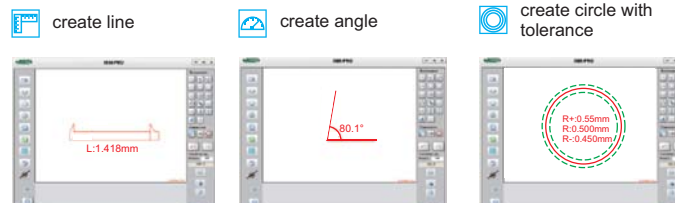
#### ■ Edge detection measurement tools:

- ☒ 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.



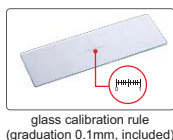
#### ■ Data export to CAD or Excel:



## 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)



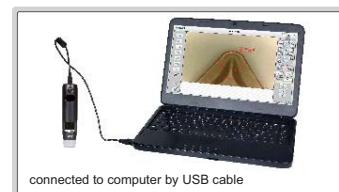
connected to iPad  
by WiFi



connected to Android  
device by WiFi



connected to computer by WiFi

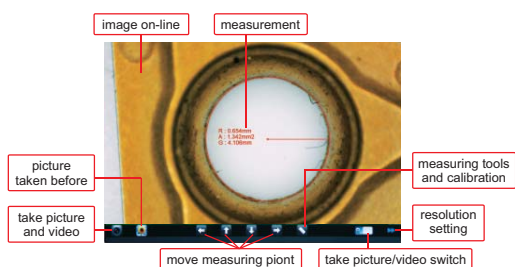


connected to computer by USB cable

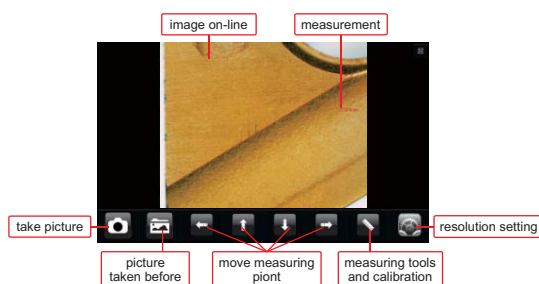
### MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

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

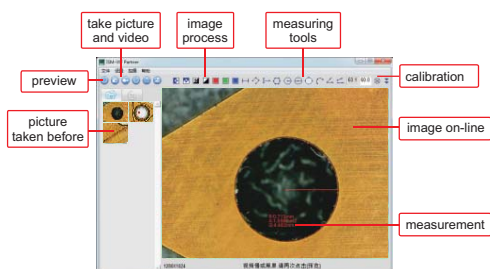
### 1 Software ISM-PAD (for iPad by WiFi)



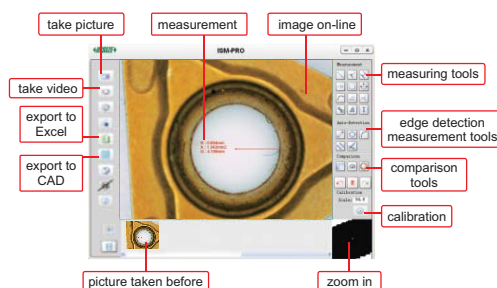
### 2 Software ISM-APK (for Android devices by WiFi)



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



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



## 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



LED ring light (optional)



### 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

### 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
LED ring light		ISM-ZS-RL
Sleeve for auxiliary objective		ISM-ZS30-ADAPTER
Digital camera		ISM-CM63
Camera adapter 0.75X **		ISM-AD-0D75

\* 0.5X, 0.63X and 0.75X auxiliary objectives must be used with ISM-ZS30-ADAPTER

\*\* Digital camera must be used with camera adapter 0.75X

## ZOOM STEREO MICROSCOPES (STANDARD TYPE)

### SPECIFICATION

Code	ISM-ZS50
Optical tube	binocular
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)	290×260×480mm
Weight	4.9kg

LED ring light (optional)



### 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



ISM-ZS50



### 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
LED ring light		ISM-ZS-RL
Sleeve for auxiliary objective		ISM-ZS30-ADAPTER
Digital camera for ISM-ZS50T		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter 0.5X for ISM-ZS50T **		ISM-MAS-ADAPTER

\* 0.5X auxiliary objective must be used with ISM-ZS30-ADAPTER

\*\* Digital camera must be used with camera adapter 0.5X



## ROUGHNESS TESTER CODE ISR-C002

CAN BE CONTROLLED  
BY COMPUTER

DATA  
OUTPUT



software CD (included)



data transmission  
cable (optional)



printer (optional)



adjustable stand (included)

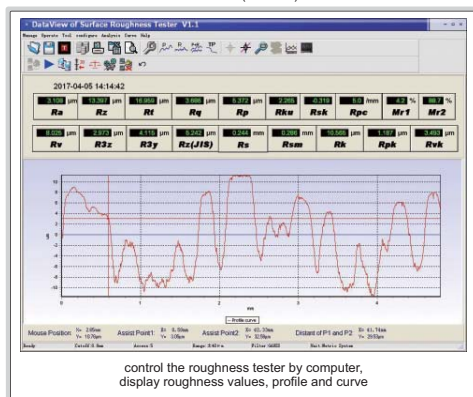


probe cover (included)

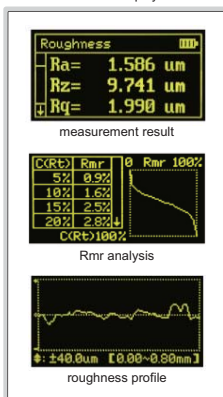


- 21 roughness parameters
- Display roughness values, profile and curve
- Memory of maximum 100 results
- Automatic power off

software (included)



screen display



light duty test stand (optional)



heavy duty test stand (optional)



Unit: mm

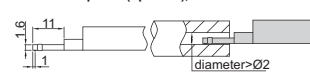
extension rod (optional), code ISR-C002-ER



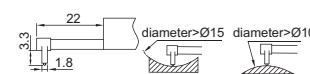
transverse rod (optional), code ISR-C002-TR



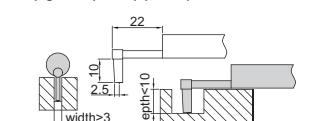
small hole probe (optional), code ISR-C002-SBP



curved surface probe (optional), code ISR-C002-SUR



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



### 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-off		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
Curved surface probe	ISR-C002-SUR
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND
Printer	ISR-C002-PRINTER
Data transmission cable	ISR-C002-SPC

## ROUGHNESS TESTER (SEPARABLE TYPE) CODE ISR-C300

CAN BE OPERATED BY  
COMPUTER OR MOBILE PHONE

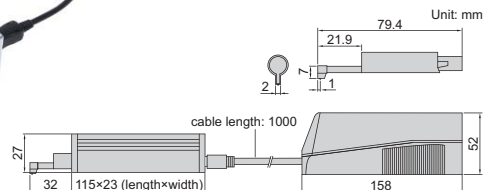
TOUCH SCREEN



BLUETOOTH

DATA  
OUTPUT

- Roughness tester can be operated by mobile phone (only android system) or computer
- Data can be output to Excel by connecting with computer via bluetooth or USB cable
- Support bluetooth printer
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Touch screen
- Automatic power off



magnetic stand adapter (included)



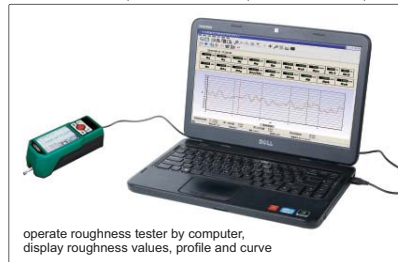
can be installed on magnetic stands

connect mobile phone via bluetooth (only android system)



operate roughness tester by mobile phones,  
display roughness values, profile and curve

connect computer via USB cable (software is included)



operate roughness tester by computer,  
display roughness values, profile and curve

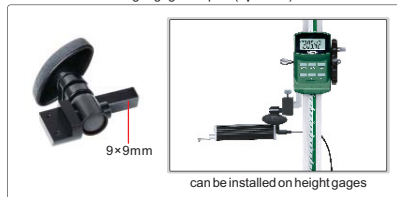
software CD (included)



roughness tester  
screen display

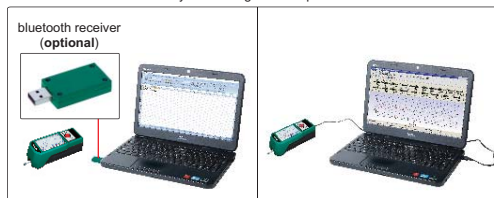


height gage adapter (optional)

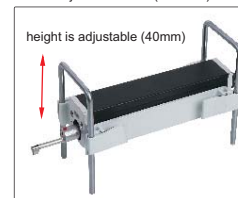


can be installed on height gages

data can be sent to Excel by connecting with computer via bluetooth or USB cable



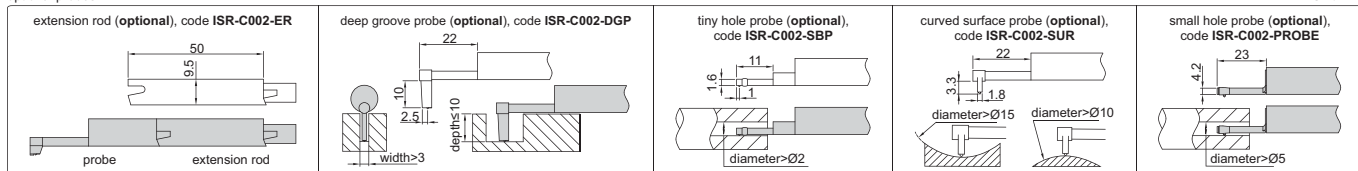
adjustable stand (included)



height is adjustable (40mm)

**NOTE:** Please confirm whether the adapter can fit your height gages.  
When using INSIZE height gages, please use the dial test indicator holder of height gages

optional probes



### SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	X axis	17.5mm
	Z axis	320μm (-160μm~160μm)
Accuracy		±10%
Resolution (Ra)		0.001μm
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		1~5
Traverse speed		0.135mm/s, 0.5mm/s, 1mm/s
Memory		100 measurement results
Output		USB and bluetooth
Power		built-in rechargeable battery
Dimension (L×W×H)		158×64×52mm
Weight		400g

### STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Connecting cable (long and short)	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
USB cable and software	1 pc
AC/DC adapter	1 pc

### OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Curved surface probe	ISR-C002-SUR
Bluetooth printer	ISR-C002-PRINTER
Height gage adapter	ISR-C300-LB1
Bluetooth receiver	ISR-C300-RECEIVER
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2

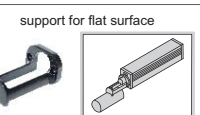
bluetooth printer (optional)



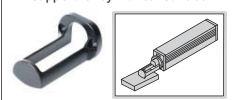
probe and main unit  
can be combined together



probe support (optional)



support for cylindrical surface



## ROUGHNESS TESTER CODE ISR-C003



calibration block (included)



VIDEO

- 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-CS130-W

INSIZE PLUS  
MADE IN UK



- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel

Machining method	Roughness (Ra)	Roughness (Rz)	Quantity
Flat lapping	0.05, 0.1, 0.2 $\mu\text{m}$	0.55, 1, 1.6 $\mu\text{m}$	3 pcs
	2, 4, 8 $\mu\text{in}$		
Reaming	0.4, 0.8, 1.6 $\mu\text{m}$	3, 6, 10 $\mu\text{m}$	3 pcs
	16, 32, 63 $\mu\text{in}$		
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 $\mu\text{m}$	0.55, 1, 1.6, 3, 6, 10 $\mu\text{m}$	6 pcs
	2, 4, 8, 16, 32, 63 $\mu\text{in}$		
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	2.5, 4, 8, 16, 32, 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 $\mu\text{m}$	2.5, 4, 8, 16, 32, 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 $\mu\text{m}$	2.5, 4, 8, 16, 32, 50 $\mu\text{m}$	6 pcs
	16, 32, 63, 125, 250, 500 $\mu\text{in}$		

## 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



VIDEO

## MAGNIFIERS WITH ILLUMINATION



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

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



2 pcs LED

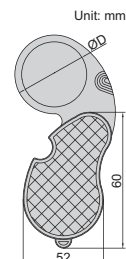
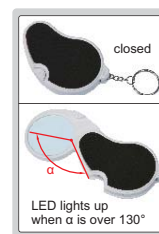
## FOLDING MAGNIFIER WITH ILLUMINATION

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

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



7514-1



Unit: mm



## FOLDING MAGNIFIER

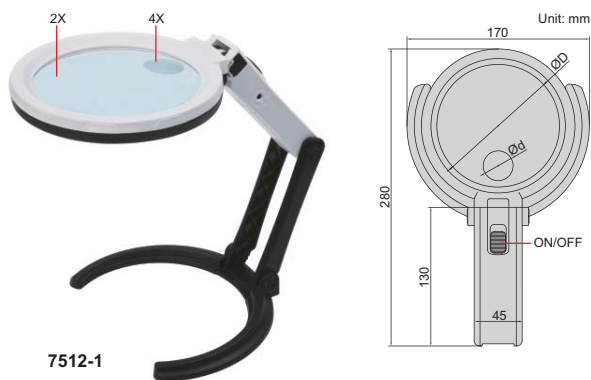


7511-8

- Glass lens

Code	Magnification	Lens diameter (ØD)
7511-8	10X	Ø21mm

## THREE WAYS MAGNIFIER WITH ILLUMINATION



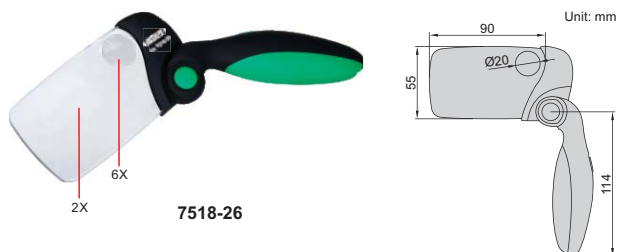
7512-1

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



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

## MAGNIFIER WITH ILLUMINATION



7518-26

- Two magnifications
- LED illumination
- Powered by 2 pcs AAA batteries (included)
- Resin lens

Code	Magnification	Lens size
7518-26	2X/6X	90x55mm



## FOLDING MAGNIFIER WITH ILLUMINATION



7515-10

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

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



## MAGNIFIER WITH TWO LENSES



7522-610

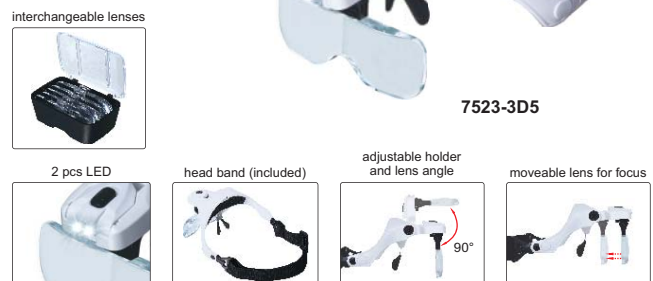
- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)



Code	Lens number	Magnification	Lens diameter (ØD)
7522-610	2 pcs	6X	37mm
		10X	50mm

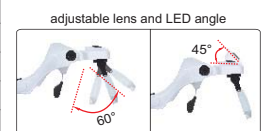
## MAGNIFICATION GLASSES

- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)



7523-3D5

Code	Lens number	Magnification
7523-3D5	5 pcs	1X
		1.5X
		2X
		2.5X
		3.5X





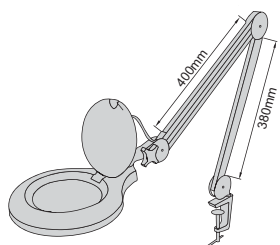
## TABLE MAGNIFIER WITH ILLUMINATION CODE 7516-5D



- 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



## TABLE MAGNIFIER WITH ILLUMINATION CODE 7517-3D



- Four steps brightness adjustment
- LED illumination, working life 20000h
- Resin lens

### SPECIFICATION

Magnification	1.75X
Diopter	3D
Lens diameter	Ø125mm
Illumination	power: 3W, illuminance: 260lm
Power supply	100~240V, 50~60Hz

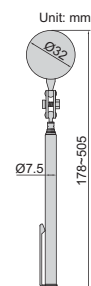
## TELESCOPING INSPECTION MIRROR

- 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



7160-1



## ULTRASONIC THICKNESS GAGE (BASIC TYPE) 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



## COATING THICKNESS GAGE CODE 9501-1200

FOR MAGNETIC AND  
NON-MAGNETIC SUBSTRATES

DATA  
OUTPUT



software CD  
(included)



magnetic induction  
probe FE (included)



eddy current probe  
NFE (optional) with  
zero calibration block



magnetic induction  
probe FE90 for bores  
and grooves (optional)



magnetic induction  
probe FE10 with big  
range (optional)



zero calibration block  
for FE (included)



calibration foils  
(included)



data transmission  
cable (optional)

- Magnetic induction probe (FE) measures the thickness of non-magnetic coating on magnetic substrate  
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)  
Coating: zinc, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Eddy current probe (NFE) measures the thickness of non-conductive coating on non-magnetic substrate  
Substrate: copper, aluminum, zinc, non-magnetic stainless steel  
Coating: plastic, powder, paint, anodizing
- Tolerance measurement
- 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	±(3%L+1)μm ±(3%L+10)μm	(range≤1250μm) (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			
Output	USB			
Power supply	2×1.5V AA batteries			
Dimension	128×68×32mm			
Weight	340g			

### STANDARD DELIVERY

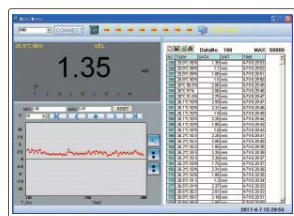
Main unit	1 pc
Magnetic induction probe (FE)	1 pc
Zero calibration block for FE probe	1 pc
Calibration foils (50μm, 100μm, 250μm, 500μm, 1000μm)	1 set
1.5V AA battery	2 pcs
USB cable and software	1 pc

### OPTIONAL ACCESSORY

Data transmission cable	9501-1200-SPC
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

## DIGITAL ANEMOMETER CODE 9331-40

DATA  
OUTPUT



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



- Measure velocity, flow, temperature and relative humidity
- Velocity unit: m/s, km/h, mil/h, ft/m, ft/s, knots
- Flow unit: CMS (cubic meter per second), CMM (cubic meter per minute), CFM (cubic feet per minute)
- Temperature type: ambient, dew point, wet bulb
- Maximum and minimum modes
- Automatic power off

### STANDARD DELIVERY

Main unit	1 pc
USB cable and software	1 pc
9V battery	1 pc

software CD  
(included)



### SPECIFICATION

Measuring range	velocity	0.8~30m/s, 1.4~108km/h, 0.9~67.2mil/h, 1.3~98.5ft/s, 78~5900ft/m, 0.8~58.3knots
	flow	0~9999CMS, 0~99990CMM, 0~99990CFM
	temperature	-20~60°C/-4~140°F
	relative humidity	0~100%RH
Accuracy	velocity	±(2%+0.5) for m/s, km/h, mil/h, ft/s, knots ±(2%+50) for ft/m
	temperature	±1.5°C/±2.7°F
	relative humidity	±3% (20~80%RH), ±5% (<20%RH or >80%RH)
Resolution	velocity	0.01m/s, 0.01km/h, 0.01mil/h, 0.01ft/s, 1ft/m, 0.01knots
	flow	0.01CMS, 0.1CMM, 0.1CFM
	temperature	0.1°C/0.1°F
	relative humidity	0.1%RH
Flowing area range		0~9.999m²/0~9.999ft²
Sampling time		0.4s
Maximum working height		2000m
Output		USB
Power supply		9V battery
Dimension		165×85×38mm
Weight		200g

## INFRARED THERMOMETER CODE 9120-550



- With maximum reading
- Tolerance measurement
- Automatic power off

### SPECIFICATION

Measuring range	-30~550°C/-22~1022°F
Accuracy	-30~0°C (-22~32°F): $\pm 3^{\circ}\text{C}$ 0~550°C (32~1022°F): $\pm (1.5^{\circ} + 2^{\circ}\text{C})$
Resolution	0.1°C/0.1°F
Distance to spot ratio (D:S)	12:1
Emissivity	0.1~1 (adjustable)
Laser type	630~670nm, class II, <1mW
Response time	<0.5s
Power supply	2×1.5V AAA batteries
Dimension	155×110×45mm
Weight	126g (without batteries)

### STANDARD DELIVERY

Main unit	1 pc
1.5V AAA battery	2 pcs

## DIGITAL MOISTURE METER CODE 9341-50



- 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

### SPECIFICATION

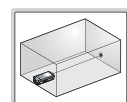
Measuring depth	0~50mm
Measuring range	Moisture 0~60% temperature -10~50°C/14~122°F relative humidity 0~100%RH
Accuracy	Moisture $\pm 2\%$ temperature $\pm 2^{\circ}\text{C}$ relative humidity $\pm 5\%\text{RH}$
Resolution	Moisture 0.1% temperature 0.1°C/0.1°F relative humidity 0.1%RH
Sampling time	0.5s for moisture 1s for temperature and relative humidity
Power supply	2×AAA batteries
Dimension	130×56×29mm
Weight	206g

## LASER DISTANCE METERS

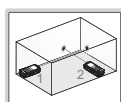


- Large display with backlight
- Unit: m, ft, in
- Distance, area, volume and height measurement
- Continuous measuring mode to track maximum and minimum value
- Memory of 99 measurement values
- Automatic power off: laser 20s, main unit 150s

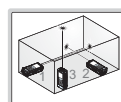
9561-80



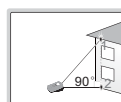
distance measurement



area measurement



volume measurement



height measurement

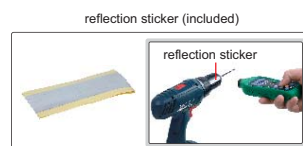
### SPECIFICATION

Code	9561-40	9561-80
Measuring range	0.05~40m	0.05~80m
Accuracy	$\pm 3\text{mm}$	
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	

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs

## NON-CONTACT DIGITAL TACHOMETER CODE 9221-999



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

### SPECIFICATION

Measuring range	50~99999RPM
Accuracy	$\pm (0.03\% + 2)$ 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

### STANDARD DELIVERY

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

## CONTACT DIGITAL TACHOMETER CODE 9222-199

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

### SPECIFICATION

Measuring range	50~19999RPM
Accuracy	± (0.03%+2) RPM
Resolution	0.01RPM (range 50~99.99RPM)
	0.1RPM (range 100~999.9RPM)
	1RPM (range 1000~19999RPM)
Power supply	4×AAA batteries
Dimension	183×60×27mm
Weight	122g

### 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



cone cavity head (included)



cone head (included)



wheel with 0.1m perimeter (included)



wheel with 6" perimeter (included)



Extension rod (included)

## DIGITAL MULTIMETER CODE 9242-ML100

- Data hold
- Display backlight
- Low battery display
- Safety rating: CAT II 600V



probes (included)

### STANDARD DELIVERY

Main unit	1 pc
Probe	2 pcs
9V battery	1 pc

### SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200mV/2V/20V/200V	0.1mV/1mV/10mV/0.1V	±(0.5%+3)
	600V	1V	±(0.8%+5)
AC Voltage	200V/600V	0.1V/1V	±(1.2%+10)
DC Current	200μA/2mA	0.1μA/1μA	±(1.0%+3)
	20mA	10μA	±(1.0%+5)
	200mA	0.1mA	±(1.5%+5)
	10A	10mA	±(3.0%+10)
Resistance	200Ω	0.1Ω	±(0.8%+5)
	2kΩ/20kΩ/200kΩ	1Ω/10Ω/0.1kΩ	±(0.8%+2)
	2MΩ	1kΩ	±(1.0%+5)
Diode	open circuit voltage 3.0V		
Continuity buzzer	<70±30Ω		
Transistor hFE	measuring range 0~1000		
Power supply	1×9V 6F22/NEDA 1604 battery		

## AC DIGITAL CLAMP METER CODE 9243-CA600

- Auto/manual ranging
- Maximum mode
- Data hold
- Display backlight
- Work light
- Low battery display
- Auto power off
- Safety rating: CAT III 600V



probes (included)



### SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200mV/2V/20V/200V	0.1mV/1mV/10mV/0.1V	±(0.8%+2)
	600V	1V	±(1.0%+2)
AC Voltage	200mV	0.1mV	±(1.0%+10)
	2V/20V/200V	1mV/10mV/0.1V	±(1.0%+5)
	600V	1V	±(1.2%+5)
AC Current	2A(≤0.5A)	1mA	±(3.5%+20)
	2A	1mA	±(3.0%+10)
	20A	10mA	±(3.0%+10)
	200A	0.1A	±(2.5%+10)
	600A	1A	±(1.5%+5)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ	0.1Ω/1Ω/10Ω/0.1kΩ/1kΩ	±(1.2%+2)
	20MΩ	10kΩ	±(2.0%+5)
Diode	open circuit voltage 1.5V		
Continuity buzzer	<60Ω		
Power supply	3×1.5V AAA batteries		

### STANDARD DELIVERY

Main unit	1 pc
Probe	2 pcs
1.5V battery	3 pcs



## PEN-TYPE DIGITAL MULTIMETER CODE 9241-ML200

### SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200mV/2V/20V/200V/600V	0.1mV/1mV/10mV/0.1V/1V	$\pm(0.7\%+2)$
AC Voltage	200mV/2V/20V/200V	0.1mV/1mV/10mV/0.1V	$\pm(0.8\%+3)$
	600V	1V	$\pm(1.0\%+3)$
DC Current	20mA/200mA	10 $\mu$ A/0.1mA	$\pm(1.5\%+3)$
AC Current	20mA/200mA	10 $\mu$ A/0.1mA	$\pm(2.0\%+3)$
Resistance	200 $\Omega$	0.1 $\Omega$	$\pm(1.0\%+3)$
	2k $\Omega$ /20k $\Omega$ /200k $\Omega$ /2M $\Omega$	1 $\Omega$ /10 $\Omega$ /0.1k $\Omega$ /1k $\Omega$	$\pm(1.0\%+1)$
	20M $\Omega$	10k $\Omega$	$\pm(1.0\%+5)$
Logic level test	<1.5V (green LED on) 1.5~3.5V (green & red LED off) >3.5V (red LED on)		
Diode	open circuit voltage 1.5V		
Continuity buzzer	<50 $\Omega$		
Power supply	2 $\times$ 1.5V AAA batteries		

- Auto/manual ranging
- Maximum mode
- Data hold
- Non contact voltage
- Low battery display
- Auto power off
- Safety rating: CAT III 600V



probe (included)



clips (included)



### STANDARD DELIVERY

Main unit	1 pc
Probe	1 pc
Clip	2 pcs
1.5V battery	2 pcs

## DIGITAL LEVEL AND SLOPE METER

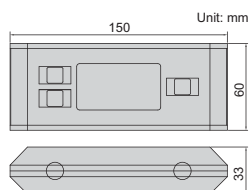
WORKING TEMPERATURE  
-5°C ~ 50°C

IP54  
WATERPROOF

ABSOLUTE  
LEVEL

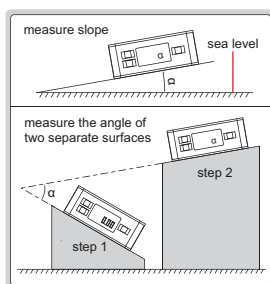
BUZZER ALARM  
AT 0° AND 90°

BACKLIGHT



2179-360

- IP54 dust/waterproof
- Used as level and slope meter
- Aluminum frame
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft), conversion, backlight
- Two AAA batteries, automatic power off



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

## DIGITAL LEVEL AND SLOPE METER

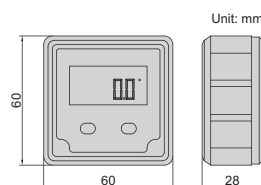
WORKING TEMPERATURE  
-5°C ~ 50°C

DISPLAY FLIPS OVER WHEN  
THE BOTTOM FACES UP

ABSOLUTE LEVEL

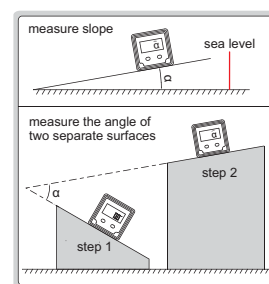
BACKLIGHT

MAGNETIC  
BOTTOM



2170-1

- Used as level and slope meter
- 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°: $\pm 0.1^\circ$ ; at others: $\pm 0.2^\circ$

## BLOCK LEVELS (ECONOMIC TYPE)

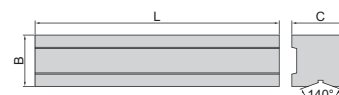
- V-groove on bottom for shafts (shafts dia. 15~70mm)
- With transverse vial
- Supplied with adjusting wrench

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

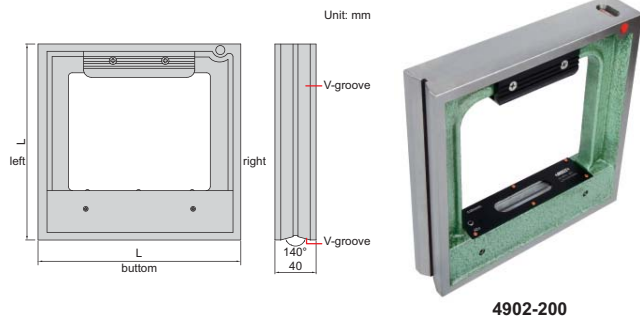
(mm)



4903-200A



## FRAME LEVELS (ECONOMIC TYPE)

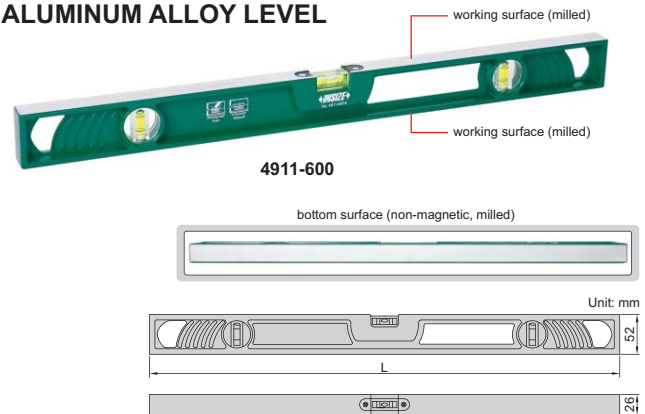


4902-200

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

Code	Sensitivity	Size (LxL)
4902-200	0.02mm/m (=0.001°)	200x200mm

## ALUMINUM ALLOY LEVEL



4911-600

- Top and bottom working surfaces
- Shock-proof and UV-proof vials
- Die casting aluminum alloy frame
- Zero position of horizontal vial can be set
- One graduation of horizontal vial is 2% slope
- Working temperature: -15°C~55°C

LIFETIME WARRANTY VIALS

Code	Length (L)	Accuracy
4911-600	600mm	0.5mm/m

## DIGITAL LEVELS AND SLOPE METER

WORKING TEMPERATURE  
0°C ~ 50°C

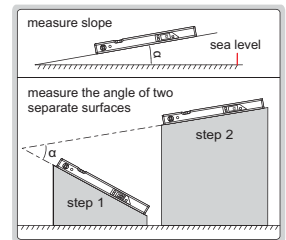
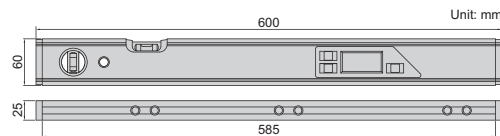


4910-600

BACKLIGHT

ABSOLUTE LEVEL

- With transverse and longitudinal vials
- Used as level and slope meter
- 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



Code	Range	Resolution	Accuracy	Remark
4910-600	0-360° (90°x4)	at 0° and 90°: 0.05° (=0.8725mm/m); at others: 0.1° (=1.745mm/m)	at 0° and 90°: ±0.1°; at others: ±0.2°	at 0° and 90° buzzer alarm

## HANDY LEVEL



4912-100

MAGNETIC BASE

LIFETIME WARRANTY VIALS

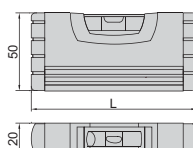
magnetic base surface



Unit: mm

- 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



## ALUMINUM LEVELS

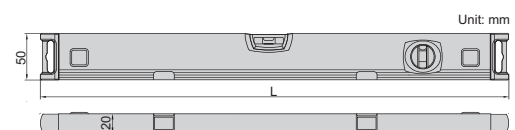


4914-600

MAGNETIC BASE

LIFETIME WARRANTY VIALS

magnetic bottom surface (milled)



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

Code	Size (L)	Accuracy
4914-300	300mm	0.5mm/m
4914-600	600mm	0.5mm/m
4914-1200	1200mm	0.5mm/m

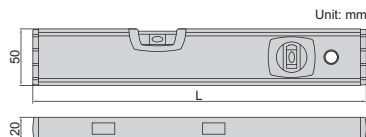
## ALUMINUM ALLOY LEVELS (BASIC TYPE)

LIFETIME  
WARRANTY VIALS

MAGNETIC  
BASE



4918-300



magnetic bottom surface



- Shock-proof and UV-proof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

Code	Size (L)	Accuracy
4918-300	300mm	1mm/m
4918-600	600mm	1mm/m
4918-1000	1000mm	1mm/m
4918-2000	2000mm	1mm/m

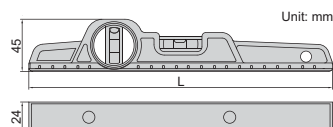
## CASTING ALUMINUM LEVEL

LIFETIME  
WARRANTY VIALS

MAGNETIC  
BASE



4913-250



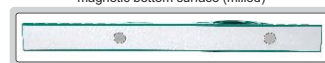
packaging



- 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

magnetic bottom surface (milled)



## PORTABLE LEEB HARDNESS TESTER (BASIC TYPE) CODE HDT-LP200

INSPECTION  
CERTIFICATE



- Can change probes
- Dual-coil probe for high accuracy
- Universal testing angle, no need to set impact direction
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Dual value display, shows both Leeb and converted hardness
- Large LCD display with backlight
- Can choose large font display and statistics display
- Automatically calculate maximum, minimum and average value
- Save 300 data
- Operating temperature: -10°C~45°C
- According to ASTM A956, DIN 50156, GB/T 17394

### SPECIFICATION

Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HRA/0.1HS/1SGM
Accuracy	±6HLD (when HLD=800)
Measuring range	HL 100-960/HRC 0.9-79.2/HRB 1-140/HB 1-1878/HV 1-1698/HS 0.5-1370/HRA 1-88.5/SGM (rm) 1-6599N/mm²
Power supply	2xAA battery
Dimension	127×67×30mm
Weight	240g

### STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
Impact device D	1 pc

### OPTIONAL ACCESSORY

Impact device DC	HDT-LP200-DC
Impact device C	HDT-LP200-C
Impact device D+15	HDT-LP200-D15
Impact device DL	HDT-LP200-DL
Impact device E	HDT-LP200-E
Impact device G	HDT-LP200-G
Hardness test block D *	ISH-BHLD
Hardness test block G *	ISH-BHLG
Printer	ISH-LP200-PRINTER
Support rings	see details

\* Hardness test block G (ISH-BHLG) is for impact device G (ISH-LP200-G). Hardness test block D (ISH-BHLD) is for all others impact devices.



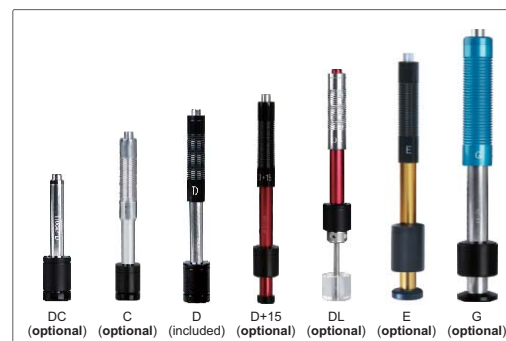
small support ring (included)



hardness test block D (included)



wireless printer (optional)



### APPLICABLE WORKPIECE

Impact device	DC	C	D	D+15	DL	E	G
Application	inner wall of small space	small or thin workpiece, coating layer	general use	deep groove	narrow slot or small hole	very hard material	casting or forging workpiece
Maximum roughness of workpiece (Ra)	2μm	0.4μm	2μm	2μm	2μm	2μm	7μm
Minimum weight of workpiece	direct measurement	5kg	1.5kg	5kg	5kg	5kg	15kg
	on solid support	2kg	0.5kg	2kg	2kg	2kg	5kg
	coupled on plate	0.05kg	0.02kg	0.05kg	0.1kg	0.05kg	0.5kg
Minimum thickness of workpiece	3mm	1mm	3mm	3mm	3mm	3mm	10mm

## PORTABLE LEEB HARDNESS TESTER (BASIC TYPE) CODE HDT-L411

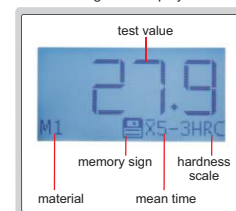
INSPECTION  
CERTIFICATEDATA  
OUTPUT

- Impact device D
- Universal testing angle, no need to set impact direction
- Dual-coil probe, high accuracy
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Dual value display, shows both Leeb and converted hardness
- High contrast digital LCD display
- Can choose large font display
- Automatically calculate maximum, minimum, average value
- Connected to PC via USB
- Save 999 data
- Operating temperature: -20°C~45°C
- According to ASTM A956, DIN 50156, GB/T 17394



VIDEO

large font display



### SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM	
Accuracy	±6HLD (when HLD=800)	
Output	USB	
Measuring range	HL100-960, HRC1-74.7, HRB1.2-140, HB28-1027, HV45-1230	
	HS4-112, HRA7-88.5, SGM (rm) 118-3315N/mm <sup>2</sup>	
Applicable workpiece	minimum weight	5kg (direct measurement)
		2kg (on solid support)
		0.05kg (coupled on plate)
	minimum thickness: 5mm	
	minimum radius of curved surface: 30mm	
	maximum roughness (Ra): 2μm	
Power supply	1xAAA battery	
Dimension	148×45×21mm	
Weight	105g	

software CD  
(included)small support ring  
(included)hardness test block D  
(included)

### STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Cleaning brush	1 pc
AAA battery	1 pc
Small support ring	1 pc
USB cable and software disc	1 pc

### OPTIONAL ACCESSORY

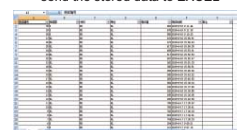
Support rings	see details
Hardness test block D	ISH-BHLD

Software (included), upload the memory to PC, print and send to EXCEL

upload the memory to PC software via USB cable



send the stored data to EXCEL



## PORTABLE HARDNESS TESTER CODE ISH-PHB

INSPECTION  
CERTIFICATE

- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Memory of 99 measurement values for browsing
- Set measurement times (1~9) to have average value
- Connected with printer via bluetooth
- Automatic power off
- According to ASTM A 956



VIDEO

### SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±6HLD (when HLD=800)	
Display	Leeb (HLD), converted hardness, material, impact direction, test times, average value, date	
Output	bluetooth	
Applicable workpiece	minimum weight	5kg
		2kg (on solid support)
		0.1kg(coupled on plate)
	minimum thickness: 5mm	
	minimum radius of curved surface: 30mm	
	maximum roughness (Ra): 1.6μm	
Power supply	3×AAA batteries	
Dimension	150×84×28mm	
Weight	200g	

### STANDARD DELIVERY

Main unit	1 pc
Impact device D	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc

### OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Couplant	ISH-COUPPLANT
Support rings	see details
Hardness test block D	ISH-BHLD

hardness test block D  
(included)small support ring  
(included)wireless printer  
(optional)



## MANUAL ROCKWELL HARDNESS TESTER (BASIC TYPE) CODE HDT-RW160



### SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N (10kg)
Test force	588N (60kg), 980N (100kg), 1471N (150kg)
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	170mm
Max. workpiece depth	135mm (from the center of indenter)
Dimension	466×238×630mm
Weight	70kg

### STANDARD DELIVERY

Main unit	1 pc
Ø58mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm steel ball indenter	1 pc
Ø1.5875mm steel ball	5 pcs
Level	1 pc
Hardness test block HRA80~88	1 pc
Hardness test block HRB85~95	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block HRC35~55	1 pc
Hardness test block HRC60~70	1 pc
Anti-dust cover	1 pc



VIDEO



level (included)



Ø150mm flat anvil (included)



Ø58mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4~60mm

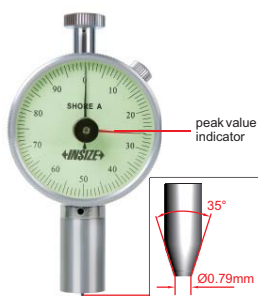


small V-type anvil (optional) for cylinders with diameter Ø2~4mm

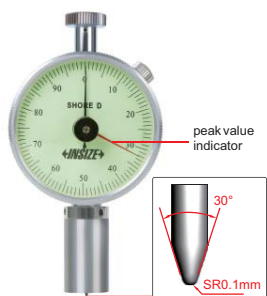
### OPTIONAL ACCESSORY

Hardness test block HRA80~88	ISH-BHRA
Hardness test block HRB85~95	ISH-BHRB
Hardness test block HRC20~30	ISH-BHRC1
Hardness test block HRC35~55	ISH-BHRC2
Hardness test block HRC60~70	ISH-BHRC3
Small V-type anvil	ISH-SMALLANVIL

## 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



VIDEO

### 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	
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

## FORCE GAGES



VIDEO

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



ISF-F500



flat push tip (included)



V-type push tip (included)



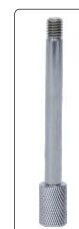
knife-edge push tip (included)



point push tip (included)



pull clamp (included)



extension rod (included)

### SPECIFICATION

Code		ISF-F50	ISF-F100	ISF-F200	ISF-F300	ISF-F500
Capacity	N	50	100	200	300	500
	kgf	5	10	20	30	50
Graduation	N	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
------------	-----------

## DIGITAL FORCE GAGES

DATA  
OUTPUT

- Push and pull test
- Units: N, gf, kgf, ozf, lbf
- 500 memories
- Automatic power off
- Metal case
- LCD display with backlight
- The display flips over when the bottom faces up
- Overload alarm



ISF-1DF100



software CD (included)



printer (optional)



## 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.), tolerance testing				
Power supply	built-in rechargeable battery				
Dimension	150×73×33mm				
Weight	450g				

accessory (included)



## 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-type push tip, knife-edge push tip, point push tip, pull clamp, extension rod)

## OPTIONAL ACCESSORY

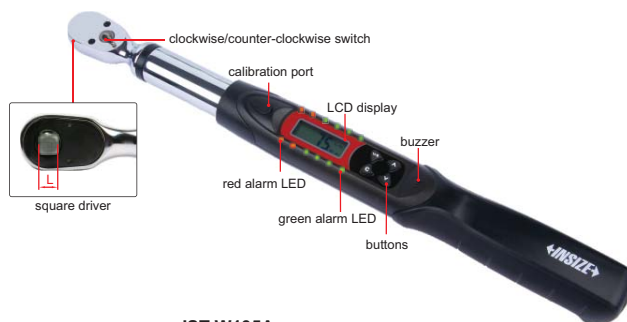
Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

## DIGITAL TORQUE WRENCHES

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



- 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

## SPECIFICATION

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-W200A	40~200N.m		0.1N.m	1/2"		530mm	1.4kg
IST-W340A	68~340N.m	clockwise: ±2.5% counter-clockwise: ±3.5%	0.1N.m	1/2"		650mm	1.6kg
IST-W500A	100~500N.m		0.1N.m	3/4"		950mm	2.1kg
IST-W850A	170~850N.m		0.1N.m	3/4"		1220mm	2.55kg

## OPTIONAL ACCESSORY

Calibration cable	IST-W-CABLE
-------------------	-------------

## TORQUE WRENCHES



- According to DIN ISO 6789, ASME B107.300
- All-metal construction, sturdy and durable



IST-9WM335

ATTENTION: CLOCKWISE  
OPERATION ONLY

### 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	±6% (<10N.m) ±4% (≥10N.m)	±4%	±4%	±4%	±4%	±4%	±4%	±4%
Graduation	0.1N.m	0.25N.m	0.5N.m	1N.m	1N.m	2.5N.m	4N.m	5N.m
Square driver (D)	3/8"	3/8"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"
Length	318mm	388mm	443mm	468mm	528mm	855mm	1055mm	1055mm
Weight	820g	960g	1040g	1160g	1300g	5000g	5900g	5900g

## DIAL TORQUE WRENCHES

ACCURACY ±3%



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



IST-DW70



### SPECIFICATION

Code	IST-DW3D5	IST-DW9	IST-DW18	IST-DW35	IST-DW70	IST-DW140	IST-DW240	IST-DW350
Range	0.7~3.5N.m 6~30in.lb	1.8~9N.m 15~75in.lb	3.6~18N.m 30~150in.lb	7~35N.m 60~300in.lb	14~70N.m 120~600in.lb	28~140N.m 20~100ft.lb	48~240N.m 35~175ft.lb	70~350N.m 50~250ft.lb
Accuracy	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%
Graduation	0.05N.m 0.5in.lb	0.1N.m 1in.lb	0.2N.m 2in.lb	0.5N.m 5in.lb	1N.m 10in.lb	2N.m 1ft.lb	3N.m 2.5ft.lb	2.5N.m 2.5ft.lb
Square driver (D)	1/4"	1/4"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"
Length	254mm	254mm	254mm	254mm	378mm	546mm	546mm	546mm
Weight	480g	480g	480g	480g	820g	1300g	1300g	1300g

## WEIGHING SCALES (HIGH PRECISION)

- LCD display, with backlight
- Zero-setting, subtracting tare value
- Overload alarm
- Automatic power off

### SPECIFICATION

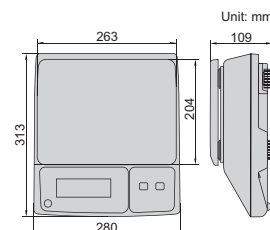
Code	8001-6	8001-15	8001-30	8001-6D	8001-15D	8001-30D
Maximum capacity	6kg	15kg	30kg	6kg	15kg	30kg
Minimum capacity	4g	10g	20g	4g	10g	20g
Division	0.2g	0.5g	1g	0.2g	0.5g	1g
Verification interval	2g	5g	10g	2g	5g	10g
Output	no					RS232
Operating temperature	-10~40°C					
Power	rechargeable battery (6V/3.2Ah), power adapter (12V/500mA)					
Dimensions of pan	263×204mm					



8001-30



printer (optional)



### OPTIONAL ACCESSORY (for scales with RS232)

Printer	8001-PRINTER
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## COUNTING SCALES

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting, accumulation, checking alarm
- Overload alarm

### SPECIFICATION

Code	8101-6	8101-15	8101-30	8101-6D	8101-15D	8101-30D
Maximum capacity	6kg	15kg	30kg	6kg	15kg	30kg
Minimum capacity	4g	10g	20g	4g	10g	20g
Division	0.2g	0.5g	1g	0.2g	0.5g	1g
Verification interval	2g	5g	10g	2g	5g	10g
Output	no			RS232		
Operating temperature	-10~40℃					
Power	rechargeable battery (6V/3.2Ah), power adapter (12V/500mA)					
Dimensions of pan	263×204mm					

### OPTIONAL ACCESSORY (for scales with RS232)

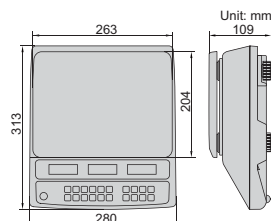
Printer	8001-PRINTER
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8101-30



printer (optional)



## ELECTRONIC BALANCES

- Automatic zero when power on
- Unit: g (gram), ct (carat), ozt (troy ounce)
- Weighing, counting, taring
- Overload alarm
- Data output



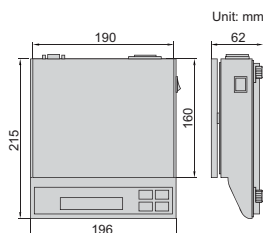
calibration weight  
(included in 8301-300,  
8301-600 and 8301-1200)



windshield  
(included in 8301-300,  
8301-600 and 8301-1200)



8301-3000



DATA  
OUTPUT

Code	8301-300	8301-600	8301-1200	8301-3000	8301-6000
Maximum weighing	300g	600g	1200g	3000g	6000g
Minimum weighing	0.2g	0.2g	0.2g	2g	2g
Resolution	0.01g	0.01g	0.01g	0.1g	0.1g
Weighing pan size	Ø135mm			190×160mm	
Verification scale interval	10d				
Working temperature	0~40°C				
Working humidity	≤80% RH				
Power supply	power adapter				
Dimension (L×W×H)	215×196×62mm				

### OPTIONAL ACCESSORY

RS232 CABLE	8301-CABLE
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## PLATFORM SCALES

DATA  
OUTPUT

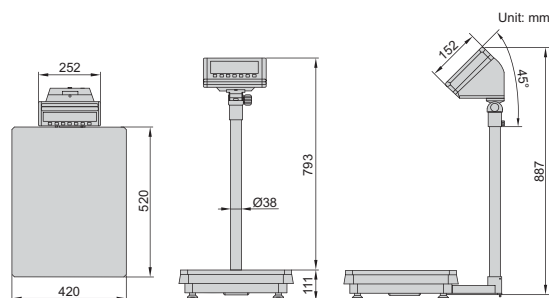


printer (optional)

- LCD large screen display with LED backlight
- Weighing, overweight alarm, counting, keyboard lock, accumulating, auto zero and animal scale
- Units: kg, g, lb, oz



8501-AL150



### SPECIFICATION

Code	8501-AL60	8501-AL150	8501-AL300
Maximum capacity	60kg	150kg	300kg
Minimum capacity	100g	200g	400g
Division	5g	10g	20g
Verification interval	5g	10g	20g
Operating temperature	-10~40°C		
Material	platform: stainless steel, base: die-cast aluminum		
Dimension of platform	420×520mm		
Power	rechargeable lead acid battery (6V/4Ah)		
Output	RS232		
Weight	18.3kg		

### OPTIONAL ACCESSORY

Printer	8001-PRINTER
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## CODE NO. INDEX

CODE	PAGE	CODE	PAGE	CODE	PAGE	CODE	PAGE
<b>11</b>		1214.....	4	2321.....	24	3281.....	13
1106.....	4	1215.....	4	2322.....	17	3282.....	14
1108.....	1	1240.....	8	2332.....	24	<b>33</b>	
1109.....	1	1244.....	8	2333.....	24	3332.....	13
1110.....	2	1250.....	11	2341.....	9	<b>34</b>	
1111.....	3	1267.....	30	2342.....	9	3400.....	11
1113.....	1	<b>13</b>		2364.....	24	<b>35</b>	
1114.....	2	1311.....	3	2372.....	27	3520.....	14
1118.....	1	1312.....	3	2373.....	27	3540.....	10
1119.....	2	1351.....	11	2374.....	27	3566.....	14
1120.....	6	<b>15</b>		2380.....	20	<b>41</b>	
1121.....	6	1520.....	6	2381.....	20	4100.....	25
1124.....	5	1526.....	5	2383.....	20	4120.....	25
1130.....	2	1530.....	5	2385.....	40	4124.....	26
1135.....	4	<b>21</b>		2386.....	20	4130.....	25
1136.....	4	2103.....	18	2397.....	40	4166.....	25
1139.....	3	2104.....	18	2398.....	20	4180.....	28
1140.....	9	2112.....	19	<b>28</b>		<b>42</b>	
1141.....	7	2121.....	23	2824.....	17	4206.....	18
1142.....	8	2131.....	23	2852.....	16	4208.....	17
1143.....	8	2132.....	24	2862.....	25	<b>46</b>	
1144.....	8	2141.....	9	2863.....	25	4601.....	28
1145.....	8	2170.....	57	2871.....	24	4602.....	29
1147.....	7	2171.....	26	<b>31</b>		4621.....	28
1148.....	7	2172.....	27	3101.....	11	4630.....	31
1150.....	10	2176.....	26	3102.....	12	<b>47</b>	
1156.....	10	2179.....	57	3108.....	11	4700.....	27
1160.....	30	2183.....	18	3109.....	12	4707.....	28
1170.....	3	<b>22</b>		3127.....	16	4780.....	26
1176.....	6	2222.....	24	<b>32</b>		4789.....	23
1178.....	6	2275.....	28	3203.....	12	4790.....	28
1180.....	30	2276.....	36	3206.....	13	4791.....	27
1181.....	7	2278.....	36	3210.....	12	4799.....	26
1185.....	6	<b>23</b>		3220.....	14	<b>48</b>	
1188.....	7	2301.....	19	3222.....	15	4801.....	29
1193.....	2	2308.....	19	3227.....	15	4802.....	30
1196.....	2	2309.....	20	3230.....	13	4804.....	30
<b>12</b>		2310.....	20	3232.....	13	4810.....	30
1203.....	3	2311.....	19	3240.....	10	4820.....	29
1204.....	3	2313.....	19	3241.....	9	4824.....	29
1205.....	3	2314.....	19	3260.....	14	4830.....	31

## CODE NO. INDEX

CODE	PAGE
4831.....	31
4832.....	32
4833.....	31
4834.....	33
4835.....	33
4836.....	32
4837.....	31
4838.....	32
4839.....	33
4840.....	33
4842.....	34
4843.....	34
4844.....	30
4852.....	31
<b>49</b>	
4902.....	58
4903.....	57
4910.....	58
4911.....	58
4912.....	58
4913.....	59
4914.....	58
4918.....	59
<b>50</b>	
5013.....	37
5024.....	37
<b>53</b>	
5303.....	44
<b>61</b>	
6140.....	3
6141.....	9
6144.....	4
<b>62</b>	
6200.....	22
6201.....	22
6202.....	22
6207.....	22
6208.....	22
6210.....	22
6211.....	23
6224.....	21

CODE	PAGE
6282.....	21
6284.....	21
6291.....	21
6293.....	21
6294.....	39
6295.....	39
6296.....	21
6297.....	21
<b>63</b>	
6300.....	14
6301.....	14
6381.....	14
<b>65</b>	
6533.....	39
6550.....	40
6562.....	40
6566.....	40
6567.....	39
<b>68</b>	
6801.....	39
6832.....	32
6863.....	23
6866.....	23
6888.....	38
6889.....	38
6890.....	39
6896.....	38
<b>69</b>	
6900.....	37
6902.....	38
6990.....	37
<b>71</b>	
7110.....	35
7114.....	18
7119.....	36
7120.....	36
7123.....	35
7140.....	35
7142.....	35
7144.....	35
7160.....	53

CODE	PAGE
<b>72</b>	
7202.....	36
7230.....	37
7231.....	37
7232.....	37
7247.....	34
7260.....	34
7261.....	34
7262.....	34
<b>73</b>	
7302.....	41
7304.....	41
7315.....	42
7353.....	17
7381.....	13
<b>75</b>	
7511.....	52
7512.....	52
7513.....	51
7514.....	51
7515.....	52
7516.....	53
7517.....	53
7518.....	52
7522.....	52
7523.....	52
<b>80</b>	
8001.....	63
<b>81</b>	
8101.....	64
<b>83</b>	
8301.....	64
<b>85</b>	
8501.....	64
<b>91</b>	
9120.....	55
<b>92</b>	
9221.....	55
9222.....	56
9241.....	57
9242.....	56

CODE	PAGE
9243.....	56
<b>93</b>	
9331.....	54
9341.....	55
<b>95</b>	
9501.....	54
9561.....	55
<b>HDT</b>	
HDT-L411.....	60
HDT-LP200.....	59
HDT-RW160.....	61
<b>ISF</b>	
ISF-1DFxxx.....	62
ISF-Fxxx.....	61
<b>ISH</b>	
ISH-PHB.....	60
ISH-SAM.....	61
ISH-SDM.....	61
<b>ISM</b>	
ISM-DL301.....	44-45
ISM-PM200SA.....	46
ISM-PM200SB.....	46
ISM-WF200.....	47
ISM-ZS30.....	48
ISM-ZS50.....	48
<b>ISQ</b>	
ISQ-RM30.....	51
<b>ISR</b>	
ISR-C002.....	49
ISR-C003.....	51
ISR-C300.....	50
ISR-CS130-W.....	51
<b>IST</b>	
IST-9WMxxx.....	63
IST-DWxxx.....	63
IST-Wxxx.....	62
<b>ISU</b>	
ISU-100D.....	53
<b>ISY</b>	
ISY-100.....	43

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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		±0.0010	-0.0005	/	50		±0.02	-0.01	/
4			-0.0005	/	100			-0.01	/
6			-0.0010	/	150			-0.02	/
8			/	/	200		±0.03	/	/
10			/	/	250			/	/
12			/	/	300			/	/

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