

**KAR**

2024  
2025



# MEASURING INSTRUMENTS

CATALOGUE NO. CAN2024

**INSIZE**

# QUALITY | INNOVATION | SERVICE | VALUE



The products with this mark are **INSIZE PLUS** brand, otherwise the products are **INSIZE** brand.

**INSIZE** is our standard quality

**INSIZE PLUS** is our premium quality



The products with this mark are supplied with manufacturer inspection certificate.

### Sample for Electronic Caliper 817000 ( Part No. 1108-150)

Measuring Length		Permissible Error		External		Internal	
0.4 DIA	+0.0005	-0.0010	/	0.0005	/	/	/
2	+0.0010	-0.0005	/	/	/	/	/
4	/	-0.0005	/	/	/	/	/
6	/	-0.0010	/	/	/	/	/
8	+0.0015	/	/	/	/	/	/
10	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/

### Sample for Outside Micrometer 816564 ( Part No. 3203-1A)

Measuring Length		Permissible Error		External		Internal	
Φ10	+0.01	-0.02	/	/	0.01	/	/
20	/	/	/	0.01	/	/	/
50	+0.02	/	/	-0.01	/	/	/
100	/	/	/	-0.02	/	/	/
150	/	/	/	/	/	/	/
200	+0.03	/	/	/	/	/	/
250	/	/	/	/	/	/	/
300	/	/	/	/	/	/	/

INSIZE provides one year manufacturer warranty for all products.

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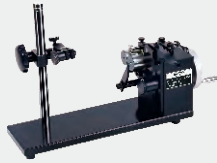
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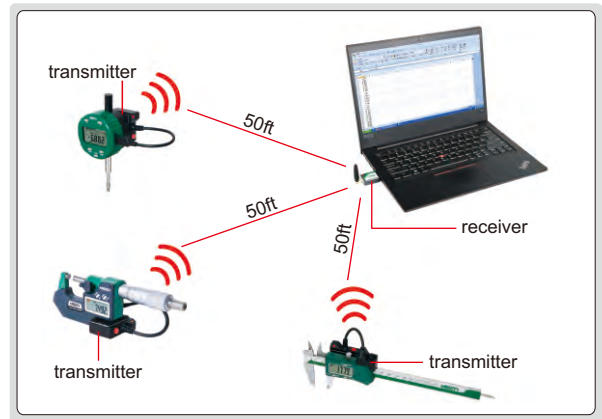
TORQUE WRENCHES



SCALES

# WIRELESS DATA TRANSMISSION SYSTEM

- Through wireless transmission, the measurement data can be transmitted to computers or mobile phones
- Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band
- Transmission distance is 50ft (under the condition of no obstruction and no electromagnetic interference)



## Transmitter

- Connecting to electronic measuring tools such as calipers, micrometers and indicators
- CR2032 battery


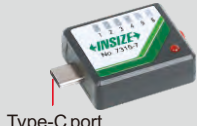
Part No.	EDP No.	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-21	877414	transmitter for electronic calipers			<ul style="list-style-type: none"> <li>Press the transmit button on the plug of cable, can also press the transmit button of the transmitter</li> <li>Data is transmitted once, the signal light of the transmitter flashes once</li> </ul>
7315-30	877269	transmitter for electronic micrometers			<ul style="list-style-type: none"> <li>Press the "data" button of electronic micrometer, can also press the transmit button of the transmitter</li> <li>Data is transmitted once, the signal light of the transmitter flashes once, at the same time, the signal light on the electronic micrometer flashes once</li> </ul>
7315-50M	877271	transmitter for electronic indicators		<p>for 2108, 2138, 2139 series electronic indicators</p>	<ul style="list-style-type: none"> <li>Press the "DATA" button of electronic indicator, can also press the transmit button of the transmitter</li> <li>Data is transmitted once, the signal light of the transmitter flashes once, at the same time, the signal light on electronic indicator flashes once</li> </ul>
				<p>for other electronic indicators</p>	<ul style="list-style-type: none"> <li>Press the transmit button of the transmitter</li> <li>Data is transmitted once, the signal light of the transmitter flashes once</li> </ul>

To be continued

Continued from previous page


### Receiver (keyboard signal)

- For computers and mobile phones
- Recognized as HID keyboard device, the transmitted data is recognized by computers or mobile phones as keyboard input data and press enter, such as 1.34↵. No need to install drivers and software
- Data can be transmitted to excel, word, txt etc.
- For any software which can receive keyboard signal

Part No.	EDP No.	Product	Description	Remark
7315-3	877267	 USB port	single channel receiver	connected with 1 transmitter only
7315-7	877415	 Type-C port	multichannel receiver	connected with 6 transmitter, each channel has status indicator

### Receiver (text format, virtual com port)

- For computers with windows system
- Text format virtual com port, converted to keyboard format with supplied software
- Supplied with EXCEL directional input software
- Measurement data can be transmitted to excel, word, txt etc. and any software which receives keyboard signal

Part No.	EDP No.	Product	Description	Remark
7315-2	877266	 antenna USB port	multichannel receiver	connected with maximum 16 transmitters, each of them has unique identification code

### EXCEL directional input software

- Supplied with 7315-2 receiver
- The measurement data of multiple measuring tools can be transmitted to the designated area of excel, which facilitates data management and improves efficiency

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.

	A	B	C	D
1	Project	Length	Width	Height
2	Dimension and Tolerance	50±0.05	24±0.01	10+0.05/-0.06
3	Measuring tool	Caliper	Micrometer	Height gage
4	1	50.02	24.004	9.98
5	2	50.01	24.010	10.01
6	3	49.99	23.990	10.02
7	4	50.00	23.996	9.99
8	5	50.04	24.000	10.01
9	6	Channel 1	Channel 2	Channel 3

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.

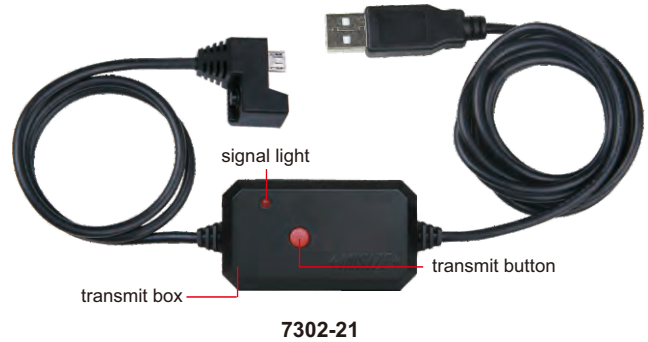
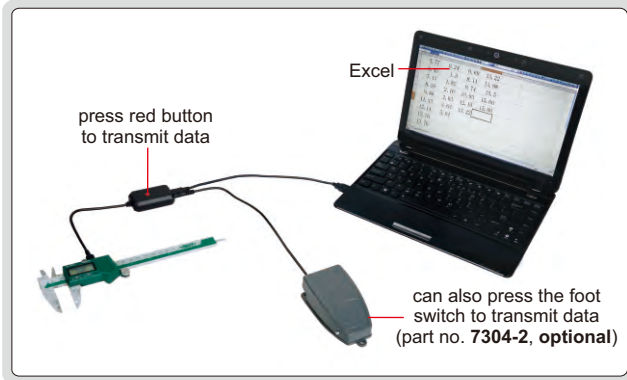
	A	B	C	D	E
1	Project	External diameter1	External diameter2	Length	Depth
2	Dimension and Tolerance	Φ23+0.01/-0.02	Φ21+0.01/-0.02	50±0.04	28±0.05
3	Measuring tool	Micrometer	Micrometer	Caliper	Depth gage
4	1	23.010	21.008	49.98	28.01
5	2	23.010	21.000	49.98	27.98
6	3	22.999	21.000	50	28
7	4	23.007	20.998	50	28
8	5	23.000	20.985	50.01	28.01
9	6	23.008	Channel 1	Channel 2	Channel 3

serial of workpieces                      the next data display area is indicated in green

## DATA OUTPUT CABLE (KEYBOARD FORMAT)

1

application



7302-21

- Recognized as HID keyboard device by computer, no need to install drivers and softwares
- Data can be transmitted to Excel, Word, txt and other files (press transmit button, which is recognized by the computer as keyboard input data and press enter, such as 1.34↵)
- For any software which can receive keyboard signal
- Optional accessory: foot switch (part no. 7304-2), hub (part no. 7324-HUB4, 7324-HUB7), extension cable (part no. 7325-ADD5, 7325-ADD10)

Part No.	EDP No.	Description	Plug	Connecting with measuring tool	Transmit data
7302-21	877412	cable for electronic caliper (length 120")			<ul style="list-style-type: none"> <li>▪ Press the transmit button on the plug of cable, can also press the transmit button of the transmit box, or press the foot switch</li> <li>▪ Data is transmitted once, the signal light of the transmit box flashes once</li> </ul>
7302-22	877413	cable for large electronic caliper (length 100")			<ul style="list-style-type: none"> <li>▪ Press the transmit button of the transmit box, or press the foot switch</li> <li>▪ Data is transmitted once, the signal light of the transmit box flashes once</li> </ul>

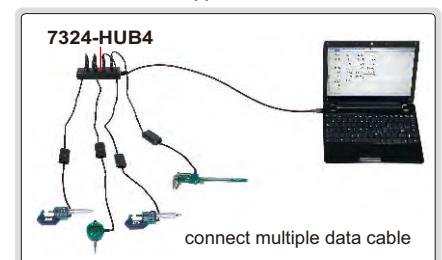
## HUB



7324-HUB4

- For USB plug data cable

application

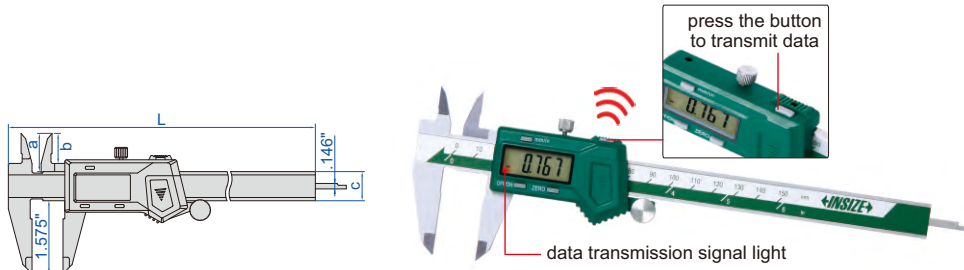


Part No.	EDP No.	Description	Applicable products
7324-HUB4	877416	4-channel hub (length 8", USB computer plug)	7302 series data cable 7305 series data cable (USB plug)

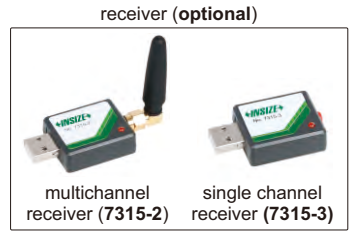
## WIRELESS ELECTRONIC CALIPER



ATTENTION: THE WORKING LIFE OF A BATTERY IS ABOUT 3-5 MONTHS

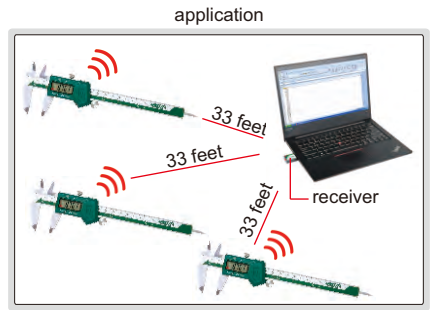


1113-150



- Non waterproof
- Built-in wireless data transmission module, Zigbee signal
- Transmission distance is 33 feet (under the condition of no obstruction and no electromagnetic interference)
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, data transmission
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, made of stainless steel
- Optional accessory: receiver (part no. 7315-2/3/6/7/8/9)

Part No.	EDP No.	Range	Accuracy	L	a	b	c
1113-150	877275	0-6"/0-150mm	±.0015"	9.291"	.827"	.630"	.630"



## IP67 WATERPROOF ELECTRONIC CALIPERS



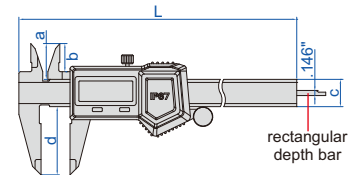
ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME

- No data output
- IP67 dust/waterproof
- Resolution .0005"/0.01mm
- Button function: zero, on/off, inch/mm, ABS/REL, hold
- Battery CR2032
- Made of stainless steel



1118-150B

Part No.	EDP No.	Range	Accuracy	L	a	b	c	d
1118-150B	816018	0-6"/0-150mm	±.0015"	9.291"	.827"	.630"	.630"	1.575"
1118-200B	280014	0-8"/0-200mm	±.0015"	11.260"	.945"	.748"	.630"	1.969"
1118-300B	280015	0-12"/0-300mm	±.0015"	15.748"	.984"	.807"	.630"	2.362"



## ELECTRONIC CALIPERS (ABSOLUTE SYSTEM)

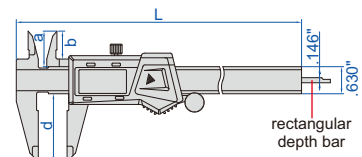


- Non waterproof
- Absolute system, low power consumption, long battery life
- Resolution .0005"/0.01mm
- Buttons: on/off, inch/mm, ORIGIN, ZERO/ABS
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: wireless transmitter, part no. 7315-22, data output cable (keyboard format), part no. 7302-22 page 3



1103-150

Part No.	EDP No.	Range	Accuracy	L	a	b	d
1103-150	285127	0-6"/0-150mm	±.0015"	9.291"	.827"	.650"	1.575"
1103-200	285128	0-8"/0-200mm	±.0015"	11.260"	.945"	.768"	1.969"
1103-300	285129	0-12"/0-300mm	±.0015"	15.748"	1.024"	.846"	2.362"





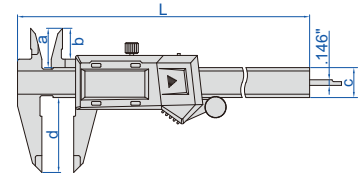
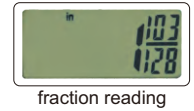


### ELECTRONIC CALIPERS (FRACTION READING)

- No data output
- Non waterproof
- Resolution .0005", 0.01mm, 1/128"
- Buttons: unit (mm/in/fraction), ABS, on/off, zero
- Absolute and incremental measurement
- Battery CR2032, automatic power off
- Made of stainless steel



1102-150



Part No.	EDP No.	Range	Accuracy	L	a	b	c	d
1102-150 *	280003	0-6"/0-150mm	±.0015"	9.213"	.787"	.591"	.630"	1.575"
1102-200 *	280004	0-8"/0-200mm	±.0015"	11.260"	.945"	.748"	.630"	1.969"
1102-300 *	280005	0-12"/0-300mm	±.0015"	15.354"	1.024"	.846"	.630"	2.362"

\*Supplied with manufacturer inspection certificate

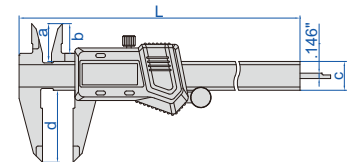


### ELECTRONIC CALIPERS

- No data output
- Non waterproof
- Zinc alloy housing for digital unit
- Resolution .0005"/0.01mm
- Buttons: zero, on/off, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1114-150A



Part No.	EDP No.	Range	Accuracy	L	a	b	c	d
1114-150A *	816012	0-6"/0-150mm	±.0015"	9.291"	.827"	.630"	.630"	1.575"
1114-200A *	816014	0-8"/0-200mm	±.0015"	11.260"	.945"	.748"	.630"	1.969"
1114-300A *	816016	0-12"/0-300mm	±.0015"	15.748"	.984"	.807"	.669"	2.362"

\*Supplied with manufacturer inspection certificate

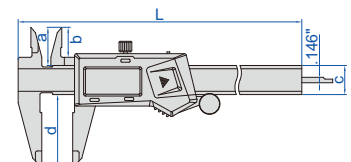


### ELECTRONIC CALIPERS (STANDARD TYPE)

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1108-150



Part No.	EDP No.	Range	Accuracy	L	a	b	c	d
1108-150 *	817000	0-6"/0-150mm	±.0010"	9.291"	.827"	.630"	.630"	1.575"
1108-200 *	817001	0-8"/0-200mm	±.0015"	11.260"	.945"	.748"	.630"	1.969"
1108-300 *	817002	0-12"/0-300mm	±.0015"	15.748"	.984"	.807"	.630"	2.362"

\*Supplied with manufacturer inspection certificate

## HEAVY DUTY 12" ELECTRONIC CALIPER

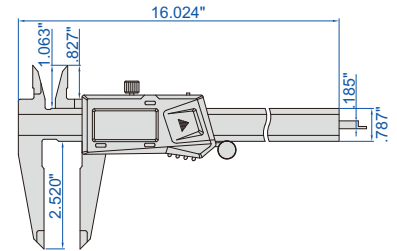


2

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-22, 7302-22 page 3)



1196-300



Part No.	EDP No.	Range	Accuracy
1196-300*	877124	0-12"/0-300mm	±.0015"

\*Supplied with manufacturer inspection certificate

## ELECTRONIC CALIPER WITH ROUND DEPTH BAR



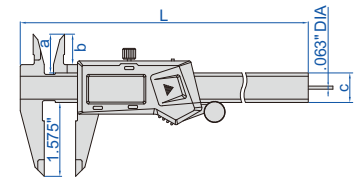
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1119-150



round depth bar .063" DIA



Part No.	EDP No.	Range	Accuracy	L	a	b	c
1119-150*	877109	0-6"/0-150mm	±.0015"	9.291"	.827"	.630"	.630"

\*Supplied with manufacturer inspection certificate

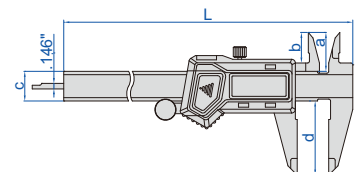
## LEFT HAND ELECTRONIC CALIPERS



- Non waterproof
- Designed for left handed users
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-22, 7302-22 page 3)



1130-150



Part No.	EDP No.	Range	Accuracy	L	a	b	c	d
1130-150*	816615	0-6"/0-150mm	±.0015"	9.291"	.827"	.630"	.630"	1.575"
1130-200*	816616	0-8"/0-200mm	±.0015"	11.260"	.945"	.748"	.630"	1.969"
1130-300*	816617	0-12"/0-300mm	±.0015"	15.748"	.984"	.807"	.630"	2.362"

\*Supplied with manufacturer inspection certificate



## ELECTRONIC CALIPERS WITH CERAMIC TIPPED JAWS

2

- Non waterproof
- Ceramic tipped jaws for outside measurement, extremely wear-resistant, non-magnetic, non-conductive
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)

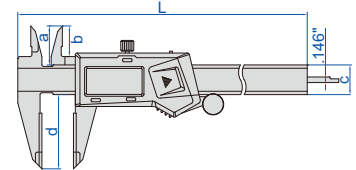


1193-150

ceramic tipped jaws



Part No.	EDP No.	Range	Accuracy	L	a	b	c	d
1193-150*	877284	0-6"/0-150mm	±.0015"	9.252"	.827"	.650"	.630"	1.575"
1193-200*	877285	0-8"/0-200mm	±.0015"	11.693"	.945"	.787"	.630"	1.969"
1193-300*	877286	0-12"/0-300mm	±.0015"	15.354"	1.024"	.846"	.630"	2.362"

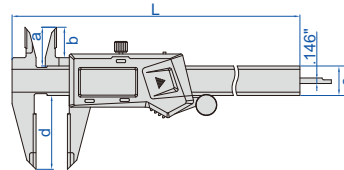


\*Supplied with manufacturer inspection certificate



## ELECTRONIC CALIPERS WITH CARBIDE TIPPED JAWS

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



carbide measuring faces



1110-150A

carbide measuring faces

Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	Remark
1110-150A*	280021	0-6"/0-150mm	±0.03mm	9.291"	.827"	.630"	.630"	1.575"	carbide tipped upper and lower jaws
1110-200A*	280022	0-8"/0-200mm	±0.03mm	11.260"	.945"	.748"	.630"	1.969"	carbide tipped upper and lower jaws
1110-300A*	280023	0-12"/0-300mm	±0.03mm	15.748"	.984"	.807"	.630"	2.362"	carbide tipped upper and lower jaws

\*Supplied with manufacturer inspection certificate

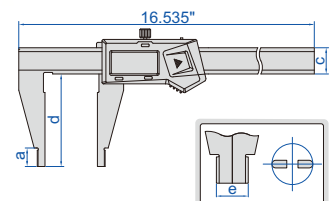


## ELECTRONIC CALIPER

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1522-127



Part No.	EDP No.	Range	Accuracy	a	c	d	e
1522-127	816686	0-12"/0-300mm	±.0015"	.472"	.669"	2.953"	.500"

## ELECTRONIC CALIPER

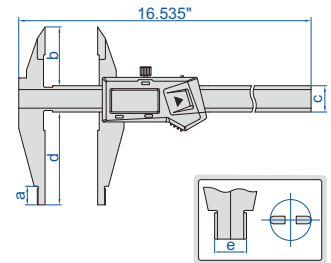


2



1523-127

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



Part No.	EDP No.	Range	Accuracy	a	b	c	d	e
1523-127	816687	0-12"/0-300mm	±.0015"	.472"	1.102"	.669"	2.953"	.500"

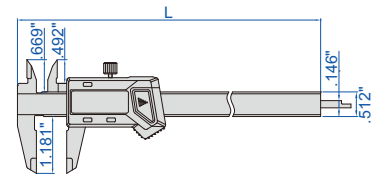
## MINI ELECTRONIC CALIPERS



1111-100A

- No data output
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: zero, inch/mm, on/off
- Automatic power off, move the digital unit to turn on power
- Battery LR44
- Made of stainless steel

Part No.	EDP No.	Range	Accuracy	L
1111-75A	280020	0-3"/0-75mm	±.0010"	5.669"
1111-100A	280019	0-4"/0-100mm	±.0010"	6.693"



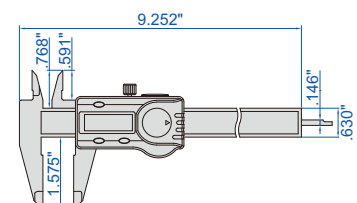
## PLASTIC ELECTRONIC CALIPER



1139-150

- No data output
- Non waterproof
- Made of hard plastic, non-magnetic and non electric conductive
- Prevent workpieces from scratching by calipers
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Battery CR2032
- Automatic power off

Part No.	EDP No.	Range	Accuracy
1139-150	280024	0-6"/0-150mm	±.004"

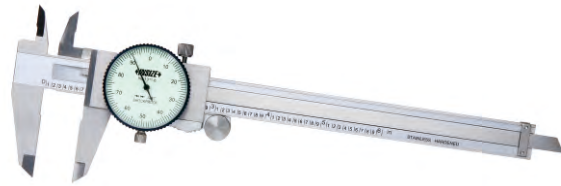


SHOCK PROOF

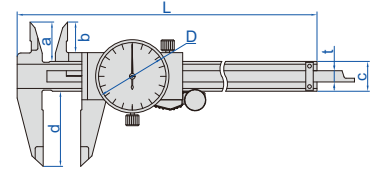
INSPECTION CERTIFICATE

DIAL CALIPERS

- Shockproof dial indicator
- Made of stainless steel



1311-6



Inch

Dial indicator graduation .001"

Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	D	t
1311-4*	280462	0-4"	±.0012"	6.496"	.709"	.472"	.512"	1.181"	1.260" DIA	.228"
1311-6*	816028	0-6"	±.0015"	9.252"	.827"	.650"	.630"	1.575"	1.535" DIA	.256"
1311-8*	816030	0-8"	±.0020"	11.339"	.945"	.748"	.630"	1.890"	1.535" DIA	.256"
1311-12*	816032	0-12"	±.0020"	16.142"	1.102"	.866"	.787"	2.441"	1.752" DIA	.295"

Metric

Dial indicator graduation: 0.01mm

Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	D	t
1311-150A*	816034	0-150mm	±0.03mm	235mm	21mm	16.5mm	16mm	40mm	Ø39mm	6.5mm
1311-200A*	816036	0-200mm	±0.03mm	288mm	24mm	19mm	16mm	48mm	Ø39mm	6.5mm
1311-300A*	816038	0-300mm	±0.03mm	410mm	28mm	22mm	20mm	62mm	Ø44.5mm	7.5mm

Metric

Dial indicator graduation: 0.02mm

Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	D	t
1312-150A*	280459	0-150mm	±0.03mm	235mm	21mm	16.5mm	16mm	40mm	Ø39mm	6.5mm
1312-200A*	280460	0-200mm	±0.03mm	288mm	24mm	19mm	16mm	48mm	Ø39mm	6.5mm
1312-300A*	280461	0-300mm	±0.03mm	410mm	28mm	22mm	20mm	62mm	Ø44.5mm	7.5mm

\*Supplied with manufacturer inspection certificate

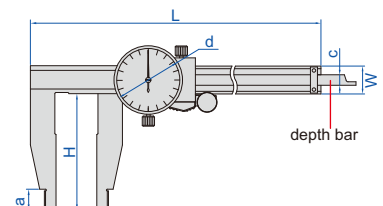
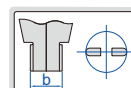
SHOCK PROOF

DIAL CALIPERS



1316-18

- Shockproof dial indicator
- Made of stainless steel



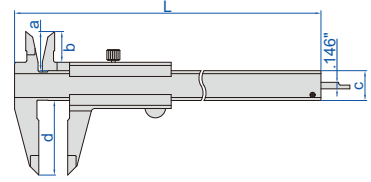
Part No.	EDP No.	Range	Graduation	Accuracy	d	L	W	H	a	b	c	Remark
1316-18	877128	0-18"	.001"	±.0020"	1.772" DIA	22.835"	.866"	3.346"	.709"	.500"	.315"	with depth bar
1316-24	877129	0-24"	.001"	±.0020"	1.772" DIA	28.740"	.866"	3.346"	.709"	.500"	.315"	with depth bar

## VERNIER CALIPERS

- Made of stainless steel
- Satin chrome plated reading surface



1205-1502E



**Inch/Metric**

Part No.	EDP No.	Range	Graduation	Accuracy	L	a	b	c	d
1205-1502E	876750	0-6"/0-150mm	.001"/0.02mm	±0.012"	9.252"	.807"	.610"	.630"	1.575"
1205-2002E	876225	0-8"/0-200mm	.001"/0.02mm	±0.012"	11.417"	.925"	.748"	.669"	1.969"
1205-3002E	876232	0-12"/0-300mm	.001"/0.02mm	±0.012"	16.299"	1.083"	.866"	.787"	2.520"

**Metric/Inch**

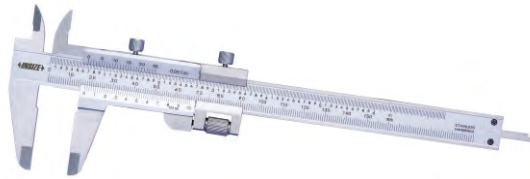
Part No.	EDP No.	Range	Graduation	Accuracy	L	a	b	c	d
1205-150S	876224	0-150mm/0-6"	0.05mm/1/128"	±0.05mm	235mm	20.5mm	15.5mm	16mm	40mm
1205-300S	876226	0-300mm/0-12"	0.05mm/1/128"	±0.05mm	414mm	27.5mm	22mm	20mm	64mm

**Metric/Inch**

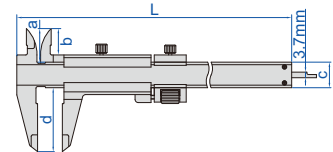
Part No.	EDP No.	Range	Graduation	Accuracy	L	a	b	c	d
1205-1502S	876230	0-150mm/0-6"	0.02mm/0.001"	±0.03mm	235mm	20.5mm	15.5mm	16mm	40mm
1205-2002S	876231	0-200mm/0-8"	0.02mm/0.001"	±0.03mm	290mm	23.5mm	19mm	17mm	50mm
1205-3002S	876232	0-300mm/0-12"	0.02mm/0.001"	±0.03mm	414mm	27.5mm	22mm	20mm	64mm

## METRIC VERNIER CALIPER WITH FINE ADJUSTMENT

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



1233-130



**Metric/Inch**

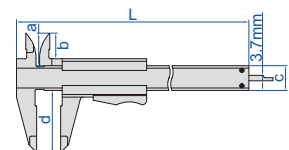
Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	(mm)
1233-130	280209	0-130mm/0-5"	±0.03mm	230	20.5	16.5	16	40	

## METRIC VERNIER CALIPER WITH THUMB CLAMP

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



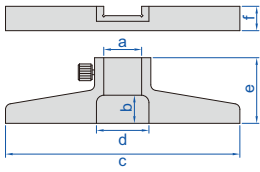
1223-150



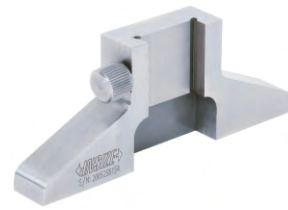
**Metric/Inch**

Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	(mm)
1223-150	280184	0-150mm/0-6"	±0.05mm	230	20.5	16.5	16	40	

## DEPTH BASE ATTACHMENTS



6140



6140-16B



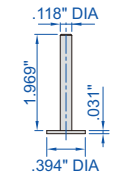
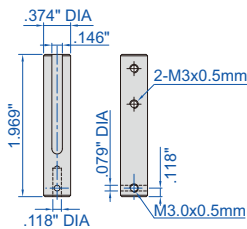
- To increase the stability of depth measurement
- Suitable for electronic calipers and dial calipers
- Made of stainless steel

Part No.	EDP No.	a	b	c	d	e	f	Type	Application
6140	816046	.650"	.354"	2.953"	.709"	1.181"	.236"	narrow base (f=.236")	suitable for calipers with beam width (w) .630"
6140-300A	877376	.787"	.591"	4.921"	.866"	1.339"	.354"	narrow base (f=.354")	suitable for calipers with beam width (w) .787"
6140-16B	877375	.630"	.492"	2.953"	.965"	1.181"	.433"	wide base (f=.433"), high stability	suitable for calipers with beam width (w) .630"
6140-300B	877377	.787"	.591"	4.921"	1.102"	1.378"	.512"	wide base (f=.512"), high stability	suitable for calipers with beam width (w) .787"

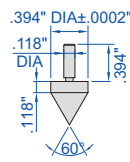
## ACCESSORY SET FOR ELECTRONIC CALIPERS PART NO. 6144



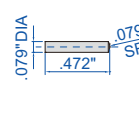
6144



disk points  
(stainless steel)



conical points  
(stainless steel)



spherical/flat points  
(stainless steel)

<p>.630-.787"</p>	<p>measuring internal groove diameter (h≤.138")</p>
<p>.88" DIA</p>	<p>measuring center distance</p>
<p>0-.236"</p>	<p>spherical points for groove diameter (inside hole) measurement</p>
<p>0-.236"</p>	<p>flat points for external groove diameter measurement</p>

- Suitable for 0-6"/0-150mm and 0-8"/0-200mm digital calipers (thickness of lower jaws ≤ .146")

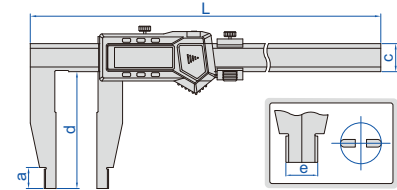
Part No.	EDP No.
6144	877188

## ELECTRONIC CALIPERS



1131-24

- Non waterproof
- Resolution .0005"/0.01mm
- Button function: on/off, zero, inch/mm, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel



**Inch/Metric**

Part No.	EDP No.	Range	Accuracy	a	c	d	e	L	Data output cable (optional)
1131-24	876221	0-24"/0-600mm	±.0020"	.709"	.945"	3.937"	.800"	30.315"	7315-22, 7302-22 page 3
1131-40	876222	0-40"/0-1000mm	±.0030"	.945"	1.220"	5.906"	.800"	48.031"	7315-22, 7302-22 page 3
1131-60	816618	0-60"/0-1500mm	±.0045"	.945"	1.654"	5.906"	.800"	70.079"	7315-20B, 7302-SPC1A
1131-80	280063	0-80"/0-2000mm	±.0055"	.945"	1.654"	5.906"	.800"	90.157"	7315-20B, 7302-SPC1A

**Metric/Inch**

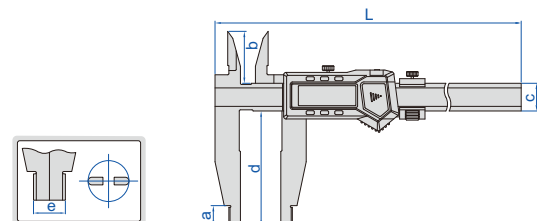
Part No.	EDP No.	Range	Accuracy	a	c	d	e	L	Data output cable (optional)
1106-301	280031	0-300mm/0-12"	±0.05mm	18mm	24mm	100mm	20mm	420mm	7315-22, 7302-22 page 3
1106-302	280032	0-300mm/0-12"	±0.05mm	18mm	24mm	150mm	20mm	420mm	7315-22, 7302-22 page 3
1106-601	280042	0-600mm/0-24"	±0.05mm	18mm	24mm	100mm	20mm	770mm	7315-22, 7302-22 page 3
1106-603	280044	0-600mm/0-24"	±0.06mm	24mm	31mm	200mm	20mm	770mm	7315-22, 7302-22 page 3
1106-1002	280051	0-1000mm/0-40"	±0.08mm	24mm	31mm	150mm	20mm	1220mm	7315-22, 7302-22 page 3

## ELECTRONIC CALIPERS



1133-24

- Non waterproof
- Resolution .0005"/0.01mm
- Button function: on/off, zero, inch/mm, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-22, 7302-22 page 3)



**Inch/Metric**

Part No.	EDP No.	Range	Accuracy	a	b	c	d	e	L
1133-24	285061	0-24"/0-600mm	±.0020"	.709"	1.772"	.945"	3.937"	.800"	30.315"
1133-40	285062	0-40"/0-1000mm	±.0030"	.945"	2.362"	1.220"	5.906"	.800"	48.031"

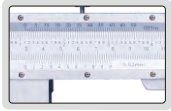
**Metric/Inch**

Part No.	EDP No.	Range	Accuracy	a	b	c	d	e	L
1136-301	280112	0-300mm/0-12"	±0.05mm	18mm	45mm	24mm	100mm	20mm	420mm
1136-501	280117	0-500mm/0-20"	±0.05mm	18mm	45mm	24mm	100mm	20mm	675mm
1136-1002	816022	0-1000mm/0-40"	±0.08mm	24mm	60mm	31mm	150mm	20mm	1220mm



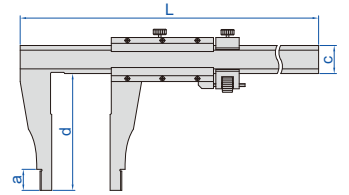
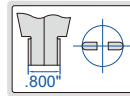
VERNIER CALIPERS (SEPARATE TYPE)

separate type  
(with screws)



1211-24

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



Part No.	EDP No.	Range	Graduation	Accuracy	Graduation on scale	a	c	d	L
1211-24	280408	0-24"/0-600mm	.001"/0.02mm	±.0020"	inch on bottom, metric on top	.709"	.945"	3.937"	30.315"
1211-40	280409	0-40"/0-1000mm	.001"/0.02mm	±.0031"	inch on bottom, metric on top	.945"	1.26"	5.512"	47.874"

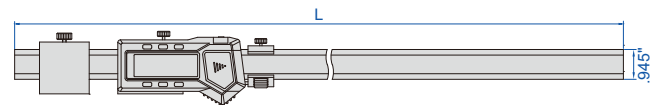


UNIVERSAL CALIPER



1125-600

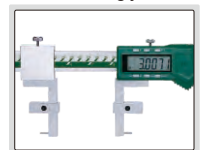
- Non waterproof
- Buttons: on/off, set, inch/mm, ABS, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-22, 7302-22 page 3)



working with stands



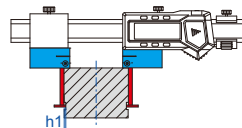
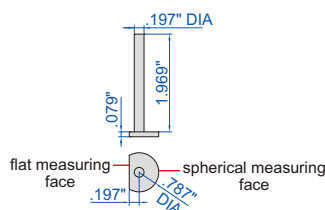
working with measuring jaws



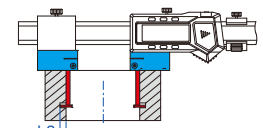
Part No.	EDP No.	Range *	Resolution	Accuracy	L
1125-600	877100	0-24"/0-600mm	.0005"/0.01mm	±.002"	30.6"

\*The range changes according to different points

Half disk points (included)



measuring external groove diameter with flat measuring face (depth  $h1 \leq .098"$ )

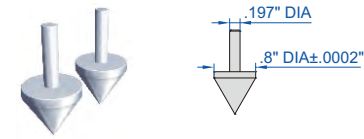


measuring internal groove diameter with spherical measuring face (depth  $h2 \leq .295"$ )

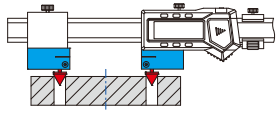
To be continued

Continued from previous page

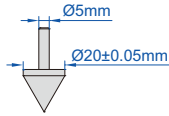
### Conical points (optional)



Part No.	EDP No.
1125-T101-1	877110

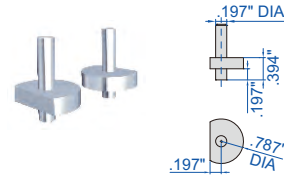


measuring center distance

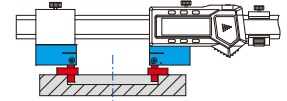


Part No.	EDP No.
1125-T101	877101

### Round shoulder points (optional)

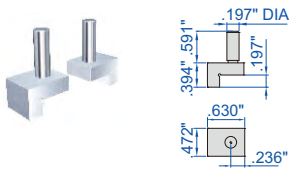


Part No.	EDP No.
1125-T102	877111

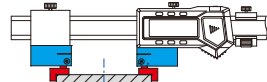


measure inside diameter of shallow hole

### Flat shoulder points (optional)

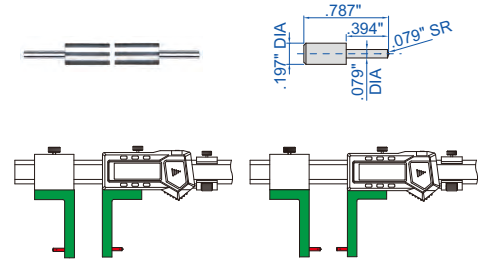


Part No.	EDP No.
1125-T103	877112

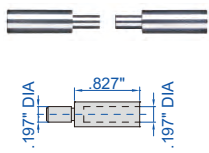


measure outside diameter of low boss

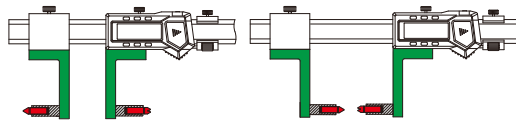
### Spherical points (included)



### Point sleeve (optional)

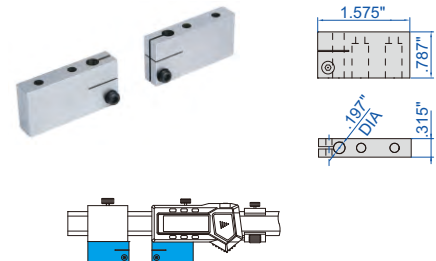


Part No.	EDP No.
1125-T104	877113

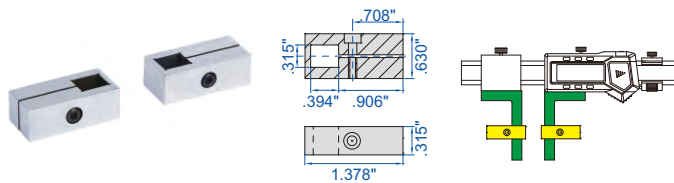


working with multifunctional points, ball points and screw thread points

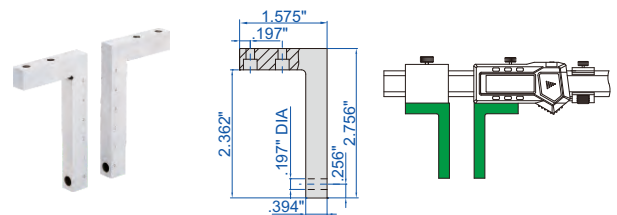
### Stands (included)



### Depth stop (included)



### Measuring jaws (included)



### Multifunctional points 7392\* (optional, page 16)



### Ball points 7391\* (optional, page 16)



### Screw thread points 7381\*, 7321\* (optional, page 16)



\* It is necessary to use point sleeve (part no. 1125-T104) for these points



# ELECTRONIC CALIPER WITH INTERCHANGEABLE POINTS

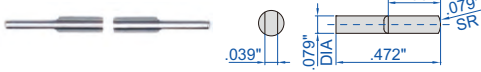
### short spherical points (included)



### long spherical/flat points (included)

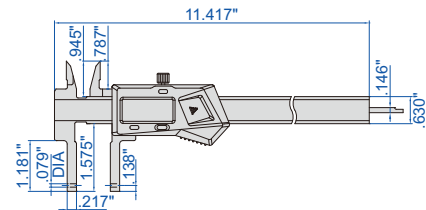


### spherical blade points (included)



1526-200

- Non waterproof
- Supplied with 3 pairs of points and zero setting block for external measurement
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: points, data output cable (part no. 7315-21 page 1, 7302-21 page 3)



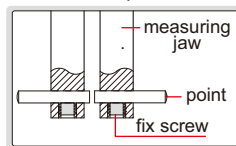
Part No.	EDP No.
1526-200	816620

Point	Range	Accuracy	Application
short spherical points	.5-8.5"/12-212mm (internal)	±.0015"	for grooves inside small hole
long spherical/flat points	1-8.8"/24-224mm (internal) 0-7.5"/0-187mm (external)	±.0015"	spherical points for grooves inside hole flat points for external grooves
spherical blade points	1-8.8"/24-224mm (internal) 0-7.5"/0-187mm (external)	±.0015"	for narrow grooves inside hole

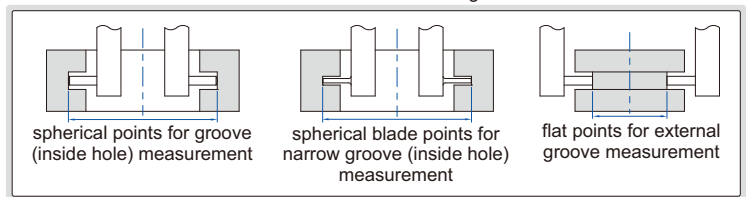
zero setting block for external measurement (included)



install points



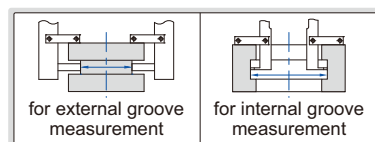
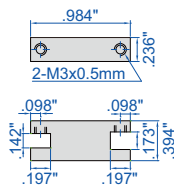
measure internal and external grooves



### Depth stop (optional)



6143

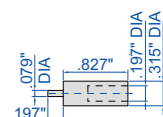


Part No.	EDP No.
6143	816408

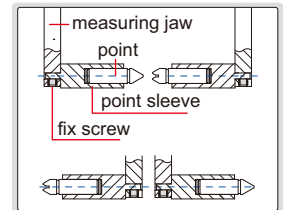
### Point sleeve (optional)



1526-T101



installation

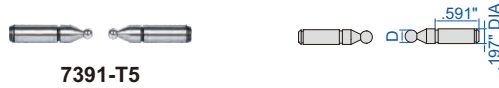


Part No.	EDP No.
1526-T101	816621

To be continued

Continued from previous page

## Ball points (optional)

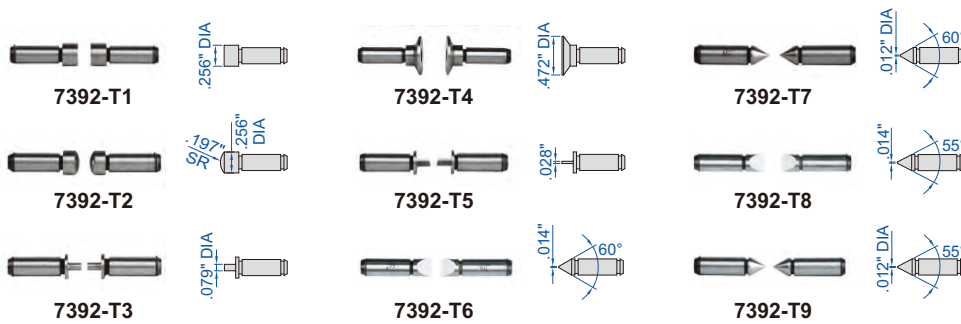


Part No.	EDP No.	Ball dia. (D)	Range**
7391-T3*	282169	.079" DIA	3.0-10.8"/75-275mm (internal) 0-5.7"/0-146mm (external)
7391-T4*	282170	.098" DIA	3.0-10.8"/76-276mm (internal) 0-5.7"/0-145mm (external)
7391-T5*	282171	.118" DIA	3.0-10.9"/77-277mm (internal) 0-5.6"/0-144mm (external)
7391-T6*	282172	.138" DIA	3.1-10.9"/78-278mm (internal) 0-5.6"/0-143mm (external)

Part No.	EDP No.	Ball dia. (D)	Range**
7391-T7*	282173	.157" DIA	3.1-10.9"/79-279mm (internal) 0-5.6"/0-142mm (external)
7391-T8*	282174	.177" DIA	3.2-11.0"/80-280mm (internal) 0-5.5"/0-141mm (external)
7391-T9*	282175	.197" DIA	3.2-11.0"/81-281mm (internal) 0-5.5"/0-140mm (external)
7391-T10*	282176	.236" DIA	3.3-11.1"/83-283mm (internal) 0-5.4"/0-138mm (external)

\* It is necessary to use point sleeve (part no. 1526-T101) for these points  
 \*\* Range of 1526-200 after installing the points and point sleeve

## Multifunctional points (optional)



Part No.	EDP No.	Type
7392-T1*	816222	flat
7392-T2*	816223	spherical
7392-T3*	816224	spline
7392-T4*	816225	disk
7392-T5*	816226	blade
7392-T6*	816227	knife-edge
7392-T7*	816228	point
7392-T8*	816229	knife-edge
7392-T9*	816230	point

**Range\*\***  
 2.6-10.5"/66-266mm (internal),  
 0-6.1"/0-155mm (external)

\*\* Range of 1526-200 after installing the points and point sleeve

\* It is necessary to use point sleeve (part no. 1526-T101) for these points

## Screw thread points (optional)



### Internal thread (60° thread angle)

Part No.	EDP No.	Pitch
7321-T11*	282160	64-48TPI/0.4-0.5mm
7321-T12*	282161	44-28TPI/0.6-0.9mm
7321-T13*	282162	24-14TPI/1-1.75mm
7321-T14*	282163	13-9TPI/2-3mm
7321-T15*	282164	8-5TPI/3.5-5mm
7321-T16*	282165	4.5-3.5TPI/5.5-7mm
7321-T1S*	282159	6 pairs/set, including all above points

### External thread (60° thread angle)

Part No.	EDP No.	Pitch
7381-T11*	281671	64-48TPI/0.4-0.5mm
7381-T12*	281672	44-28TPI/0.6-0.9mm
7381-T13*	281673	24-14TPI/1-1.75mm
7381-T14*	281674	13-9TPI/2-3mm
7381-T15*	281675	8-5TPI/3.5-5mm
7381-T16*	281676	4.5-3.5TPI/5.5-7mm
7381-TS*	281670	6 pairs/set, including all above points

**Range\*\***  
 2.6-10.5"/66-266mm (internal),  
 0-6.1"/0-155mm (external)

\*\* Range of 1526-200 after installing the points and point sleeve

\* It is necessary to use point sleeve (part no. 1526-T101) for these points

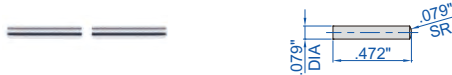


# ELECTRONIC CALIPER WITH INTERCHANGEABLE POINTS



1124-300A

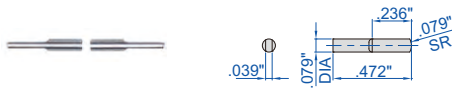
**short spherical/flat points (included)**



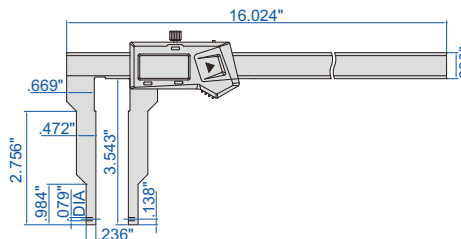
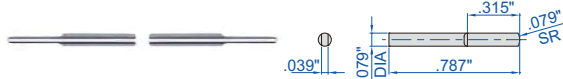
**long spherical/flat points (included)**



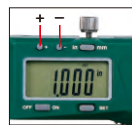
**short spherical blade points (included)**



**long spherical blade points (included)**



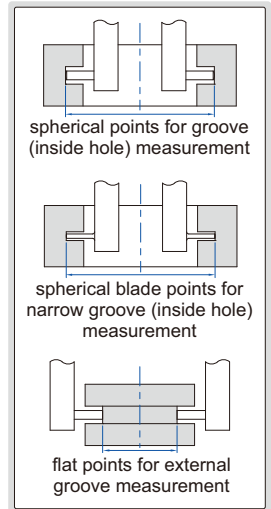
preset buttons



depth stop 6143 (optional)

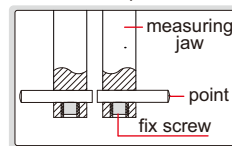


measure internal and external grooves



- Non waterproof
- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: points (part no. 1526-T101, 7392, 7391, 7381, 7321), depth stop (part no. 6143), data output cable (part no. 7315-21 page 1, 7302-21 page 3)

install points



Part No.	EDP No.
1124-300A	816619

zero setting block for external measurement (included)



Point	Range	Accuracy	Application
short spherical/flat points	1-12.7"/24-324mm (internal) 0-11.3"/0-288mm (external)	±.0015"	spherical points for grooves inside hole (small hole) flat points for external grooves
long spherical/flat points	1.5-13.3"/40-340mm (internal) 0-10.7"/0-272mm (external)	±.0015"	spherical points for grooves inside hole (large hole) flat points for external grooves
short spherical blade points	1-12.7"/24-324mm (internal) 0-11.3"/0-288mm (external)	±.0015"	for narrow grooves inside hole (small hole)
long spherical blade points	1.5-13.3"/40-340mm(internal) 0-10.7"/0-272mm(external)	±.0015"	for narrow grooves inside hole (large hole)

**Multifunctional points 7392\* (optional, page 16)**



**Ball points 7391\* (optional, page 16)**



**Screw thread points 7381\* , 7321\* (optional, page 16)**



\* It is necessary to use point sleeve (part no. 1526-T101) for these points

## ELECTRONIC INSIDE GROOVE CALIPER



2

- Non waterproof
- Measure diameter of grooves inside small bores
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**), data output cable (part no. **7315-21** page 1, **7302-21** page 3)

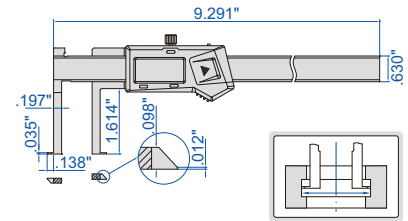


1520-150

depth stop **6143**  
(optional)



preset buttons



Part No.	EDP No.	Range	Accuracy
1520-150	877105	.43-6"/11-150mm	±.0015"

## ELECTRONIC INSIDE POINT CALIPERS

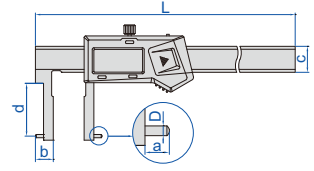
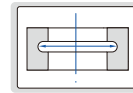


- Non waterproof
- Measure groove diameter
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**), data output cable (part no. **7315-21** page 1, **7302-21** page 3)



1121-150A

preset buttons



depth stop **6143**  
(optional)



Preset (no need to add the width of the jaws on the reading)

Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	D
1121-150A	280541	0.94-6"/24-150mm	±.0015"	9.843"	.197"	.472"	.630"	1.102"	.079" DIA
1121-200A	280544	0.98-8"/25-200mm	±.0015"	12.205"	.197"	.492"	.630"	1.457"	.079" DIA
1121-3001A	280548	1.97-12"/50-300mm	±.0030"	16.142"	.315"	.984"	.630"	3.031"	.118" DIA

## ELECTRONIC INSIDE GROOVE CALIPERS

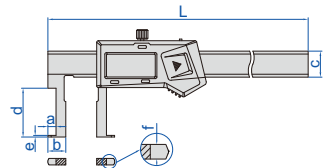
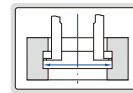
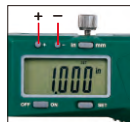


- Non waterproof
- Measure groove diameter
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**), data output cable (part no. **7315-21** page 1, **7302-21** page 3)



1120-150AE

preset buttons



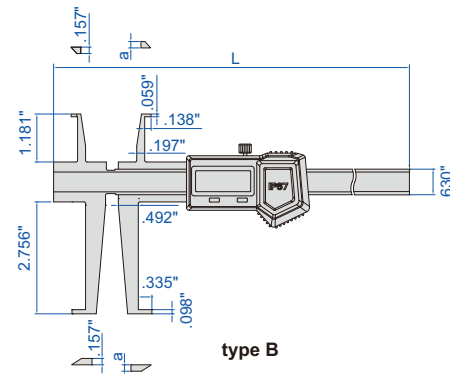
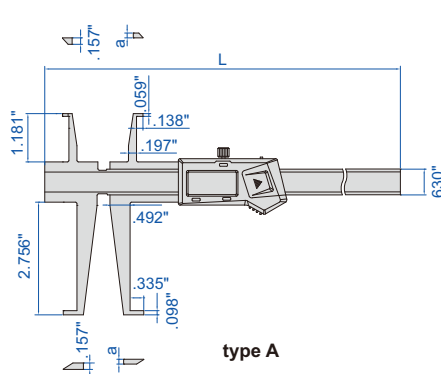
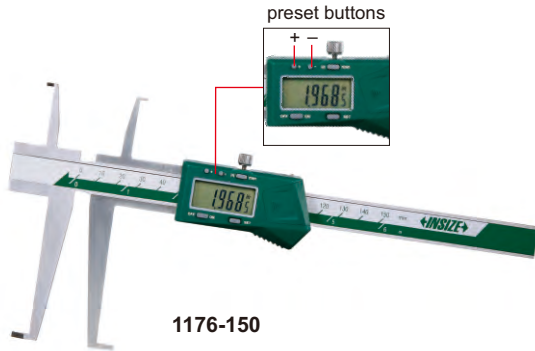
depth stop **6143**  
(optional)



Preset (no need to add the width of the jaws on the reading)

Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	e	f
1120-150AE	280523	1-6"/25.4-150mm	±.0015"	9.843"	.197"	.500"	.630"	1.181"	.039"	.157"
1120-200A	280525	.98-8"/25-200mm	±.0015"	12.205"	.197"	.492"	.630"	1.575"	.039"	.157"
1120-300A	280527	1.18-12"/30-300mm	±.0020"	16.142"	.197"	.591"	.630"	1.969"	.059"	.157"

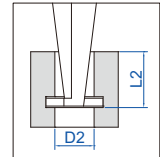
## ELECTRONIC INSIDE GROOVE CALIPERS



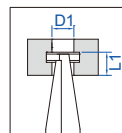
depth stop **6143**  
(optional)



sizes to be measured  
(use lower jaws)



sizes to be measured  
(use upper jaws)



- Measure diameter of grooves inside bores
- Resolution .0005"/0.01mm
- Buttons type A: on/off, set, inch/mm, preset (+, -)  
type B: on/off, zero, inch/mm, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**)

D1	L1
.354" DIA	<.315"
.394" DIA	<.591"
.433~8" DIA	<1.181"

D2	L2
.669" DIA	<.630"
.709" DIA	<1.102"
.748" DIA	<1.575"
.787" DIA	<1.969"
.827" DIA	<2.283"
.866~8" DIA	<2.756"

Non waterproof, with data interface (data output cable part no. 7315-21 page 1, 7302-21 page 3, optional)

Part No.	EDP No.	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150	817005	.35-6"/9-150mm	.70-6"/17-150mm	A	±.0015"	10.236"	.118"
1176-200	877281	.35-8"/9-200mm	.70-8"/17-200mm	A	±.0020"	12.598"	.138"

Non waterproof, built-in wireless (receiver part no. 7315-2/3/6/7/8/9 is required)

Part No.	EDP No.	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-200WL	877282	.35-8"/9-200mm	.70-8"/17-200mm	A	±.0020"	12.598"	.138"

IP67 dust/waterproof, without data interface, no automatic power off, set zero after power on each time

Part No.	EDP No.	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150P	877280	.35-6"/9-150mm	.70-6"/17-150mm	B	±.0015"	10.236"	.157"

## ELECTRONIC INSIDE GROOVE CALIPER

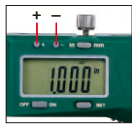


2

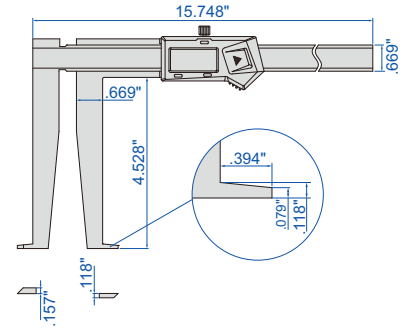
depth stop **6143**  
(optional)



preset buttons



**1178-300**



- Non waterproof
- Measure diameter of grooves inside bores
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**), data output cable (part no. **7315-21** page 1, **7302-21** page 3)

Part No.	EDP No.	Range	Accuracy
<b>1178-300</b>	816633	1.18-12"/25-300mm	±.0020"

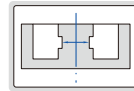
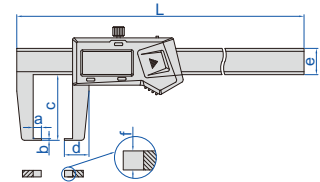
## ELECTRONIC OUTSIDE NECK CALIPER



- Non waterproof
- Measure grooves and recesses
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**), data output cable (part no. **7315-21** page 1, **7302-21** page 3)



**1187-150A**



depth stop **6143**  
(optional)



Part No.	EDP No.	Range	Accuracy	L	a	b	c	d	e	f
<b>1187-150A</b>	280505	0-6"/0-150mm	±.0015"	9.843"	.197"	.039"	1.575"	.591"	.630"	.157"

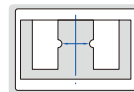
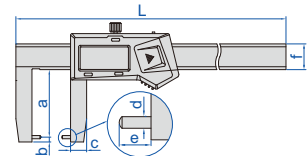
## ELECTRONIC OUTSIDE POINT CALIPER



- Non waterproof
- Measure wall thickness inside bores and recesses
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**), data output cable (part no. **7315-21** page 1, **7302-21** page 3)



**1185-150A**



depth stop **6143**  
(optional)

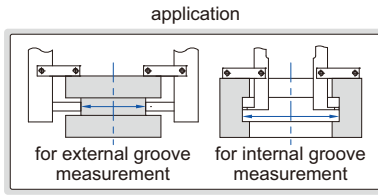


Part No.	EDP No.	Range	Accuracy	L	a	b	c	d (DIA)	e	f
<b>1185-150A</b>	280514	0-6"/0-150mm	±.0015"	9.843"	1.575"	.118"	.394"	.079"	.197"	.630"

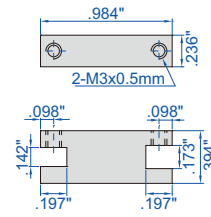


## DEPTH STOP FOR CALIPER

2



6143



- Supplied in pair
- Made of stainless steel
- Suitable for caliper series 1124, 1526, 1530, 1520, 1176, 1178, 1120, 1121, 1187, 1129 and 1185

Part No.	EDP No.
6143	816408

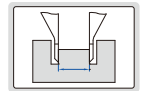
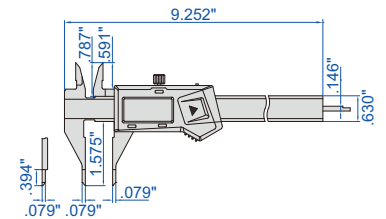


## ELECTRONIC SMALL POINT CALIPER

- Non waterproof
- Small pointed jaws fit into small grooves and recesses
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1169-150



Part No.	EDP No.	Range	Accuracy
1169-150	877119	0-6"/0-150mm	±.0015"

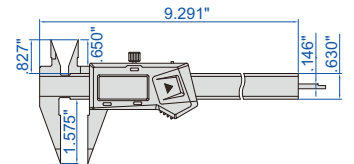
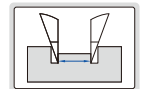


## ELECTRONIC POINT CALIPER

- Non waterproof
- Pointed jaws fit into small grooves and recesses
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1183-150A



Part No.	EDP No.	Range	Accuracy
1183-150A	280569	0-6"/0-150mm	±.0015"

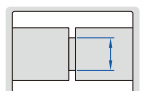
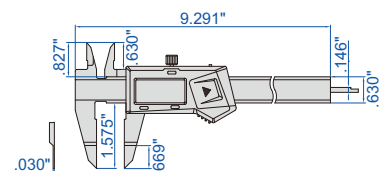


## ELECTRONIC BLADE CALIPER

- Non waterproof
- The blade jaws fit into small grooves
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1188-150A



Part No.	EDP No.	Range	Accuracy
1188-150A	280580	0-6"/0-150mm	±.0015"

**ELECTRONIC INSIDE KNIFE-EDGE CALIPER**

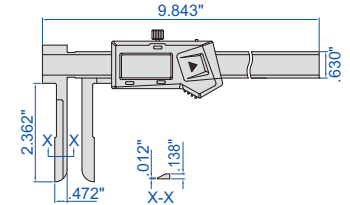
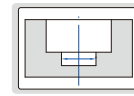


2

- Non waterproof
- Measure diameter of deep step holes
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1123-150A



Part No.	EDP No.	Range	Accuracy
1123-150A	280589	.6-6"/15-150mm	±.0020"

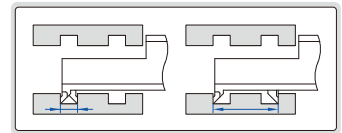
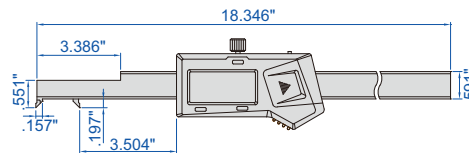
**ELECTRONIC HOOK CALIPER**



- Non waterproof
- Measure width and distance of grooves inside bores
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1122-300



Part No.	EDP No.	Range	Accuracy
1122-300	280645	.16-12"/4-300mm	±.0015"

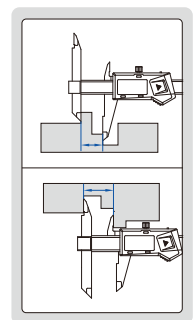
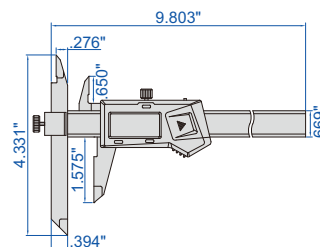
**ELECTRONIC OFFSET CALIPER**



- Non waterproof
- The left jaw can slide up and down to facilitate measurement of stepped sections
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1186-150A



Part No.	EDP No.	Range	Accuracy
1186-150A	280625	0-6"/0-150mm	±.0015"

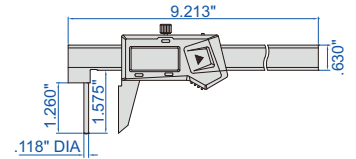


## ELECTRONIC TUBE THICKNESS CALIPER

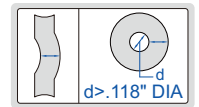
- Non waterproof
- Measure wall thickness of tubes
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1161-150A



Part No.	EDP No.	Range	Accuracy
1161-150A	280502	0-6"/0-150mm	±.0020"



## ELECTRONIC RTJ RING GROOVE CALIPERS

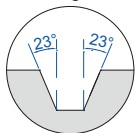
- Non waterproof
- Measure ring grooves of flange
- Resolution .0005"/0.01mm
- Button function: on/off, set, zero, inch/mm, data preset
- Battery CR2032
- Data output
- Made of stainless steel

1179-300 preset buttons

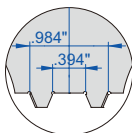


1179-300 type A

applicable for RTJ ring grooves with angle 23°

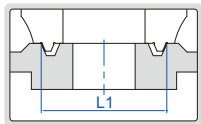


d and e need to be added on the reading

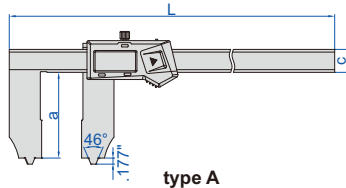
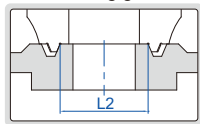


1179-600 type B

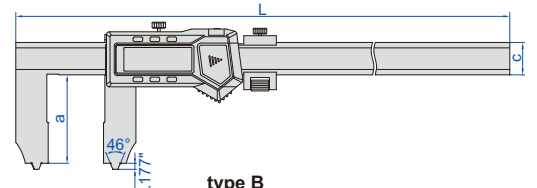
measure outside diameter of RTJ ring groove



measure inside diameter of RTJ ring groove



type A



type B

Part No.	EDP No.	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Angle of RTJ ring groove	Accuracy	Type	L	a	c	Data output cable (optional)
1179-300	877121	.4-12"/10-300mm	1-12"/25-300mm	23°	±.0025"	A	16.142"	2.500"	.669"	7315-21 page 1, 7302-21 page 3
1179-600	877122	.4-24"/10-600mm	1-24"/25-600mm	23°	±.0030"	B	30.315"	2.579"	.945"	7315-22, 7302-22 page 3

ELECTRONIC CALIPER WITH LARGE MEASURING FACES

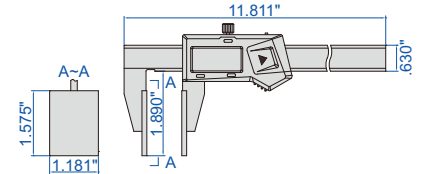


2



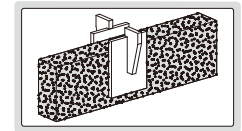
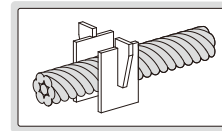
1172-200

- Non waterproof
- Measure diameter of wire ropes, and thickness of soft materials like rubber, sponge, etc.
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



measure diameter of wire ropes

measure thickness of rubber, sponge, etc.



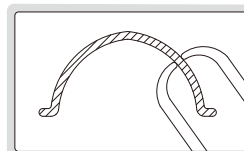
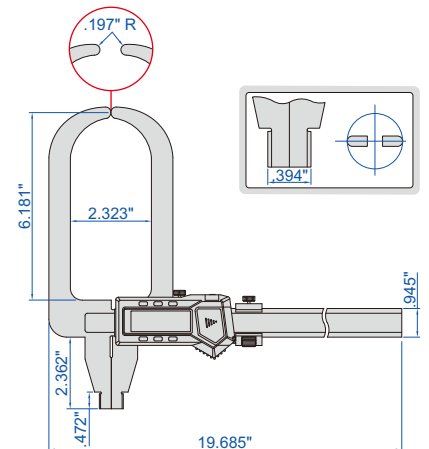
Part No.	EDP No.	Range	Accuracy
1172-200	877104	0-8"/0-200mm	±.0030"

ELECTRONIC WALL THICKNESS CALIPER



1536-300

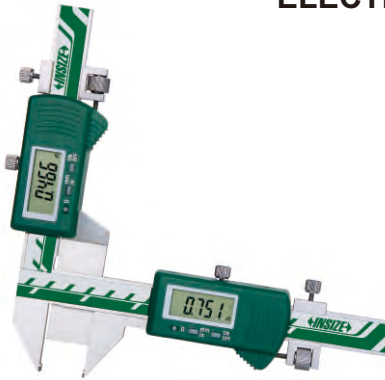
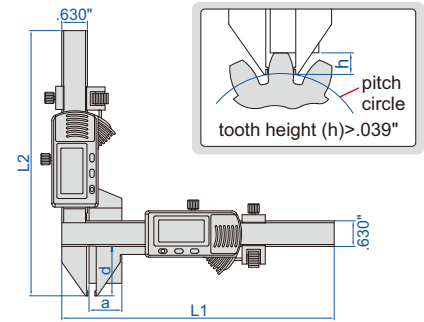
- Non waterproof
- Measure wall thickness of helmets, domes and curved pots
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, ABS, data preset
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



Part No.	EDP No.	Range	Accuracy
1536-300	877287	0-12"/0-300mm	±.0020"

## ELECTRONIC GEAR TOOTH CALIPERS

- No data output
- Non waterproof
- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height > .039")
- Buttons: zero, on/off, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

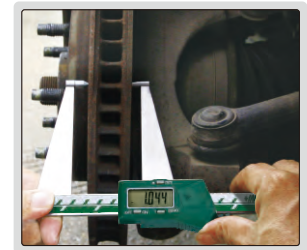
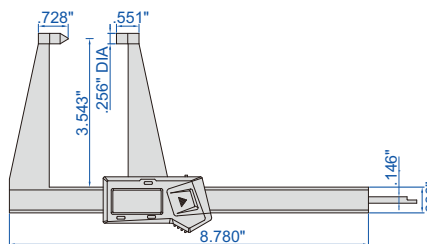

**1181-M25A**


Part No.	EDP No.	Range	Accuracy of height measurement	Accuracy of thickness measurement	Resolution	Total accuracy	L1	L2	a	d
<b>1181-M25A</b>	280658	P1-P24	±.0015"	±.0015"	.0005"/0.01mm	±.0015"	6.693"	6.516"	.827"	1.201"
<b>1181-M50A</b>	280659	P1/2-P5	±.0015"	±.0015"	.0005"/0.01mm	±.0015"	8.661"	7.480"	1.988"	2.165"

RELATIVE PRODUCT: DISK BRAKE MICROMETER (PART NO. 3288-, 3588-)



- Non waterproof
- Measure thickness of disk brakes
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. **7315-21** page 1, **7302-21** page 3)

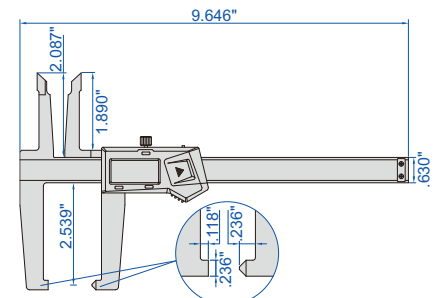

**1162-125A**


Part No.	EDP No.	Range	Accuracy
<b>1162-125A</b>	284529	0-5"/0-125mm	±.0020"

RELATIVE PRODUCT: DISK BRAKE MICROMETER (PART NO. 3288-, 3588-)



- Non waterproof
- Measure thickness of disk brakes and pad wear
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. **7315-21** page 1, **7302-21** page 3)


**1167-150A**


Part No.	EDP No.	Range	Accuracy
<b>1167-150A</b>	877118	0-6"/0-150mm	±.0030"

## ELECTRONIC DEPTH GAGES (STANDARD TYPE)

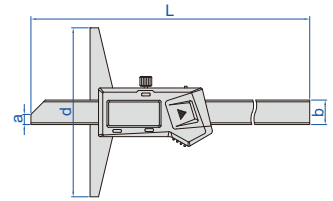


3

- Non waterproof
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel



1141-150A



Part No.	EDP No.	Range	Resolution	Accuracy	L	a	b	d	Data output cable (optional)
1141-150A	816040	0-6"/0-150mm	.0005"/0.01mm	±.0015"	9.055"	.236"	.571"	3.937"	7315-21 page 1, 7302-21 page 3
1141-200A	816042	0-8"/0-200mm	.0005"/0.01mm	±.0015"	11.024"	.236"	.571"	3.937"	7315-21 page 1, 7302-21 page 3
1141-300A	816044	0-12"/0-300mm	.0005"/0.01mm	±.0015"	14.961"	.236"	.571"	5.906"	7315-21 page 1, 7302-21 page 3
1141-500A	280676	0-20"/0-500mm	.0005"/0.01mm	±.0020"	23.031"	.276"	.591"	5.906"	7315-22, 7302-22 page 3

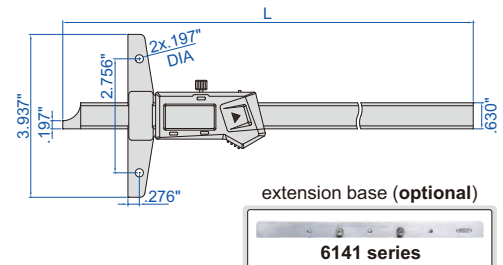
## ELECTRONIC DEPTH GAGES WITH MOUNTING HOLES FOR EXTENSION BASE



- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: extension base (part no. 6141), data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1147-300



Part No.	EDP No.	Range	Accuracy	L
1147-150	285130	0-6"/0-150mm	±.0015"	9.331"
1147-200	285131	0-8"/0-200mm	±.0015"	11.299"
1147-300	285132	0-12"/0-300mm	±.0015"	15.866"

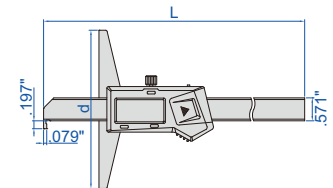
## ELECTRONIC HOOK DEPTH GAGES



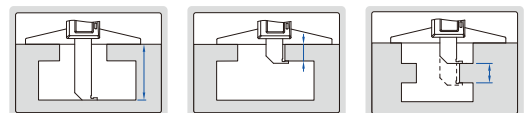
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1142-150A



Part No.	EDP No.	Range	Accuracy	L	d
1142-150A	280677	0-6"/0-150mm	±.0015"	9.055"	3.937"
1142-200A	280678	0-8"/0-200mm	±.0015"	11.024"	3.937"
1142-300A	280679	0-12"/0-300mm	±.0015"	14.961"	5.906"



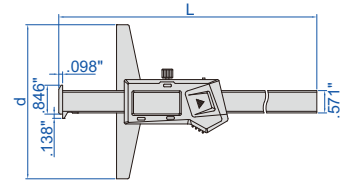


## ELECTRONIC DOUBLE HOOK DEPTH GAGES

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)

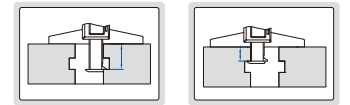


1144-150A



3

Part No.	EDP No.	Range	Accuracy	L	d
1144-150A	280681	0-6"/0-150mm	±.0015"	9.173"	3.937"
1144-200A	280682	0-8"/0-200mm	±.0015"	11.142"	3.937"
1144-300A	280683	0-12"/0-300mm	±.0015"	15.079"	5.906"



## ELECTRONIC DEPTH GAGES WITH ROUND DEPTH BAR

MEASURE DEPTH OF SMALL HOLES (>.157" DIA)

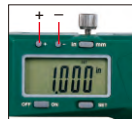
MEASURE WIDTH AND DEPTH OF GROOVES INSIDE BORE

- Non waterproof
- Resolution .0005"/0.01mm
- Supplied with three interchangeable points (flat, spherical, disk)
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: extension base (part no. 6141, for 1148-200E), data output cable (part no. 7315-21 page 1, 7302-21 page 3)

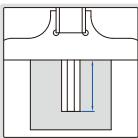


1148-200E

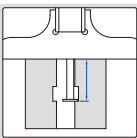
preset buttons



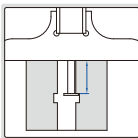
measure depth of small holes (>.157" DIA)



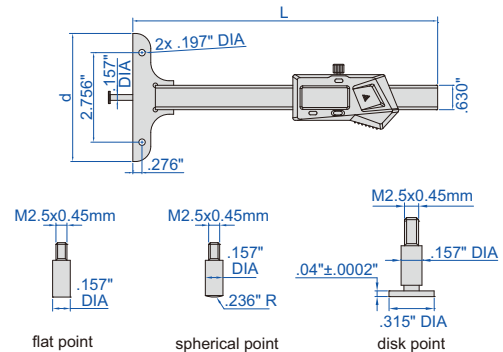
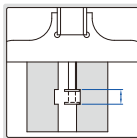
measure depth of grooves inside bore



measure depth of grooves inside bore



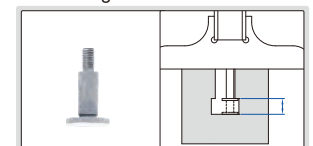
measure width of grooves inside bore



extension base for 1148-200E (optional)



1148-P103E (optional), measure width of bottom grooves inside blind hole

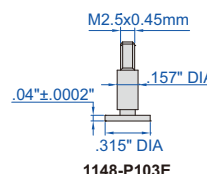


Part No.	EDP No.	Range *	Accuracy	L	d	Remark
1148-100E	877278	0-4"/0-100mm	±.0010"	7.874"	3.346"	
1148-200E	877103	0-8"/0-200mm	±.0015"	11.811"	3.976"	with mounting holes for extension base

\*When disk points are used, the range is reduced by .394"

### OPTIONAL DISK POINT

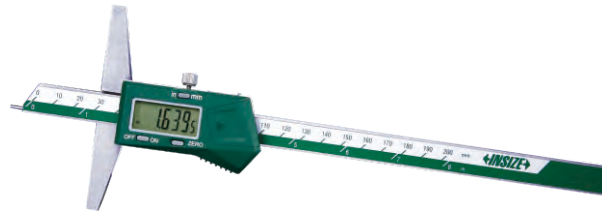
Part No.	EDP No.	Description	Remark
1148-P103E	877116	.04" disk point	for grooves inside blind hole



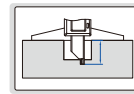
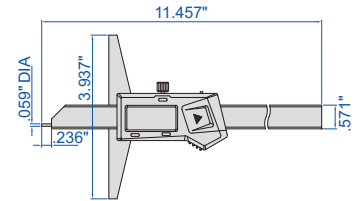
## ELECTRONIC POINT DEPTH GAGE



- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



1143-200A



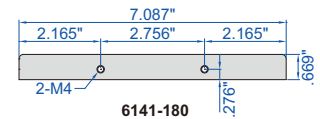
Part No.	EDP No.	Range	Accuracy
1143-200A	877004	0-8"/0-200mm	±.0015"

## EXTENSION BASES

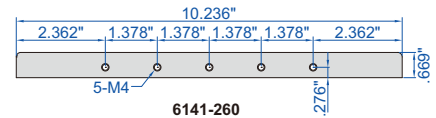


6141-260

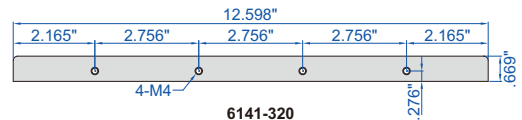
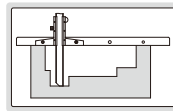
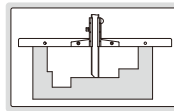
- Supplied with two screws
- Made of stainless steel
- Suitable for depth gages series 1147, 1148, 1247, 1248 and 1249



6141-180



6141-260



6141-320

Part No.	EDP No.	Length
6141-180	280750	7.087"
6141-260	280751	10.236"
6141-320	280752	12.598"

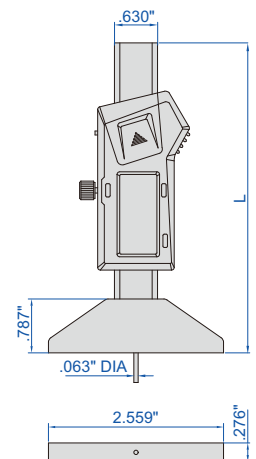
## MINI ELECTRONIC DEPTH GAGES WITH ROUND BAR



- Non waterproof
- Measure depth of small groove and hole
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, 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 (part no. 7315-21 page 1, 7302-21 page 3)



1140-25



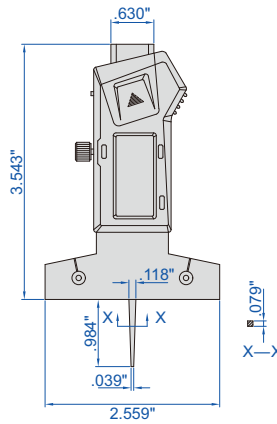
Part No.	EDP No.	Range	Accuracy	L
1140-25	877114	0-1"/0-25mm	±.0010"	4.488"
1140-50	877115	0-2"/0-50mm	±.0010"	5.512"





### MINI ELECTRONIC DEPTH GAGE

- Non waterproof
- Measure depth of small groove and hole, also measure depth of tire tread
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- 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 (part no. 7315-21 page 1, 7302-21 page 3)



1145-25A



Part No.	EDP No.	Range	Accuracy
1145-25A	284550	0-1"/0-25mm	±.0015"

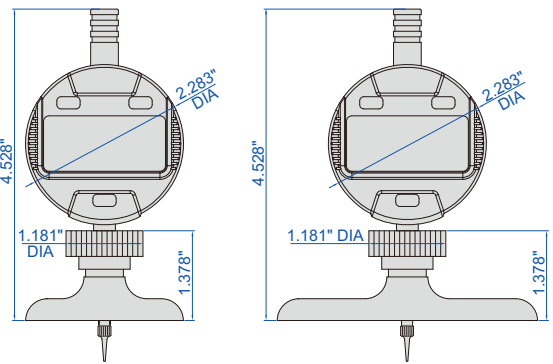


### ELECTRONIC DEPTH GAGES



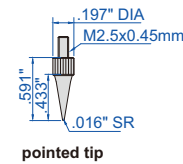
2141-202A

- Button function: on/off, zero, inch/mm, ABS, data preset, change measuring direction
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Supplied with pointed tip and ball tip
- Optional accessory: data output cable (part no. 7315-50M page 1, 7302-40M), granite extension holder (part no. 2141-10)

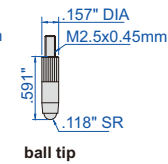


2141-201A

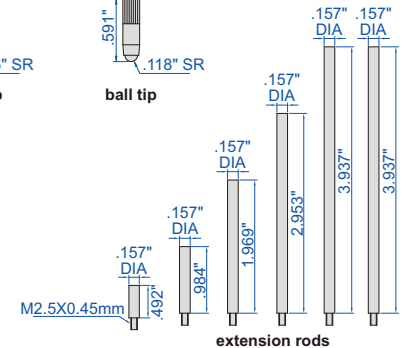
2141-202A



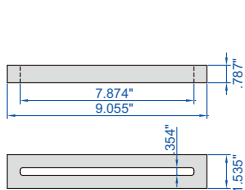
pointed tip



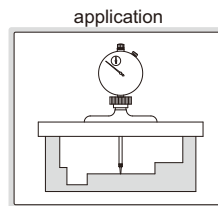
ball tip



extension rods

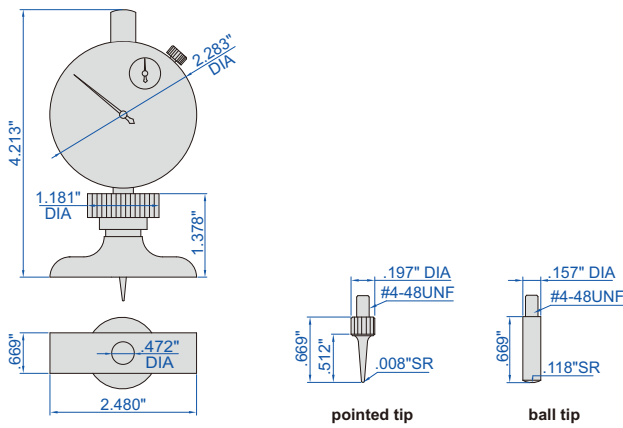


2141-10 (optional), can be customized according to workpieces



Part No.	EDP No.	Range	Electronic indicator stroke	Electronic indicator resolution	Accuracy	Base
2141-201A	876242	0-12"/0-300mm	.5"/12.7mm	.0005"/0.01mm	±.0008"	2.480 x .669"
2141-202A	876243	0-12"/0-300mm	.5"/12.7mm	.0005"/0.01mm	±.0008"	3.996 x .669"

**DIAL DEPTH GAGE**



2341-E1

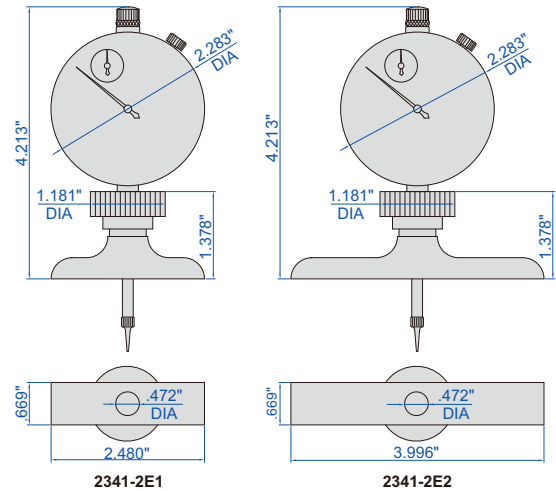
- Stainless steel base
- Supplied with pointed tip and ball tip

Part No.	EDP No.	Range	Dial indicator stroke	Dial indicator graduation	Accuracy
2341-E1	283207	0-1.2"	.5"	.001"	±.0012"

**DIAL DEPTH GAGES**



2341-2E2



2341-2E1

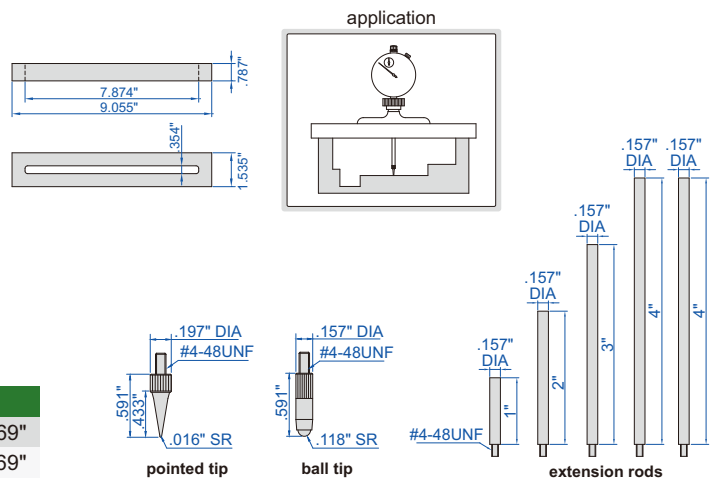
2341-2E2



**2141-10 (optional)**, can be customized according to workpieces

- Dial indicator graduation .001"
- Accuracy: ±.002"
- Stainless steel base
- Extension rods: 1" (1 pc), 2" (1 pc), 3" (1 pc), 4" (2 pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: granite extension holder (part no. **2141-10**)

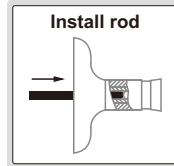
Part No.	EDP No.	Range	Dial indicator stroke	Base
2341-2E1	876240	0-12"	1"	2.480 x .669"
2341-2E2	876241	0-12"	1"	3.996 x .669"





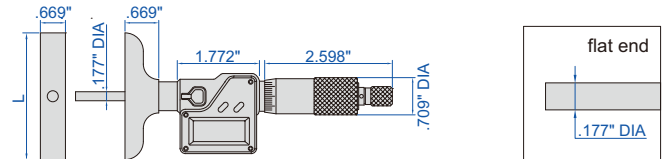
ELECTRONIC DEPTH MICROMETERS

- Resolution .0005"/0.01mm
- Micrometer head accuracy:  $\pm 0.00012"$
- Rod accuracy:  $\pm [0.001 + 0.0005(L/3)]"$ , L is the measuring range in inch
- Button function: on/off, set, inch/mm, data transmit
- IP65 dust/waterproof
- Data output, automatic power off
- Rods with flat end
- Ratchet stop
- Optional accessory: data output cable (part no. 7315-31, 7302-31)



3540-150E

Part No.	EDP No.	Range	Rods	L
3540-50E	281943	0-2"/0-50mm	2 pcs	3.996"
3540-150E	281945	0-6"/0-150mm	6 pcs	3.996"
3540-300E	281947	0-12"/0-300mm	12 pcs	3.996"

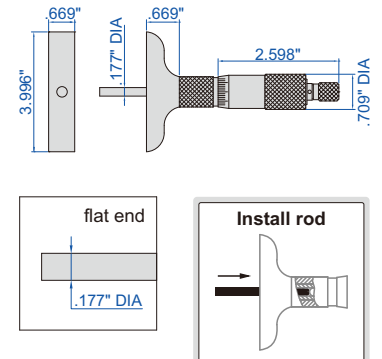


- Graduation .001"
- Micrometer head accuracy:  $\pm 0.00012"$
- Rod accuracy:  $\pm [0.001 + 0.0005(L/3)]"$ , L is the measuring range in inch
- Rods with flat end
- Ratchet stop



3240-6

DEPTH MICROMETER



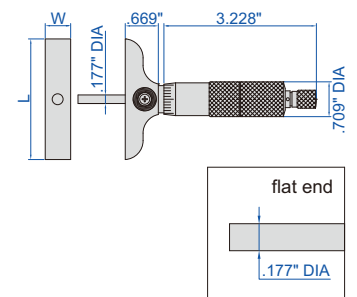
Part No.	EDP No.	Range	Rods
3240-6	281939	0-6"	6 pcs

- Graduation .001"
- Micrometer head accuracy:  $\pm 0.00012"$
- Rod accuracy:  $\pm [0.001 + 0.0005(L/3)]"$ , L is the measuring range in inch
- Rods with flat end
- Ratchet stop



3241-4

DEPTH MICROMETERS

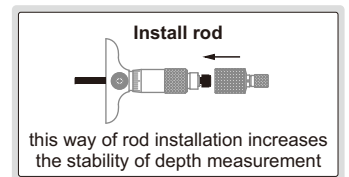


Base: LxW=3.996x.669"

Part No.	EDP No.	Range	Rods
3241-1	281921	0-1"	1 pc
3241-2	281922	0-2"	2 pcs
3241-3	877307	0-3"	3 pcs
3241-4	281923	0-4"	4 pcs
3241-6	281924	0-6"	6 pcs
3241-12	281926	0-12"	12 pcs

Base: LxW=2.480x.669"

Part No.	EDP No.	Range	Rods
3241-B1	281927	0-1"	1 pc
3241-B4	281929	0-4"	4 pcs



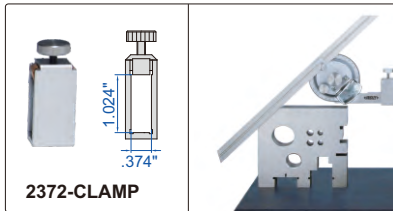
## ELECTRONIC HEIGHT GAGES



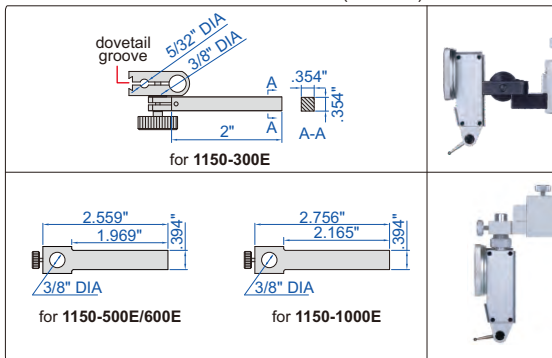
4

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Carbide tipped scriber
- Made of stainless steel (except the base)
- LR44 battery, data output
- Supplied with dial test indicator holder
- Supplied with dust cover
- Optional accessory: wireless transmitter (part no. **7315-1150**), data output cable (part no. **7302-SPC7**, keyboard format), clamp for protractors (part no. **2372-CLAMP**, for **1150-300E**)

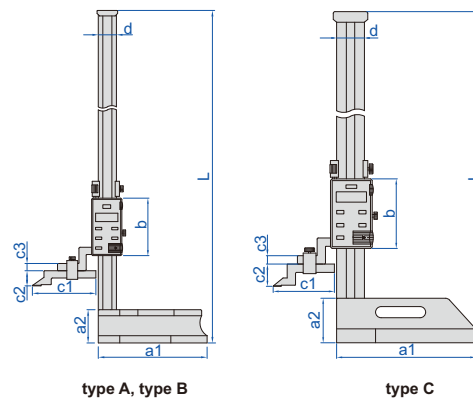
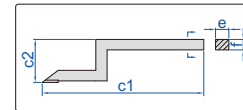
clamp for protractors (optional) for 1150-300E



dial test indicator holder (included)



scriber (included)



Part No.	EDP No.	Range	Type	Accuracy	L	a1	a2	b	c1	c2	c3	d	e	f
1150-300E	280756	0-12"/0-300mm	A	±.0015"	19.094"	5.433"	1.772"	3.740"	3.150"	1.181"	.394"	1.102"	.354"	.354"
1150-500E	280757	0-20"/0-500mm	B	±.0025"	28.346"	7.087"	2.165"	3.740"	4.055"	.984"	.472"	1.181"	.394"	.472"
1150-600E	280758	0-24"/0-600mm	B	±.0025"	32.283"	7.087"	2.165"	3.740"	4.055"	.984"	.472"	1.181"	.394"	.472"
1150-1000E	280759	0-40"/0-1000mm	C	±.0030"	50.197"	9.843"	3.150"	4.921"	4.331"	1.535"	.591"	1.969"	.394"	.591"

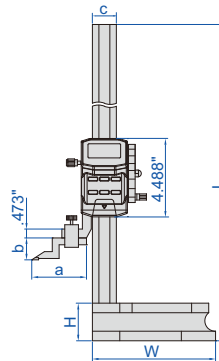
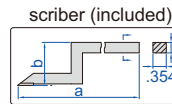


## ELECTRONIC HEIGHT GAGES WITH DRIVING WHEEL

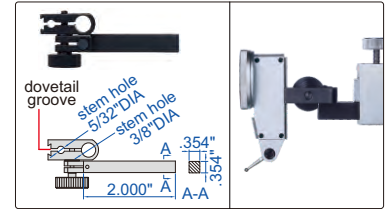
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, preset (+, -), ABS/INC
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032, data output
- Supplied with dust cover
- With dial test indicator holder
- Optional accessory: data output cable (part no. **7315-22**, **7302-22** page 3), clamp for protractors (part no. **2372-CLAMP**)



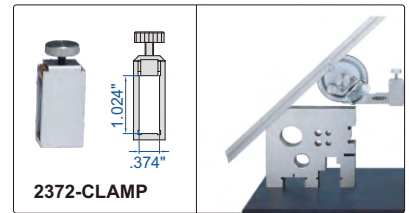
1156-300



dial test indicator holder (included)



clamp for protractors (optional)

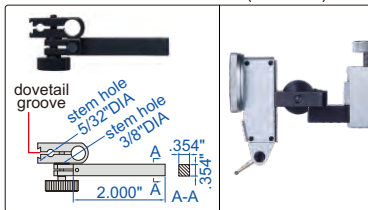


Part No.	EDP No.	Range	Accuracy	L	W	H	a	b	c	h
1156-300	816634	0-12"/0-300mm	±.0015"	20.276"	7.087"	2.165"	3.150"	1.181"	1.378"	.354"
1156-600	816635	0-24"/0-600mm	±.0020"	32.087"	7.087"	2.165"	3.150"	1.181"	1.378"	.354"



## ELECTRONIC HEIGHT GAGES

dial test indicator holder (included)

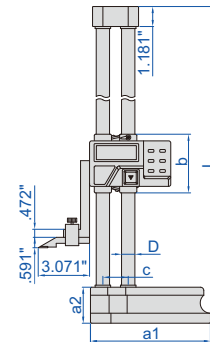
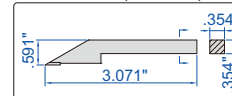


- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, data hold, ABS/INC, preset
- ABS/INC is for absolute and incremental measurement
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032, data output
- With driving wheel
- With dial test indicator holder
- Supplied with dust cover
- Optional accessory: clamp for protractors (part no. **2372-CLAMP**), wireless transmitter (part no. **7315-1151**), data output cable (part no. **7302-1151**, keyboard format)



1151-300AE

scriber (included)



driving wheel on the back



clamp for protractors (optional)



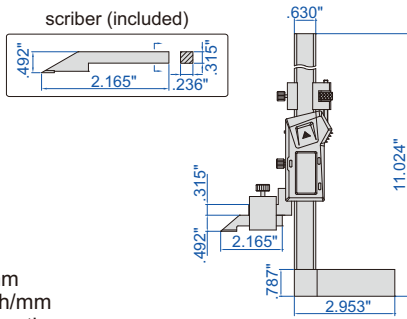
2372-CLAMP

Part No.	EDP No.	Range	Accuracy	L	a1	a2	b	c	D
1151-300AE	816100	0-12"/0-300mm	±.0015"	18.701"	5.315"	1.693"	3.307"	1.299"	.591" DIA
1151-600AE	816104	0-24"/0-600mm	±.0020"	31.890"	7.087"	2.126"	3.465"	1.496"	.787" DIA

**MINI ELECTRONIC HEIGHT GAGE**



4

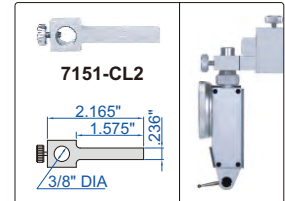


- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- With fine adjustment
- Made of stainless steel
- Battery CR2032, data output
- Optional accessory: data output cable (part no. **7315-21** page 1, **7302-21** page 3), dial test indicator holder (part no. **7151-CL2**)



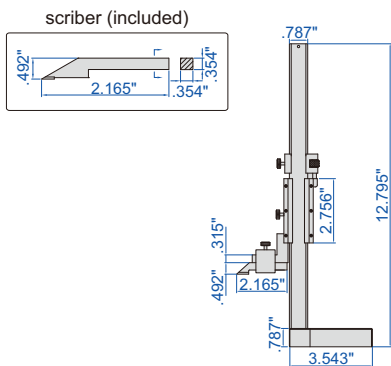
**1154-150**

dial test indicator holder (optional)

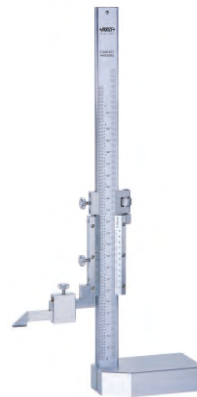


Part No.	EDP No.	Range	Accuracy
<b>1154-150</b>	877102	0-6"/0-150mm	±.0015"

**MINI VERNIER HEIGHT GAGE**

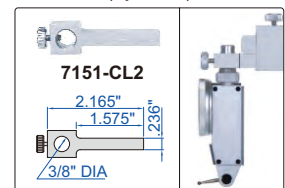


- Graduation .001"/0.02mm
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Optional accessory: dial test indicator holder (part no. **7151-CL2**)



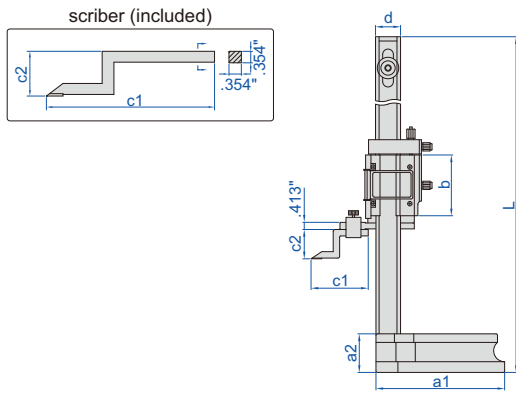
**1253-200**

dial test indicator holder (optional)

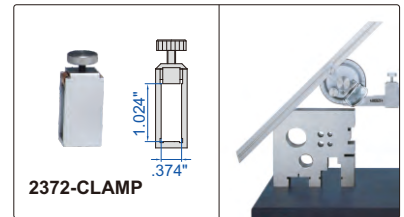


Part No.	EDP No.	Range	Accuracy
<b>1253-200</b>	877126	0-8"/0-200mm	±.0012"

## VERNIER HEIGHT GAGES

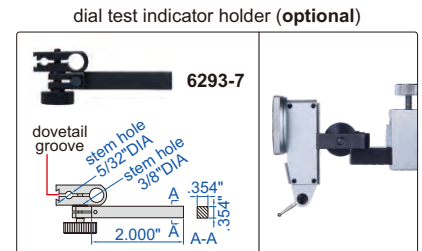


1250-300



2372-CLAMP

- Graduation .001"/0.02mm
- Adjustable main scale to set zero
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Supplied with magnifier
- With fine adjustment
- Supplied with dust cover
- Optional accessory: dial test indicator holder (part no. **6293-7**), clamp for protractors (part no. **2372-CLAMP**)



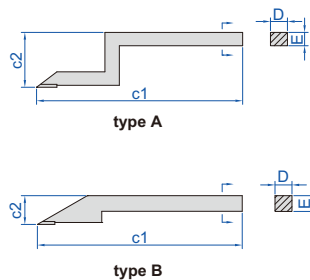
dial test indicator holder (optional)

6293-7

Part No.	EDP No.	Range	Accuracy	L	a1	a2	b	c1	c2	d
1250-300	280780	0-12"/0-300mm	±.0016"	21.457"	5.315"	1.693"	2.953"	3.150"	1.181"	1.102"
1250-600	280783	0-24"/0-600mm	±.0020"	34.252"	7.087"	2.126"	3.346"	3.150"	1.614"	1.378"

## SCRIBERS FOR HEIGHT GAGES

- Carbide tipped



7150-SC3

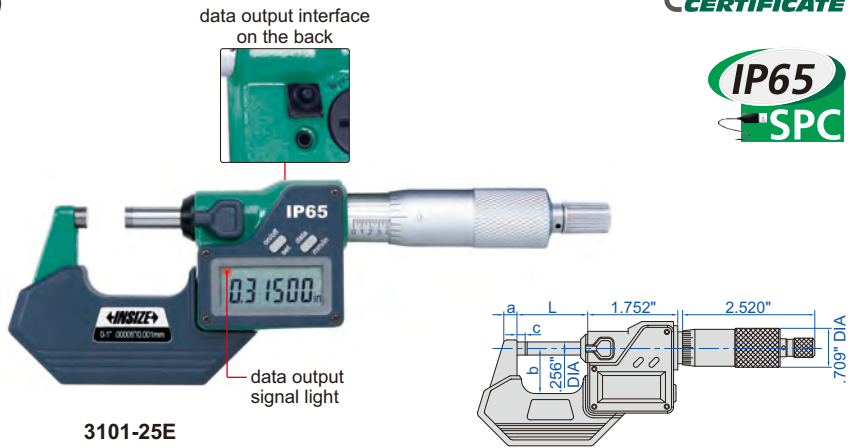
Part No.	EDP No.	For height gages	Type	c1	c2	D	E
7150-SC2	280787	1150-500E, 1150-600E	A	4.055"	.984"	.394"	.472"
7150-SC3	280788	1150-1000E, 1150-1500E, 1150-2000E	A	4.331"	1.535"	.394"	.591"
7150-SC4	280789	1351-12, 1351-18, 1351-24, 1151-300E, 1151-450E, 1151-600E,	B	3.071"	.591"	.354"	.354"
7150-SC6	280791	1250-300, 1156-300, 1156-600, 1150-300E	A	3.150"	1.181"	.354"	.354"
7150-SC7	280792	1250-450, 1250-600	A	3.150"	1.614"	.354"	.354"
7150-SC9	877408	1253-150, 1253-200, 1154-150	B	2.165"	.492"	.236"	.315"

## WATERPROOF ELECTRONIC OUTSIDE MICROMETERS (WITH DATA OUTPUT INTERFACE)

INSPECTION  
CERTIFICATE

IP65  
SPC

- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-1"/0-25mm)
- Optional accessory: data output cable (part no. 7315-31, 7302-31)



3101-25E

**Inch/Metric**

**Individual (ratchet stop)**

Part No.	EDP No.	Range	Resolution	Accuracy	L	a	b	c
3101-25E*	280838	0-1"/0-25mm	.00005"/0.001mm	±.00010"	1.358"	.236"	.984"	.118"
3101-50E*	280839	1-2"/25-50mm	.00005"/0.001mm	±.00010"	2.343"	.315"	1.260"	.118"
3101-75E*	280840	2-3"/50-75mm	.00005"/0.001mm	±.00015"	3.327"	.315"	1.752"	.118"
3101-100E*	280841	3-4"/75-100mm	.00005"/0.001mm	±.00015"	4.311"	.315"	2.244"	.118"
3101-125E	280842	4-5"/100-125mm	.00005"/0.001mm	±.00015"	5.315"	.394"	2.756"	.118"
3101-150E	280843	5-6"/125-150mm	.00005"/0.001mm	±.00015"	6.319"	.394"	3.228"	.118"
3101-175E	280829	6-7"/150-175mm	.00005"/0.001mm	±.00020"	7.323"	.472"	3.720"	.217"
3101-200E	280830	7-8"/175-200mm	.00005"/0.001mm	±.00020"	8.327"	.472"	4.213"	.217"
3101-225E	280846	8-9"/200-225mm	.00005"/0.001mm	±.00020"	9.291"	.906"	5.098"	.217"
3101-250E	280847	9-10"/225-250mm	.00005"/0.001mm	±.00020"	10.295"	.906"	5.610"	.217"
3101-275E	280848	10-11"/250-275mm	.0001"/0.001mm	±.0002"	11.299"	.906"	6.102"	.217"
3101-300E	280849	11-12"/275-300mm	.0001"/0.001mm	±.0002"	12.303"	.906"	6.594"	.217"



**Metric/Inch**

**Metric/Inch type (ratchet stop)**

(mm)

Part No.	EDP No.	Range	Resolution	Accuracy	L	a	b	c
3101-25A*	280823	0-25mm/0-1"	0.001mm/0.00005"	±2µm	34.5	6	25	3
3101-50A*	280824	25-50mm/1-2"	0.001mm/0.00005"	±2µm	59.5	8	32	3
3101-225A	280831	200-225mm/8-9"	0.001mm/0.00005"	±4µm	236	23	129.5	5.5

**Inch/Metric**

**Individual (friction thimble)**

Part No.	EDP No.	Range	Resolution	Accuracy	L	a	b	c
3101-25FE*	877302	0-1"/0-25mm	.00005"/0.001mm	±.00010"	1.358"	.236"	.984"	.118"

**Metric/Inch**

**Metric/Inch type (friction thimble)**

(mm)

Part No.	EDP No.	Range	Resolution	Accuracy	L	a	b	c
3101-25FA*	877301	0-25mm/0-1"	0.001mm/0.00005"	±2µm	34.5	6	25	3

**Inch/Metric**

**Set (ratchet stop type)**

Part No.	EDP No.	Range	Micrometers included	Packaging
3101-33E*	877303	0-3"/0-75mm	3101-25E, 3101-50E, 3101-75E	blow mould case
3101-44E*	285125	0-4"/0-100mm	3101-25E, 3101-50E, 3101-75E, 3101-100E	blow mould case
3101-66E	285126	0-6"/0-150mm	3101-25E, 3101-50E, 3101-75E, 3101-100E, 3101-125E, 3101-150E	aluminum box



3101-33E

3101-66E

\* Supplied with manufacturer inspection certificate

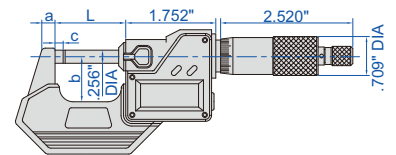


## WATERPROOF ELECTRONIC OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)



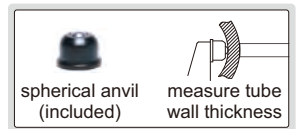
3108-1

- No data output
- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, ABS/INC
- Ratchet stop
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-1"/0-25mm)



### Ratchet stop type

Part No.	EDP No.	Range	Accuracy	L	a	b	c
3108-1*	280868	0-1"/0-25mm	±.00010"	1.358"	.236"	.984"	.118"
3108-2*	280869	1-2"/25-50mm	±.00010"	2.343"	.315"	1.260"	.118"



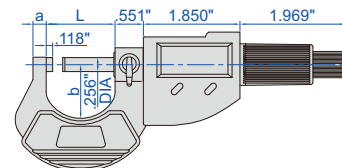
\*Supplied with manufacturer inspection certificate

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



3109-25E

- No data output
- Resolution .00005"/0.001mm
- Button functions: on/off, set, inch/mm, ABS/INC
- Automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Setting standards are included (except 0-1"/0-25mm)

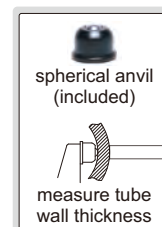


### Inch/Metric

Part No.	EDP No.	Range	Accuracy	L	a	b
3109-25E*	816500	0-1"/0-25mm	±.00010"	1.260"	.236"	1.083"
3109-50E*	816502	1-2"/25-50mm	±.00010"	2.244"	.315"	1.457"
3109-75E*	816504	2-3"/50-75mm	±.00015"	3.228"	.315"	1.969"
3109-100E*	816506	3-4"/75-100mm	±.00015"	4.213"	.394"	2.402"

### Metric/Inch

Part No.	EDP No.	Range	Accuracy	L	a	b
3109-25A*	289005	0-25mm/0-1"	±2µm	32mm	6mm	27.5mm
3109-50A*	289008	25-50mm/1-2"	±2µm	57mm	8mm	37mm



\*Supplied with manufacturer inspection certificate

## OUTSIDE MICROMETERS



3203-1A



3203-2A

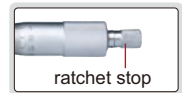
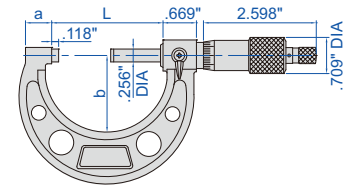
5

- Graduation: inch .0001"  
metric 0.01mm
- Carbide measuring faces
- Supplied with setting standards (except 0-1" and 0-25mm)

### Inch

#### Ratchet stop type

Part No.	EDP No.	Range	Accuracy	L	a	b
3203-1A *	816564	0-1"	.00015"	1.260"	.354"	1.102"
3203-2A *	816566	1-2"	.00015"	2.244"	.551"	1.496"
3203-3A *	816568	2-3"	.00020"	3.228"	.591"	1.929"
3203-4A *	816570	3-4"	.00020"	4.213"	.591"	2.362"
3203-5A *	816572	4-5"	.00025"	5.236"	.650"	2.874"
3203-6A *	816574	5-6"	.00025"	6.220"	.650"	3.346"
3203-7A	816576	6-7"	.00030"	7.205"	.764"	4.094"
3203-8A	816578	7-8"	.00030"	8.228"	.764"	4.606"
3203-9A	816580	8-9"	.00030"	9.213"	.764"	5.118"
3203-10A	816582	9-10"	.00030"	10.236"	.764"	5.591"
3203-11A	816584	10-11"	.00035"	11.220"	.764"	6.102"
3203-12A	816586	11-12"	.00035"	12.205"	.764"	6.614"



### Metric

#### Ratchet stop type

Part No.	EDP No.	Range	Accuracy	L	a	b
3203-25A *	816530	0-25mm	±2µm	32mm	9mm	28mm
3203-50A *	816532	25-50mm	±2µm	57mm	14mm	38mm
3203-75A *	816534	50-75mm	±2µm	82mm	15mm	49mm
3203-100A *	816536	75-100mm	±3µm	107mm	15mm	60mm
3203-125A	816538	100-125mm	±3µm	133mm	16.5mm	73mm
3203-150A	816540	125-150mm	±3µm	158mm	16.5mm	85mm
3203-175A	816542	150-175mm	±4µm	183mm	19.4mm	104mm
3203-200A	816544	175-200mm	±4µm	209mm	19.4mm	117mm
3203-225A	816546	200-225mm	±4µm	234mm	19.4mm	130mm
3203-250A	816548	225-250mm	±5µm	260mm	19.4mm	142mm
3203-275A	816550	250-275mm	±5µm	285mm	19.4mm	155mm
3203-300A	816552	275-300mm	±5µm	310mm	19.4mm	168mm

### Inch

#### Friction thimble type

Part No.	EDP No.	Range	Accuracy	L	a	b
3203-1FA *	816565	0-1"	.00015"	1.260"	.354"	1.102"
3203-2FA *	877304	1-2"	.00015"	2.244"	.551"	1.496"
3203-3FA *	877305	2-3"	.00020"	2.244"	.591"	1.929"

\* Supplied with manufacturer inspection certificate

To be continued

Continued from previous page



3203-44A



3203-126A

**Inch**

**Micrometer set (ratchet stop type)**

Part No.	EDP No.	Range	Micrometers included	Packaging
3203-33A *	816538	0-3"	3203-1A, 3203-2A, 3203-3A	blow mould case
3203-44A *	816590	0-4"	3203-1A, 3203-2A, 3203-3A, 3203-4A	blow mould case
3203-66A *	816592	0-6"	3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A	blow mould case
3203-126A	816594	6-12"	3203-7A, 3203-8A, 3203-9A, 3203-10A, 3203-11A, 3203-12A	aluminum box
3203-1212A	816596	0-12"	3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A, 3203-7A, 3203-8A, 3203-9A, 3203-10A, 3203-11A, 3203-12A	aluminum box

**Metric**

**Micrometer set (ratchet stop type)**

Part No.	EDP No.	Range	Micrometers included	Packaging
3203-753A *	816554	0-75mm	3203-25A, 3203-50A, 3203-75A	blow mould case
3203-1004A *	816556	0-100mm	3203-25A, 3203-50A, 3203-75A, 3203-100A	blow mould case
3203-1506A	816558	0-150mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A	blow mould case
3203-3006A	816560	150-300mm	3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A	aluminum box
3203-3012A	816562	0-300mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A, 3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A	aluminum box



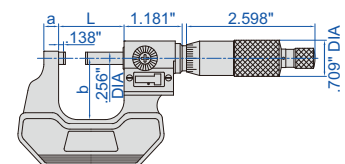
**OUTSIDE MICROMETERS WITH COUNTER**

- Counter resolution .001"
- Thimble graduation .0001"
- Carbide measuring faces
- Ratchet stop
- Supplied with setting standards (except 0-1" and 0-25mm)



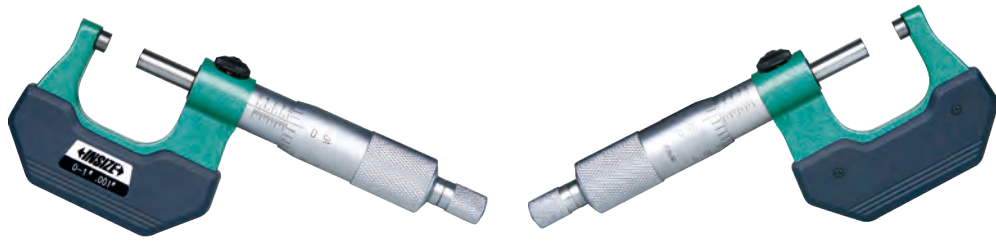
3400-1

Part No.	EDP No.	Range	Accuracy	L	a	b
3400-1 *	280933	0-1"	.00015"	1.260"	.236"	1.024"
3400-2 *	280934	1-2"	.00015"	2.244"	.315"	1.260"
3400-3 *	280935	2-3"	.00020"	3.228"	.315"	1.752"
3400-4 *	280936	3-4"	.00020"	4.213"	.315"	2.244"



\* Supplied with manufacturer inspection certificate

## LEFT OR RIGHT HAND OUTSIDE MICROMETERS

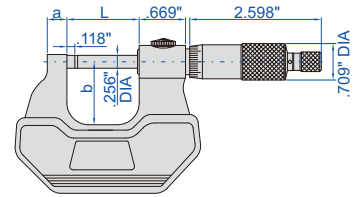


front

back

3236-1B

- Graduation .001"
- Graduations on two sides
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-1" and 0-25mm)



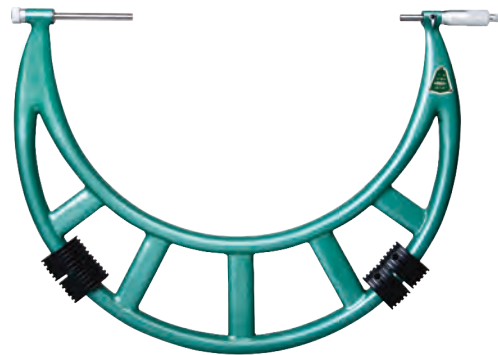
Part No.	EDP No.	Range	Accuracy	Graduation	L	a	b
3236-1B	816636	0-1"	.00015"	.001"	1.260"	.236"	.945"
3236-2B	816637	1-2"	.00015"	.001"	2.244"	.315"	1.260"

5

## OUTSIDE MICROMETER WITH INTERCHANGEABLE ANVILS

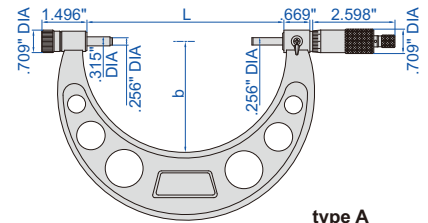
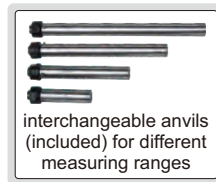
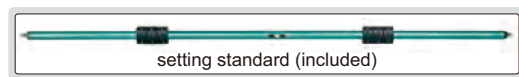


3206-6

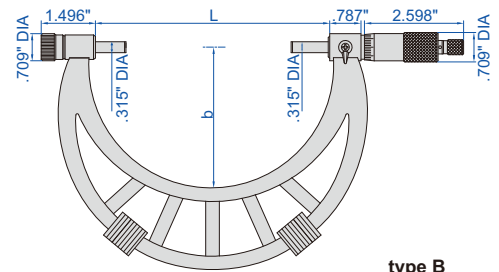


3206-16

- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



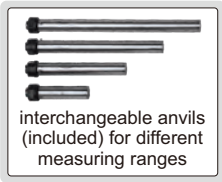
type A



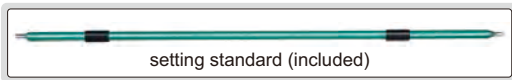
type B

Part No.	EDP No.	Range	Type	Accuracy	Graduation	L	b	Setting standard (included)
3206-4	281181	0-4"	A	.00020"	.0001"	4.252"	2.244"	1", 2", 3"
3206-6	281182	0-6"	A	.00025"	.0001"	6.220"	3.228"	1", 2", 3", 4", 5"
3206-8	281183	4-8"	A	.00030"	.0001"	8.189"	4.488"	4", 5", 6", 7"
3206-12	281186	6-12"	A	.00035"	.0001"	12.126"	6.496"	6", 7", 8", 9", 10", 11"
3206-121	281187	8-12"	A	.00035"	.0001"	12.126"	6.496"	8", 9", 10", 11"
3206-16	281188	12-16"	B	.00045"	.001"	16.102"	8.819"	13", 15"
3206-20	281189	16-20"	B	.00050"	.001"	20.039"	10.827"	17", 19"
3206-24	281190	20-24"	B	.00055"	.001"	23.976"	12.638"	21", 23"
3206-28	281191	24-28"	B	.00065"	.001"	27.913"	14.606"	25", 27"
3206-32	281192	28-32"	B	.00070"	.001"	31.850"	16.772"	29", 31"
3206-36	281193	32-36"	B	.00080"	.001"	35.787"	18.740"	33", 35"
3206-40	281194	36-40"	B	.00085"	.001"	39.724"	22.677"	37", 39"

METRIC ELECTRONIC OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS



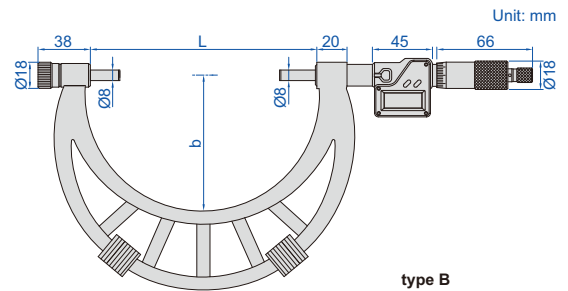
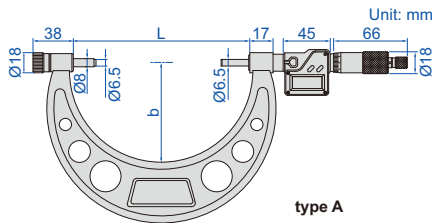
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-31, 7302-31)



3506-150A



3506-400A



Metric/Inch		(mm)							
Part No.	EDP No.	Range	Type	Resolution	Accuracy	L	b	Setting standard (included)	
3506-150A	281197	0-150mm/0-6"	A	0.001mm/0.00005"	±6µm	155	82	25, 50, 75, 100, 125	
3506-300A	281201	150-300mm/6-12"	A	0.001mm/0.0001"	±8µm	305	165	150, 175, 200, 225, 250, 275	
3506-400A	281203	300-400mm/12-16"	B	0.001mm/0.0001"	±9µm	405	224	325, 375	

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

INDICATING MICROMETERS

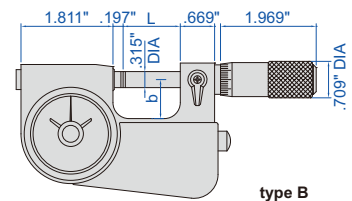
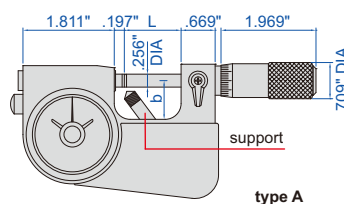


3332-1



3332-1B

- Dial indicator: range ±.0015", graduation .00005", accuracy .00005"
- Carbide measuring faces
- Optional accessory: gage blocks grade 0 (4112-A series), for zero setting

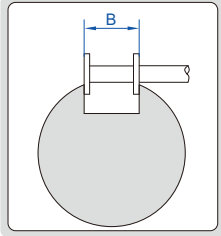


Part No.	EDP No.	Micrometer head range	Micrometer head accuracy	Micrometer head graduation	Type	L	b	Remark
3332-1	281845	0-1"	.00015"	.0001"	A	1.122"	.748"	with support
3332-1B	281849	0-1"	.00015"	.0001"	B	1.122"	.748"	without support

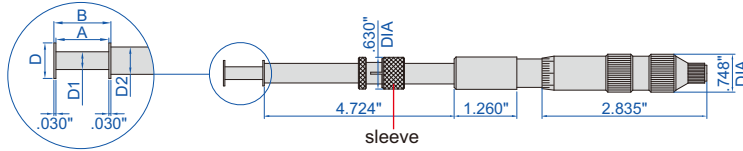
## GROOVE MICROMETERS

5

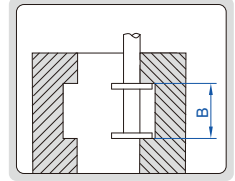
measure width of keyway



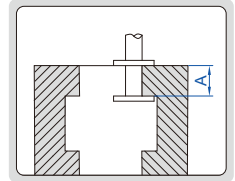
3287-1B



measure width of groove



measure position of groove



- Measure width of grooves inside bores
- Non-rotating spindle
- Two graduations for inside and outside measurement
- Two-directional ratchet stop

Part No.	EDP No.	Range (outside A)	Range (inside B)	Accuracy	Graduation	D	D1	D2
3287-1B	281908	0-1"	.06-1.05"	.00039"	.001"	.512" DIA	.256" DIA	.394" DIA
3287-2B	281909	1-2"	1.05-2.05"	.00039"	.001"	.512" DIA	.256" DIA	.394" DIA

## SCREW THREAD MICROMETERS

NON-ROTATING SPINDLE

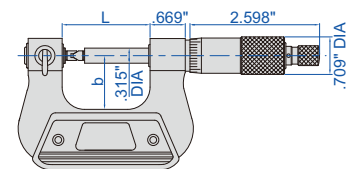
- Graduation .001"
- Measure pitch diameter of screw threads
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-1")
- Optional accessory: 55° setting standards



3281-1  
(measuring tips are optional)

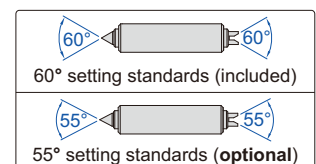
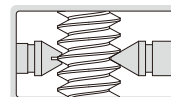
Measuring tips are optional

Part No.	EDP No.	Range	L	b	55° setting standard (optional)
3281-1	281696	0-1"	1.654"	1.024"	-
3281-2	281697	1-2"	2.638"	1.496"	3281-SPE1
3281-3	281698	2-3"	3.622"	1.969"	3281-SPE2
3281-4	281699	3-4"	4.630"	2.441"	3281-SPE3
3281-5	281700	4-5"	5.630"	2.756"	3281-SPE4
3281-6	281701	5-6"	6.622"	3.228"	3281-SPE5
3281-7	281702	6-7"	7.559"	3.720"	3281-SPE6
3281-8	281703	7-8"	8.543"	4.213"	3281-SPE7



accuracy of micrometers with tips

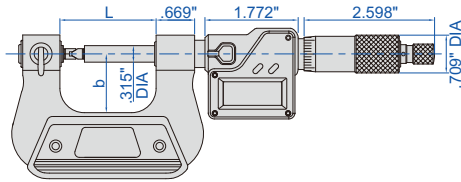
Pitch	Range					
	0-1"	1-2"	2-3"	3-4"	4-5"	5-8"
64~48TPI	.00040"	-	-	-	-	-
44~32TPI	.00040"	.00050"	-	-	-	-
28~20TPI	.00045"	.00060"	.00065"	.00065"	-	-
18~13TPI	.00055"	.00065"	.00075"	.00075"	.00080"	.00090"
12~7TPI	.00065"	.00075"	.00085"	.00085"	.00090"	.00100"
6~3.5TPI	-	.00085"	.00090"	.00090"	.00100"	.00110"



NON-ROTATING SPINDLE

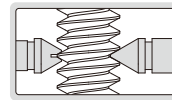
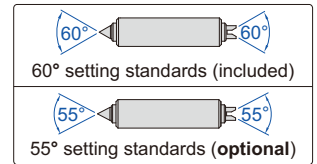


## ELECTRONIC SCREW THREAD MICROMETERS



**3581-25E**  
(measuring tips are optional)

- Measure pitch diameter of screw threads
- Resolution .00005"/0.001mm
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-1"/0-25mm)
- Optional accessory: 55° setting standards, data output cable (part no. 7315-31, 7302-31)



accuracy of micrometers with tips

Pitch	Range	
	0-1"	1-2"
64~48TPI	±.00040"	-
44~32TPI	±.00040"	±.00050"
28~20TPI	±.00045"	±.00060"
18~13TPI	±.00055"	±.00065"
12~7TPI	±.00065"	±.00075"
6~3.5TPI	-	±.00085"

Measuring tips are optional

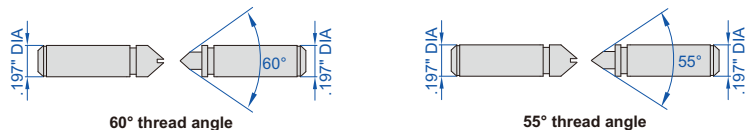
Part No.	EDP No.	Range	L	b	55° setting standard (optional)
3581-25E	877166	0-1"/0-25mm	1.654"	1.024"	-
3581-50E	877320	1-2"/25-50mm	2.638"	1.496"	3281-SPE1

## MEASURING TIPS FOR SCREW THREAD MICROMETERS



7381-T13

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



Unified and metric thread (60° thread angle)

Part No.	EDP No.	Pitch
7381-T11	281671	64-48TPI/0.4-0.5mm
7381-T12	281672	44-28TPI/0.6-0.9mm
7381-T13	281673	24-14TPI/1-1.75mm
7381-T14	281674	13-9TPI/2-3mm
7381-T15	281675	8-5TPI/3.5-5mm
7381-T16	281676	4.5-3.5TPI/5.5-7mm
7381-TS	281670	6 pairs/set, including all above tips

Whitworth thread (55° thread angle)

Part No.	EDP No.	Pitch
7381-T2S	281677	10 pairs/set: 60-48TPI, 48-40TPI, 40-32TPI, 32-24TPI, 24-18TPI, 18-14TPI, 14-10TPI, 10-7TPI, 7-4.5TPI, 4.5-3.5TPI

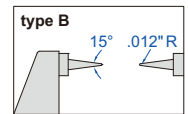
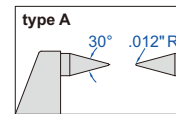
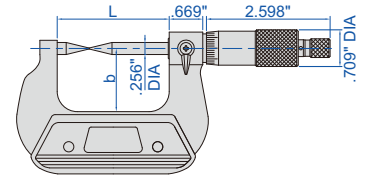
## POINT MICROMETERS

5



3230-1

- Measure the web thickness of drills, small grooves and keyways
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-1")



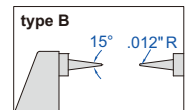
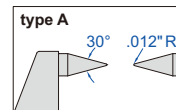
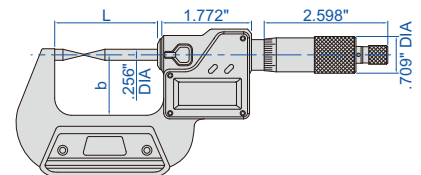
Part No.	EDP No.	Range	Type	Accuracy	Graduation	L	b
3230-1	281345	0-1"	A	.00015"	.0001"	2.244"	1.260"
3230-2	281346	1-2"	A	.00015"	.0001"	3.228"	1.752"
3230-4	281348	3-4"	A	.00020"	.0001"	5.220"	2.736"
3230-1B	877306	0-1"	B	.00015"	.0001"	2.244"	1.260"

## ELECTRONIC POINT MICROMETERS



3530-25E

- Measure the web thickness of drills, small grooves and keyways
- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output, automatic power off
- Ratchet stop, carbide tips
- Supplied with setting standards (except 0-1"/0-25mm)
- Optional accessory: data output cable (part no. 7315-31, 7302-31)



### Inch/Metric

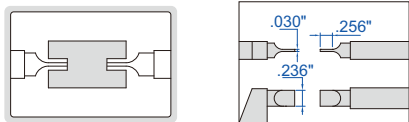
Part No.	EDP No.	Range	Type	Accuracy	L	b
3530-25E	877310	0-1"/0-25mm	A	±.00015"	2.244"	1.260"
3530-25BE	877309	0-1"/0-25mm	B	±.00015"	2.244"	1.260"

### Metric/Inch

Part No.	EDP No.	Range	Type	Accuracy	L	b
3530-25A	281349	0-25mm/0-1"	A	±4μm	57mm	32mm



**NON-ROTATING SPINDLE**

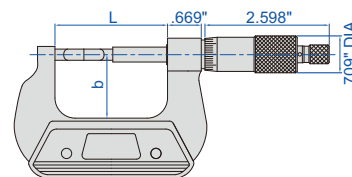


- Measure the groove diameter of shafts and keyways
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-1")

**BLADE MICROMETERS**



3232-1



Part No.	EDP No.	Range	Accuracy	Graduation	L	b
3232-1	281320	0-1"	.00015"	.0001"	2.244"	1.260"
3232-2	281321	1-2"	.00015"	.0001"	3.228"	1.752"
3232-3	281322	2-3"	.00020"	.0001"	4.213"	2.244"
3232-4	281323	3-4"	.00020"	.0001"	5.220"	2.736"
3232-5	281324	4-5"	.00025"	.0001"	6.220"	3.228"
3232-6	281325	5-6"	.00025"	.0001"	7.220"	3.720"
3232-7	281326	6-7"	.00030"	.0001"	8.220"	4.213"

**NON-ROTATING SPINDLE**

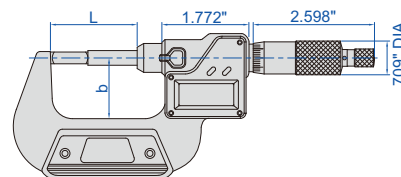


**ELECTRONIC BLADE MICROMETERS**

- Measure the groove diameter of shafts and keyways
- Non-rotating spindle
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-1"/0-25mm)
- Optional accessory: data output cable (part no. 7315-31, 7302-31)

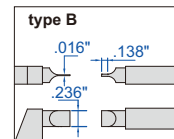
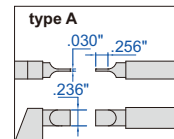


3532-25E



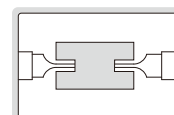
**Inch/Metric**

Part No.	EDP No.	Range	Type	Accuracy	Resolution	L	b
3532-25E	281327	0-1"/0-25mm	A	±.00015"	.00005"/0.001mm	2.244"	1.260"
3532-50E	281328	1-2"/25-50mm	A	±.00015"	.00005"/0.001mm	3.228"	1.752"
3532-75E	281329	2-3"/50-75mm	A	±.00020"	.00005"/0.001mm	4.213"	2.244"
3532-100E	281330	3-4"/75-100mm	A	±.00020"	.00005"/0.001mm	5.220"	2.736"
3532-125E	281331	4-5"/100-125mm	A	±.00025"	.00005"/0.001mm	6.220"	3.228"
3532-25BE	877317	0-1"/0-25mm	B	±.00015"	.00005"/0.001mm	2.244"	1.260"



**Metric/Inch**

Part No.	EDP No.	Range	Type	Accuracy	Resolution	L	b
3532-25A	289015	0-25mm/0-1"	A	±4µm	0.001mm/0.00005"	57	32
3532-50A	877318	25-50mm/1-2"	A	±4µm	0.001mm/0.00005"	82	44.5
3532-75A	289017	50-75mm/2-3"	A	±5µm	0.001mm/0.00005"	107	57
3532-100A	877311	75-100mm/3-4"	A	±5µm	0.001mm/0.00005"	132.6	69.5
3532-125A	877312	100-125mm/4-5"	A	±6µm	0.001mm/0.00005"	158	82
3532-150A	877313	125-150mm/5-6"	A	±6µm	0.001mm/0.00005"	183.4	94.5
3532-175A	877314	150-175mm/6-7"	A	±7µm	0.001mm/0.00005"	208.8	107
3532-25BA	877316	0-25mm/0-1"	B	±4µm	0.001mm/0.00005"	57	32
3532-175BA	877315	150-175mm/6-7"	B	±7µm	0.001mm/0.00005"	208.8	107

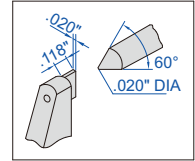
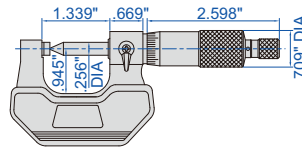


## CRIMP HEIGHT MICROMETERS



- Measure the height of crimp contact
- Ratchet stop
- Supplied with setting standards (except 0-1")

3266-1B



Part No.	EDP No.	Range	Accuracy	Graduation	b
3266-1B	281395	0-1"	.00015"	.0001"	.945"

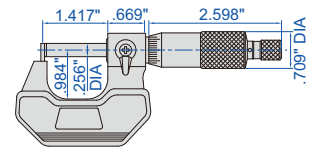
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## CYLINDRICAL ANVIL TUBE MICROMETERS

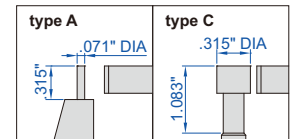
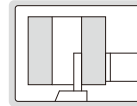
- Measure wall thickness of tubes
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-1")



3261-1



Part No.	EDP No.	Range	Type	Accuracy	Graduation
3261-1	281480	0-1"	A	.00025"	.0001"
3261-1C	281483	0-1"	C	.00025"	.0001"

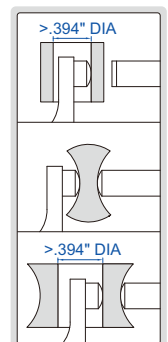
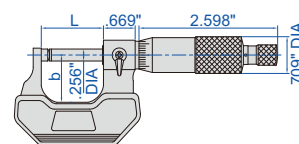


## SPHERICAL ANVIL TUBE MICROMETERS

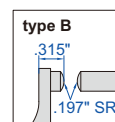
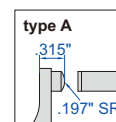


3260-1

- Measure wall thickness of tubes
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-1")



Part No.	EDP No.	Range	Type	Accuracy	Graduation	L	b
3260-1	281457	0-1"	A	.00015"	.0001"	1.260"	.945"
3260-2	281458	1-2"	A	.00015"	.0001"	2.244"	1.260"
3260-3	281459	2-3"	A	.00020"	.0001"	3.228"	1.752"
3260-1S	281461	0-1"	B	.00015"	.0001"	1.260"	.945"
3260-2S	281462	1-2"	B	.00015"	.0001"	2.244"	1.260"



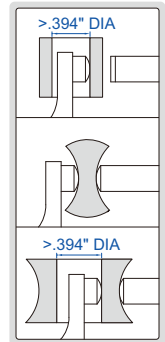
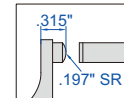
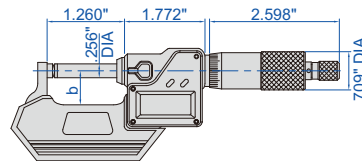


## ELECTRONIC SPHERICAL ANVIL TUBE MICROMETER

- Measure wall thickness of tubes
- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-1"/0-25mm)
- Optional accessory: data output cable (part no. 7315-31, 7302-31)

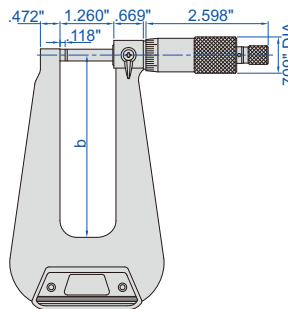
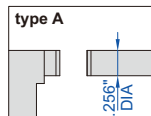
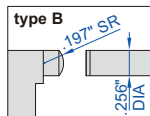
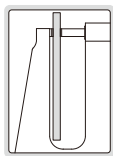


3560-25E



Part No.	EDP No.	Range	Accuracy	b
3560-25E	877319	0-1"/0-25mm	±.00015"	.945"

## SHEET METAL MICROMETERS



3239-13

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

Part No.	EDP No.	Range	Type	Accuracy	Graduation	b
3239-13	281235	0-1"	A	.00030"	.0001"	6.102"
3239-14F	281251	0-1"	B	.00040"	.0001"	12.205"

NON-ROTATING SPINDLE

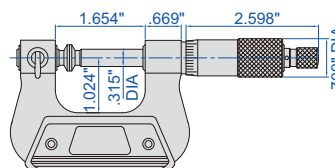
## NON-ROTATING SPINDLE UNIVERSAL MICROMETER

55° anvil/spindle tip (optional)

Part No. 3280-SP1 Knife-edge		
Part No. 3280-SP2 Point		



3280-1



Anvil/spindle tip (included)

Flat		
Spherical		
Spline		
Disk		
Blade		
Knife-edge		
Point		

- Non-rotating spindle
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Optional accessory: 55° anvil/spindle tip (part no. 3280-SP1 and 3280-SP2)

Part No.	EDP No.	Range	Accuracy	Graduation
3280-1	281607	0-1"	.00015"	.0001"

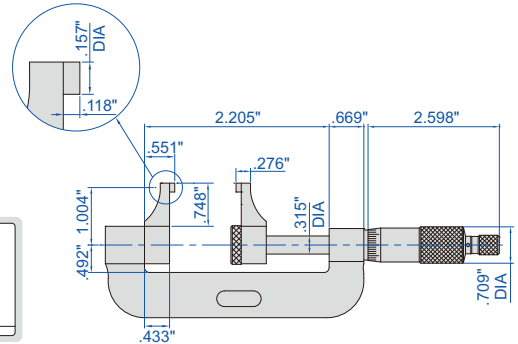
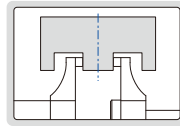
## CALIPER TYPE MICROMETER



**3238-1**

- Non-rotating spindle
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-1" and 0-25mm)

Part No.	EDP No.	Range	Accuracy	Graduation
3238-1	281595	0-1"	.00040"	.001"



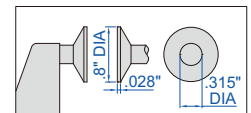
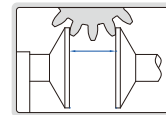
## DISK MICROMETER



**3282-1**

- Measure root tangent length of gear
- Ratchet stop
- Supplied with setting standards

Part No.	EDP No.	Range	Accuracy	Graduation	Parallelism	b
3282-1	281575	0-1"	.00015"	.0001"	.00020"	.945"

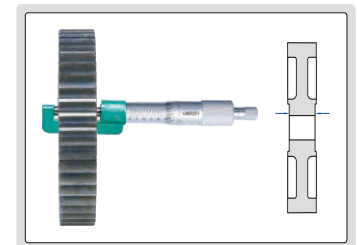
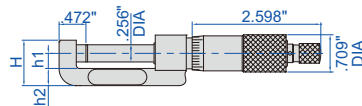


## HUB MICROMETERS



**3292-1**

- Measure hub thickness and shoulder inside a bore
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-1")



Part No.	EDP No.	Range	Accuracy	Graduation	h1	h2	H
3292-1	281796	0-1"	.00015"	.0001"	.236"	.354"	.736"
3292-2	281797	1-2"	.00015"	.0001"	.256"	.433"	.835"

## CAN SEAM MICROMETERS



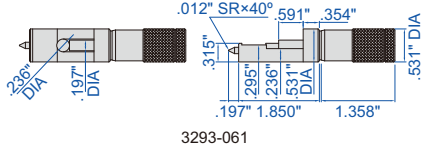
3293-061



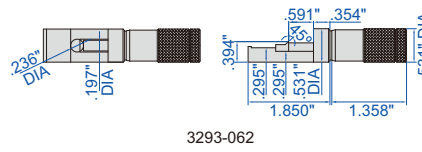
3293-062



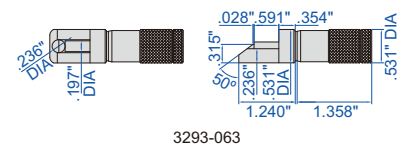
3293-063



3293-061

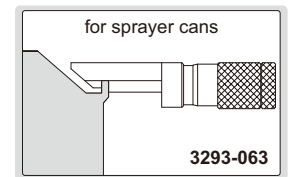
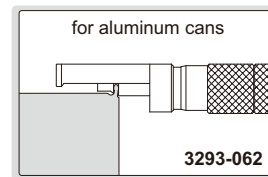
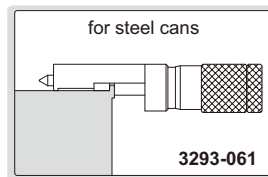


3293-062



3293-063

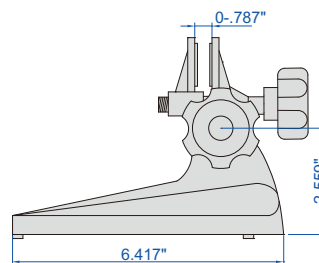
- Measure the width, height and depth of can seams



Part No.	EDP No.	Range	Accuracy	Graduation
3293-061	281825	0-.5"	.00015"	.001"
3293-062	281826	0-.5"	.00015"	.001"
3293-063	281827	0-.5"	.00015"	.001"

## MICROMETER STAND

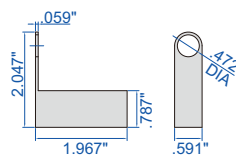
- Suitable for micrometers up to 4"



6301

Part No.	EDP No.
6301	282456

- Suitable for inside micrometers



6301-1

Part No.	EDP No.	Description	Applicable products
6301-1	877191	clamp for inside micrometers	all sizes of 3220 series

## MICROMETER SETTING STANDARDS



6311-4



Part No.	EDP No.	Length	Accuracy	D (DIA)
6311-1	282508	1"	±.00006"	.276"
6311-2	282509	2"	±.00008"	.276"
6311-3	282510	3"	±.00010"	.276"
6311-4	282511	4"	±.00012"	.315"
6311-5	282512	5"	±.00014"	.315"
6311-6	282513	6"	±.00016"	.315"
6311-7	282514	7"	±.00018"	.315"
6311-8	282515	8"	±.00020"	.315"
6311-9	282516	9"	±.00022"	.315"
6311-10	282517	10"	±.00024"	.315"

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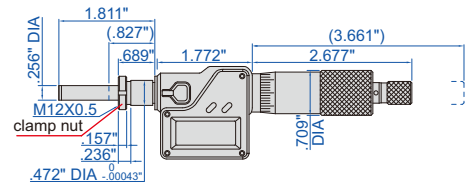
## ELECTRONIC MICROMETER HEADS



- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: data output cable (part no. 7315-31, 7302-31)



6353-25



### Rotating spindle

Part No.	EDP No.	Range	Stem	Spindle tip	Accuracy
6353-25	282585	0-1"/0-25mm	with clamp nut	flat (carbide)	±.00010"

## MICROMETER HEADS

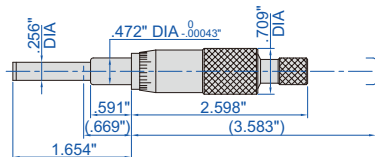


6381-1W

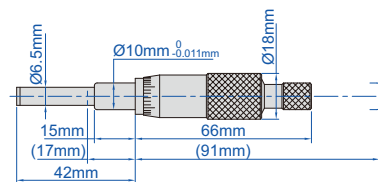


6381-25W

- Ratchet stop



6381-1W



6381-25W

### Inch

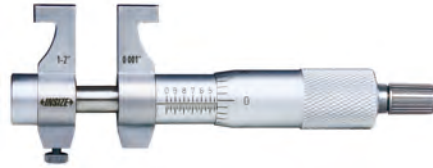
Part No.	EDP No.	Range	Graduation	Spindle tip	Accuracy
6381-1W	816688	0-1"	.001"	flat (carbide)	.00015"

### Metric

Part No.	EDP No.	Range	Graduation	Spindle tip	Accuracy
6381-25W	282605	0-25mm	0.01mm	flat (carbide)	3µm

## INSIDE MICROMETERS

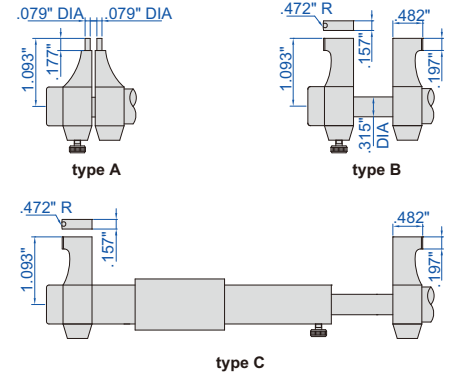
micrometer stand with clamp (optional)



3220-2

- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting ring (part no. 6313), micrometer stand and clamp (part no. 6301 and 6301-1)

Part No.	EDP No.	Range	Type	Setting ring	Accuracy	Graduation
3220-1	281962	.2-1.2"	A	.2" DIA (included)	.00030"	.001"
3220-2	281963	1-2"	B	1" DIA (included)	.00035"	.001"
3220-3	281964	2-3"	B	2" DIA (optional)	.00035"	.001"
3220-4	281965	3-4"	C	3" DIA (optional)	.00040"	.001"

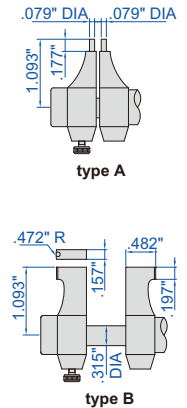


## ELECTRONIC INSIDE MICROMETERS

- Resolution .00005"/0.001mm
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (part no. 7315-31, 7302-31), setting ring (part no. 6313)



3520-30E



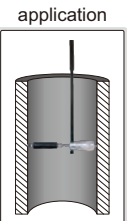
Part No.	EDP No.	Range	Type	Setting ring	Accuracy
3520-30E	281970	.2-1.2"/5-30mm	A	.2" DIA (included)	±.00020"
3520-50E	877308	1-2"/25-50mm	B	1" DIA (included)	±.00025"

## TUBULAR INSIDE MICROMETERS

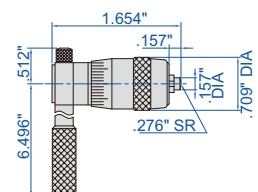
- Accuracy:  $[\pm.0003 + .00005(L/2)]$ ,  
L=maximum measuring length (inch)
- Optional accessory: setting ring (part no. 6313), gage block accessory (part no. 6881), cylinder gage block (part no. 4001), caliper/height gage checker (part no. 6884)



3221-8



Part No.	EDP No.	Range	Travel of micrometer head	Extension rods	Graduation
3221-8	282039	2-8"	.5"	6 pcs	.001"
3221-12	282040	2-12"	.5"	10 pcs	.001"
3221-20	282042	8-20"	1"	3 pcs	.001"
3221-40	282043	8-40"	1"	8 pcs	.001"

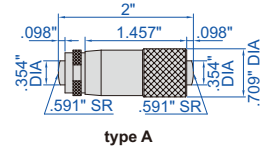


## TUBULAR INSIDE MICROMETERS

- Carbide measuring faces
- Optional accessory:  
gage block accessory (part no. **6881**),  
cylinder gage block (part no. **4001**),  
caliper/height gage checker (part no. **6884**)

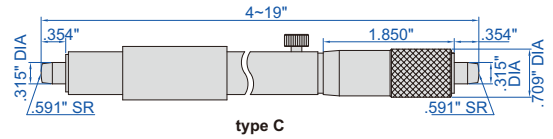


3229-7



type A

Part No.	EDP No.	Range	Type	Accuracy	Graduation
3229-3	282092	2-3"	A	.00020"	.001"
3229-6	282095	5-6"	C	.00025"	.001"
3229-7	282096	6-7"	C	.00030"	.001"
3229-11	282100	10-11"	C	.00035"	.001"



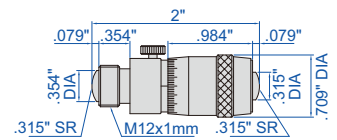
type C

## 6 TUBULAR INSIDE MICROMETERS

- Accuracy:  $[(.00005(3+n+L/2))]$ , n=number of rods,  
L=maximum measuring length (inch)
- Supplied with setting standards
- Carbide measuring faces



3222-6



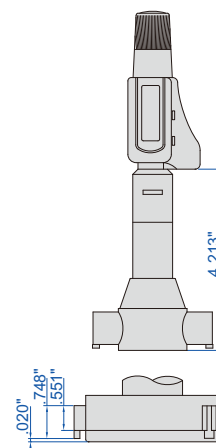
Part No.	EDP No.	Range	Graduation	Micrometer head	Travel of micrometer head	Extension rods
3222-6	281999	2-6"	.001"	2-2.5"	.5"	.5", 1", 2"
3222-12	282000	2-12"	.001"	2-2.5"	.5"	.5", 1", 2" (2 pcs), 4"
3222-20	282001	2-20"	.001"	2-2.5"	.5"	.5", 1", 2" (2 pcs), 4", 8"
3222-24	282007	2-24"	.001"	2-2.5"	.5"	.5", 1", 2", 4", 6", 8"
3222-40	282002	2-40"	.001"	2-2.5"	.5"	.5", 1", 2" (2 pcs), 4", 8" (2 pcs), 12"
3222-60	282003	2-60"	.001"	2-2.5"	.5"	.5", 1", 2" (2 pcs), 4", 8" (3 pcs), 12" (2 pcs)

## ELECTRONIC WIDE RANGE THREE POINTS INTERNAL MICROMETERS

- Resolution .00005"/0.001mm  
(resolution of **3128-12** is .0001"/0.001mm)
- IP54 dust/waterproof
- Buttons: on/off, set, inch/mm, ABS/INC
- Data output
- Automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Setting rings are included (except part no. **3128-12**)
- Optional accessory: data output cable  
(part no. **7315-30** page 1, **7302-30**)



3128-28



Part No.	EDP No.	Range	Accuracy	Setting ring	Extension rod
3128-28*	816640	2-2.8"/51-71mm	.00020"	2" DIA (included)	6" (included)
3128-4*	816641	2.8-4"/71-101mm	.00020"	2.8" DIA (included)	6" (included)
3128-6*	816642	4-6"/101-152mm	.00025"	4" DIA (included)	6" (included)
3128-10*	816643	6-10"/152-254mm	.00035"	6" DIA (included)	6" (included)
3128-12*	816644	8-12"/203-305mm	.00035"	8" DIA (optional)	6" (included)



setting ring

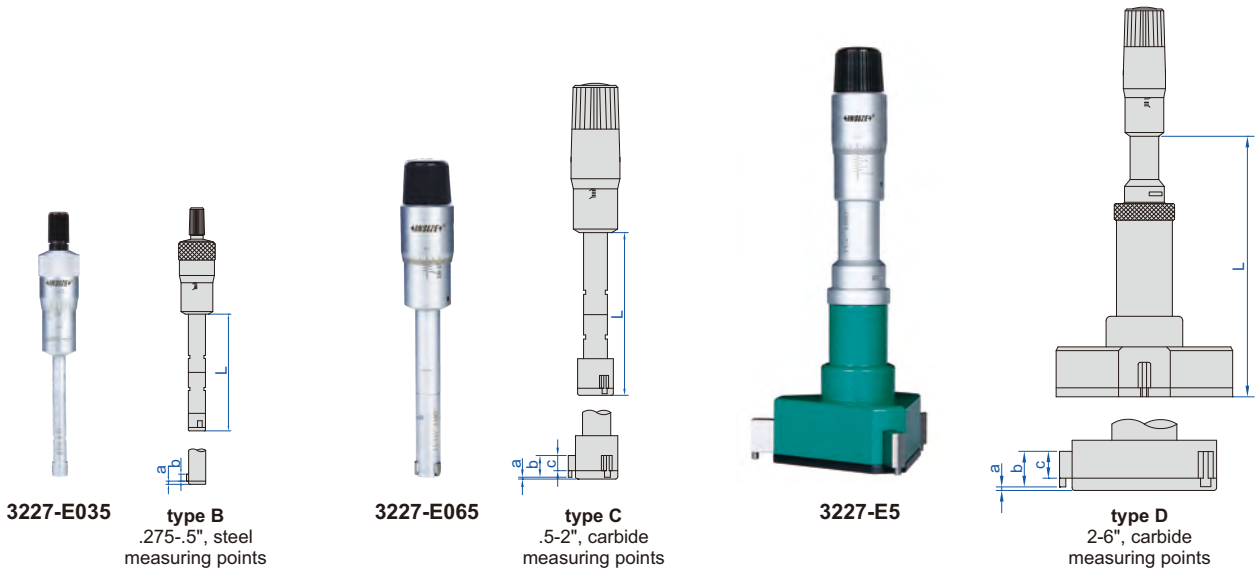


extension rod  
(included)

\*Supplied with manufacturer inspection certificate



### THREE POINTS INTERNAL MICROMETERS



- Ratchet stop
- Optional accessory: setting rings (part no. 6313), micrometer stand and clamp (part no. 6301 and 6301-2)

#### Individual

Part No.	EDP No.	Range	Type	Graduation	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3227-E035	282196	.275-.35"	B	.0001"	.00015"	.275" DIA (included)	4"	2.146"	.059"	.098"	—
3227-E0425	877165	.35-.425"	B	.0001"	.00015"	.35" DIA (included)	4"	2.146"	.059"	.098"	—
3227-E05	282198	.425-.5"	B	.0001"	.00015"	.5" DIA (included)	4"	2.146"	.059"	.098"	—
3227-E065	282213	.5-.65"	C	.0002"	.00015"	.65" DIA (included)	6"	3.150"	.020"	.236"	.177"
3227-E08	282214	.65-.8"	C	.0002"	.00015"	.65" DIA (included)	6"	3.150"	.020"	.236"	.177"
3227-E1	282215	.8-1"	C	.0002"	.00015"	1" DIA (included)	6"	3.543"	.020"	.315"	.236"
3227-E112	282216	1-1.2"	C	.0002"	.00015"	1" DIA (included)	6"	3.543"	.020"	.315"	.236"
3227-E16	282217	1.2-1.6"	C	.0002"	.00015"	1.6" DIA (included)	6"	3.819"	.020"	.551"	.472"
3227-E2	282218	1.6-2"	C	.0002"	.00020"	1.6" DIA (included)	6"	3.819"	.020"	.551"	.472"
3227-E25	282219	2-2.5"	D	.0002"	.00020"	2.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3227-E3	282220	2.5-3"	D	.0002"	.00020"	2.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3227-E35	282221	3-3.5"	D	.0002"	.00020"	3.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3227-E4	282222	3.5-4"	D	.0002"	.00020"	3.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3227-E5	282260	4-5"	D	.0002"	.00025"	optional	6"	5.512"	.035"	1.142"	.984"
3227-E6	282261	5-6"	D	.0002"	.00025"	optional	6"	5.512"	.035"	1.142"	.984"



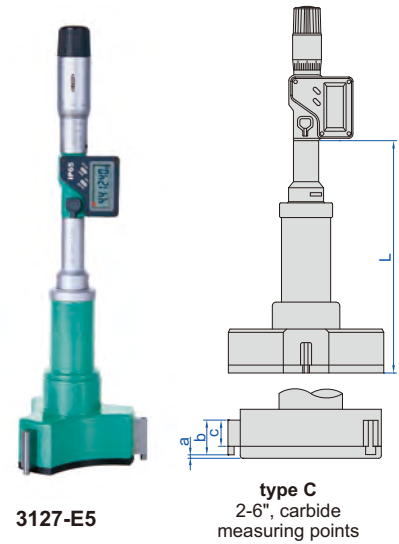
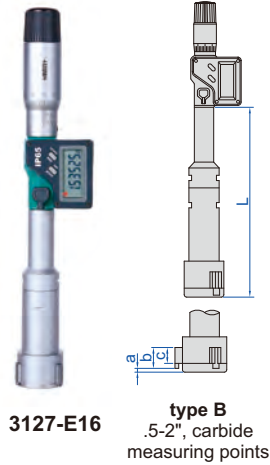
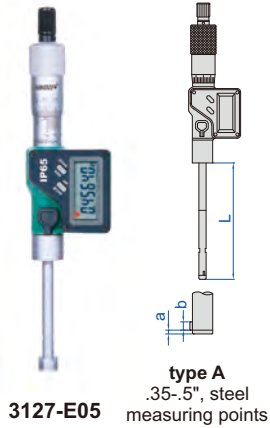
#### Set

Part No.	EDP No.	Range	Graduation	Micrometers included	Setting ring (included)	Extension rod (included)
3227-E053	282199	.275-.5"	.0001"	.275-.35", .35-.425", .425-.5"	.275" DIA, .35" DIA, .5" DIA	4"
3227-E082	282223	.5-.8"	.0002"	.5-.65", .65-.8"	.65" DIA	6"
3227-E24	282224	.8-2"	.0002"	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA, 1.6" DIA	6"
3227-E44	282225	2-4"	.0002"	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA, 3.5" DIA	6"

## ELECTRONIC THREE POINTS INTERNAL MICROMETERS

INSPECTION  
CERTIFICATE

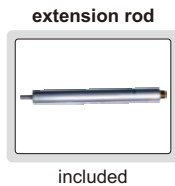
IP65  
SPC



- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Buttons: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: data output cable (part no. 7315-31, 7302-31), setting ring (part no. 6313), micrometer stand and clamp (part no. 6301 and 6301-2)

### Individual

Part No.	EDP No.	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3127-E0425 *	816638	.35-.425"/9-11mm	A	.00015"	.35" DIA (included)	4"	2.146"	.059"	.098"	—
3127-E05 *	282305	.425-.5"/11-13mm	A	.00015"	.5" DIA (included)	4"	2.146"	.059"	.098"	—
3127-E065 *	282317	.5-.65"/13-17mm	B	.00015"	.65" DIA (included)	6"	3.150"	.020"	.236"	.177"
3127-E08 *	282318	.65-.8"/17-20mm	B	.00015"	.65" DIA (included)	6"	3.150"	.020"	.236"	.177"
3127-E1 *	282319	.8-1"/20-25mm	B	.00015"	1" DIA (included)	6"	3.543"	.020"	.315"	.236"
3127-E112 *	282320	1-1.2"/25-30mm	B	.00015"	1" DIA (included)	6"	3.543"	.020"	.315"	.236"
3127-E16 *	282321	1.2-1.6"/30-40mm	B	.00015"	1.6" DIA (included)	6"	3.819"	.020"	.551"	.472"
3127-E2 *	282322	1.6-2"/40-51mm	B	.00020"	1.6" DIA (included)	6"	3.819"	.020"	.551"	.472"
3127-E25 *	282323	2-2.5"/51-63mm	C	.00020"	2.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3127-E3 *	282324	2.5-3"/63-76mm	C	.00020"	2.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3127-E35 *	282325	3-3.5"/76-89mm	C	.00020"	3.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3127-E4 *	282326	3.5-4"/89-101mm	C	.00020"	3.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3127-E5 *	282367	4-5"/101-127mm	C	.00025"	optional	6"	5.512"	.035"	1.142"	.984"
3127-E6 *	282368	5-6"/127-152mm	C	.00025"	optional	6"	5.512"	.035"	1.142"	.984"

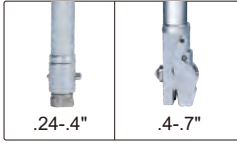


### Set

Part No.	EDP No.	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3127-E053 *	282306	.275-.5"/7-13mm	.275-.35", .35-.425", .425-.5"	.275" DIA, .35" DIA, .5" DIA	4"
3127-E082 *	282330	.5-.8"/13-20mm	.5-.65", .65-.8"	.65" DIA	6"
3127-E24 *	282331	.8-2"/20-51mm	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA, 1.6" DIA	6"
3127-E44 *	282332	2-4"/51-101mm	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA, 3.5" DIA	6"

\* Supplied with manufacturer inspection certificate

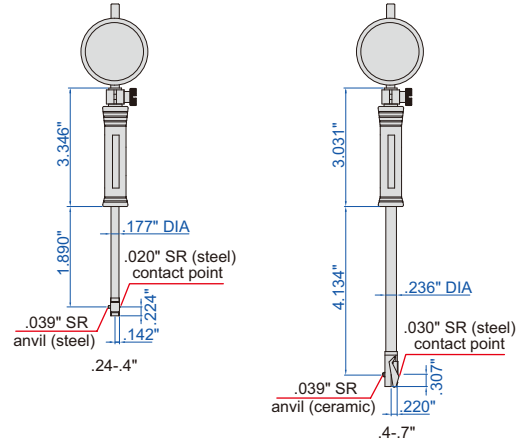
## BORE GAGES FOR SMALL HOLES



- Not suitable for .00005", .0001" or 0.001mm dial indicators
- Optional accessory: setting ring (part no. 6313), bore gage setter



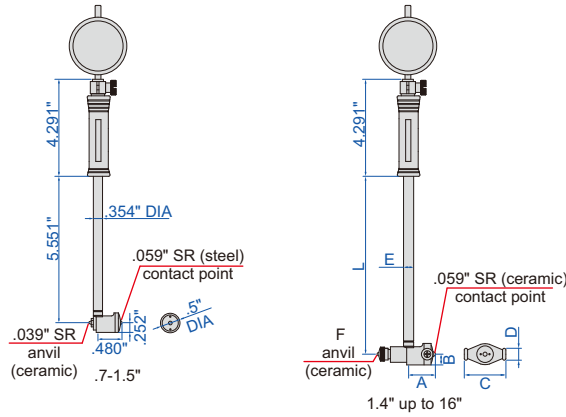
2323-04



**With dial indicator**

Part No.	EDP No.	Range	Indicator	Accuracy	Repeatability
2323-04	282928	.24-.4"	dial indicator, range .25", graduation .0005"	±.00075"	.00015"
2323-07	282929	.4-.7"		±.00075"	.00015"

## BORE GAGES



- Not suitable for .00005", .0001" or 0.001mm dial indicators
- Optional accessory: setting ring (part no. 6313), long handle (part no. 7351), bore gage setter

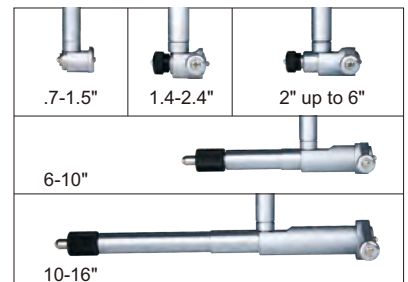


2323-6

Range	A	B	C	D (DIA)	E (DIA)	F	L
1.4-2.4"	.866"	.354"	1.063"	.512"	.504"	.079" R	5.551"
2-6"	1.024"	.354"	1.378"	.512"	.504"	.079" R	5.551"
6-10"	2.224"	.512"	2.933"	.591"	.571"	.079" R	9.488"
10-16"	3.406"	.591"	3.996"	.591"	.571"	.098" R	9.488"

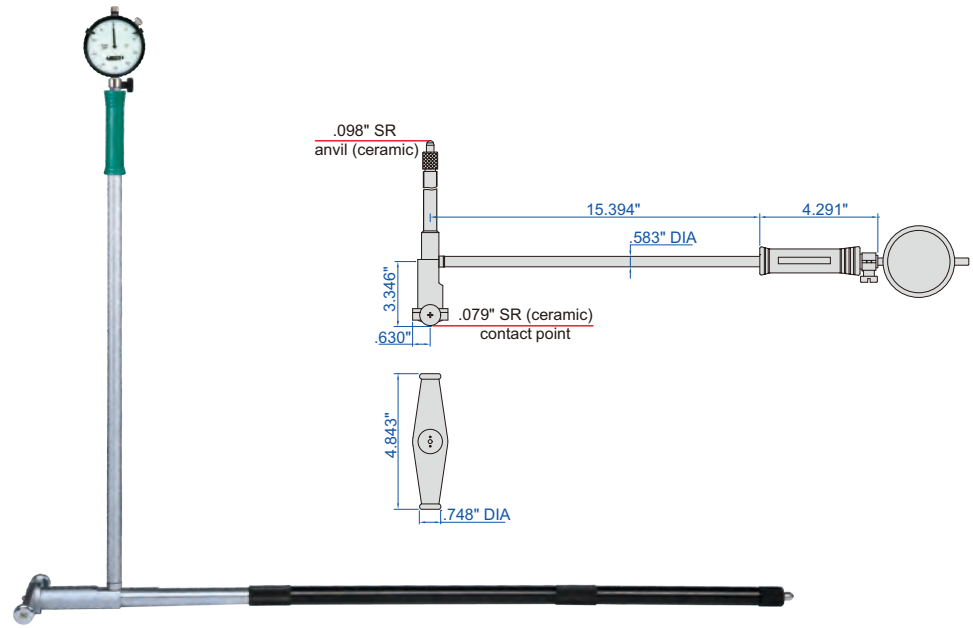
**With dial indicator**

Part No.	EDP No.	Range	Indicator	Accuracy	Repeatability
2323-15	282930	.7-1.5"	dial indicator, range .25", graduation .0005"	±.00075"	.00015"
2323-24	816188	1.4-2.4"		±.0009"	.00015"
2323-6	816192	2-6"		±.0009"	.00015"
2323-10	816184	6-10"		±.0009"	.00015"
2323-16	816186	10-16"		±.0009"	.00015"



## BORE GAGE

- Not suitable for .00005", .0001" or 0.001mm dial indicators



2828-32

Part No.	EDP No.	Range	Indicator	Accuracy	Repeatability
2828-32	877161	16-32"	dial indicator, range .25", graduation .0005"	±.001"	.00015"

## BORE GAGE SETS

- Not suitable for .00005", .0001" or 0.001mm dial indicators
- Optional accessory: setting ring (part no. 6313), long handle (part no. 7351), bore gage setter



2824-S2E

2824-S3E

packaging (part no. 2824-S3E)

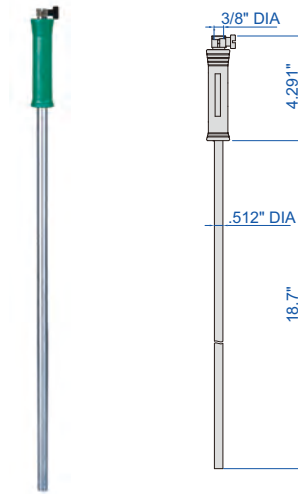


### With dial indicator

Part No.	EDP No.	Range	Indicator	Bore gages included	Accuracy	Repeatability
2824-S2E	877159	1.4-6"	dial indicator, range .25", graduation .0005"	① 1.4-2" (dial indicator and handle are not included) ② 2-6"	1.4-2" ±.0009" 2-6" ±.0009"	.00015"
2824-S3E	877160	.7-6"	dial indicator, range .25", graduation .0005"	① .7-1.5" ② 1.4-2.4" (dial indicator is not included) ③ 2-6" (dial indicator is not included)	.7-1.5" ±.00075" 1.4-2.4" ±.0009" 2-6" ±.0009"	.00015"

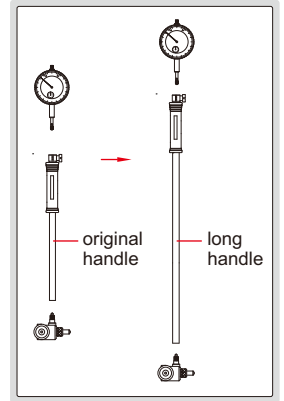
LONG HANDLE

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



7351-1EX11

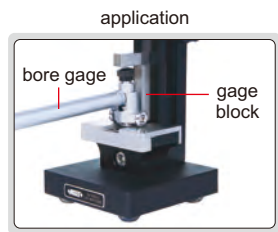
method of use (replace the original handle with long handle)



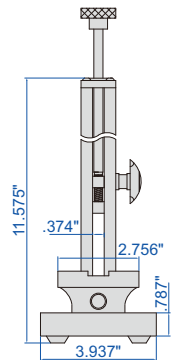
Part No.	EDP No.	Applicable bore gages
7351-1EX11	877423	1.4-2.4", 2-6"

BORE GAGE SETTERS

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



7353-6



gage blocks for 7353-6



horizontal use

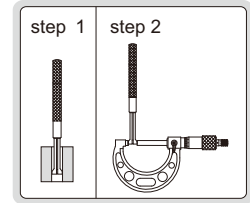
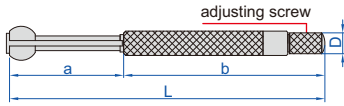


Part No.	EDP No.	Range	Repeatability	Remark
7353-6	877262	0-6"	.00005"	with gage block set
7353-160W	877213	0-6"	.00005"	without gage block set

Gage block set for 7353-6

Blocks per set	Size (inch)	Step	Quantity	Remark
36	.05		1 pc	grade AS-2 (ASME B89.1.9)
	.1001-.1009	.0001"	9 pcs	
	.101-.109	.001"	9 pcs	
	.11-.19	.01"	9 pcs	
	.1-1.5	.1"	5 pcs	
	1		1 pc	
	2		1 pc	
	4		1 pc	

## SMALL HOLE GAGE SET



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

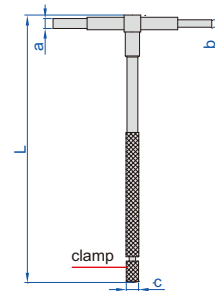
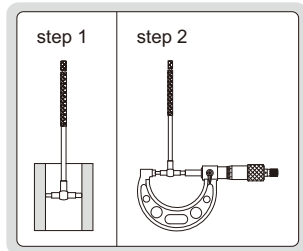
4208-1

Part No.	EDP No.	Total range	Gages included
4208-1	816204	.125~.5"	.125~.2", .2~.3", .3~.4", .4~.5"

Range	L	a	b	D
.125~.2"	2.992"	.945"	2.047"	.197" DIA
.2~.3"	3.110"	1.063"	2.047"	.197" DIA
.3~.4"	3.465"	1.181"	2.283"	.236" DIA
.4~.5"	3.583"	1.339"	2.283"	.236" DIA

6

## TELESCOPING GAGE SET



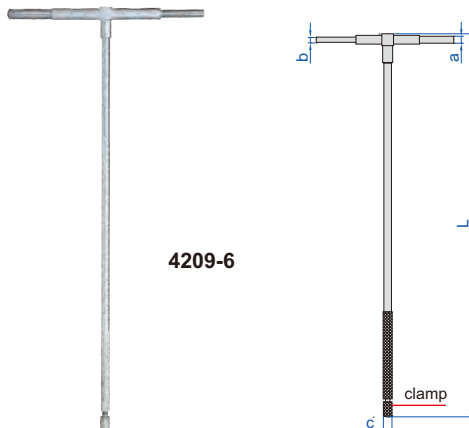
- 6 gages per set
- For quick measurement of inside diameter of holes and width of slots
- Satin chrome finish

4206-1

Part No.	EDP No.	Total range	Gages included
4206-1	816202	5/16~6"	5/16~1/2", 1/2~3/4", 3/4~1-1/4", 1-1/4~2-1/8", 2-1/8~3-1/2", 3-1/2~6"

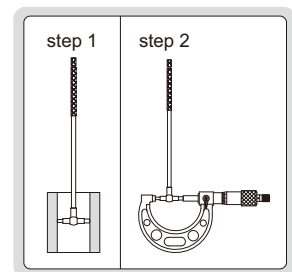
Range	L	a (DIA)	b (DIA)	c (DIA)
5/16~1/2"	4.528"	.154"	.114"	.244"
1/2~3/4"	4.528"	.209"	.150"	.244"
3/4~1-1/4"	4.528"	.209"	.150"	.244"
1-1/4~2-1/8"	5.394"	.299"	.240"	.283"
2-1/8~3-1/2"	5.394"	.299"	.240"	.283"
3-1/2~6"	5.394"	.299"	.240"	.283"

## LONG HANDLE TELESCOPING GAGES



4209-6

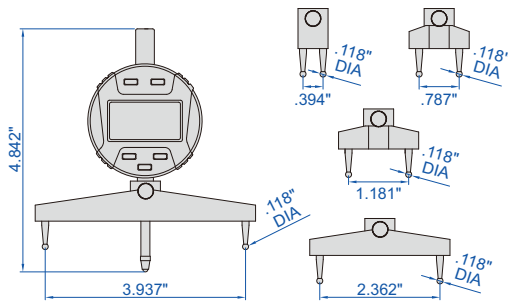
- For quick measurement of inside diameter of deep holes and width of slots
- Satin chrome finish



Part No.	EDP No.	Range	L	a (DIA)	b (DIA)	c (DIA)
4209-1	283589	5/16~1/2"	11.811"	.154"	.114"	.244"
4209-2	283590	1/2~3/4"	11.811"	.209"	.150"	.244"
4209-3	283591	3/4~1-1/4"	11.811"	.209"	.150"	.244"
4209-4	283592	1-1/4~2-1/8"	11.811"	.299"	.240"	.283"
4209-5	283593	2-1/8~3-1/2"	11.811"	.299"	.240"	.283"
4209-6	283594	3-1/2~6"	11.811"	.299"	.240"	.283"

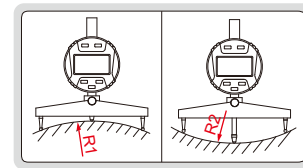


## ELECTRONIC RADIUS GAGE (LOW ACCURACY)



2183

- Resolution .001"/0.01mm
- Buttons: on/off, hold, inch/mm, s (select jaws), zero
- Measure radius of internal or external arcs
- Display can be rotated by 320°
- Supplied with 5 jaws for different sizes of arc
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: calibration standard (part no. **2183-BLOCK**), data output cable(part no. **7315-2183**, **7302-2183**)



Part No.	EDP No.	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (inch)
2183	283213	.2-35.83"/5-910mm	.3-35.83"/7-910mm	±0.01R*

\* R is the radius to be measured. For example, radius is 4", the accuracy is ±0.01x4=±0.04"

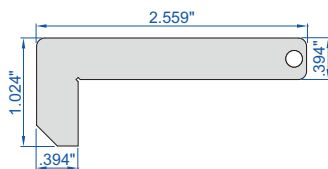
### Calibration standard (optional)

Part No.	Remark
2183-BLOCK	includes 5 standard blocks



2183-BLOCK

calibration standard application



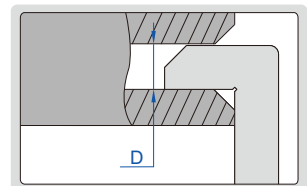
- To measure internal and external chamfers
- Made of stainless steel



4844-1E

## CHAMFER GAGES

for internal chamfer measurement, diameter should be larger than D



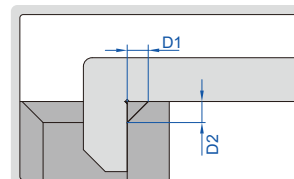
### Inch

Part No.	EDP No.	Graduation	Accuracy	D
4844-1E	877174	1/32"	±.01"	.433" DIA

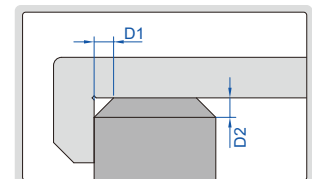
### Metric

Part No.	EDP No.	Graduation	Accuracy	D
4844-1	877367	0.5mm	±0.25mm	Ø11mm

internal chamfer

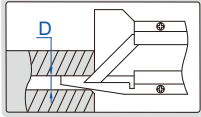


external chamfer

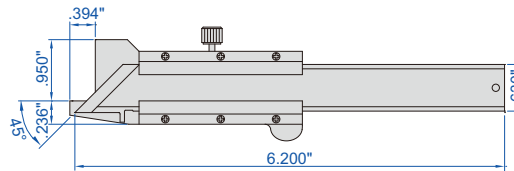


## CHAMFER GAGE

for internal chamfer measurement, diameter should be larger than D

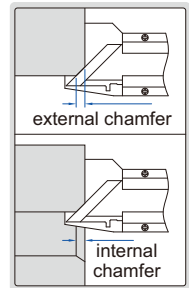


1267-02



- Made of stainless steel
- Satin chrome plated reading surface

measure chamfer dimension



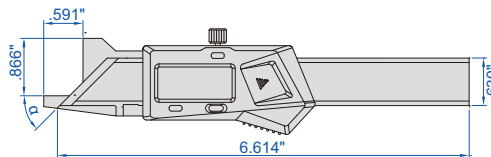
7

Part No.	EDP No.	Range	Accuracy	Graduation	Chamfer ( $\alpha$ )	D
1267-02	877127	0-.2"	$\pm .003$ "	.001"	45°	.276" DIA

## ELECTRONIC CHAMFER GAGES

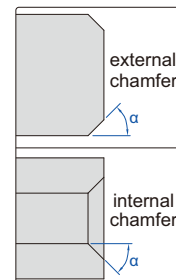
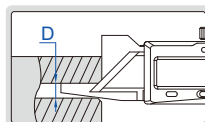


1180-6

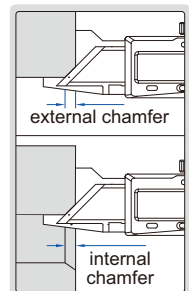


- Non waterproof
- Measure 30°/45° chamfer dimension
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)

for internal chamfer measurement, diameter should be larger than D



measure chamfer dimension



Part No.	EDP No.	Range	Accuracy	Chamfer ( $\alpha$ )
1180-6	816370	0-.39"/0-10mm	$\pm .0025$ "	45°
1180-63	877283	0-.39"/0-10mm	$\pm .0025$ "	30°



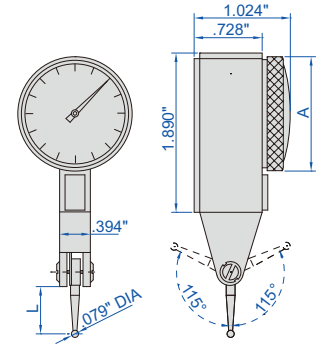


## DIAL TEST INDICATORS

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA
- Optional accessory: styli (page 63)



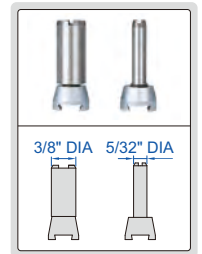
2380-31



### Inch

Part No.	EDP No.	Range	Graduation	Accuracy	Dial reading	A	L
2380-31 *	282858	.03"	.001"	±.001"	0-15-0	1.181" DIA	.50"
2380-35 *	816170	.03"	.0005"	±.0005"	0-15-0	1.181" DIA	.50"
2380-301 *	816172	.008"	.0001"	±.0001"	0-40-0	1.181" DIA	.563"
2381-31 *	282859	.03"	.001"	±.001"	0-15-0	1.457" DIA	.50"
2381-35 *	282860	.03"	.0005"	±.0005"	0-15-0	1.457" DIA	.50"
2381-301 *	282861	.008"	.0001"	±.0001"	0-40-0	1.457" DIA	.563"

clamp (included)



### Metric

(mm)

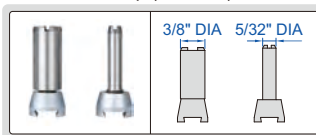
Part No.	EDP No.	Range	Graduation	Accuracy	Hysteresis	Dial reading	A	L
2380-08 *	816168	0.8mm	0.01mm	13µm	3µm	0-40-0	Ø30	13.5

\*Supplied with manufacturer inspection certificate



## LONG STYLI DIAL TEST INDICATOR

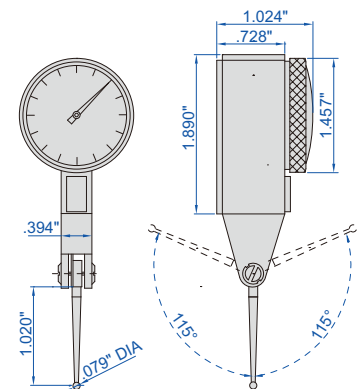
clamp (included)



- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA
- Optional accessory: styli (page 63)



2383-35A



Part No.	EDP No.	Range	Graduation	Accuracy	Dial reading
2383-35A *	816372	.03"	.0005"	±.0005"	0-15-0

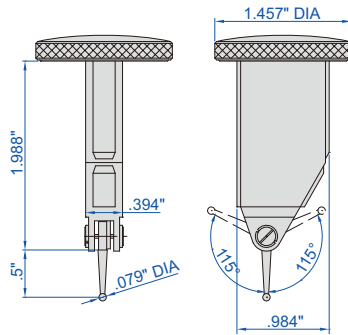
\*Supplied with manufacturer inspection certificate

## VERTICAL TYPE DIAL TEST INDICATOR

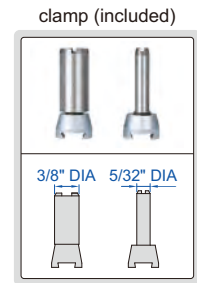
JEWELLED BEARING

INSPECTION CERTIFICATE

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA
- Optional accessory: styli (page 63)



2398-03



Part No.	EDP No.	Range	Graduation	Accuracy	Dial reading
2398-03*	877156	.03"	.0005"	±.0005"	0-15-0

\*Supplied with manufacturer inspection certificate

8

## TILTED FACE TYPE DIAL TEST INDICATOR

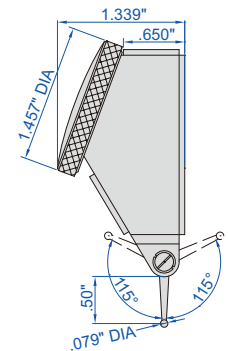
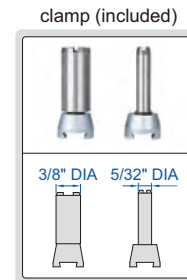
JEWELLED BEARING

INSPECTION CERTIFICATE

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA
- Optional accessory: styli (page 63)



2399-03



Part No.	EDP No.	Range	Graduation	Accuracy	Dial reading
2399-03*	877157	.03"	.0005"	±.0005"	0-15-0

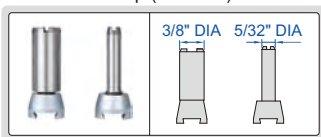
\*Supplied with manufacturer inspection certificate

## LARGE RANGE DIAL TEST INDICATOR

JEWELLED BEARING

INSPECTION CERTIFICATE

clamp (included)

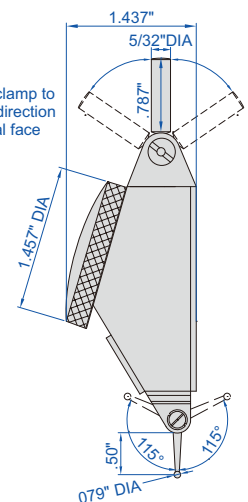


- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA
- Optional accessory: styli (page 63)



2386-006A

rotate clamp to adjust direction of dial face



Part No.	EDP No.	Range	Graduation	Accuracy	Dial reading
2386-006A*	816174	.06"	.0005"	±.0008"	0-15-0

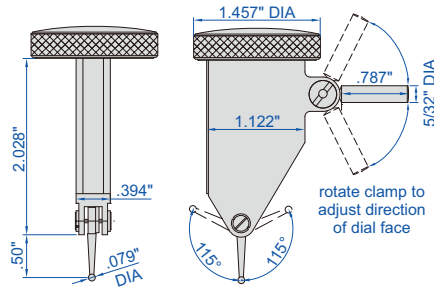
\*Supplied with manufacturer inspection certificate



JEWELLED BEARING

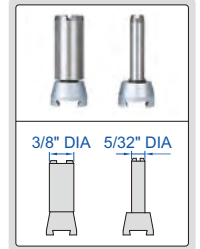
## LARGE RANGE VERTICAL TYPE DIAL TEST INDICATOR

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA
- Optional accessory: styli (page 63)



2480-06

clamp (included)



Part No.	EDP No.	Range	Graduation	Accuracy	Dial reading
2480-06 *	877158	.06"	.0005"	±.0008"	0-15-0

\* Supplied with manufacturer inspection certificate

## CLAMPS FOR DIAL TEST INDICATORS

8

Part No.	EDP No.	D
6298-1	877384	.157" DIA
6298-2	289027	.315" DIA



6298-1



6298-2

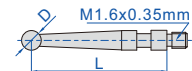


## STYLI FOR DIAL TEST INDICATORS

Inch					
Part No.	EDP No.	For dial test indicator	Material of contact point	L	D
6284-9	876268	2380-31, 2380-35, 2381-31, 2381-35, 2398-03, 2399-03	steel	.50"	.039" DIA
6284-10	285265		carbide	.50"	.079" DIA
6284-11	816409		ruby	.50"	.079" DIA
6284-12	816410		carbide	.50"	.118" DIA
6284-13	816411	2380-301, 2381-301	steel	.563"	.039" DIA
6284-14	816412		carbide	.563"	.079" DIA
6284-15	816413		ruby	.563"	.079" DIA
6284-16	816414		carbide	.563"	.118" DIA
6284-17	816373	2383-35A	steel	1.020"	.039" DIA
6284-18	816374		carbide	1.020"	.079" DIA
6284-19	816375		ruby	1.020"	.079" DIA
6284-20	816376		carbide	1.020"	.118" DIA
6284-65	816377	2386-006A, 2480-06	steel	.50"	.039" DIA
6284-66	816378		carbide	.50"	.079" DIA
6284-67	816379		ruby	.50"	.079" DIA
6284-68	816380		carbide	.50"	.118" DIA

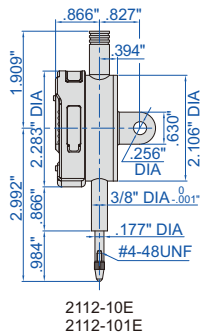


6284-10



Metric					
Part No.	EDP No.	For dial test indicator	Material of contact point	L	D
6284-1	282869	2380-08, 2398-08,	steel	13.5mm	SØ1mm
6284-3	282871	2381-08, 2399-08	carbide	13.5mm	SØ2mm
6284-22	282870	2380-02, 2381-02	carbide	12.5mm	SØ2mm

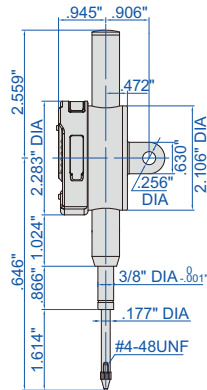
## ELECTRONIC INDICATORS (STANDARD TYPE)



2112-10E  
2112-101E



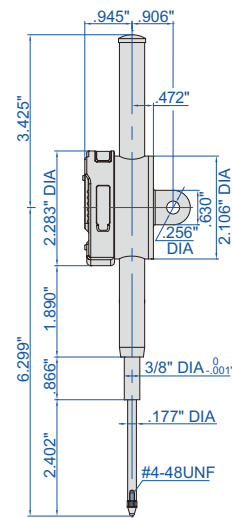
2112-10E



2112-25E  
2112-251E



2112-251E



2112-50E  
2112-501E



2112-501E

spindle lift knob  
is included



- Meet ASME B89.1.10M-2001
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Switchable high/low frequency measurement mode, high frequency mode is suitable for high speed moving of spindle and has large power consumption, low power consumption in low frequency mode
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable), data output
- Optional accessory: data output cable (part no. **7315-50M** page 1, **7302-40M**, **7305-40M**), backs (page 73~74), contact points (page 71~72)

### Inch/Metric

Resolution .00005"/0.001mm

Part No.	EDP No.	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2112-101E*	877008	.5"/12.7mm	±.00015"	.00005"	.337lbf	lug back
2112-251E*	816392	1"/25.4mm	±.00015"	.00005"	.495lbf	lug back
2112-501E*	816394	2"/50.8mm	±.00015"	.00005"	.562lbf	lug back

### Inch/Metric

Resolution .0005"/0.01mm

Part No.	EDP No.	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2112-10E*	877010	.5"/12.7mm	±.0015"	.0005"	.337lbf	lug back
2112-25E*	816393	1"/25.4mm	±.0015"	.0005"	.495lbf	lug back
2112-50E*	816395	2"/50.8mm	±.0015"	.0005"	.562lbf	lug back

### Metric/Inch

Resolution 0.001mm/0.00005"

Part No.	EDP No.	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2112-101F*	877289	12.7mm/0.5"	5µm	2µm	1.5N	flat back

### Metric/Inch

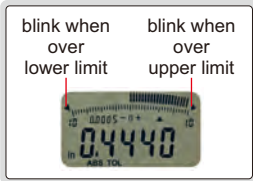
Resolution 0.01mm/0.0005"

Part No.	EDP No.	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2112-10F*	877290	12.7mm/0.5"	20µm	10µm	1.5N	flat back

\* Supplied with manufacturer inspection certificate

# ELECTRONIC INDICATORS (ADVANCED TYPE)

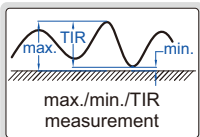
warning when over tolerance



analog pointer



max./min./TIR



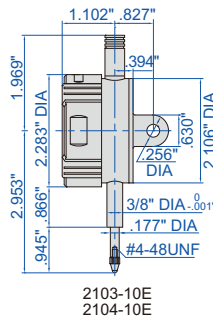
2103-10E



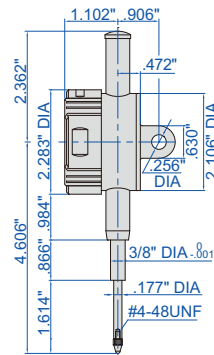
2104-25E



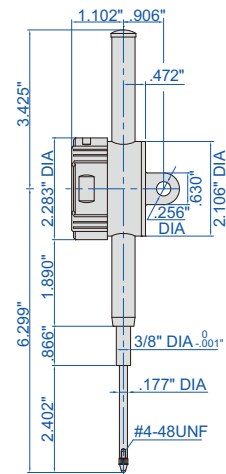
2103-50E



2103-10E  
2104-10E



2103-25E  
2104-25E

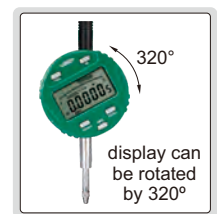


2103-50E  
2104-50E

- Meet ASME B89.1.10M-2001
- Reading in digit and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-50M** page 1, **7302-40M**, **7305-40M**), backs (page 73~74), contact points (page 71~72)

## Resolution .00005"/0.001mm

Part No.	EDP No.	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2103-10FE*	877288	.5"/12.7mm	±.00015"	.00005"	.337lbf	flat back
2103-10E *	285053	.5"/12.7mm	±.00015"	.00005"	.337lbf	lug back
2103-25E *	285052	1"/25.4mm	±.00015"	.00005"	.495lbf	lug back
2103-50E *	285051	2"/50.8mm	±.00015"	.00005"	.562lbf	lug back



## Resolution .0005"/0.01mm

Part No.	EDP No.	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2104-10E *	877006	.5"/12.7mm	±.0015"	.0005"	.337lbf	lug back
2104-25E *	876700	1"/25.4mm	±.0015"	.0005"	.495lbf	lug back
2104-50E *	876272	2"/50.8mm	±.0015"	.0005"	.562lbf	lug back

spindle lift knob is included

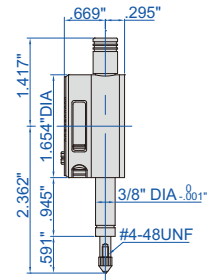


\* Supplied with manufacturer inspection certificate

## COMPACT ELECTRONIC INDICATORS



- Meet ASME B89.1.10M-2001
- Button function:
  - in/mm: short press for inch/metric conversion
  - long press to change measuring direction
  - ABS: short press for absolute/incremental measurement
  - long press to preset data
  - O/ON: short press to turn on when power is off
  - short press to set zero when power is on
  - long press to turn off
- Keep preset data in memory after restart
- CR1632 battery, automatic power off
- Data output
- With flat back
- Optional accessory: data output cable (part no. **7315-50M** page 1, **7302-40M**, **7305-40M**), contact points (page 71~72)



2114-51FE

Part No.	EDP No.	Range	Resolution	Accuracy	Hysteresis
2114-5FE *	877131	.2"/5mm	.0005"/0.01mm	±.0015"	.0005"
2114-51FE *	877130	.2"/5mm	.00005"/0.001mm	±.00015"	.00005"

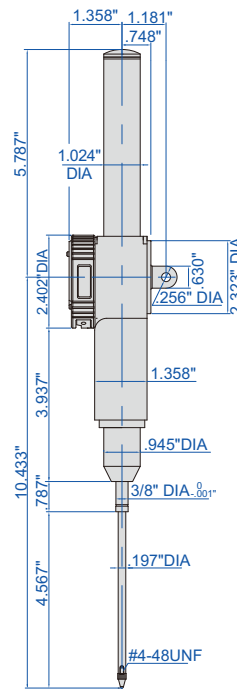
\*Supplied with manufacturer inspection certificate

## 8

## LARGE STROKE ELECTRONIC INDICATORS



- Button function: on/off, zero, inch/mm, data preset, tolerance, change measuring direction, max./min./TIR measurement, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Maximum measuring force .719lbf
- Data output
- Optional accessory: data output cable (part no. **7315-50M** page 1, **7302-40M**, **7305-40M**), backs (page 73~74), contact points (page 71~72)



2117-100E

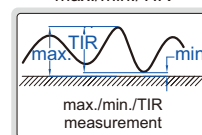
warning when over tolerance



spindle lift knob is included



max./min./TIR



### Inch/Metric

Resolution .0005"/0.01mm

Part No.	EDP No.	Range	Accuracy	Hysteresis	Remark
2117-100E	877292	4"/100mm	±.0015"	.0005"	lug back

### Metric/Inch

Resolution 0.01mm/0.0005"

Part No.	EDP No.	Range	Accuracy	Hysteresis	Remark
2117-100	877291	100mm/4"	30µm	10µm	lug back



SHOCK PROOF

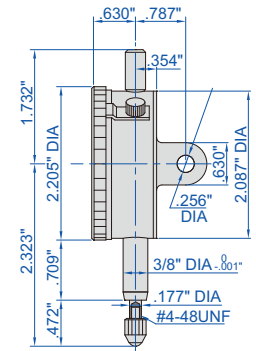
JEWELLED BEARING

## PRECISION DIAL INDICATOR

- Meet ASME B89.1.10M-2001
- Shockproof
- Jeweled bearing
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 73~74), contact points (page 71~72)



2315-05



Part No.	EDP No.	Range	Graduation	Accuracy		Range/rev	Dial reading
				First 2.5 rev	Overall		
2315-05 *	282719	.05"	.0001"	±.0001"	±.0003"	.01"	0-100

\* Supplied with manufacturer inspection certificate

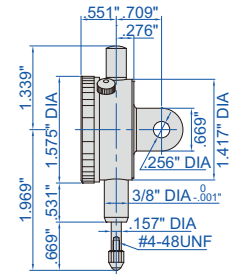


## COMPACT DIAL INDICATORS

- Meet ASME B89.1.10M-2001
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 73~74), contact points (page 71~72)



2304-01



Part No.	EDP No.	Range	Graduation	Accuracy		Range/rev	Dial reading	Remark
				First 2.5 rev	Overall			
2304-01 *	282699	.1"	.001"	—	±.001"	.1"	0-100	lug back
2304-02 *	282700	.2"	.001"	—	±.001"	.1"	0-100	lug back
2304-025 *	282701	.25"	.001"	±.001"	±.001"	.1"	0-100	lug back
2304-015 *	282702	.1"	.0005"	—	±.0005"	.05"	0-50	lug back
2304-0205 *	282703	.2"	.0005"	±.0005"	±.0015"	.05"	0-50	lug back
2304-0255 *	282704	.25"	.0005"	±.0005"	±.0015"	.05"	0-50	lug back
2304-02F *	877298	.2"	.001"	—	±.001"	.1"	0-100	flat back

\* Supplied with manufacturer inspection certificate

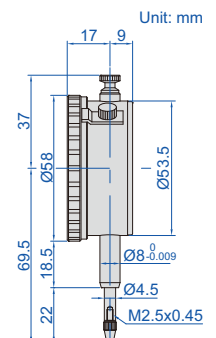


## METRIC DIAL INDICATOR (BASIC TYPE)

- Meet DIN878
- Jeweled bearing
- With flat back
- Supplied with limit hands and bezel clamp
- Packed in carton box
- Optional accessory: backs, contact points



2301-10F



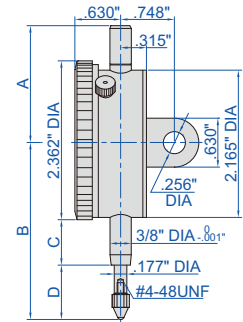
Part No.	EDP No.	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading
2301-10F *	877295	10mm	0.01mm	17µm	3µm	1mm	0-100

\* Supplied with manufacturer inspection certificate

## DIAL INDICATORS



2307-1



- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 73~74), contact points (page 71~72)

Range	A	B	C	D
.25"	1.811"	2.953"	.787"	.984"
.5"	1.811"	2.953"	.787"	.984"
1"	1.811"	3.346"	.787"	1.378"
2"	4.370"	5.472"	1.969"	2.323"

8

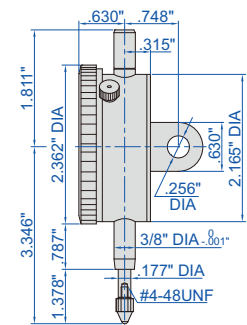
Part No.	EDP No.	Range	Graduation	Accuracy		Range/rev	Dial reading
				First 2.5 rev	Overall		
2307-025 *	282705	.25"	.001"	±.001"	±.001"	.1"	0-100
2307-05 *	816156	.5"	.001"	±.001"	±.002"	.1"	0-100
2307-1 *	816158	1"	.001"	±.001"	±.002"	.1"	0-100
2307-2 *	816160	2"	.001"	±.001"	±.004"	.1"	0-100
2307-0255 *	282707	.25"	.0005"	±.0005"	±.0015"	.05"	0-50
2307-055 *	282708	.5"	.0005"	±.0005"	±.0015"	.05"	0-50
2307-105 *	282709	1"	.0005"	±.0005"	±.002"	.05"	0-50
2307-205 *	282710	2"	.0005"	±.0005"	±.002"	.05"	0-50

\*Supplied with manufacturer inspection certificate

## REVERSE READING DIAL INDICATORS



2307-1R



- Meet ASME B89.1.10M-2001
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 73~74), contact points (page 71~72)

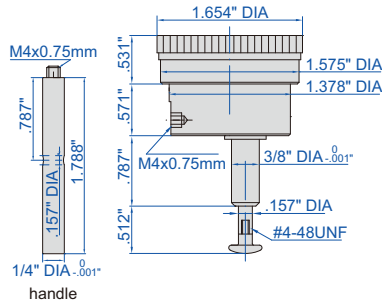
Part No.	EDP No.	Range	Graduation	Accuracy		Range/rev	Dial reading	Remark
				First 2.5 rev	Overall			
2307-1R *	877299	1"	.001"	±.001"	±.002"	.1"	100-0	lug back
2307-1RF *	877300	1"	.001"	±.001"	±.002"	.1"	100-0	flat back

\*Supplied with manufacturer inspection certificate



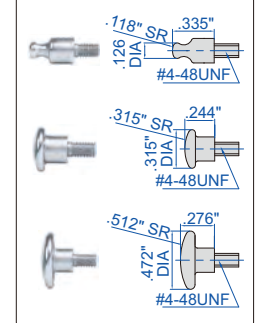


## BACK PLUNGER TYPE DIAL INDICATOR



2320-02

points (included)



- Supplied with handle
- Optional accessory: contact points (page 71~72)

Part No.	EDP No.	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading
2320-02 *	816371	.2 "	.001"	±.001"	.00033"	.1"	0-100

\* Supplied with manufacturer inspection certificate

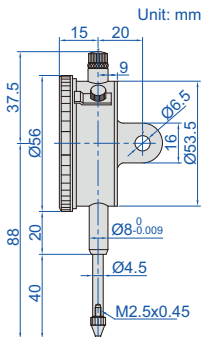


## METRIC DIAL INDICATORS (LONG STROKE)



2310-30A

- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points



Part No.	EDP No.	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2310-30FA *	282664	30mm	0.01mm	35µm	7µm	1mm	0-100	flat back
2310-30A *	282665	30mm	0.01mm	35µm	7µm	1mm	0-100	lug back

\* Supplied with manufacturer inspection certificate

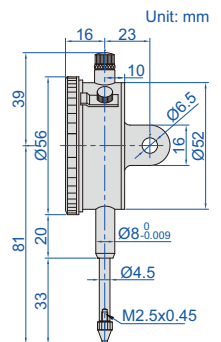


## METRIC DIAL INDICATORS (LONG STROKE, BASIC TYPE)



2302-25

- Supplied with limit pointers and bezel clamp
- Packed in carton box
- Optional accessory: backs, contact points



Part No.	EDP No.	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2302-25F *	877297	25mm	0.01mm	35µm	7µm	1mm	0-100	flat back
2302-25 *	877296	25mm	0.01mm	35µm	7µm	1mm	0-100	lug back with spare flat back

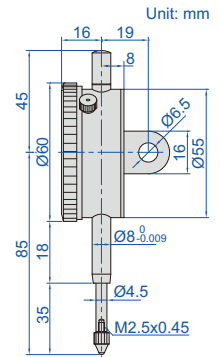
\* Supplied with manufacturer inspection certificate

## METRIC DIAL INDICATOR (GRADUATION 0.1mm)

- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points



2318-25



Part No.	EDP No.	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading
2318-25	816164	25mm	0.1mm	60µm	20µm	10mm	0-10

## LARGE DIAL FACE DIAL INDICATORS

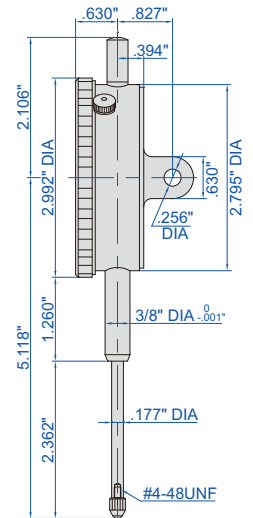


8

- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: contact points (page 71~72)



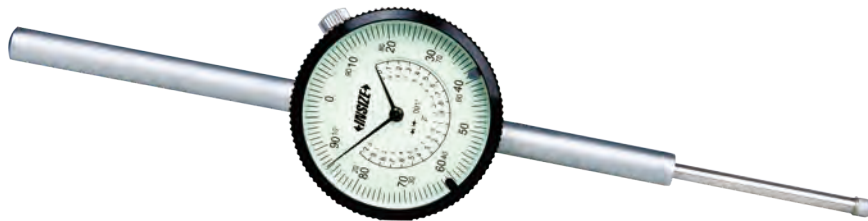
2312-15



Part No.	EDP No.	Range	Graduation	Accuracy		Range/rev	Dial reading
				First 2.5 rev	Overall		
2312-15 *	282711	1.5"	.001"	±.001"	±.004"	.1"	0-100
2312-2 *	282712	2"	.001"	±.001"	±.004"	.1"	0-100

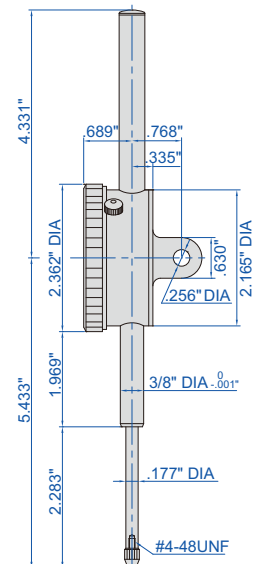
\*Supplied with manufacturer inspection certificate

## LONG STROKE DIAL INDICATOR



2326-2

- Graduation .001"
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 73~74), contact points (page 71~72)



Part No.	EDP No.	Range	Accuracy		Range/rev	Dial reading
			First 2.5 rev	Overall		
2326-2 *	282715	2"	±.001"	±.004"	.1"	0-100

\*Supplied with manufacturer inspection certificate

## BALL POINTS

### Inch

Part No.	EDP No.	Material of measuring face	D	L
6282-0102	282737	carbide	.118" DIA	.287"

### Metric

Part No.	EDP No.	Material of measuring face	SØD	L
6282-0301	282766	steel	1mm	7.3mm

### Metric

Part No.	EDP No.	Material of measuring face	SØD	L
6282-0304	282769	carbide	2.5mm	7.3mm



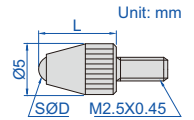
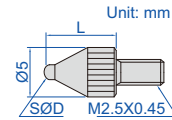
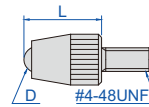
6282-0102



6282-0301



6282-0304



### Inch

Part No.	EDP No.	Material of measuring face	L
6282-0201	282753	steel	.156"

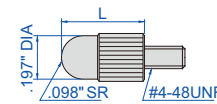
### Metric

Part No.	EDP No.	Material of measuring face	L
6282-0202	282754	steel	5mm
6282-0205	282757	steel	15mm

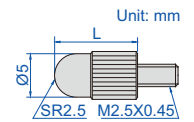
## SHELL TYPE POINTS



6282-0201



6282-0201



6282-0202

### Inch

Part No.	EDP No.	Material of measuring face
6282-0402	282764	steel

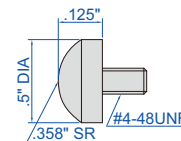
### Metric

Part No.	EDP No.	Material of measuring face
6282-0401	282763	steel

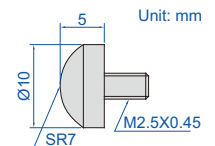
## SPHERICAL POINTS



6282-0402



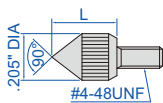
6282-0402



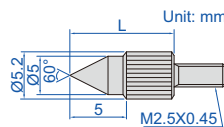
6282-0401



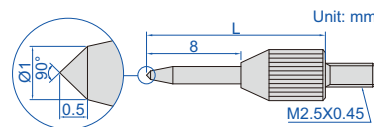
6282-0702



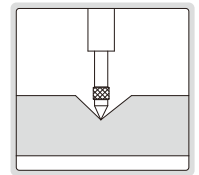
6282-0601



6282-0901



## CONICAL POINTS



### Inch

Part No.	EDP No.	Material of measuring face	L
6282-0702	282778	steel	.281"

### Metric

Part No.	EDP No.	Material of measuring face
6282-1201	282789	steel

### Metric

Part No.	EDP No.	Material of measuring face	L
6282-0601	282775	steel	10mm
6282-0901	282780	steel	15mm

## FLAT POINTS

### Inch

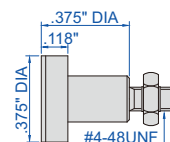
Part No.	EDP No.	Material of measuring face
6282-1207	282795	steel

### Metric

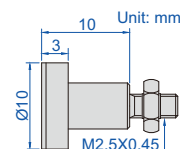
Part No.	EDP No.	Material of measuring face
6282-1201	282789	steel



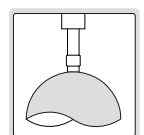
6282-1207



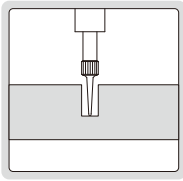
6282-1207



6282-1201



**METRIC NEEDLE POINTS**



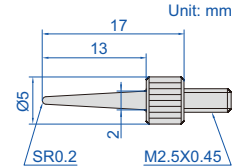
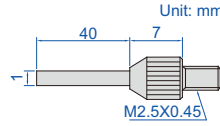
6282-1708



6282-1602

Part No.	EDP No.	Material of measuring face
6282-1708	282835	carbide

Part No.	EDP No.	Material of measuring face
6282-1602	282782	steel



**ROLLER POINTS**

**Inch**

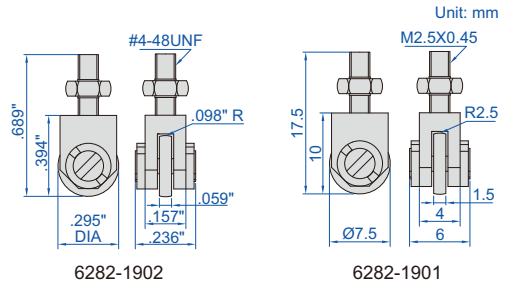
Part No.	EDP No.	Material of measuring face
6282-1902	282827	steel

**Metric**

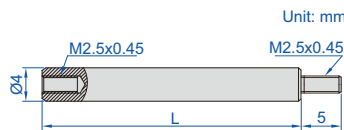
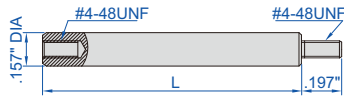
Part No.	EDP No.	Material of measuring face
6282-1901	282826	steel



6282-1902



**EXTENSION RODS**



6282-2018

**Inch**

Part No.	EDP No.	Material	L
6282-2018	282823	steel	1"
6282-2019	282824	steel	2"
6282-2020	282825	steel	4"

**Metric**

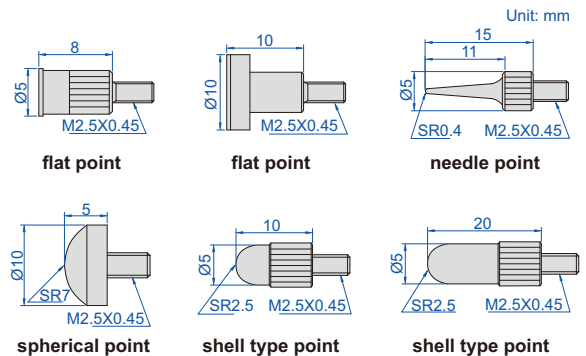
Part No.	EDP No.	Material	L
6282-2001	282806	steel	10mm
6282-2002	282807	steel	15mm
6282-2003	282808	steel	20mm
6282-2004	282809	steel	25mm
6282-2007	282812	steel	40mm
6282-2009	282814	steel	50mm
6282-2013	282818	steel	70mm
6282-2017	282822	steel	100mm

**METRIC POINT SET**

Part No.	EDP No.	Material of measuring face
6282-S6	282848	steel



6282-S6



## FLAT BACKS

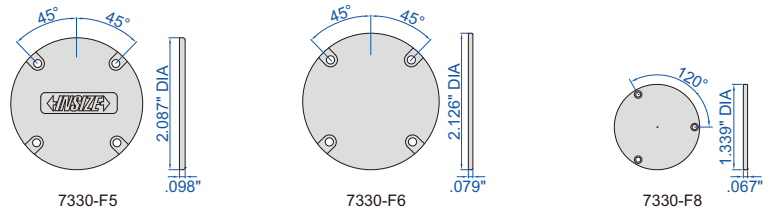
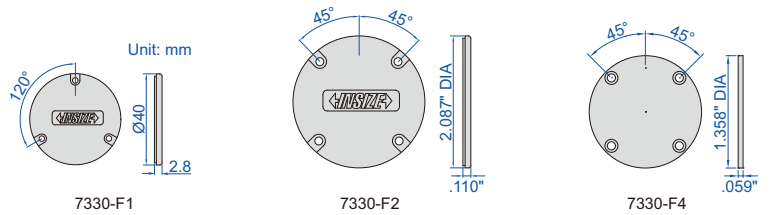


7330-F2



7330-F8

Inch		
Part No.	EDP No.	For electronic/ dial indicators
7330-F2	282853	2301
		2302
		2315
7330-F4	889333	2304
7330-F5	877054	2103
		2104
		2112
		2117
7330-F6	877056	2307
		2318
		2326
7330-F8	816649	2310



Metric		
Part No.	EDP No.	For electronic/ dial indicators
7330-F1	282852	2311

## LUG BACKS

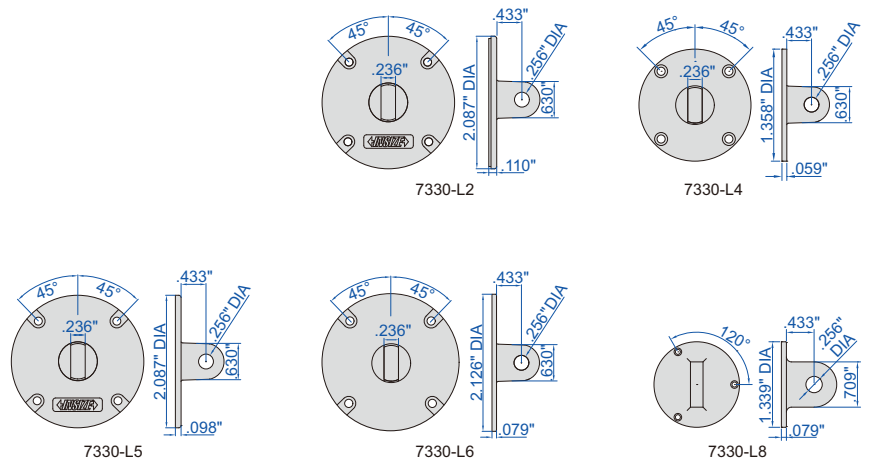


7330-L2



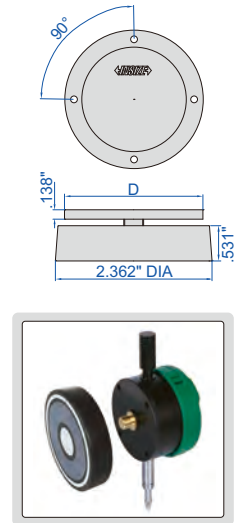
7330-L8

Part No.	EDP No.	For electronic/ dial indicators
7330-L2	282853	2301
		2302
		2315
7330-L4	889333	2304
7330-L5	877054	2103
		2104
		2112
		2117
7330-L6	877056	2307
		2318
		2326
7330-L8	816649	2310



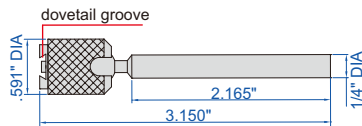
## MAGNETIC BACKS

Part No.	EDP No.	D (DIA)	For electronic/ dial indicators
7331-M1	877211	2.028"	2103
			2104
			2112
			2117
			2301
			2302
			2307
			2315
7331-M2	877212	2.126"	2326



## DIAL TEST INDICATOR UNIVERSAL HOLDER

8



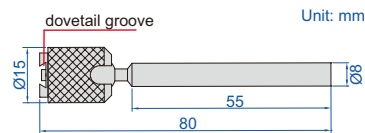
6293-5



Part No.	EDP No.
6293-5	282880

- Set the indicators at the desired attitude to the workpiece

## METRIC DIAL TEST INDICATOR UNIVERSAL HOLDER



6297-1



Part No.	EDP No.
6297-1	816523

- Set the indicators at the desired attitude to the workpiece

## DIAL TEST INDICATOR HOLDER

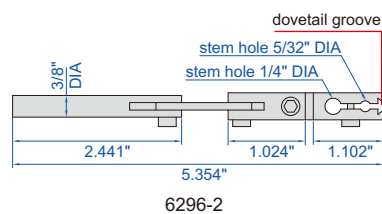
- Supplied with hex key



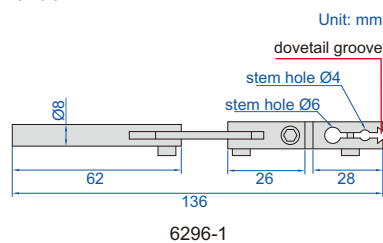
6296-2

Inch	
Part No.	EDP No.
6296-2	877030

Metric	
Part No.	EDP No.
6296-1	877383



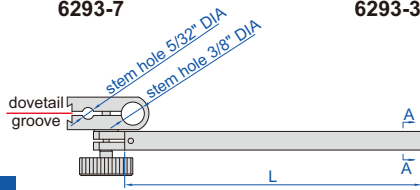
6296-2



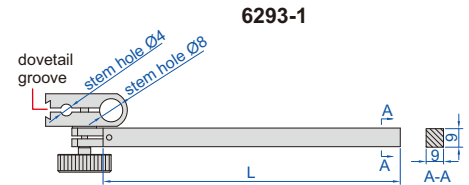
6296-1



## DIAL TEST INDICATOR HOLDERS



Inch			
Part No.	EDP No.	Stem section (BxC)	Stem length (L)
6293-7	816416	.354x.354"	2"
6293-3	282878	.25x.5"	4"

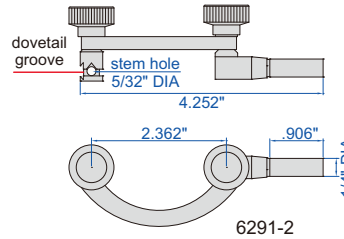
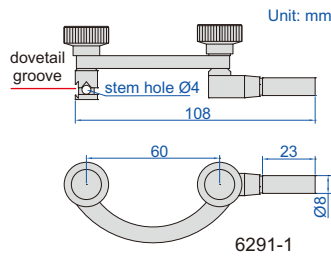


Metric			
Part No.	EDP No.	Stem section	Stem length (L)
6293-1	282876	9x9mm	100mm

## DIAL TEST INDICATOR HOLDERS

Inch	
Part No.	EDP No.
6291-2	282875

Metric	
Part No.	EDP No.
6291-1	282874



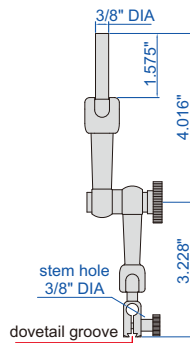
6291-2

■ Can be used with dial test indicators

## DIAL TEST INDICATOR HOLDER

■ Can be used with dial test indicators

Part No.	EDP No.
6295-1AE	284452

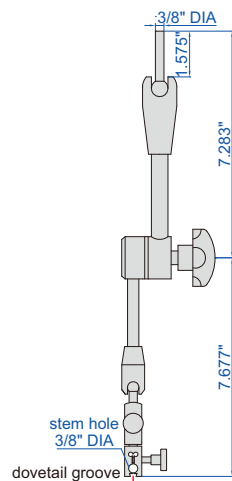


6295-1AE

## DIAL INDICATOR HOLDER

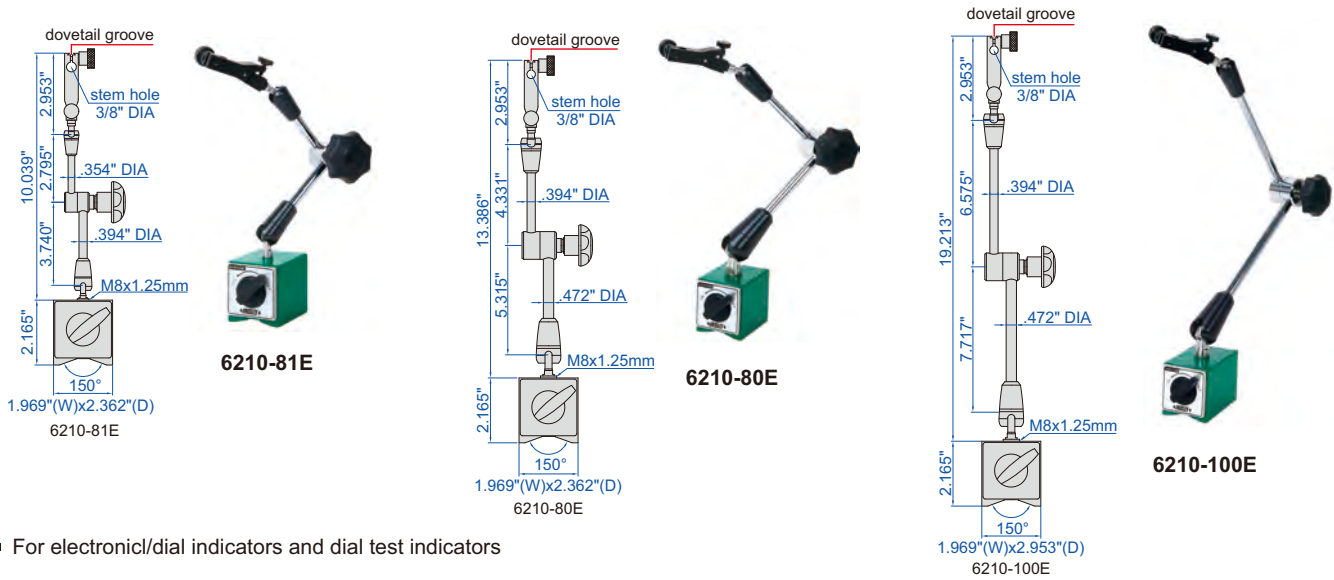
■ Can be used with dial test indicators or dial indicators

Part No.	EDP No.
6294-1AE	284453



6294-1AE

## UNIVERSAL MAGNETIC STANDS



- For electronic/dial indicators and dial test indicators

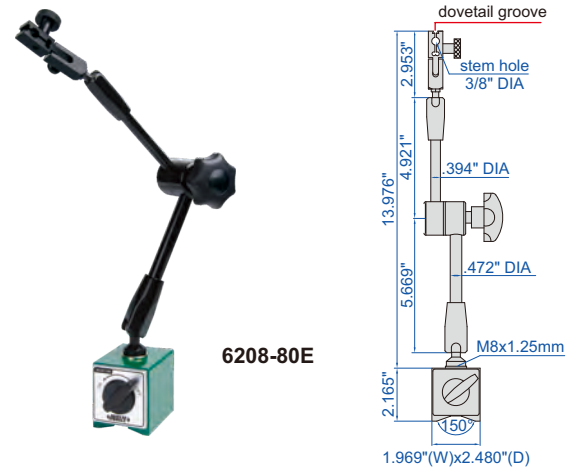
Part No.	EDP No.	Magnetic force	Applicable holding stem	Remark
6210-81E	877379	176lbf	3/8" DIA	with fine adjustment and dovetail groove
6210-80E	877028	176lbf	3/8" DIA	with fine adjustment and dovetail groove
6210-100E	877378	220lbf	3/8" DIA	with fine adjustment and dovetail groove

8

## UNIVERSAL MAGNETIC STAND (ECONOMIC TYPE)

- For electronic/dial indicators and dial test indicators
- Low locking force

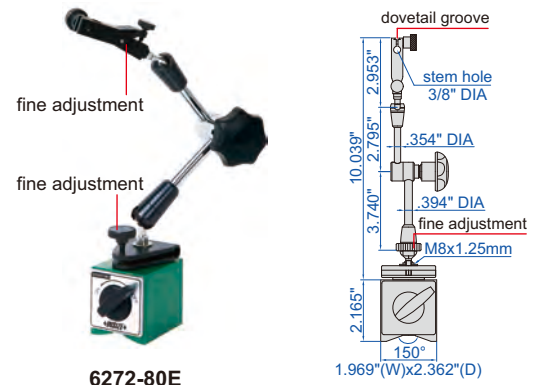
Part No.	EDP No.	Magnetic force	Applicable holding stem	Remark
6208-80E	816256	176lbf	3/8" DIA	with fine adjustment and dovetail groove



## MAGNETIC STAND WITH TWO FINE ADJUSTMENTS

- With two fine adjustments on the head and on the base
- For electronic/dial indicators and dial test indicators

Part No.	EDP No.	Magnetic force	Applicable holding stem	Remark
6272-80E	877382	176lbf	3/8" DIA	with double fine adjustment and dovetail groove





## MINI MAGNETIC STANDS

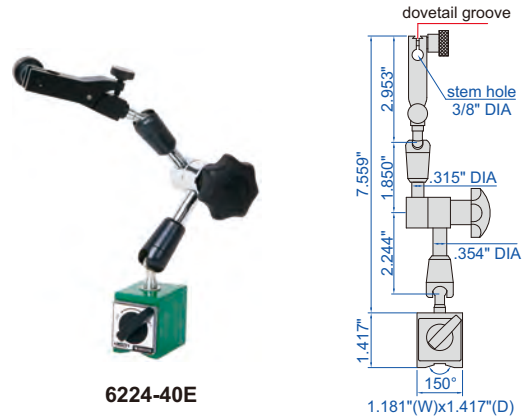
- For dial test indicators
- With fine adjustment and dovetail groove

### Inch

Part No.	EDP No.	Magnetic force	Applicable holding stem
6224-40E	816650	88lbf	3/8" DIA

### Metric

Part No.	EDP No.	Magnetic force	Applicable holding stem
6224-40	889325	40kgf	Ø8mm



6224-40E

## MAGNETIC STANDS



6200-60



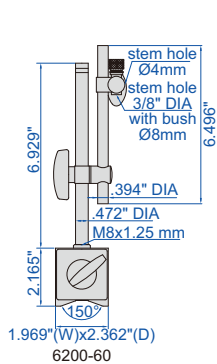
6201-60



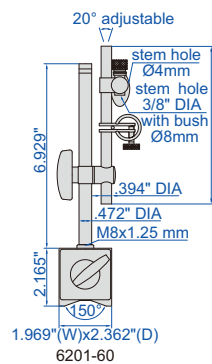
6202-80



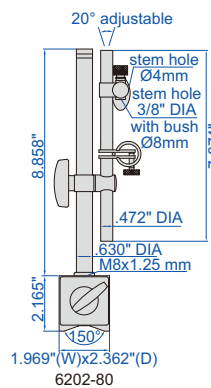
6202-100



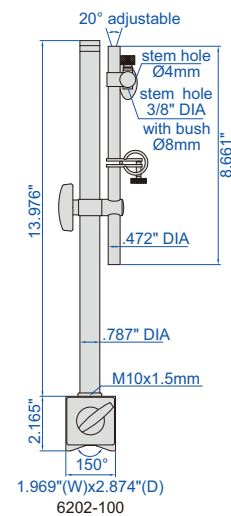
6200-60



6201-60



6202-80



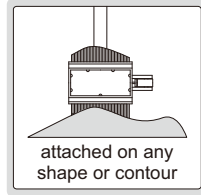
6202-100

- For electronic/dial indicators and dial test indicators

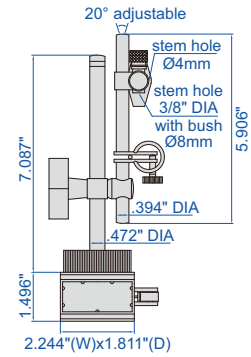
Part No.	EDP No.	Magnetic force	Applicable holding stem	Remark
6200-60	816250	132lbf	3/8" DIA, Ø8mm, Ø4mm	without fine adjustment
6201-60	816252	132lbf	3/8" DIA, Ø8mm, Ø4mm	with fine adjustment
6202-80	282886	176lbf	3/8" DIA, Ø8mm, Ø4mm	with fine adjustment
6202-100	816254	220lbf	3/8" DIA, Ø8mm, Ø4mm	with fine adjustment

## MAGNETIC STAND FOR UNEVEN SURFACE

- For electronic/dial indicators and dial test indicators
- With fine adjustment



6215-60



Part No.	EDP No.	Magnetic force	Applicable holding stem
6215-60	282893	132lbf	3/8" DIA, Ø8mm, Ø4mm

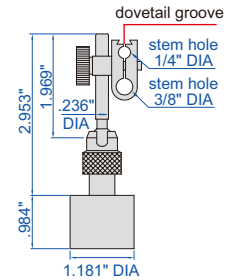
8

## MINI MAGNETIC STAND

- For dial test indicators
- With dovetail groove



6211-10E



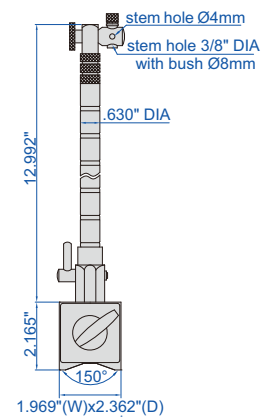
Part No.	EDP No.	Magnetic force	Applicable holding stem
6211-10E	877189	22lbf	1/4" DIA, 3/8" DIA

## FLEX ARM MAGNETIC STAND

- For dial test indicators

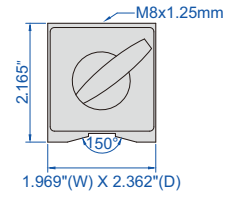


6207-80A



Part No.	EDP No.	Magnetic force	Applicable holding stem
6207-80A	282892	176lbf	3/8" DIA, Ø8mm, Ø4mm

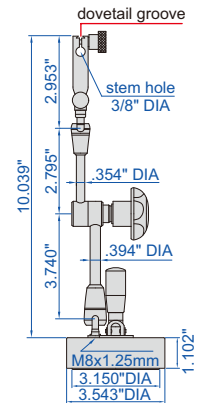
## MAGNETIC BASE



6212-80

Part No.	EDP No.	Magnetic force
6212-80	877380	176lbf

## VACUUM STAND

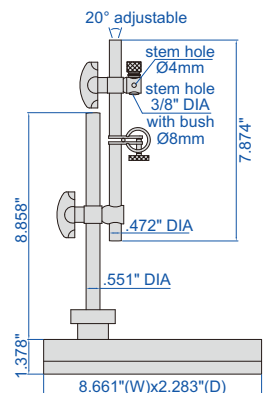


6217-BE

- Suitable for granite surface plates or cast iron surface plates
- For electronic/dial indicators and dial test indicators

Part No.	EDP No.	Diameter of vacuum disc	Vacuum force	Applicable holding stem	Remark
6217-BE	877190	3.150" DIA	176lbf	3/8" DIA	with fine adjustment and dovetail groove

## UNIVERSAL STAND

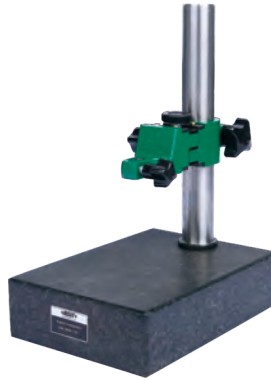


6214-A

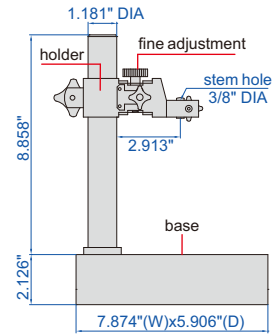
- For electronic/dial indicators and dial test indicators
- With fine adjustment

Part No.	EDP No.	Applicable holding stem
6214-A	877381	3/8" DIA, Ø8mm, Ø4mm

## GRANITE DIAL INDICATOR STAND



- Vertical travel of holder: 5.906"
- Fine adjustment range .079"
- Supplied with dust cover

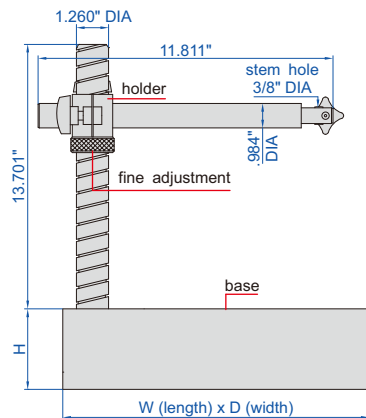


6866-150E

8

Part No.	EDP No.	Applicable holding stem	Base
6866-150E	877397	3/8" DIA	flatness 98µin

## GRANITE DIAL INDICATOR STANDS



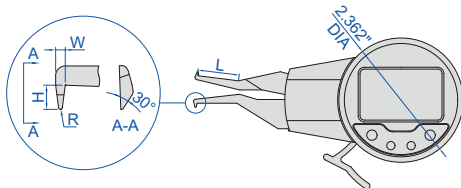
6867-250E

- Vertical travel of holder: 9.843"
- Fine adjustment range: entire stroke
- Supplied with dust cover

Part No.	EDP No.	Applicable holding stem	W	D	H	Base
6867-250E	877398	3/8" DIA	11.811"	11.811"	2.953"	flatness 110µin

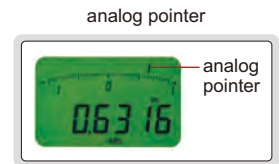
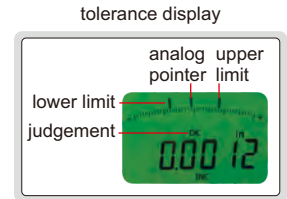
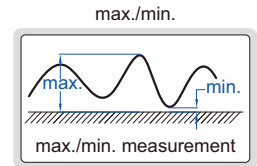


## ELECTRONIC INTERNAL CALIPER GAGES



2121-15

- Resolution .0002"/0.005mm
- 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
- Optional accessory: data output cable (part no. 7315-30 page 1, 7302-30)

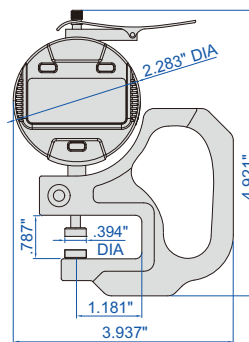


Part No.	EDP No.	Range	Accuracy	Repeatability	L	H	W	R
2121-15	283130	.2-.6"/5-15mm	±.0012"	.0004"	.787"	.079"	.059"	.012" R
2121-25	283139	.2-1.0"/5-25mm	±.0012"	.0004"	1.378"	.059"	.039"	.012" R
2121-31	283140	.4-1.2"/10-30mm	±.0012"	.0004"	2.165"	.217"	.098"	.020" R
2121-41	283141	.8-1.6"/20-40mm	±.0012"	.0004"	3.150"	.236"	.118"	.020" R
2121-51	283142	1.2-2.0"/30-50mm	±.0012"	.0004"	3.150"	.315"	.118"	.020" R



## ELECTRONIC THICKNESS GAGES

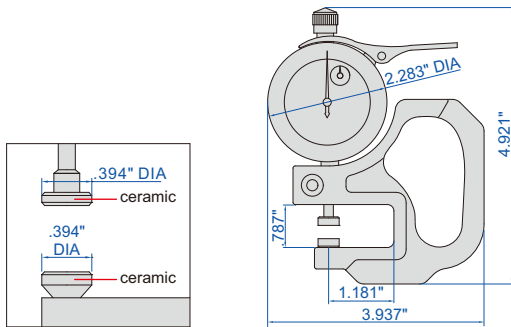
- Ceramic spindle tip and anvil
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. 7315-50M page 1, 7302-50M)



2871-101

Part No.	EDP No.	Range	Resolution	Accuracy
2871-10	877162	0-.4"/0-10mm	.0005"/0.01mm	±.001"
2871-101	877163	0-.4"/0-10mm	.00005"/0.001mm	±.0002"

## THICKNESS GAGE



2364-055

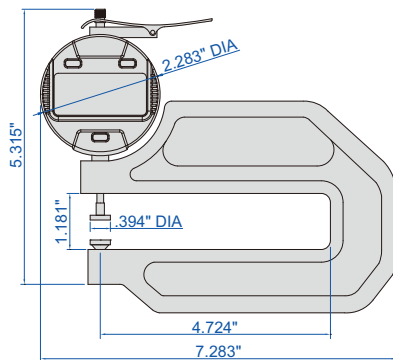
Part No.	EDP No.	Range	Graduation	Accuracy
2364-055	876312	0-.5"	.0005"	±.0008"

## ELECTRONIC THICKNESS GAGE



9

measuring tips and anvils can be custom-made



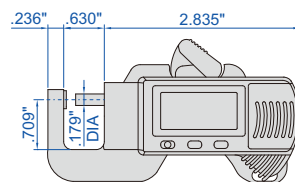
2872-10

- Ceramic spindle tip and anvil
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, data output
- Automatic power off (time is adjustable)
- Optional accessory: data output cable (part no. 7315-50M page 1, 7302-50M)

Part No.	EDP No.	Range	Resolution	Accuracy
2872-10	877164	0-.4"/0-10mm	.0005"/0.01mm	±.001"

## ELECTRONIC SNAP GAGE

- No data output



2166-12

Part No.	EDP No.	Range	Resolution	Accuracy
2166-12	283197	0-.5"/0-12mm	.0005"/0.01mm	±.0015"



## STEP AND GAP GAGE

zero setting block  
(included)

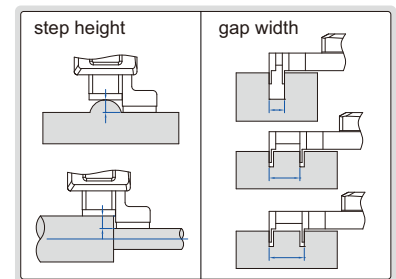
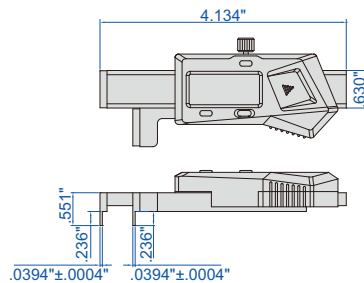


front

2168-12

back

- Non waterproof
- Measure step height and gap width
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with zero setting block
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)

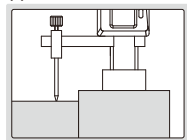


Part No.	EDP No.	Range	Accuracy
2168-12	877152	0-.5"/0-12.7mm	±.0012"

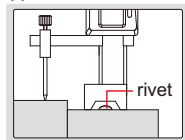


## MINI ELECTRONIC HEIGHT GAGES

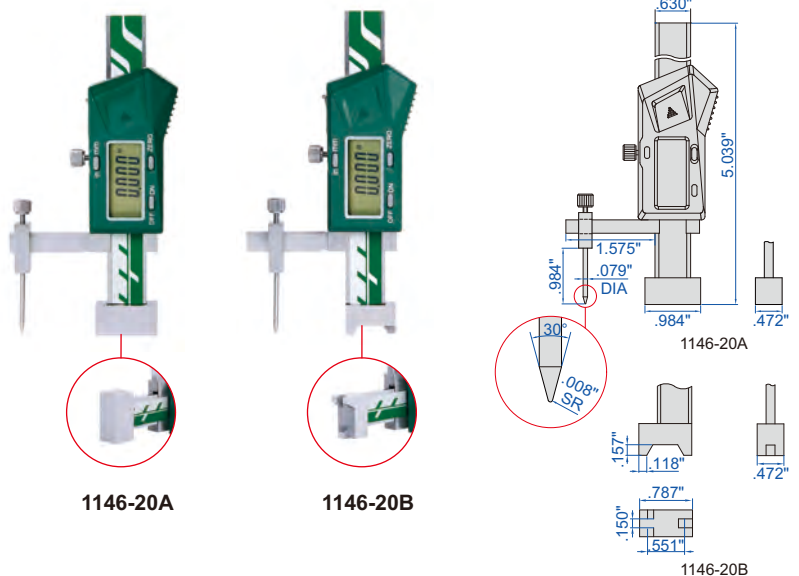
application of 1146-20A



application of 1146-20B



- Non waterproof
- Measure height difference of two surfaces (1146-20B, suitable for surfaces with barrier, such as rivet)
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3),



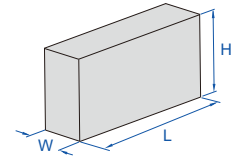
1146-20A

1146-20B

1146-20B

Part No.	EDP No.	Range	Accuracy
1146-20A	877276	0-.8"/0-20mm	±.0010"
1146-20B	877277	0-.8"/0-20mm	±.0010"

**STEEL GAGE BLOCK SETS**



- Made of alloy steel
- Meet ASME B89.1.9
- Supplied with manufacturer inspection certificate

**4102-81**

Dimension:

Size (L)	W	H
.02 ≤ L ≤ .394"	.354"	1.181"
L > .394"	.354"	1.378"

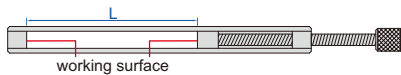
Blocks per set	Gage blocks included in set			Part No.					
	Size (inch)	Step (inch)	Quantity	Grade 0	EDP No.	Grade AS-1	EDP No.	Grade AS-2	EDP No.
36	.05		1	<b>4102-36</b>	283257	<b>4102-136</b>	283258	<b>4102-236</b>	283259
	.1001-.1009	.0001	9						
	.101-.109	.001	9						
	.11-.19	.01	9						
	.1-.5	.1	5						
	1		1						
	2		1						
4		1							
81	.1001-.1009	.0001	9	<b>4102-81</b>	283260	<b>4102-181</b>	283261	<b>4102-281</b>	283262
	.101-.149	.001	49						
	.05-.95	.05	19						
	1-4	1	4						

10

**GAGE BLOCK ACCESSORIES**



**6881-A3**



Part No.	EDP No.	Name	Clamping range* (L)
<b>6881-A1</b>	877399	holder	0-1"
<b>6881-A2</b>	877400	holder	1-2"
<b>6881-A3</b>	877401	holder	2-4"
<b>6881-A4</b>	877402	holder	4-8"
<b>6881-A5</b>	877403	holder	8-12"
<b>6881-A6**</b>	877404	holder	12-20"

\*The actual clamping range should deduct the width of jaws  
 \*\*Not suitable for base **6881-BE**

application

<p>(plain jaw+holder) set zero for bore gage and inside micrometers</p>	<p>(base+holder+scraper) measure height or scribe</p>	<p>(half round jaw+holder) measure inside diameter</p>
<p>(scraper+centre point+holder) scribe circle</p>	<p>(plain jaw+parallel jaw+holder) Go and No Go inspection</p>	

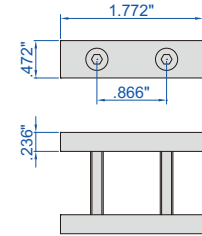


## GAGE BLOCK HOLDERS

- Made of aluminum
- To be used with individual steel gage blocks (part no. 4112) as Go and No-Go gage

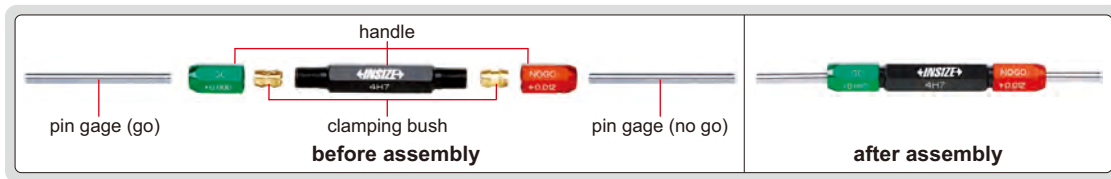


6883-4



Part No.	EDP No.	Applicable gage block size
6883-1	877405	.06-.2"
6883-2	877406	.2-.4"

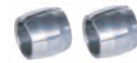
## PIN GAGE HANDLES (ASSEMBLED WITH WRENCH)



Handle



brass  
(.008-.281")



aluminum  
(.281-.976")

clamping bush

- Wrench is needed to install pins
- Clamping bushes (.008-.281") are made of brass
- Clamping bushes (.281-.976") are made of aluminum



Part No.	EDP No.	Applicable pin gage diameter	Including		H	L
			Handle	Clamping bush		
7341-0S	877417	.008-.040"	1 pc	6 pairs (the clamping range are .008-.015", .015-.020", .020-.025", .025-.030", .030-.035", .035-.040")	.276"	2.244"
7341-1S	877434	.040-.075"	1 pc	7 pairs (the clamping range are .040-.045", .045-.050", .050-.055", .055-.060", .060-.065", .065-.070", .070-.075")	.276"	2.244"
7341-2S	877435	.075-.131"	1 pc	8 pairs (the clamping range are .075-.082", .082-.089", .089-.096", .096-.103", .103-.110", .110-.117", .117-.124", .124-.131")	.354"	2.874"
7341-3S	877436	.131-.180"	1 pc	7 pairs (the clamping range are .131-.138", .138-.145", .145-.152", .152-.159", .159-.166", .166-.173", .173-.180")	.354"	2.874"
7341-4S	877437	.180-.228"	1 pc	6 pairs (the clamping range are .180-.188", .188-.196", .196-.204", .204-.212", .212-.220", .220-.228")	.551"	3.110"
7341-5S	877438	.228-.281"	1 pc	6 pairs (the clamping range are .228-.236", .236-.244", .244-.252", .252-.261", .261-.271", .271-.281")	.551"	3.110"
7341-6S	877439	.281-.341"	1 pc	6 pairs (the clamping range are .281-.291", .291-.301", .301-.311", .311-.321", .321-.331", .331-.341")	.748"	3.583"
7341-7S	877440	.341-.406"	1 pc	6 pairs (the clamping range are .341-.351", .351-.361", .361-.371", .371-.382", .382-.394", .394-.406")	.748"	3.583"
7341-8S	877441	.406-.465"	1 pc	4 pairs (the clamping range are .406-.420", .420-.435", .435-.450", .450-.465")	.866"	4.173"
7341-9S	877442	.465-.510"	1 pc	3 pairs (the clamping range are .465-.480", .480-.495", .495-.510")	.866"	4.173"
7341-10S	877418	.510-.579"	1 pc	4 pairs (the clamping range are .510-.532", .532-.547", .547-.563", .563-.579")	.945"	4.528"
7341-11S	877419	.579-.635"	1 pc	4 pairs (the clamping range are .579-.594", .594-.610", .610-.625", .625-.635")	.945"	4.528"
7341-12S	877420	.635-.704"	1 pc	4 pairs (the clamping range are .635-.656", .656-.672", .672-.688", .688-.704")	1.063"	4.646"
7341-13S	877421	.704-.760"	1 pc	4 pairs (the clamping range are .704-.719", .719-.735", .735-.750", .750-.760")	1.063"	4.646"
7341-15S	877422	.760-.976"	1 pc	8 pairs (the clamping range are .760-.781", .781-.812", .812-.843", .843-.875", .875-.907", .907-.937", .937-.968", .968-.976")	1.063"	4.646"

## SETTING RINGS

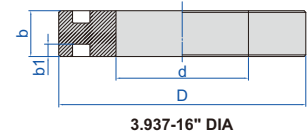
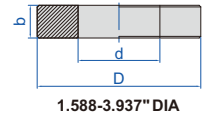


CAN SUPPLY CUSTOM SETTING RINGS FROM 1/16" TO 16", FOR EXAMPLE, .6726"

- Class X of ASME B89.1.6
- For zero setting of inside micrometers, three points internal micrometers and bore gages
- The size marked on the setting ring is checked at the direction of the marking line
- Size difference is the difference between the ordered size and the size marked on the setting ring when supplied. For example, the ordered size is .2", the size marked on the setting ring when supplied may be .20008"
- Supplied with manufacturer inspection certificate



6313-0D8



Diameter d *	b	D (DIA)	Size difference	Roundness and cylindricity
.197-.394"	.315"	1.260"	±.00039"	.000016"
.394-.591"	.394"	1.496"	±.00039"	.000020"
.591-.709"	.472"	1.772"	±.00039"	.000020"
.709-.787"	.472"	1.772"	±.00039"	.000024"
.787-.984"	.551"	2.087"	±.00039"	.000024"
.984-1.181"	.630"	2.480"	±.00039"	.000024"
1.181-1.260"	.630"	2.480"	±.00039"	.000028"
1.260-1.575"	.709"	2.795"	±.00039"	.000028"
1.575-1.969"	.787"	3.346"	±.00039"	.000028"
1.969-2.362"	.787"	3.937"	±.00039"	.000031"
2.362-2.756"	.945"	4.409"	±.00039"	.000031"
2.756-3.150"	.945"	4.921"	±.00039"	.000031"
3.150-3.543"	.945"	5.512"	±.00039"	.000039"
3.543-3.937"	.945"	6.300"	±.00039"	.000039"

Part No.	EDP No.	Diameter
6313-1H4	889412	1/4" DIA
6313-1H2	282487	1/2" DIA
6313-3H4	877395	3/4" DIA
6313-0D24	877385	.24" DIA
6313-0D65	877386	.65" DIA
6313-0D7	877387	.7" DIA
6313-0D8	877388	.8" DIA
6313-1	282486	1.0" DIA
6313-1D2	877389	1.2" DIA
6313-1D4	877390	1.4" DIA
6313-1D6	877391	1.6" DIA
6313-1D8	877392	1.8" DIA
6313-2	282489	2.0" DIA
6313-2D5	877393	2.5" DIA
6313-3	282492	3.0" DIA
6313-3D5	877394	3.5" DIA
6313-4	282494	4.0" DIA
6313-5	889417	5.0" DIA

Diameter d *	b	b1	D (DIA)	Size difference	Roundness and cylindricity
3.937-4.331"	1.181"	.315"	6.457"	±.00039"	.000039"
4.331-5.118"	1.339"	.394"	7.559"	±.00039"	.000039"

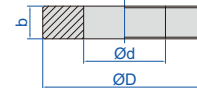
\* For example .709-.787" means .709" DIA < diameter ≤ .787" DIA

## METRIC SETTING RING

CAN SUPPLY CUSTOM SETTING RINGS FROM Ø1.500MM TO Ø400.000MM, FOR EXAMPLE, Ø17.085MM



6312-20



- For zero setting of inside micrometers, three points internal micrometers and bore gages
- The size marked on the setting ring is checked at the direction of the marking line
- Size difference (difference between the ordered size and the size marked on the setting ring when supplied): For example, the ordered size is Ø10.125mm, the size marked on the setting ring when supplied may be Ø10.135mm
- Meet DIN2250-1:2008
- Supplied with manufacturer inspection certificate

Diameter d *	b	ØD	Size difference	Roundness and cylindricity
Ø20-25mm	14mm	53mm	±10.0µm	0.6µm

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

Part No.	EDP No.	Size
6312-25	282467	Ø25mm



WARNING: LIFE TIME IS LIMITED,  
CAN BE USED ABOUT 2000 TIMES



## METRIC THREAD PLUG GAGES

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



4130-10

Part No.	EDP No.	Size
4130-2	284053	M2x0.4mm
4130-2D2	284054	M2.2x0.45mm
4130-2D5	284055	M2.5x0.45mm
4130-3	284056	M3x0.5mm
4130-3D5	284057	M3.5x0.6mm
4130-4	284058	M4x0.7mm
4130-5	284059	M5x0.8mm
4130-6	284060	M6x1mm
4130-7	816680	M7x1mm
4130-8	284061	M8x1.25mm

Part No.	EDP No.	Size
4130-9	816681	M9x1.25mm
4130-10	284062	M10x1.5mm
4130-11	816682	M11x1.5mm
4130-12	284063	M12x1.75mm
4130-14	284064	M14x2mm
4130-16	284065	M16x2mm
4130-18	284066	M18x2.5mm
4130-20	284067	M20x2.5mm
4130-22	284068	M22x2.5mm
4130-24	284069	M24x3mm

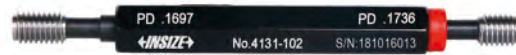
Part No.	EDP No.	Size
4130-27	284070	M27x3mm
4130-30	284071	M30x3.5mm
4130-33	284072	M33x3.5mm
4130-36	284073	M36x4mm
4130-39	284074	M39x4mm
4130-42	284075	M42x4.5mm
4130-45	284076	M45x4.5mm
4130-48	284077	M48x5mm
4130-52	284078	M52x5mm
4130-56	284079	M56x5.5mm
4130-60	284080	M60x5.5mm

WARNING: LIFE TIME IS LIMITED,  
CAN BE USED ABOUT 2000 TIMES



## AMERICAN STANDARD THREAD PLUG GAGES

- Supplied with Go and No-Go gages together
- Standard ANSI/ASME B1.2
- Supplied with manufacturer inspection certificate



4131-102

### Class 2B

Part No.	EDP No.	Size
4131-21	877342	No. 2-56UNC
4131-41	816651	No. 4-40UNC
4131-42	877347	No. 4-48UNF
4131-61	816652	No. 6-32UNC
4131-62	877351	No. 6-40UNF
4131-81	816653	No. 8-32UNC
4131-82	877355	No. 8-36UNF
4131-101	877331	No. 10-24UNC
4131-102	816654	No. 10-32UNF
4131-121	877332	No. 12-24UNC
4131-122	877333	No. 12-28UNF
4131-1B1	816655	1/4-20UNC
4131-1B2	816656	1/4-28UNF
4131-1B3	877337	1/4-32UNEF
4131-5D1	816657	5/16-18UNC
4131-5D2	816658	5/16-24UNF
4131-5D3	877349	5/16-32UNEF

### Class 2B

Part No.	EDP No.	Size
4131-3C1	816659	3/8-16UNC
4131-3C2	816660	3/8-24UNF
4131-7D1	877354	7/16-14UNC
4131-7D2	816661	7/16-20UNF
4131-1A1	816662	1/2-13UNC
4131-1A2	816663	1/2-20UNF
4131-9D1	877356	9/16-12UNC
4131-9D2	816664	9/16-18UNF
4131-9D3	877358	9/16-24UNEF
4131-5C1	816665	5/8-11UNC
4131-5C2	816666	5/8-18UNF
4131-3B1	816667	3/4-10UNC
4131-3B2	816668	3/4-16UNF
4131-13D516	877335	13/16-16UN
4131-13D3	877334	13/16-20UNEF
4131-7C1	877352	7/8-9UNC
4131-7C2	877353	7/8-14UNF

### Class 2B

Part No.	EDP No.	Size
4131-2A1	877343	1-8UNC
4131-2A2	877344	1-12UNF
4131-2A514	877345	1-14UN
4131-1E512	877338	1 1/16-12UN
4131-3E512	877346	1 3/16-12UN
4131-1G1	877340	1 1/4-7UNC
4131-1G2	877341	1 1/4-12UNF

### Class 3B

Part No.	EDP No.	Size
4131-1B2B	877336	1/4-28UNF
4131-5D1B	877348	5/16-18UNC
4131-5D3B	877350	5/16-32UNEF
4131-9D2B	877357	9/16-18UNF
4131-1F58B	877339	1 1/8-8UN

# AMERICAN STANDARD THREAD RING GAGES



WARNING: LIFE TIME IS LIMITED,  
CAN BE USED ABOUT 2000 TIMES



front



back

4121-1B1



front



back

4121-1B1N

- Standard ANSI/ASME B1.2
- Class 2A
- Supplied with manufacturer inspection certificate

Size	Part No.			
	GO	EDP No.	NOGO	EDP No.
No. 4-40UNC	4121-41	284272	4121-41N	284340
No. 4-48UNF	4121-42	284273	4121-42N	284341
No. 5-40UNC	4121-51	284274	4121-51N	284342
No. 5-44UNF	4121-52	284275	4121-52N	284343
No. 6-32UNC	4121-61	284276	4121-61N	284344
No. 6-40UNF	4121-62	284277	4121-62N	284345
No. 8-32UNC	4121-81	284278	4121-81N	284346
No. 8-36UNF	4121-82	284279	4121-82N	284347
No. 10-24UNC	4121-101	284280	4121-101N	284348
No. 10-32UNF	4121-102	284281	4121-102N	284349
No. 12-24UNC	4121-121	284282	4121-121N	284350
No. 12-28UNF	4121-122	284283	4121-122N	284351
1/4-20UNC	4121-1B1	284285	4121-1B1N	284353
1/4-28UNF	4121-1B2	284286	4121-1B2N	284354
1/4-32UNEF	4121-1B3	284287	4121-1B3N	284355
1/4-36UNS	4121-1B4	877323	4121-1B4N	877324
5/16-18UNC	4121-5D1	284288	4121-5D1N	284356
5/16-24UNF	4121-5D2	284289	4121-5D2N	284357
3/8-16UNC	4121-3C1	284291	4121-3C1N	284359
3/8-24UNF	4121-3C2	284292	4121-3C2N	284360
7/16-14UNC	4121-7D1	284294	4121-7D1N	284362
7/16-20UNF	4121-7D2	284295	4121-7D2N	284363
1/2-13UNC	4121-1A1	284297	4121-1A1N	284365
1/2-20UNF	4121-1A2	284298	4121-1A2N	284366
9/16-12UNC	4121-9D1	284300	4121-9D1N	284368
9/16-18UNF	4121-9D2	284301	4121-9D2N	284369
5/8-11UNC	4121-5C1	284303	4121-5C1N	284371
5/8-18UNF	4121-5C2	284304	4121-5C2N	284372
11/16-16UN	4121-11D516	877321	4121-11D516N	877322
3/4-10UNC	4121-3B1	284307	4121-3B1N	284375
3/4-16UNF	4121-3B2	284308	4121-3B2N	284376
7/8-9UNC	4121-7C1	284310	4121-7C1N	284378
7/8-14UNF	4121-7C2	284311	4121-7C2N	284379
1-8UNC	4121-2A1	877325	4121-2A1N	877326
1-12UNF	4121-2A2	877327	4121-2A2N	877328
1 5/16-12UN	4121-5E512	877329	4121-5E512N	877330

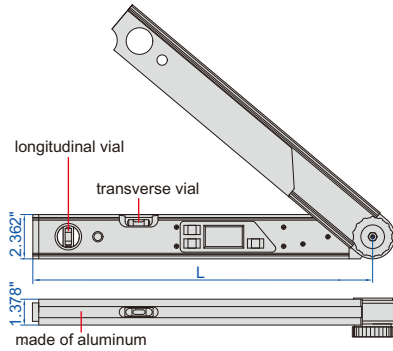


ABSOLUTE LEVEL

AUTOMATIC BACKLIGHT

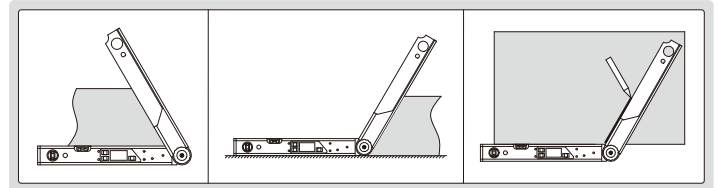
IP54

## WATERPROOF ELECTRONIC PROTRACTOR (HEAVY DUTY)



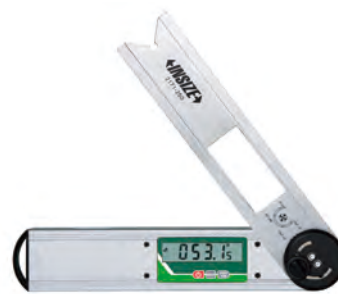
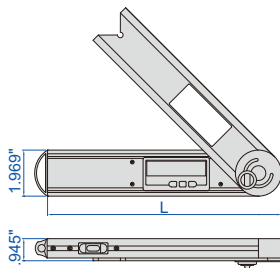
2174-225

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

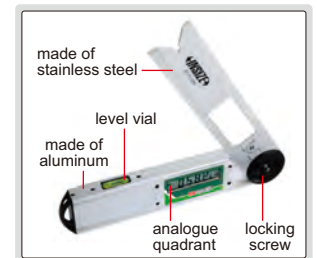


Part No.	EDP No.	Size (L)	Range	Resolution	Accuracy
2174-225	877153	18.11"	0-225°	0.05°	±0.10°

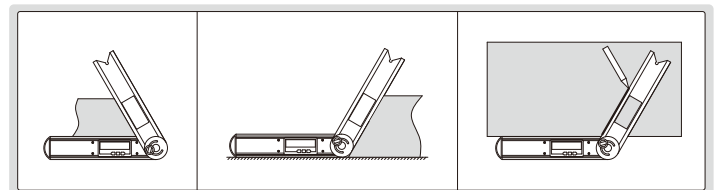
## ELECTRONIC PROTRACTOR



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



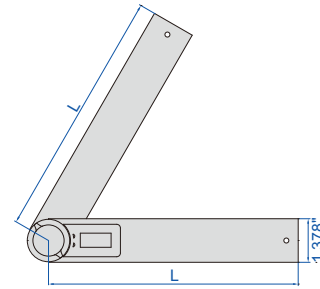
Part No.	EDP No.	Size (L)	Range	Resolution	Accuracy
2171-250	877106	10"	0-360°	0.05°	±0.15°

## ELECTRONIC PROTRACTORS

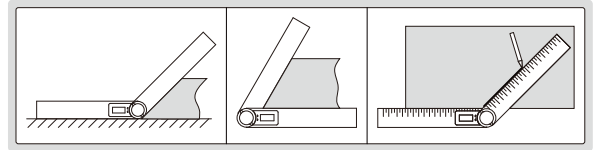
- Buttons: on/off, zero
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- Made of stainless steel
- CR2032 battery
- Automatic power off



2176-200



Part No.	EDP No.	Size (L)	Range	Resolution	Accuracy
2176-200	877018	8"	0-360°	0.1°	±0.3°
2176-300	877107	12"	0-360°	0.1°	±0.3°

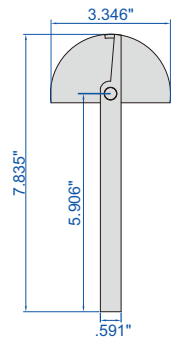


## PROTRACTOR

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



4780-85A



Part No.	EDP No.	Range	Graduation	Accuracy
4780-85A	283328	0-180°	1°	±0.5°

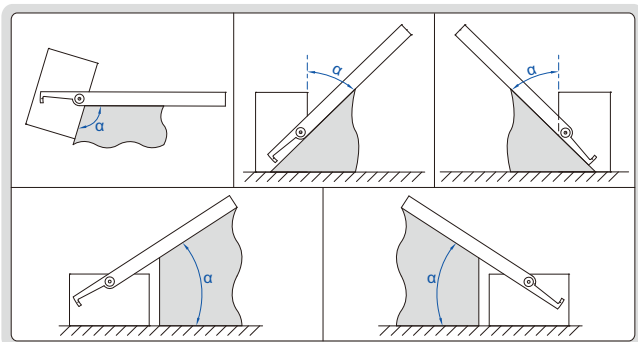
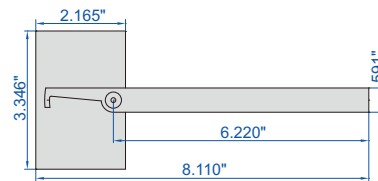
11

## PROTRACTOR

- Range: 0-180°
- Made of stainless steel
- Satin chrome plated scale
- With clamping screw



4781-85A



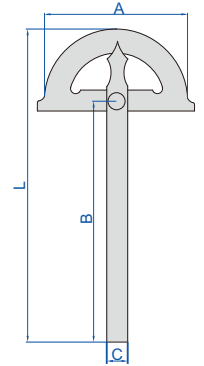
Part No.	EDP No.	Size	Graduation	Accuracy
4781-85A	877168	3.346x6.220"	1°	±0.3°

## PROTRACTORS

- Graduation: 1°
- Made of stainless steel  
(4799-1300 is made of carbon steel)
- Satin chrome plated scale
- With clamping screw



4799-180



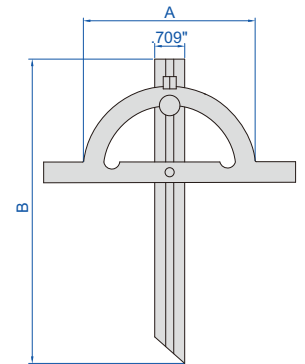
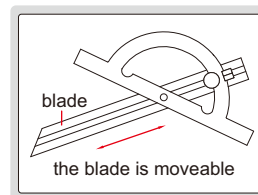
Part No.	EDP No.	Size (AxB)	Range	Accuracy	L	C
4799-180	283329	3.1x4.7"	0-180°	±0.3°	6.614"	.433"
4799-1120	283330	4.7x5.9"	0-180°	±0.3°	8.661"	.551"
4799-1150	283331	5.9x7.9"	0-180°	±0.3°	11.220"	.630"
4799-1200	283332	7.9x11.8"	0-180°	±0.3°	16.260"	.787"
4799-1300	283333	11.8x19.7"	0-180°	±0.3°	26.575"	1.181"

## PROTRACTOR

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



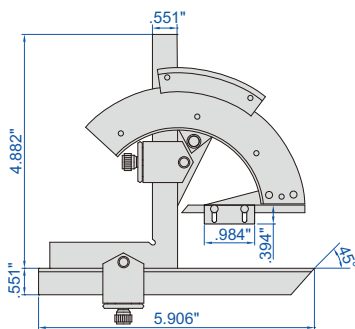
4797-100



Part No.	EDP No.	Size (AxB)	Range	Accuracy
4797-100	283334	3.9x5.9"	10-170°	±0.3°

11

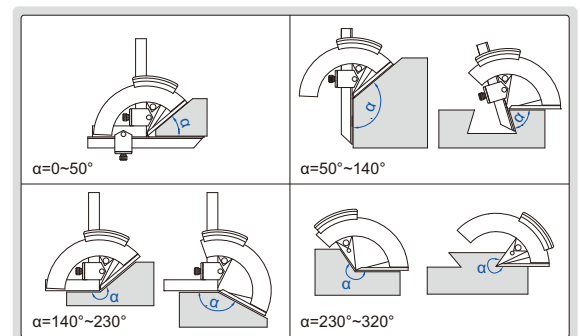
## PROTRACTOR



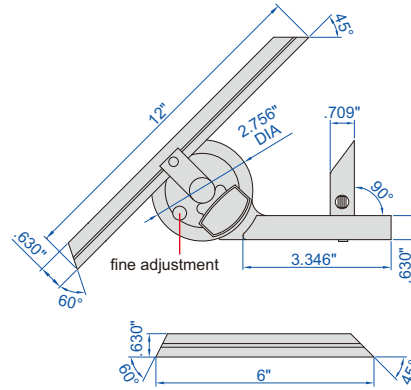
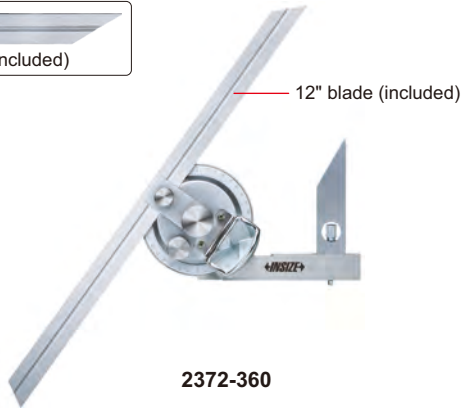
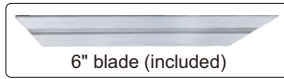
2374-320

- Made of stainless steel
- Satin chrome plated scale

Part No.	EDP No.	Range	Graduation	Accuracy
2374-320	283340	0-320°	2'	±2'

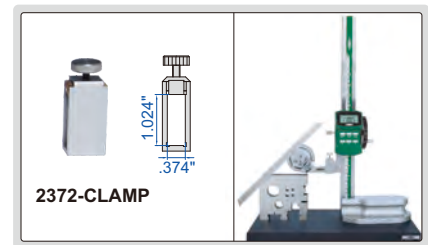


## UNIVERSAL PROTRACTOR



- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (part no. **2372-CLAMP**), suitable for height gages **1156**, **1351** and **1250**

clamp for height gages (optional)



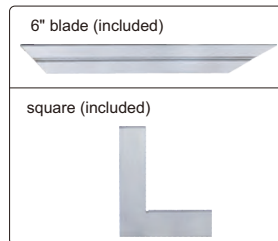
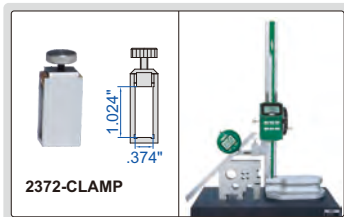
Part No.	EDP No.	Range	Graduation	Accuracy
2372-360	283341	0-360°	5'	±5'

## ELECTRONIC PROTRACTOR



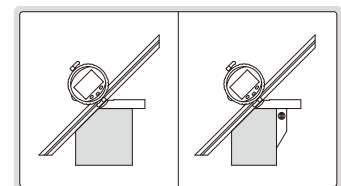
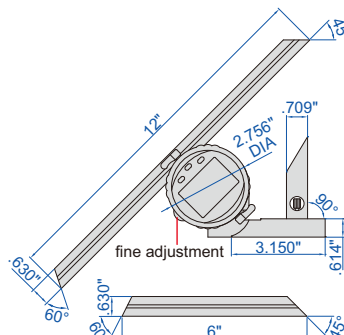
11

clamp for height gages (optional)



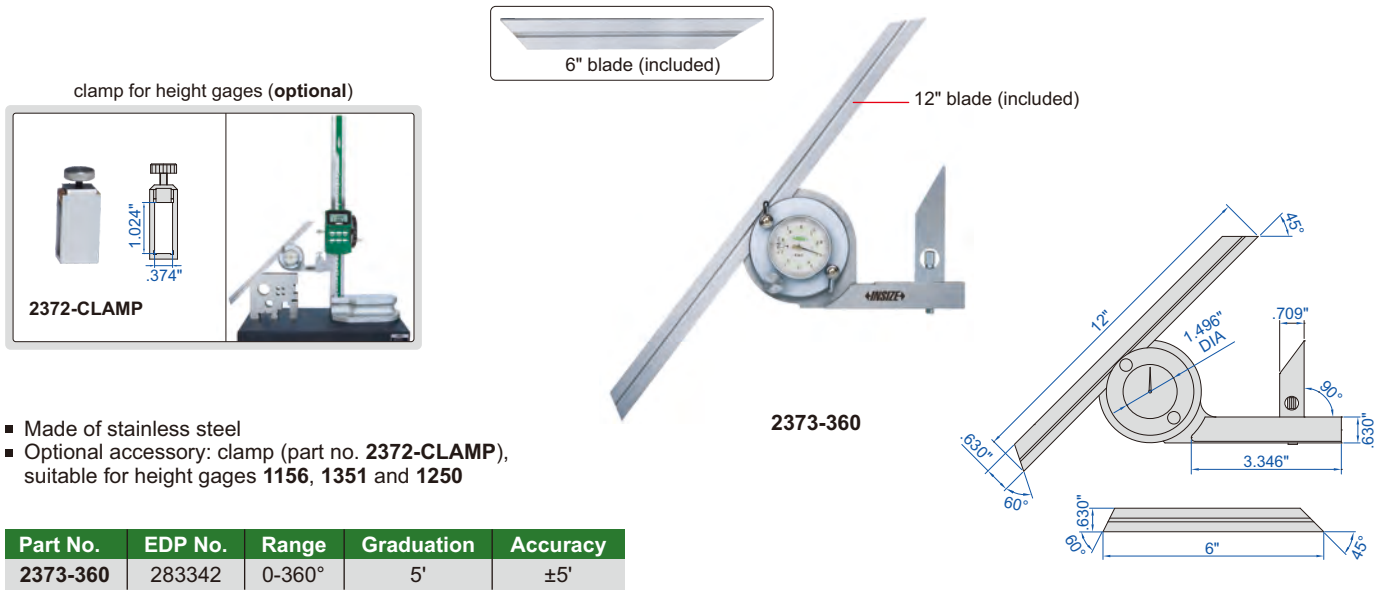
- Display in degree (for example 32.655°) and degree/minute/second (for example 32°39'30")
- SET button: preset the reading, change measuring direction
- MODE button: choose 0~90°, 0~180° or 0~360° display
- ZERO/ON/OFF button: zero and power on/off
- Battery CR2032, automatic power off
- Data output
- Supplied with square to set 90°
- Made of stainless steel
- Optional accessory: data output cable (code **7315-50**, **7302-SPC3B**), clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1150-300**, **1351**, **1250** and **1151**

Part No.	EDP No.	Range	Resolution	Accuracy
2172-360A	283343	0-360°	10"/0.005°	±5'





## DIAL PROTRACTOR

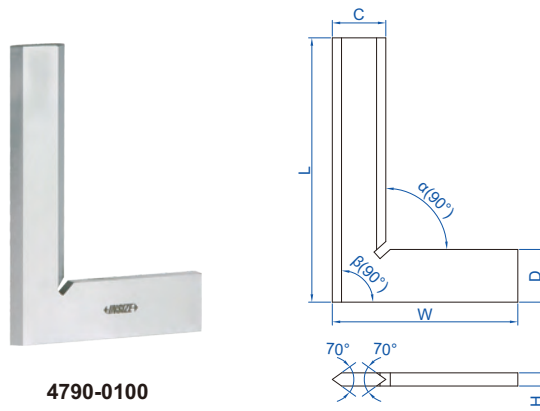


- Made of stainless steel
- Optional accessory: clamp (part no. **2372-CLAMP**), suitable for height gages **1156**, **1351** and **1250**

Part No.	EDP No.	Range	Graduation	Accuracy
<b>2373-360</b>	283342	0-360°	5'	±5'

## 90° BEVELED EDGE SQUARES

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



**4790-0100**

### DIN875 grade 00

Part No.	EDP No.	Size (LxW)	Squareness		C	D	H
			Inside ( $\alpha$ )	Outside ( $\beta$ )			
<b>4790-050</b>	816300	2.0x1.6"	.00009"	.00010"	.512"	.512"	.157"
<b>4790-075</b>	816302	3.0x2.0"	.00010"	.00011"	.591"	.591"	.157"
<b>4790-0100</b>	816304	3.9x2.8"	.00011"	.00012"	.787"	.787"	.197"
<b>4790-0150</b>	816306	5.9x3.9"	.00013"	.00014"	1.181"	1.181"	.236"
<b>4790-0200</b>	816308	7.9x5.1"	.00015"	.00016"	1.339"	1.339"	.276"
<b>4790-0300</b>	816310	11.8x7.9"	.00018"	.00020"	1.575"	1.575"	.315"

### DIN875 grade 0

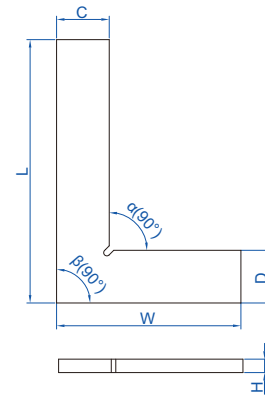
Part No.	EDP No.	Size (LxW)	Squareness		C	D	H
			Inside ( $\alpha$ )	Outside ( $\beta$ )			
<b>4790-500</b>	283354	2.0x1.6"	.00024"	.00024"	.512"	.512"	.157"
<b>4790-750</b>	283355	3.0x2.0"	.00024"	.00028"	.591"	.591"	.157"
<b>4790-1000</b>	283356	3.9x2.8"	.00028"	.00028"	.787"	.787"	.197"
<b>4790-1500</b>	283357	5.9x3.9"	.00028"	.00032"	1.181"	1.181"	.236"
<b>4790-2000</b>	283358	7.9x5.1"	.00032"	.00036"	1.339"	1.339"	.276"
<b>4790-2500</b>	283359	9.8x6.5"	.00036"	.00040"	1.378"	1.378"	.276"

## 90° FLAT EDGE SQUARES

- Made of hardened stainless steel



4791-100



DIN875 grade 0

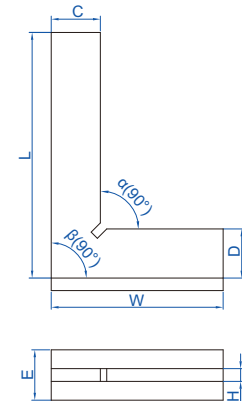
Part No.	EDP No.	Size (LxW)	Squareness		C	D	H
			Inside ( $\alpha$ )	Outside ( $\beta$ )			
4791-50	816312	2.0x1.6"	.00024"	.00024"	.591"	.591"	.157"
4791-75	816314	3.0x2.0"	.00024"	.00028"	.591"	.591"	.157"
4791-100	816316	3.9x2.8"	.00028"	.00028"	.787"	.787"	.197"
4791-150	816318	5.9x3.9"	.00028"	.00032"	1.181"	1.181"	.236"
4791-200	816320	7.9x5.1"	.00032"	.00036"	1.181"	1.181"	.276"
4791-250	283375	9.8x6.5"	.00036"	.00040"	1.378"	1.378"	.276"
4791-300	816322	11.8x7.9"	.00040"	.00043"	1.575"	1.575"	.315"

## 90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel



4793-100



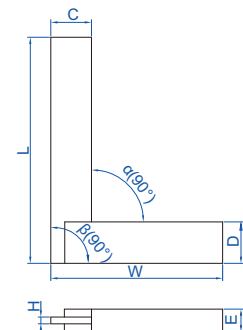
Part No.	EDP No.	Size (LxW)	Squareness		C	D	H	E
			Inside ( $\alpha$ )	Outside ( $\beta$ )				
4793-100	283378	3.9x2.8"	.00028"	.00028"	.787"	.787"	.197"	.787"
4793-200	283380	7.9x5.1"	.00032"	.00036"	1.181"	1.181"	.276"	1.181"

## 90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel



4792-50



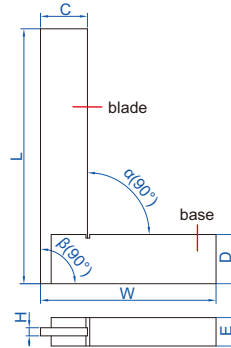
Part No.	EDP No.	Size (LxW)	Squareness		C	D	H	E
			Inside ( $\alpha$ )	Outside ( $\beta$ )				
4792-50	283383	2.0x1.6"	.00015"	.00015"	.472"	.472"	.118"	.394"
4792-75	283384	3.0x2.0"	.00024"	.00024"	.551"	.551"	.118"	.394"
4792-150	283391	5.9x3.9"	.00032"	.00032"	.866"	.866"	.157"	.472"

## MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

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

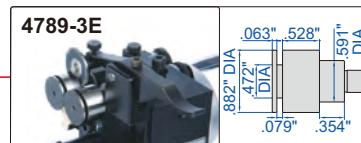
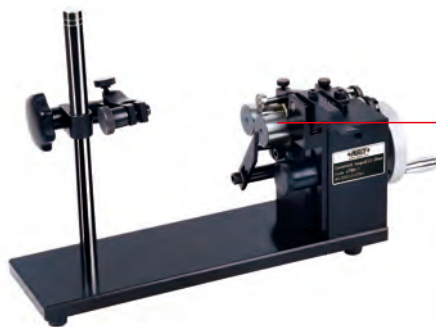


4707-100



Part No.	EDP No.	Size (LxW)	Squareness		C	D	H	E
			Inside ( $\alpha$ )	Outside ( $\beta$ )				
4707-50	283490	2.0x1.6"	.00094"	.00098"	.630"	.472"	.118"	.354"
4707-75	283491	3.0x2.0"	.00102"	.00110"	.630"	.630"	.118"	.354"
4707-100	283492	3.9x2.8"	.00110"	.00118"	.748"	.748"	.118"	.472"
4707-150	283493	6x4"	.00130"	.00138"	.984"	.984"	.118"	.630"
4707-200	283494	8x5"	.00146"	.00158"	1.181"	1.260"	.157"	.630"
4707-250	283495	10x6"	.00165"	.00177"	1.181"	1.260"	.157"	.748"
4707-300	283496	12x8"	.00185"	.00197"	1.260"	1.260"	.157"	.748"
4707-400	283497	16x10"	.00221"	.00236"	1.496"	1.496"	.197"	.866"
4707-500	283498	20x12"	.00256"	.00276"	1.772"	1.969"	.236"	.984"
4707-600	877026	24x14"	.00295"	.00315"	1.969"	1.969"	.236"	1.181"
4707-750	877360	30x16"	.00354"	.00374"	2.165"	2.165"	.236"	1.969"
4707-900	877361	35x20"	.00406"	.00433"	2.559"	2.953"	.354"	1.969"

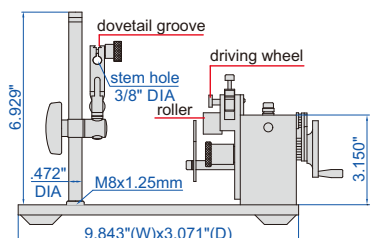
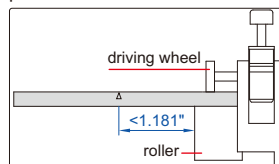
## CONCENTRICITY GAGES



- Accuracy .00008"
- Optional accessory: dial test indicator

Part No.	EDP No.	Applicable diameter
4789-1E	877169	.138" DIA~.984" DIA
4789-3E	877363	.039" DIA~.984" DIA

to ensure the accuracy .00008", the distance between measuring point and roller should be <1.181"

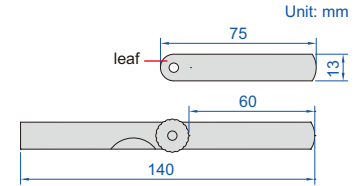


## METRIC FEELER GAGE

- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy:  $\pm(3+T/80)$   $\mu\text{m}$ ,  
'T' is the thickness of leaves in  $\mu\text{m}$



4601-25



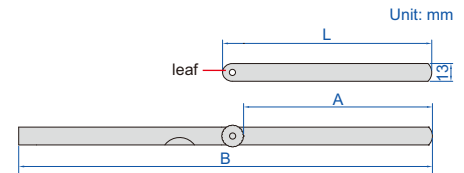
Part No.	EDP No.	Range	Thickness of leaves included (mm)	Quantity of leaves
4601-25	283523	0.04-1.00mm	0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	25

## METRIC LONG FEELER GAGES

- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy:  $\pm(3+T/80)$   $\mu\text{m}$ ,  
'T' is the thickness of leaves in  $\mu\text{m}$



4605-20



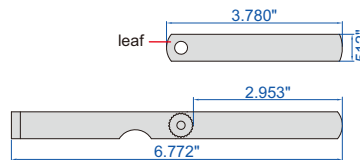
Part No.	EDP No.	Range	Thickness of leaves included (mm)	Quantity of leaves	L	A	B
4605-13	283530	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13	150mm	135mm	295mm
4605-132	283532	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13	300mm	285mm	590mm
4605-20	283533	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	150mm	135mm	295mm
4605-201	283534	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	200mm	185mm	395mm
4605-202	283535	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	300mm	285mm	590mm

## FEELER GAGE



4608-31

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

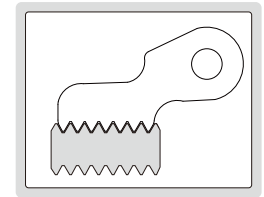


Part No.	EDP No.	Range	Quantity of Leaves
4608-31	283543	.0015"~.035"	32

Thickness of leaves included	Accuracy	Thickness of leaves included	Accuracy
.010" (brass)	$\pm 0.00039$ "	.016", .017"	$\pm 0.00055$ "
.0015", .002"	$\pm 0.0002$ "	.018", .019"	$\pm 0.00059$ "
.0025", .003", .004", .005", .006", .007"	$\pm 0.00028$ "	.020", .021"	$\pm 0.00067$ "
.008", .009"	$\pm 0.00035$ "	.022", .023"	$\pm 0.00071$ "
.010", .011"	$\pm 0.00039$ "	.024", .025", .026"	$\pm 0.00075$ "
.012", .013"	$\pm 0.00047$ "	.028"	$\pm 0.00091$ "
.014", .015"	$\pm 0.00051$ "	.030"	$\pm 0.00094$ "
		.032", .035"	$\pm 0.00102$ "

## METRIC PITCH GAGES

- Identify the pitch of screw thread
- Made of medium carbon steel



4820-122

### Metric 60° screw

Part No.	EDP No.	Range	Pitch of leaves included (mm)	Quantity of leaves
4820-122	283550	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, 7	22
4820-124	283551	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, 7	24

### Unified 60° screw

Part No.	EDP No.	Range	Pitch of leaves included	Quantity of leaves
4820-230	283552	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30

### Whitworth 55° screw

Part No.	EDP No.	Range	Pitch of leaves included	Quantity of leaves
4820-330	283554	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30
4820-328	283555	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	28

### Metric 60° and Whitworth 55° screw

Part No.	EDP No.	Range	Pitch of leaves included	Quantity of leaves
4820-452	283556	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm	52
		4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	

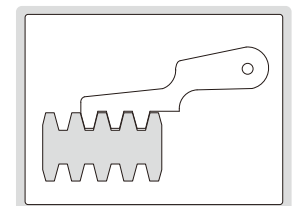
### Metric 60° and Unified 60° screw

Part No.	EDP No.	Range	Pitch of leaves included	Quantity of leaves
4820-552	816695	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	52
		4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	

- Check the pitch of screw thread
- Accuracy:  $\pm 0.0028''$
- Made of medium carbon steel



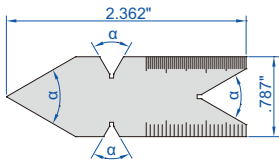
4824-12



## PITCH GAGES

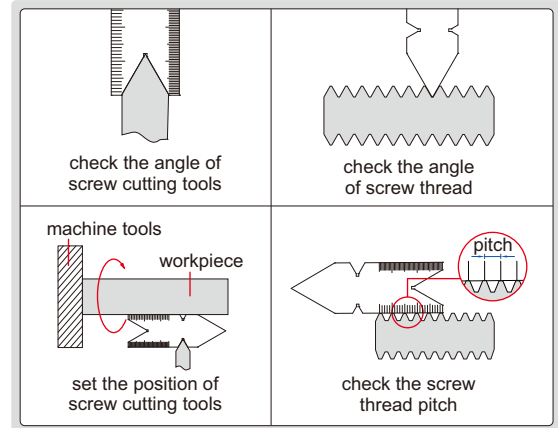
Part No.	EDP No.	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-16	283549	1-12TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI	16
4824-12	283548	2-20mm	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12

## CENTER GAGES



4810-602

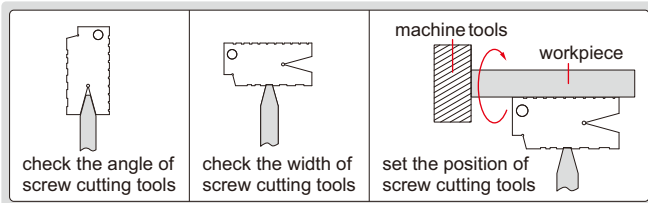
- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy:  $\pm 30\text{min}$ .
- Made of stainless steel



Part No.	EDP No.	Thread type	Angle ( $\alpha$ )	Graduation
4810-602	283560	UNIFIED 60°	60°	14ths and 20ths on front side, 24ths and 32ths on back side
4810-601	283559	METRIC 60°	60°	0.5mm and 1mm
4810-55	283561	WHITWORTH 55°	55°	14ths and 20ths on front side, 24ths and 32ths on back side

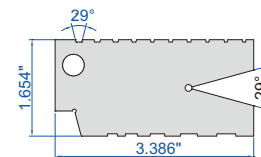
## THREAD GAGE

12



4812-E

- To check and set screw cutting tools
- Made of medium carbon steel



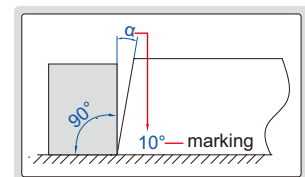
Part No.	EDP No.	Thread type	Pitch
4812-E	283557	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI

## ANGLE GAGE

- To check complementary angles
- Made of stainless steel

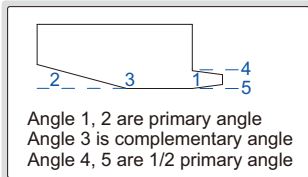


4806-20

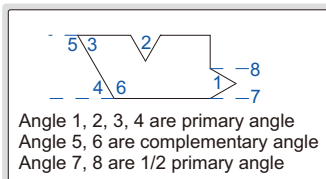


Part No.	EDP No.	Range	Angle of leaves included	Quantity of leaves	Accuracy
4806-20	816600	1°-45°	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°	20	$\pm 30'$

## ANGLE GAGE SET



type A



type B



4807

- Each blade checks primary, 1/2 primary and complementary angles
- Made of medium carbon steel

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

Part No.	EDP No.	Quantity of leaves	Accuracy
4807	816602	18	±10'

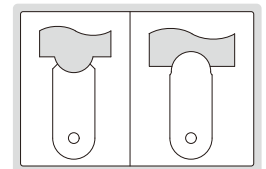
## RADIUS GAGES

12

- Made of medium carbon steel



4801-15E



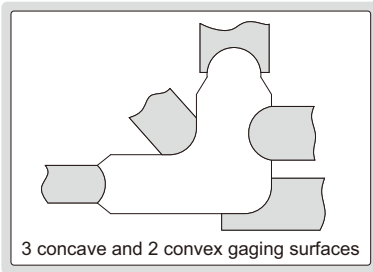
### Inch

Part No.	EDP No.	Range	Radius of leaves included	Quantity of leaves (internal+external)
4801-15E	283567	1/32"-1/4"	1/32", 3/64", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16", 13/64", 7/32", 15/64", 1/4"	15+15
4801-16E	283568	17/64"-1/2"	17/64", 9/32", 19/64", 5/16", 21/64", 11/32", 23/64", 3/8", 25/64", 13/32", 27/64", 7/16", 29/64", 15/32", 31/64", 1/2"	16+16
4801-16E1	283569	17/32"-1"	17/32", 9/16", 19/32", 5/8", 21/32", 11/16", 23/32", 3/4", 25/32", 13/16", 27/32", 7/8", 29/32", 15/16", 31/32", 1"	16+16

### Metric

Part No.	EDP No.	Range	Radius of leaves included (mm)	Quantity of leaves (internal + external)
4801-17	283564	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
4801-16	283565	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

## RADIUS GAGE SETS



4804-26

- Each piece has 3 concave and 2 convex gauging surfaces
- Made of medium carbon steel

### Inch

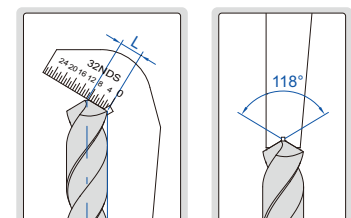
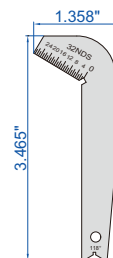
Part No.	EDP No.	Range	Radius of leaves included	Quantity of leaves	Handle
4804-25E	816198	1/64"~1/2"	1/64", 1/32", 3/64", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16", 13/64", 7/32", 15/64", 1/4", 17/64", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 15/32", 1/2"	25	with
4804-26E	283572	.010"~.5"	.010", .015", .020", .025", .030", .040", .050", .060", .070", .080", .090", .100", .12", .14", .16", .18", .20", .22", .24", .26", .28", .30", .35", .40", .45", .50"	26	with
4804-8E	816200	9/16"~1"	9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1"	8	without
4804-8E1	283571	1-1/16"~1-1/2"	1-1/16", 1-1/8", 1-3/16", 1-1/4", 1-5/16", 1-3/8", 1-7/16", 1-1/2"	8	without

### Metric

Part No.	EDP No.	Range	Radius of leaves included	Quantity of leaves	Handle
4804-26	816196	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, 13mm	26	with

## DRILL POINT GAGE

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



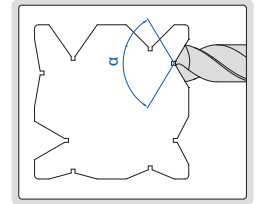
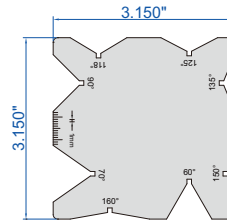
Part No.	EDP No.	Accuracy	
		Angle	Length
4843-1E	877173	±0.5°	±.02"



## DRILL ANGLE GAGE



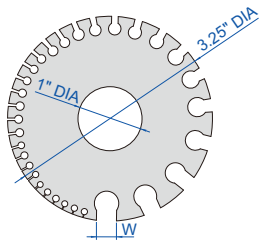
4842-1



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

Part No.	EDP No.	Accuracy
4842-1	816683	±0.5°

## AMERICAN STANDARD WIRE GAGE



4808

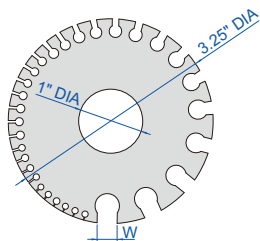
- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC50-57

Part No.	EDP No.	Range
4808	283574	0-36 (.3249\"-.0050\")

No.	W	No.	W	No.	W
0	.3249"	13	.0720"	26	.0159"
1	.2893"	14	.0641"	27	.0142"
2	.2576"	15	.0571"	28	.0126"
3	.2294"	16	.0508"	29	.0113"
4	.2043"	17	.0453"	30	.0100"
5	.1819"	18	.0403"	31	.0089"
6	.1620"	19	.0359"	32	.0080"
7	.1443"	20	.0320"	33	.0071"
8	.1285"	21	.0285"	34	.0063"
9	.1144"	22	.0253"	35	.0056"
10	.1019"	23	.0226"	36	.0050"
11	.0907"	24	.0201"		
12	.0808"	25	.0179"		

12

## U.S. STANDARD SHEET METAL GAGE



4809

- For gaging sheet metal, plate iron and steel
- Hardened to HRC50-57

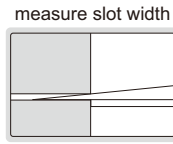
Part No.	EDP No.	Range
4809	283575	0-36 (.3125\"-.0070\")

No.	W	No.	W	No.	W
0	.3125"	13	.0938"	26	.0188"
1	.2813"	14	.0781"	27	.0172"
2	.2656"	15	.0703"	28	.0156"
3	.2500"	16	.0625"	29	.0141"
4	.2344"	17	.0563"	30	.0125"
5	.2188"	18	.0500"	31	.0109"
6	.2031"	19	.0438"	32	.0102"
7	.1875"	20	.0375"	33	.0094"
8	.1719"	21	.0344"	34	.0086"
9	.1563"	22	.0313"	35	.0078"
10	.1406"	23	.0281"	36	.0070"
11	.1250"	24	.0250"		
12	.1094"	25	.0219"		

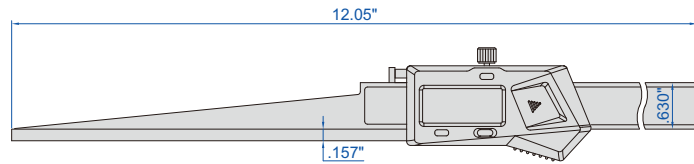
## ELECTRONIC TAPER SLOT GAGE



- Non waterproof
- Measuring opening, slot width
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. 7315-21 page 1, 7302-21 page 3)



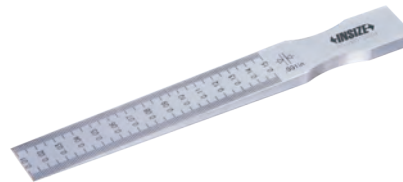
1160-10



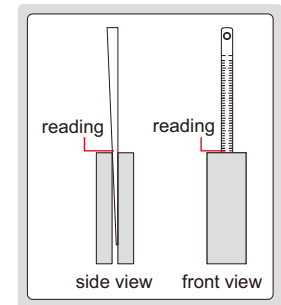
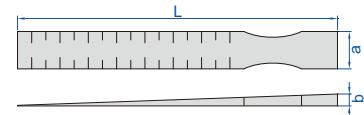
Part No.	EDP No.	Range	Accuracy
1160-10	877279	.01-.39"/0.2-10mm	±.001"

## TAPER SLOT GAGES

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



4630-1E



### Inch

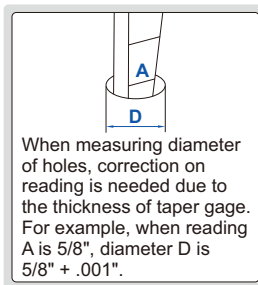
Part No.	EDP No.	Range	Graduation	Accuracy	L	a	b
4630-1E	283577	.01-.15"	.001"	±.003"	4.449"	.520"	.165"

### Metric

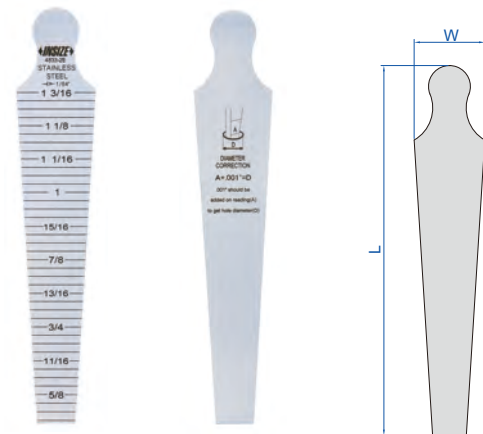
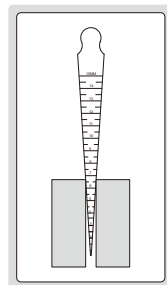
Part No.	EDP No.	Range	Graduation	Accuracy	L	a	b
4630-3	877359	0.4-6mm	0.05mm	±0.04mm	164mm	12.5mm	6.5mm
4630-1	283576	0.5-10mm	0.05mm	±0.07mm	220mm	10mm	10.5mm

## TAPER GAGES

measure diameter of hole



measure slot width



4833-2E

### Inch

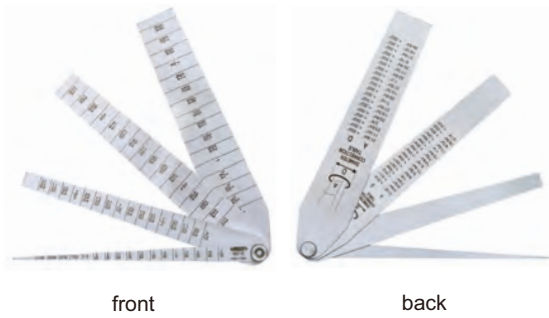
Part No.	EDP No.	Range	Graduation	Accuracy	L	W
4833-1E	877263	1/32~5/8"	1/64"	±.004"	5.748"	.669"
4833-2E	877364	5/8~1-3/16"	1/64"	±.004"	6.260"	1.197"
4833-3E	877365	1-3/16~1-3/4"	1/64"	±.004"	6.535"	1.787"

### Metric

Part No.	EDP No.	Range	Graduation	Accuracy	L	W
4833-1	285112	0.8-15mm	0.1mm	±0.05mm	146mm	17mm

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

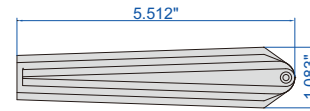
## TAPER GAGE SET



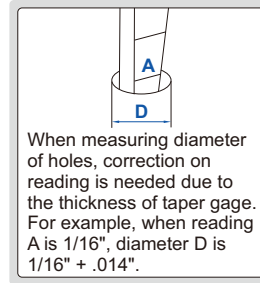
4837-1E

- Include 4 pcs (1/16~5/16", 21/64~9/16", 37/64~13/16", 53/64~1-1/16")
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

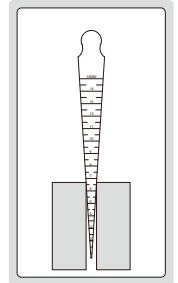
Part No.	EDP No.	Range	Graduation	Accuracy
4837-1E	877172	1/16~1-1/16"	1/64"	±.004"



measure diameter of hole



measure slot width



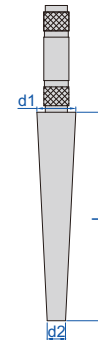
## TAPER BORE GAGES

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

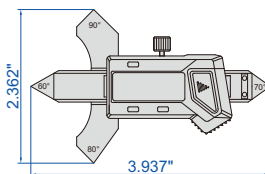


4852-E15

Part No.	EDP No.	Range	Graduation	Accuracy	L	d1	d2
4852-E15	877175	.6-1.2"	.005"	±.0025"	6.496"	1.220" DIA	.579" DIA
4852-E30	877176	1.2-1.8"	.005"	±.0025"	6.496"	1.811" DIA	1.165" DIA



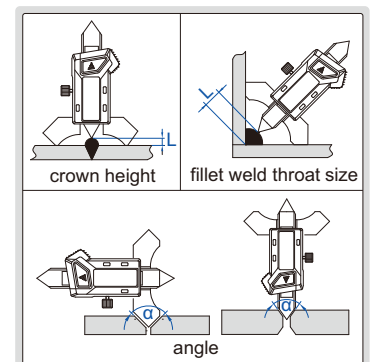
## ELECTRONIC WELDING GAGE



4831-20A

- No data output
- Non waterproof
- Buttons: zero, inch/mm, on/off
- Battery LR44
- Made of stainless steel

Part No.	EDP No.	Measurement	Range	Resolution	Accuracy
4831-20A	877170	crown height	0-.4"/0-7mm	.0005"/0.01mm	±.0012"
		fillet weld throat size	0-.8"/0-20mm	.0005"/0.01mm	±.0039"
		angle	60°, 70°, 80°, 90°	—	±1°



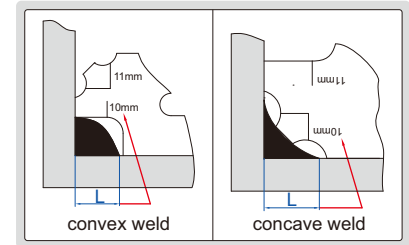
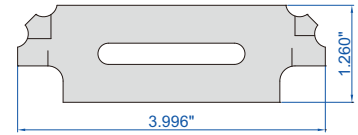
## FILLET WELDING GAGES

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



4836-2

4836-1



convex weld

concave weld

Part No.	EDP No.	Size	Accuracy
4836-2	877171	1/8" (3.2mm), 3/16" (4.8mm), 1/4" (6.4mm), 5/16" (7.9mm), 3/8" (9.5mm), 7/16" (11.1mm), 1/2" (12.7mm), 5/8" (15.9mm), 3/4" (19.1mm), 7/8" (22.2mm), 1" (25.4mm)	±.02" (0.5mm)
4836-1	877366	3mm, 4mm, 5mm, 6mm, 8mm, 9mm, 10mm, 11mm, 12mm, 14mm, 16mm, 19mm, 22mm, 25mm	±0.5mm

## WELDING GAGE

12

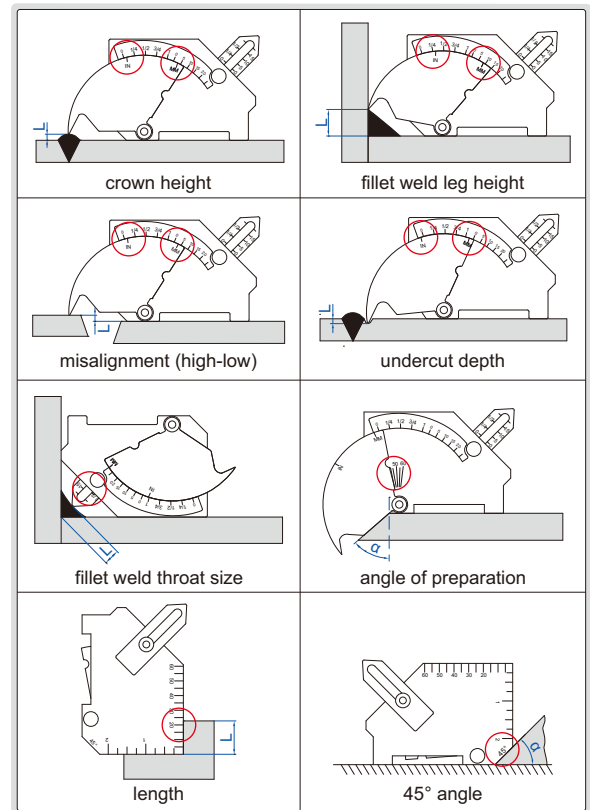
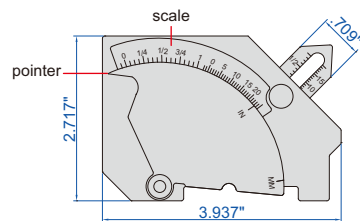


front

4835-1

back

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



crown height

fillet weld leg height

misalignment (high-low)

undercut depth

fillet weld throat size

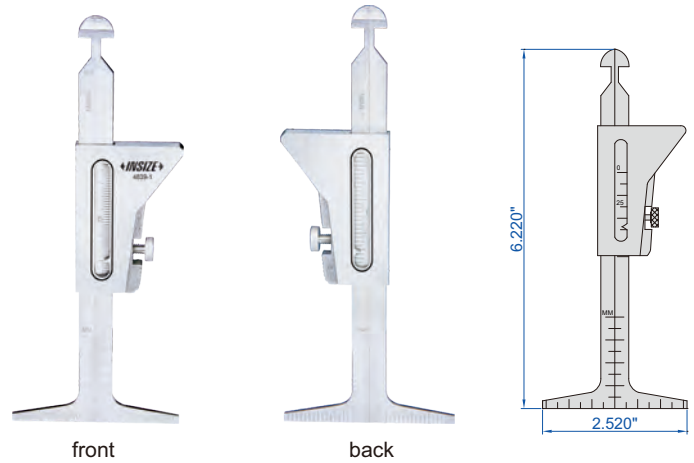
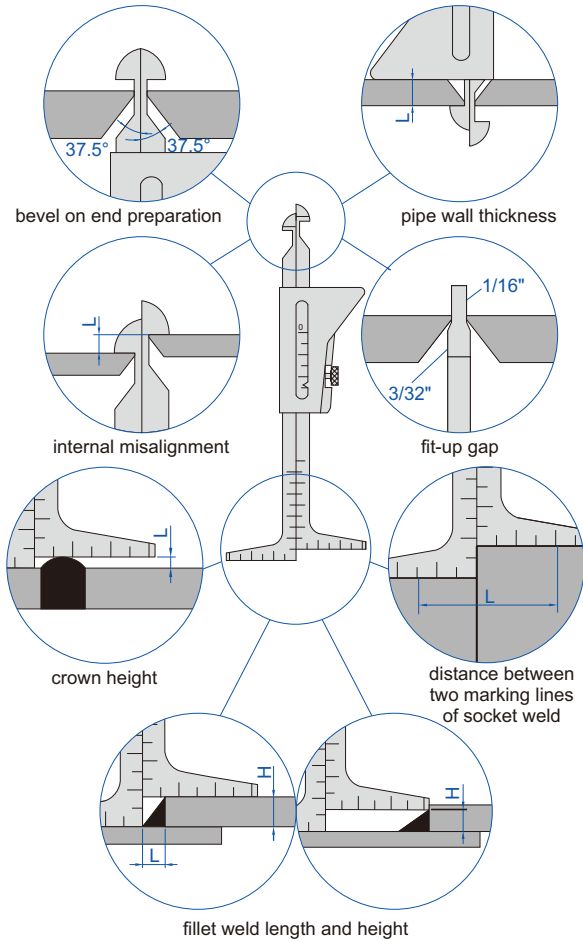
angle of preparation

length

45° angle

Part No.	EDP No.	Measurement	Range	Graduation	Accuracy
4835-1	877031	crown height	0-1" (0-25mm)	1/16" (1mm)	±.02"
		fillet weld leg height	0-1" (0-25mm)	1/16" (1mm)	±.02"
		misalignment (high-low)	0-1" (0-25mm)	1/16" (1mm)	±.02"
		undercut depth	0-1/8" (0-2mm)	1/16" (1mm)	±.02"
		fillet weld throat size	0-3/4" (0-20mm)	1/16" (1mm)	±.02"
		angle of preparation	0-60°	5°	±1°
		length	0-2" (0-60mm)	1/16" (1mm)	±.02"
		45° angle	—	—	±1°

## PIPE WELDING GAGE



4839-1

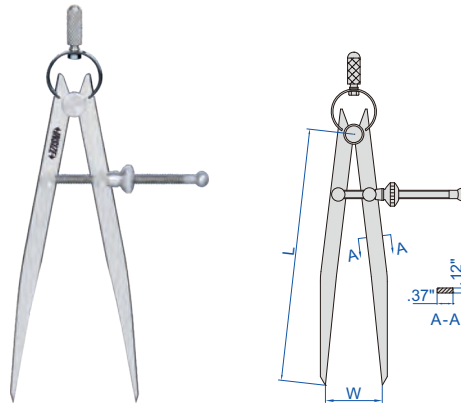
- Made of stainless steel

Part No.	EDP No.	Measurement	Range	Graduation	Accuracy
4839-1	877032	bevel on end preparation	37.5°	—	±1°
		pipe wall thickness	0~1-3/4" (0-45mm)	1/16" (1mm)	±.02"
		internal misalignment	0~1-3/8" (0-35mm)	1/32" (1mm)	±.02"
		fit-up gap	1/16", 3/32"	—	±.004"
		crown height	0~1-3/8" (0-35mm)	1/32" (1mm)	±.02"
		distance between two marking lines of socket weld	0~2-3/8" (0-60mm)	1/16" (1mm)	±.02"
		fillet weld length	0~1-1/4" (0-30mm)	1/16" (1mm)	±.02"
		fillet weld height	0~1-3/8" (0-35mm)	1/32" (1mm)	±.02"

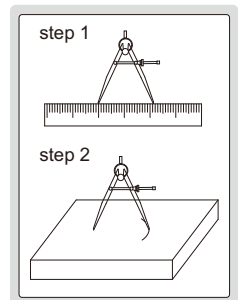
## SPRING DIVIDERS

- Made of carbon steel
- Hardened points

Part No.	EDP No.	Size (L)	Range (W)
7260-150	283897	6"	0-5.91"
7260-200	816417	8"	0-8.27"
7260-250	816418	10"	0-10.24"
7260-300	816419	12"	0-12.60"

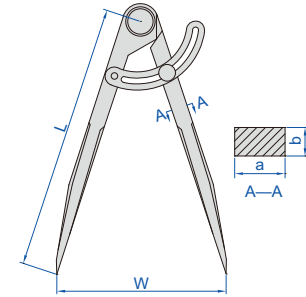
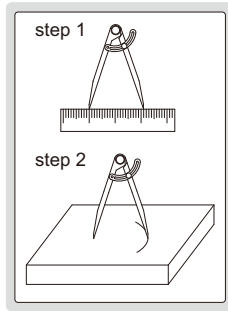


7260-150



## DIVIDERS

- Made of carbon steel
- Hardened points



7247-150

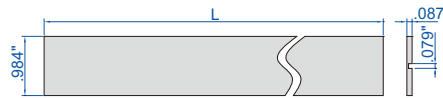
Part No.	EDP No.	Size (L)	Range (W)	a	b
7247-150	283917	6"	0-5.51"	.33"	.28"
7247-200	283919	8"	0-7.48"	.39"	.28"
7247-300	283921	12"	0-11.42"	.47"	.28"

## RIGID RULE



7113-300A

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



groove on the back

Part No.	EDP No.	Range	Graduation		Accuracy	L
			front	back		
7113-300A	283606	12"/300mm	1/32" and 0.5mm	1/64" and 1mm	±.006"	12"

## RIGID RULES

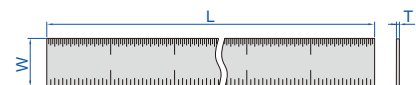
- 4R graduation
- Made of stainless steel
- Non-glare surface



front



back



7126-6

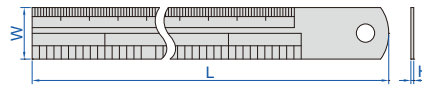
Part No.	EDP No.	Range (L)	Graduation	Accuracy	W	T
7126-6	877203	6"	1/64" and 1/32" on front face, 1/16" and 1/8" on back face	±.007"	.748"	.039"
7126-12	877201	12"	1/64" and 1/32" on front face, 1/16" and 1/8" on back face	±.010"	.984"	.039"
7126-24	877202	24"	1/64" and 1/32" on front face, 1/16" and 1/8" on back face	±.017"	1.102"	.047"

## STEEL RULES



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

7110-300



Individual (1 pc per package)

Part No.	EDP No.	Range	Accuracy	L	W	H	Remark
7110-150	283596	6"/150mm	±.007"	6.693"	.709"	.039"	graduation on front and back
7110-200	283597	8"/200mm	±.007"	8.661"	.709"	.039"	graduation on front and back
7110-300	283598	12"/300mm	±.010"	12.992"	.984"	.039"	graduation on front and back
7110-3001	816384	12"/300mm	±.010"	12.795"	1.181"	.039"	graduation on front and back
7110-500	283599	20"/500mm	±.010"	20.866"	1.181"	.047"	graduation on front and back
7110-600	283600	24"/600mm	±.017"	24.803"	1.181"	.047"	graduation on front and back
7110-1000	283601	40"/1000mm	±.017"	40.945"	1.260"	.059"	graduation on front and back
7110-1200	283603	48"/1200mm	±.025"	48.819"	1.378"	.071"	graduation on front
7110-1500	283604	60"/1500mm	±.025"	61.024"	1.496"	.071"	graduation on front
7110-2000	283605	80"/2000mm	±.031"	81.299"	1.575"	.079"	graduation on front

## COMBINATION SQUARE SETS

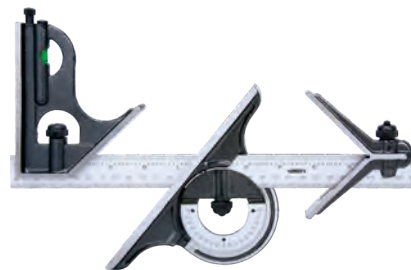
- Center head (made of cast iron):  
To locate center of cylinder with diameter (d): 1.181" DIA-3.937" DIA  
Accuracy: ±.006"
- Protractor head (made of cast iron):  
set the blade at desired angle to an edge of a workpiece, and can be used to measure angles  
range: 0-180°,  
accuracy: ±20min.
- Square 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)
- Optional accessory: rigid rule (part no. 7113)



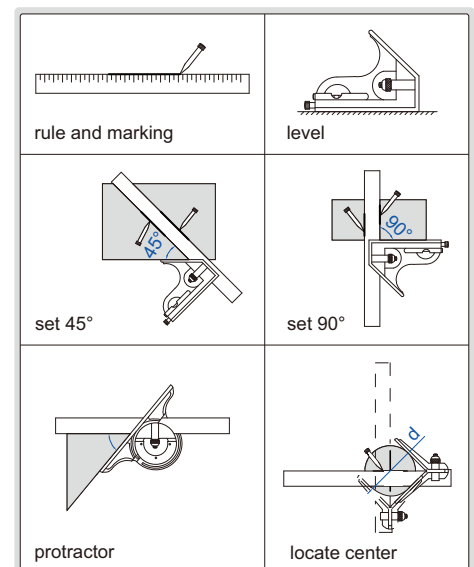
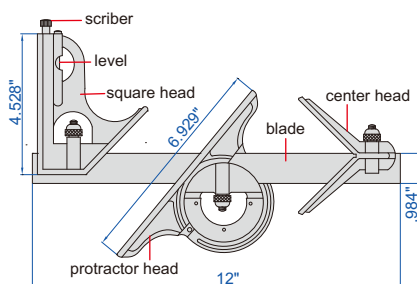
2278-2



2278-3E



2278-180



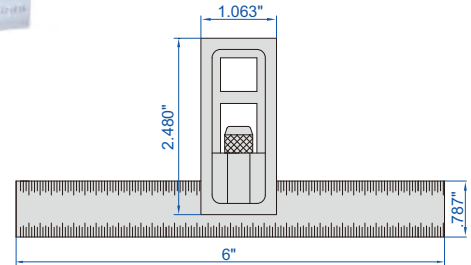
Part No.	EDP No.	Remark	Blade range	Blade graduation
2278-2	877294	2-piece set	12"/300mm	1/32" and 0.5mm on front face, 1/64" and 1mm on back face
2278-2E	877154	2-piece set	12"	1/8" and 1/16" on front face, 1/32" and 1/64" on back face
2278-3E	877155	3-piece set	12"	1/8" and 1/16" on front face, 1/32" and 1/64" on back face
2278-180	816324	4-piece set	12"/300mm	1/32" and 0.5mm on front face, 1/64" and 1mm on back face
2278-180E	283344	4-piece set	12"	1/8" and 1/16" on front face, 1/32" and 1/64" on back face

## DOUBLE SQUARE



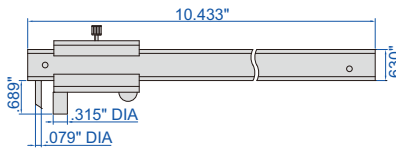
2277-2

- Accuracy:  $\pm 2$ min for  $90^\circ$  square
- Hardened and chrome plated blade



Part No.	EDP No.	Blade Length	Graduation
2277-2	283348	6"	1/8", 1/16", 1/32", 1/64"

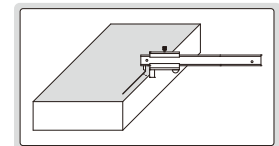
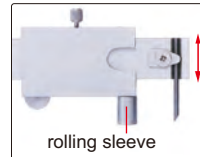
## SCRIBING CALIPER



7202-200A

- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip
- Optional accessory: carbide scriber tip (part no. **SP-SCRIBER-7202**)

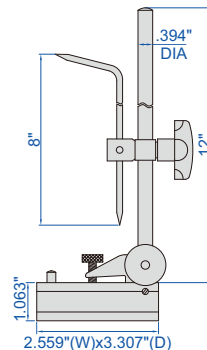
the position of scriber tip can be adjusted



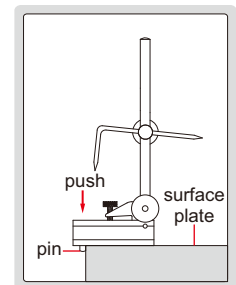
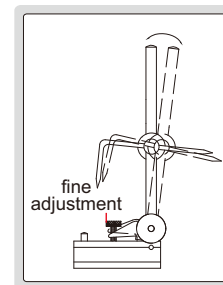
Part No.	EDP No.	Range	Graduation	Accuracy
7202-200A	283948	0-8"/0-200mm	1/128", 0.1mm	$\pm .004$ "

## HEIGHT SCRIBER

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



6990-300A

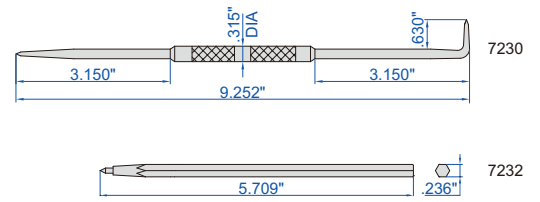


Part No.	EDP No.
6990-300A	283971





## SCRIBERS



- 7230 is nickel plated, 7232 is zinc-plated

Part No.	EDP No.	Tip
7230	283972	hardened tips
7232	283974	carbide tip

## 2-PIECE MEASURING TOOL SETS

- Includes:
  - Electronic caliper, range 0-6"/0-150mm, resolution .0005"/0.01mm (part no. **1108-150**, EDP No. 817000)
  - Electronic outside micrometer, range 0-1"/0-25mm, resolution .00005"/0.001mm (part no. **3109-25E**, EDP No. 816500)



5022-E

### Inch

Part No.	EDP No.
5022-E	877370

### Metric

Part No.	EDP No.
5022	816345

## 2-PIECE MEASURING TOOL SET

- Includes:
  - Dial test indicator, range .03", graduation .0005" (part no. **2380-35**, EDP No. 816170)
  - Magnetic stand



5023-E

Part No.	EDP No.
5023-E	284501

## 2-PIECE MEASURING TOOL SET

■ Includes:

- 1) Dial indicator, range 1", graduation .001" (part no. **2307-1**, EDP No. 816158)
- 2) Magnetic stand (part no. **6201-60**, EDP No. 816252)



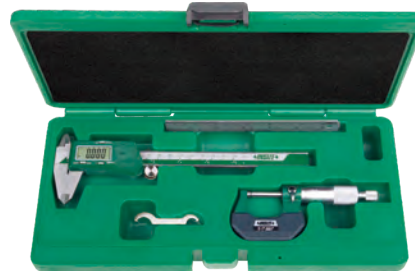
5002-4E

Part No.	EDP No.
5002-4E	284505

## 3-PIECE MEASURING TOOL SET

■ Includes:

- 1) Electronic caliper, range 0-6"/0-150mm, resolution .0005"/0.01mm (part no. **1108-150**, EDP No. 817000)
- 2) Outside micrometer, range 0-1", graduation .0001" (part no. **3202-1**)
- 3) Steel rule, 6"/150mm (part no. **7110-150**, EDP No. 283596)



5003-1E

Part No.	EDP No.
5003-1E	284514

## 3-PIECE MEASURING TOOL SET

■ Includes:

- 1) Dial caliper, range 0-6", graduation .001" (part no. **1311-6**, EDP No. 816028)
- 2) Outside micrometer, range 0-1", graduation .0001" (part no. **3202-1**)
- 3) Steel rule, 6"/150mm (part no. **7110-150**, EDP No. 283596)

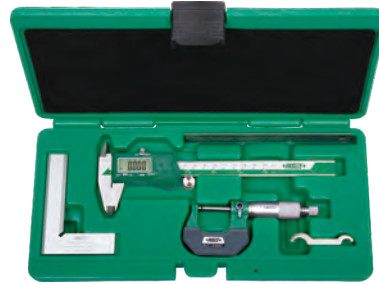


5003-1

Part No.	EDP No.
5003-1	284512

## 4-PIECE MEASURING TOOL SET

- Includes:
  - 1) Electronic caliper, range 0-6"/0-150mm, resolution .0005"/0.01mm (part no. **1108-150**, EDP No. 817000)
  - 2) Outside micrometer, range 0-1", graduation .0001", (part no. **3202-1**)
  - 3) 90° beveled edge square, 3.937x2.756", grade 0 (part no. **4790-1000**, EDP No. 283356)
  - 4) Steel rule, 6"/150mm (part no. **7110-150**, EDP No. 283596)



5042-E

Part No.	EDP No.
5042-E	877371

## 5-PIECE MEASURING TOOL SET

- Includes:
  - 1) Electronic caliper, range 0-6"/0-150mm, resolution .0005"/0.01mm, (part no. **1108-150**, EDP No. 817000)
  - 2) Outside micrometer, range 0-1", graduation .0001" (part no. **3203-1A**, EDP No. 816564)
  - 3) Dial indicator, range 1", graduation .001" (part no. **2307-1**, EDP No. 816158)
  - 4) Magnetic stand (part no. **6201-60**, EDP No. 816252)
  - 5) Micrometer stand (part no. **6300**, EDP No. 282455)



5051-E

Part No.	EDP No.
5051-E	877372

## 5-PIECE MEASURING TOOL SET

- Includes:
  - 1) Electronic caliper, range 0-6"/0-150mm, resolution .0005"/0.01mm (part no. **1108-150**, EDP No. 817000)
  - 2) Electronic outside micrometer, range 0-1"/0-25mm, resolution .00005"/0.001mm (part no. **3109-25E**, EDP No. 816500)
  - 3) Electronic indicator, range .5"/12.7mm, resolution .0005"/0.01mm (part no. **2112-10E**, EDP No. 877010)
  - 4) Magnetic stand (part no. **6201-60**, EDP No. 816252)
  - 5) Micrometer stand (part no. **6300**, EDP No. 282455)



5052-E

Part No.	EDP No.
5052-E	816350

## 6-PIECE MEASURING TOOL SET

■ Includes:

- 1) Electronic caliper, range 0-6"/0-150mm resolution .0005"/0.01mm (part no. **1108-150**, EDP No. 817000)
- 2) Outside micrometer, range 0-1", graduation .0001" (part no. **3202-1**)
- 3) 90° beveled edge square, 3.937x2.756", grade 00 (part no. **4790-0100**, EDP No. 816304)
- 4) Straight edge, 3.937" (part no. **4700-100**, EDP No. 283471)
- 5) Spring divider, 6"/150mm (part no. **7260-150**, EDP No. 283897)
- 6) Steel rule, 8"/200mm (part no. **7110-200**, EDP No. 283597)

Part No.	EDP No.
5062-E	877373



5062-E

## 9-PIECE MEASURING TOOL SET

■ Includes:

- 1) Electronic caliper, range 0-6"/0-150mm, resolution .0005"/0.01mm (part no. **1108-150**, EDP No. 817000)
- 2) Outside micrometer, range 0-1", graduation .0001" (part no. **3202-1**)
- 3) Protractor, range 0-180°, graduation 1° (part no. **4799-180**, EDP No. 283329)
- 4) Pitch gauge, range 4-42TPI, 30 pcs, unified 60° thread (part no. **4820-230**, EDP No. 283552)
- 5) Radius gauge, range 1/32"-1/4" (part no. **4801-15E**, EDP No. 283567)
- 6) Feeler gauge, range .0015-.035", 31 pcs (part no. **4608-31**, EDP No. 283543)
- 7) 90° beveled edge square, 3.937x2.756", grade 0 (part no. **4790-1000**, EDP No. 283356)
- 8) Scriber (part no. **7230**, EDP No. 283972)
- 9) Steel rule, 6"/150mm (part no. **7110-150**, EDP No. 283596)

Part No.	EDP No.
5091-E	877374



5091-E

## 13-PIECE MEASURING TOOL SET

■ Includes:

- 1) Electronic caliper, range 0-6"/0-150mm, resolution .0005"/0.01mm (part no. **1108-150**, EDP No. 817000)
- 2) Outside micrometer, range 0-1", graduation .0001" (part no. **3202-1**)
- 3) Dial indicator, range 1", graduation .001" (part no. **2307-1**, EDP No. 816158)
- 4) Magnetic stand (part no. **6201-60**, EDP No. 816252)
- 5) Protractor, range 0-180°, graduation 1° (part no. **4799-180**, EDP No. 283329)
- 6) Pitch gauge, range 4-42TPI, 30 pcs, unified 60° thread (part no. **4820-230**, EDP No. 283552)
- 7) Radius gauge, range 1/32"-1/4" (part no. **4801-15E**, EDP No. 283567)
- 8) Feeler gauge, range .0015-.035", 31 pcs (part no. **4608-31**, EDP No. 283543)
- 9) 90° beveled edge square, 3.937x2.756", grade 0 (part no. **4790-1000**, EDP No. 283356)
- 10) Scriber (part no. **7230**, EDP No. 283972)
- 11) Steel rule, 6"/150mm (part no. **7110-150**, EDP No. 283596)
- 12) Depth base attachment (part no. **6140**, EDP No. 816046)
- 13) Zero setting bar for depth base attachment

Part No.	EDP No.
5013-E	816407



5013-E

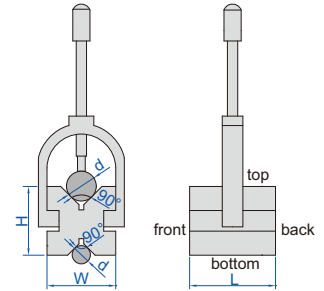
## V-BLOCK SETS



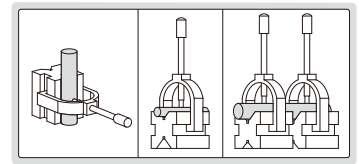
6896-10



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 (except 6896-10)



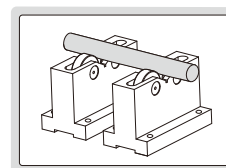
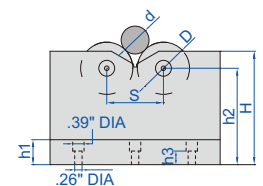
Part No.	EDP No.	Size (LxWxH)	Range of shafts (d)	Parallelism of both V grooves to top and bottom sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
6896-10	877407	1.0x.8x.8"	.12-.79" DIA	.00012"	.00012"	.00012"
6896-11	889455	2.0x1.6x1.6"	.20-1.18" DIA	.00020"	.00020"	.00020"
6896-12	889456	3.1x2.5x2.5"	.28-2.48" DIA	.00020"	.00020"	.00020"
6896-13	889457	3.9x3.1x3.1"	.28-3.15" DIA	.00020"	.00020"	.00020"

## ROLLER BEARING V-BLOCK SETS



6888-1

- Runout accuracy .00020"
- Parallelism of bearings to bottom .00047"
- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces



Part No.	W1	W2	h1	h2	h3	L1	L2	S
6888-1	.87"	1.73"	.79"	3.35"	.47"	3.94"	-	2.36"
6888-2	1.57"	2.36"	.87"	3.35"	.47"	3.94"	-	1.97"
6888-3	2.36"	3.15"	1.18"	4.88"	.79"	7.09"	3.54"	4.72"

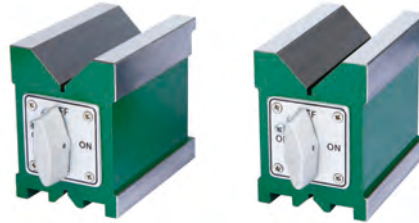
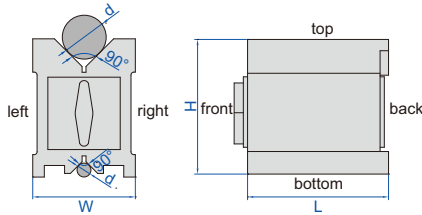
Part No.	EDP No.	Size (LxWxH)	Part No. of bearings	Diameter of bearings (D)	Range of shafts (d)	Load capacity
6888-1	877034	5.9x2.4x3.9"	6303 ZZ	1.65" DIA	.98-2.76" DIA	1100lb
6888-2	877198	5.9x3.1x3.9"	16004 ZZ	1.85" DIA	.20-2.17" DIA	2200lb
6888-3	877199	9.1x3.9x5.9"	6306 ZZ	2.83" DIA	2.76-7.87" DIA	2200lb

## MAGNETIC V-BLOCK (PROFESSIONAL TYPE)

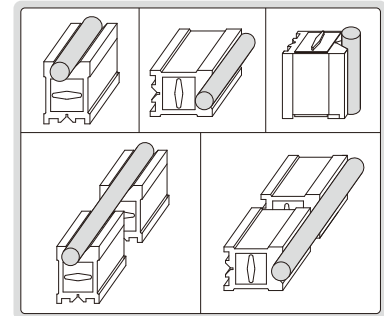
HARDENED SURFACES

HIGH PRECISION

STRONG MAGNETIC FORCE



6889-1



- Hardened, high accuracy, strong magnetic force, for grinding, light milling, drilling and inspection of round and square jobs
- All working surfaces are hardened to HRC60±2
- Magnetic force on top, bottom and two V grooves
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Suitable for cast iron surface plates and granite surface plates

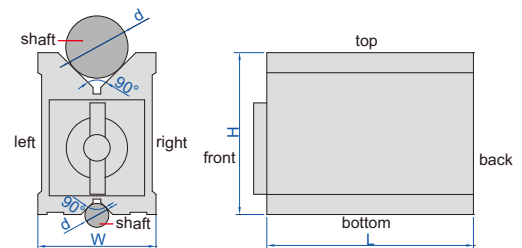
Part No.	EDP No.	Size (LxWxH)	Range of shafts (d)	Magnetic force	Parallelism of V grooves to top, bottom, left, right sides	Squareness of V grooves to back side	Height difference of a matched pair
6889-1	877036	3.0x2.2x3.0"	.20-1.57" DIA	187lbf	.00020"	.00020"	.00020"

## MAGNETIC V-BLOCKS (ECONOMIC TYPE)

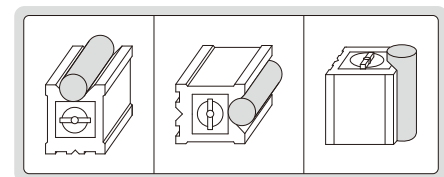
13



6801-1201



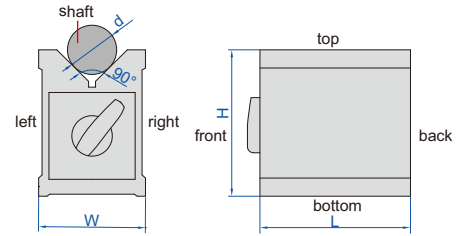
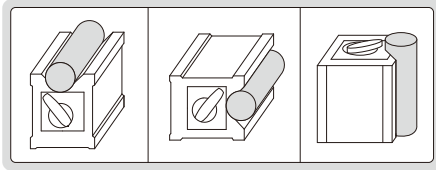
- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surface, otherwise the magnetic force will be reduced



Part No.	EDP No.	Size (LxWxH)	Range of shafts (d)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side
6801-1201	877035	3.1x2.8x3.7"	.24-2.64" DIA	141lbf	.00040"	.00040"
6801-1202	283754	3.9x2.8x3.7"	.24-2.64" DIA	176lbf	.00040"	.00040"
6801-1203	283755	4.7x2.8x3.7"	.24-2.64" DIA	211lbf	.00040"	.00040"

## MAGNETIC V-BLOCK (ECONOMIC TYPE)

- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surface, otherwise the magnetic force will be reduced

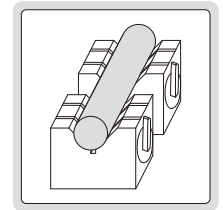
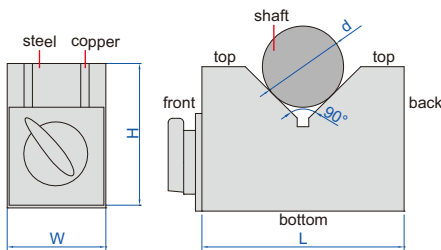


6890-702

Part No.	Part No.	Size (LxWxH)	Range of shafts (d)	Magnetic force	Parallelism of V groove to top, bottom, left and right sides	Squareness of V groove to back side
6890-702	283748	2.8x2.4x2.9"	.24-1.73" DIA	123lbf	.00040"	.00040"

**ATTENTION:  
NON HARDENED**

## MAGNETIC V-BLOCK SETS



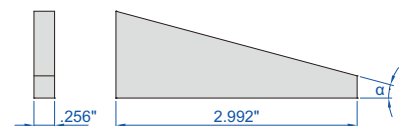
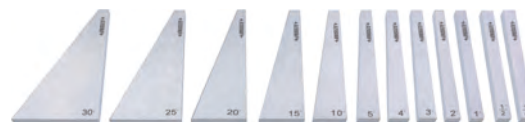
6891-1

- Hold cylindrical workpieces for inspection, not suitable for machining due to low magnetic force
- Two V-blocks per set
- Hardness HRB70

Part No.	Part No.	Size (LxWxH)	Range of shafts (d)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
6891-1	283758	2.8x1.6x2.0"	.24-1.81" DIA	33lbf	.0004"	.0004"
6891-3	283760	5.9x2.0x3.9"	.24-4.92" DIA	46lbf	.0004"	.0004"

## ANGLE PLATE SET

- For angle set-up in tooling, production and inspection
- Made of tool steel
- Hardness HRC55



4003-12

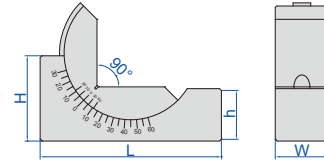
Part No.	EDP No.	Angle plates included	Angle $\alpha$	Accuracy
4003-12	877167	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±9 seconds

## ADJUSTABLE ANGLE BLOCKS

- Made of hardened tool steel
- With locking screw
- Accuracy of angle: 10 minutes



6535-30

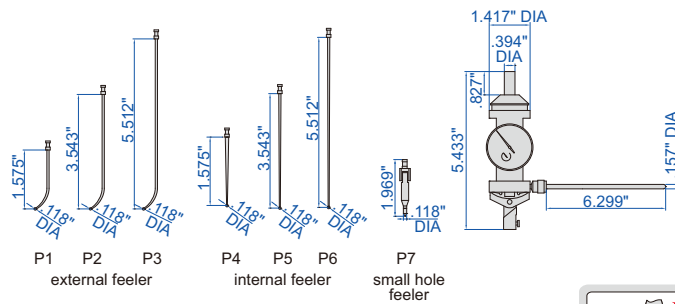


Part No.	EDP No.	Size (LxWxH)	h	Adjustable angle	Graduation of angle
6535-25	877195	3.0x1.0x1.4"	.98"	30°~0°~60°	10 minutes
6535-30	877196	4.0x1.2x1.9"	1.18"	30°~0°~60°	10 minutes

## CENTERING INDICATOR

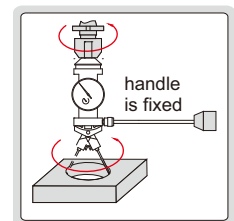


2385-3



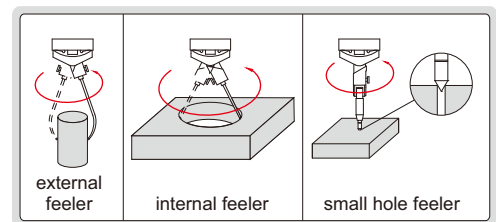
13

- Provides quick and accurate centering in boring and milling set-up
- Maximum speed is recommended not to exceed 800RPM



Feeler	Measuring diameter	Accuracy
P1	0-2.362" DIA	.00060"
P2	0-6.299" DIA	.00080"
P3	0-9.843" DIA	.00120"
P4	.126-3.150" DIA	.00060"
P5	.126-7.087" DIA	.00076"
P6	.126-11.024" DIA	.00120"
P7	0- .110" DIA	.00060"

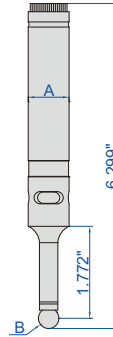
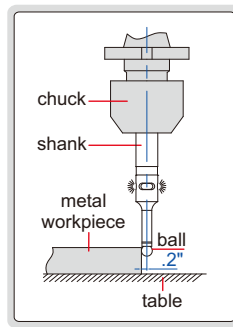
Part No.	EDP No.
2385-3	284450



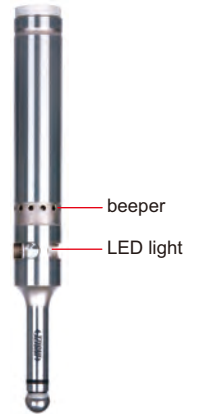


## ELECTRONIC EDGE FINDERS

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



6566-2E

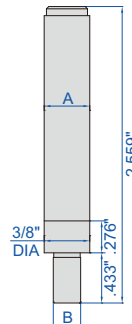


6566-3E

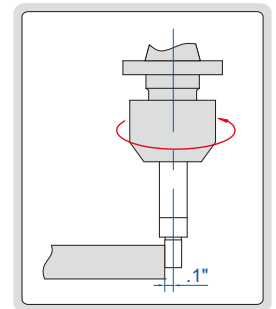
Part No.	EDP No.	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6566-2E	816381	3/4" DIA	.4" DIA	.0002"	without	23AE, 12Vx1 pc
6566-3E	816382	3/4" DIA	.4" DIA	.0002"	with	23AE, 12Vx1 pc

## EDGE FINDER

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



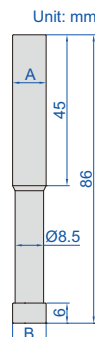
6567-1E



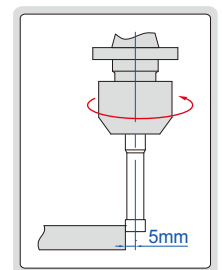
Part No.	EDP No.	Shank (A)	Contact point (B)	Accuracy
6567-1E	816383	3/8" DIA	.2" DIA	.0003"

## METRIC CERAMIC EDGE FINDER

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

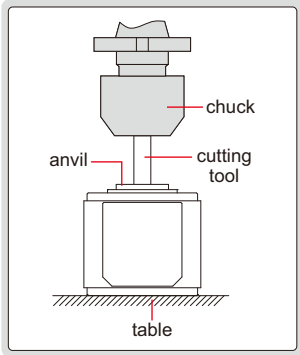


6568-1



Part No.	EDP No.	Shank (A)	Contact point (B)	Accuracy
6568-1	824500	Ø10mm	Ø10mm	8µm

**ELECTRONIC ZERO SETTER**



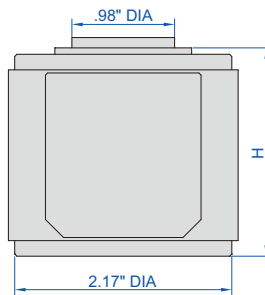
**6557-50E**



automatic backlight at zero



- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Buttons: on/off, inch/mm, zero
- CR2032 battery
- Automatic power off
- Magnetic base
- Automatic backlight at zero

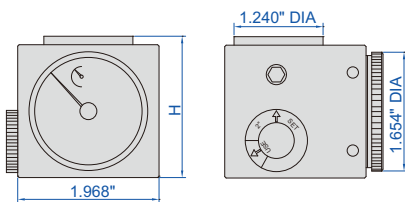


Part No.	EDP No.	Height (H)	Anvil stroke	Accuracy *	Test force	Repeatability
6557-50E	877396	2"	.1"	±.0004"/10µm	2.25lbf (at 2")	.00008"

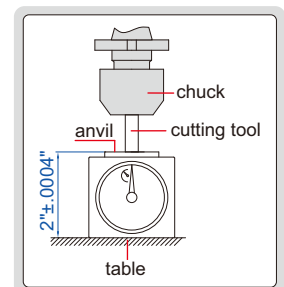
\* The accuracy is ensured within .4" DIA of the center

**13**

**ZERO SETTER**



**2397-25A**



- Magnetic base

Part No.	EDP No.	Height (H)	Accuracy	Graduation	Test force
2397-25A	284447	2"	±.0004"	.0005"	2lbf (at 2")



ABSOLUTE LEVEL

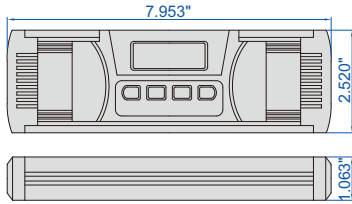
BACKLIGHT

BUZZER ALARM AT 0° AND 90°

WORKING TEMPERATURE 23°F ~ 122°F

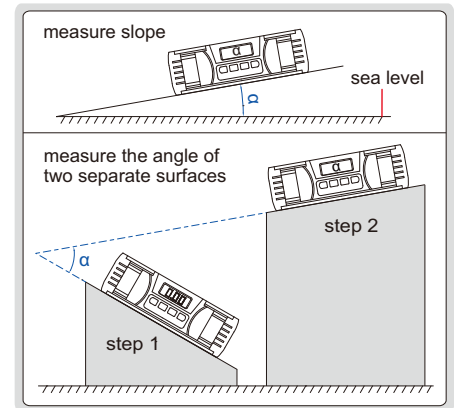
## ELECTRONIC LEVEL AND PROTRACTOR

IP67



2175-360

- IP67 dust/waterproof
- Used as level and slope meter
- Aluminum frame, shock absorbing rubber end caps
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, backlight/buzzer alarm, absolute and incremental measurement, unit (°, %, mm/m), HOLD (keep the reading)
- Three AAA batteries
- Automatic power off



Part No.	EDP No.	Range	Resolution	Accuracy
2175-360	877293	0-360° (90°x4)	0.05° (=0.00625in/ft)	at 0°: ±0.05°; at others: ±0.1°

ABSOLUTE LEVEL

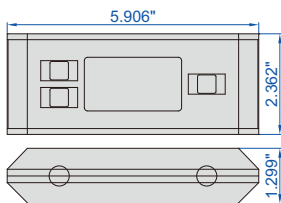
BACKLIGHT

BUZZER ALARM AT 0° AND 90°

WORKING TEMPERATURE 23°F ~ 122°F

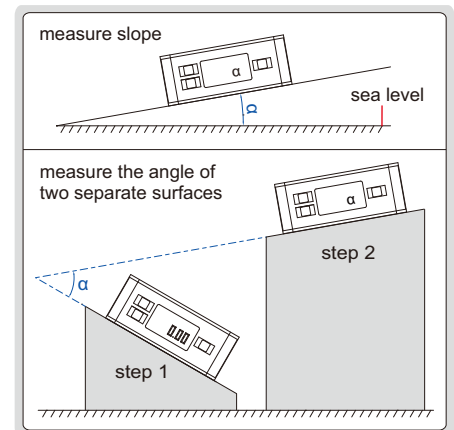
## ELECTRONIC LEVEL AND SLOPE METER

IP54



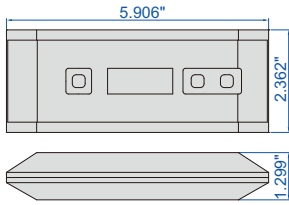
2179-360

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



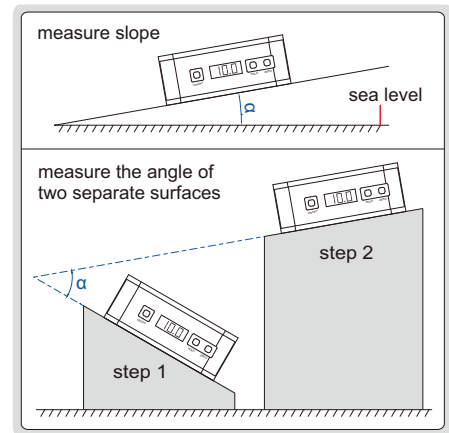
Part No.	EDP No.	Range	Resolution	Accuracy
2179-360	877108	0-360° (90°x4)	0.05° (=0.00625in/ft)	at 0° and 90°: ±0.1°; at others: ±0.2°

## ELECTRONIC LEVEL AND SLOPE METER



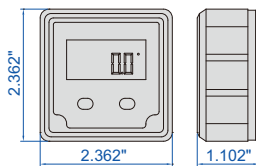
2173-360

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



Part No.	EDP No.	Range	Resolution	Accuracy
2173-360	816340	0-360° (90°x4)	0.1° (= 1.745 mm/m)	at 0° and 90°: ±0.1°; others: ±0.2°

## ELECTRONIC LEVEL AND SLOPE METER



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 seconds 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

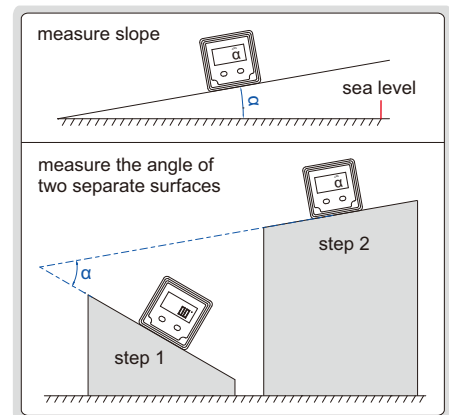
WORKING TEMPERATURE  
23°F ~ 122°F

DISPLAY FLIPS OVER WHEN  
THE BOTTOM FACES UP

BACKLIGHT

ABSOLUTE  
LEVEL

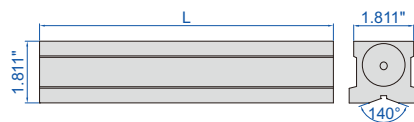
MAGNETIC  
BOTTOM



Part No.	EDP No.	Range	Resolution	Accuracy
2170-1	816396	4x90°	0.1° (=0.021in/ft)	at 0° and 90°: ±0.1°; at others: ±0.2°

## BLOCK LEVELS

- V-groove on bottom for shafts (shafts diameter .59~2.68")
- With transverse vial



4901-8

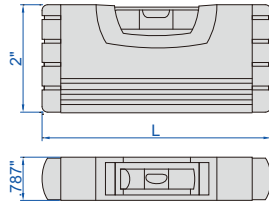
Part No.	EDP No.	Sensitivity	Length (L)
4901-6	816326	.00024in/ft (=0.001°)	6"
4901-8	816328	.00024in/ft (=0.001°)	8"
4901-12	816330	.00024in/ft (=0.001°)	12"

MAGNETIC BASE

LIFETIME WARRANTY VIALS

### HANDY LEVEL

magnetic base surface



4912-100

packaging



- Shockproof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: 5°F~131°F

Part No.	EDP No.	Size (L)	Accuracy
4912-100	877180	4"	.006in/ft

MAGNETIC BASE

LIFETIME WARRANTY VIALS

### CAST ALUMINUM LEVEL

magnetic bottom surface (milled)

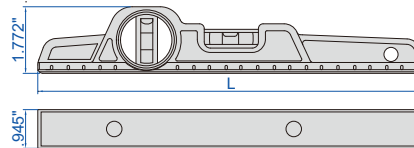


4913-250

packaging



- Shockproof horizontal and vertical vials
- Magnetic base
- Working temperature: 5°F~131°F
- Cast aluminum body

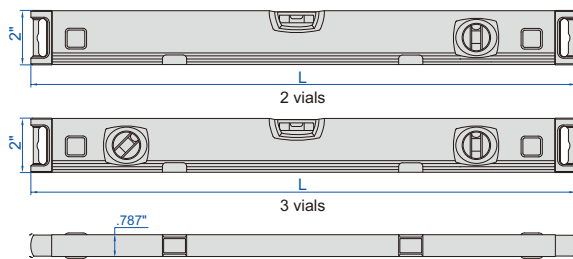


Part No.	EDP No.	Size (L)	Accuracy
4913-250	877182	10"	.006in/ft

MAGNETIC BASE

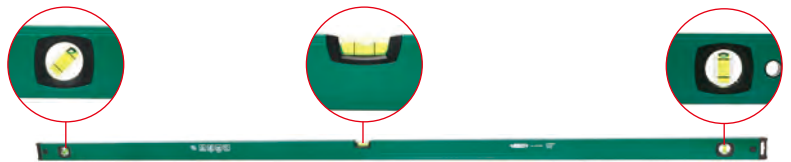
LIFETIME WARRANTY VIALS

### ALUMINUM LEVELS



4914-600

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: 5°F~131°F



4914-2000

magnetic bottom surface (milled)

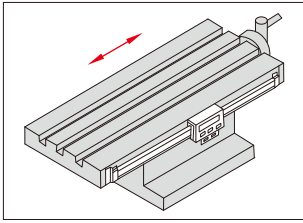


Part No.	EDP No.	Size (L)	Accuracy	Number of vials
4914-300	877369	12"	.006in/ft	2
4914-600	877185	24"	.006in/ft	2
4914-800	877186	32"	.006in/ft	2
4914-1000	877183	40"	.006in/ft	2
4914-1200	877184	48"	.006in/ft	2
4914-2000	877368	80"	.006in/ft	3

## ELECTRONIC HORIZONTAL SCALES



example of application

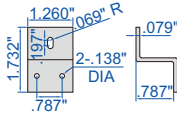


7101-300A



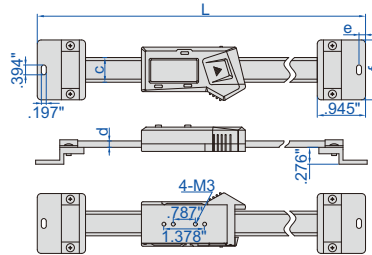
7101-400A

bracket (included)

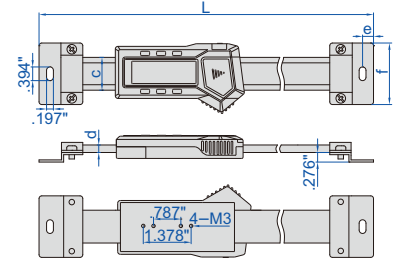


- Resolution .0005"/0.01mm
- Buttons type A: on/off, zero, inch/mm, type B: on/off, zero, inch/mm, ABS, data preset
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back

type A



type B

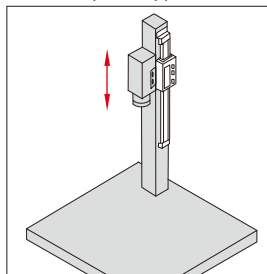


Part No.	EDP No.	Range	Type	Accuracy	L	c	d	e	f	Data output cable (optional)
7101-100A	284454	4"/100mm	A	±.0010"	8.465"	.630"	.157"	.236"	1.417"	7315-21 page 1, 7302-21 page 3, 7305-21
7101-200A	284456	8"/200mm	A	±.0015"	12.402"	.630"	.157"	.236"	1.417"	7315-21 page 1, 7302-21 page 3, 7305-21
7101-300A	284457	12"/300mm	A	±.0015"	17.520"	.630"	.157"	.236"	1.417"	7315-21 page 1, 7302-21 page 3, 7305-21
7101-400A	284458	16"/400mm	B	±.0020"	23.228"	.945"	.217"	.315"	1.772"	7315-22, 7302-22 page 3, 7305-22
7101-800A	284462	32"/800mm	B	±.0040"	38.976"	.945"	.217"	.315"	1.772"	7315-22, 7302-22 page 3, 7305-22
7101-1000A	877200	40"/1000mm	B	±.0040"	48.819"	1.220"	.413"	.394"	2.362"	7315-22, 7302-22 page 3, 7305-22

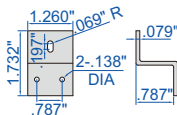
## ELECTRONIC VERTICAL SCALE



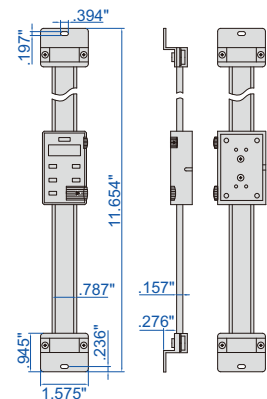
example of application



bracket (included)



7102-150



- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, ABS/INC, data hold, TOL, set
- Battery LR44
- Made of stainless steel
- Data output
- Supplied with bracket to be mounted on the back
- Optional accessory: wireless transmitter (part no. 7315-1150), data output cable (part no. 7302-SPC7, keyboard format), data output cable (part no. 7305-1150, serial port format)

Part No.	EDP No.	Range	Accuracy
7102-150	284469	6"/150mm	±.0015"

BUILT-IN SOFTWARE  
WITHOUT COMPUTER

MEASUREMENT

TAKE  
PICTURES

## DIGITAL MEASURING MICROSCOPES



0.5X camera adapter  
(included)



1X auxiliary objective  
(included)



calibration plate  
(included)



16G USB flash disk  
(included)

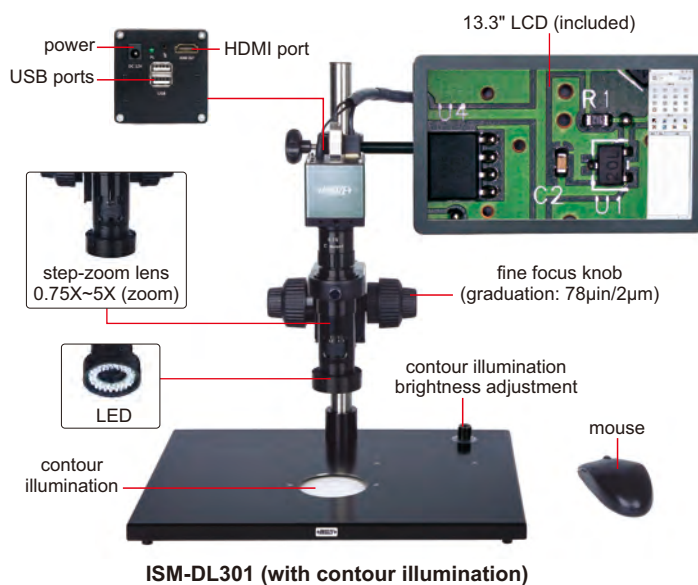
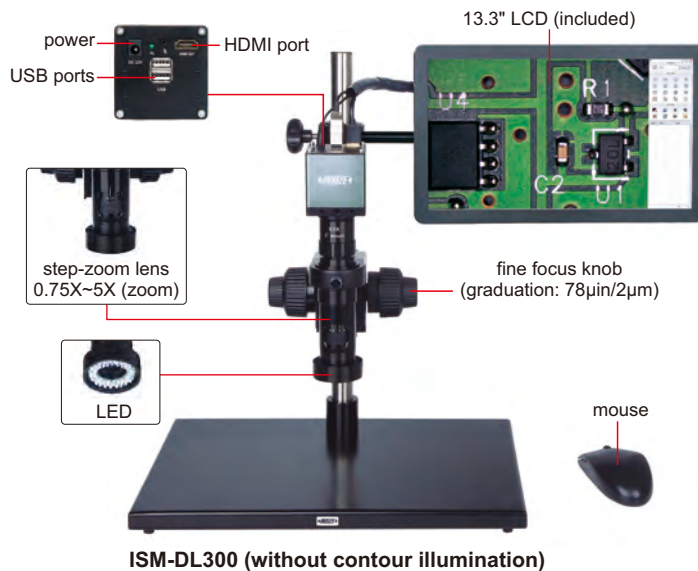


1X camera adapter  
(optional)



2X auxiliary objective  
(optional)

- 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

Part No.	ISM-DL300 (without contour illumination)	ISM-DL301 (with contour illumination)
EDP No.	877229	877230
Magnification	15X~100X	
Sensor	1/2" CMOS	
Pixel	2M	
Resolution	1920×1080	
Frame rate	60fps	
Output	HDMI	
Power supply	power adapter	
Dimension (L×W×H)	22.44×11.81×16.93"	
Weight	14.44lb	

To be continued

Continued from previous page

**STANDARD DELIVERY**

Part No.	ISM-DL300	ISM-DL301
Main unit	1 pc	1 pc
0.5X camera adapter	1 pc	1 pc
1X auxiliary objective	1 pc	1 pc
Calibration plate	1 pc	1 pc
16G USB flash disk	1 pc	1 pc
White/black plate	1 pc	1 pc
Mouse	1 pc	1 pc
HDMI cable	1 pc	1 pc
Power adapter	2 pcs	3 pcs

**OPTIONAL ACCESSORY**

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 3.94"×3.38")	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED light	refer to details
Auxiliary objective	refer to details

**MAGNIFICATION AND MEASURING ACCURACY**

Objective magnification	Image magnification	Measuring accuracy*
0.75X	15X	±.00031"
1X	20X	±.00028"
1.5X	30X	±.00024"
2X	40X	±.00024"
2.5X	50X	±.00024"
3X	60X	±.00020"
3.5X	70X	±.00020"
4X	80X	±.00016"
4.5X	90X	±.00016"
5X	100X	±.00016"

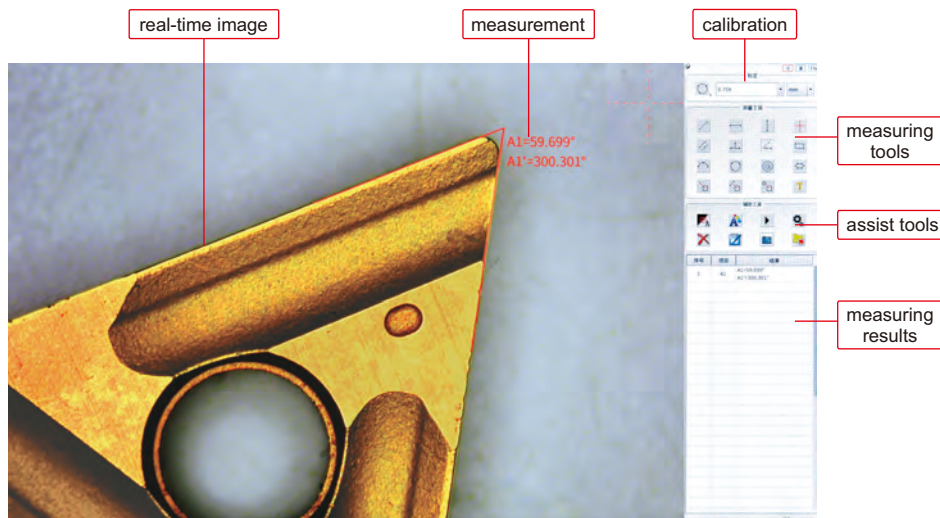
\* When measuring the contour of workpieces, please use **ISM-DL301** to ensure accuracy.



**MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD**

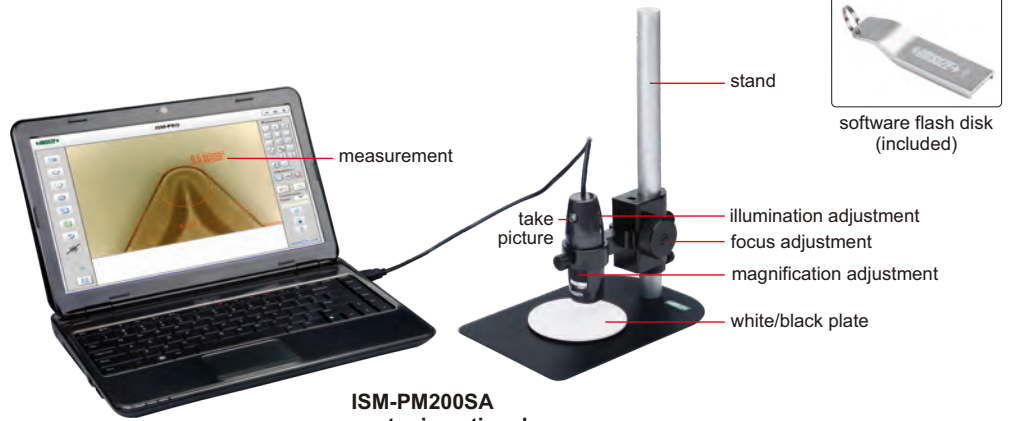
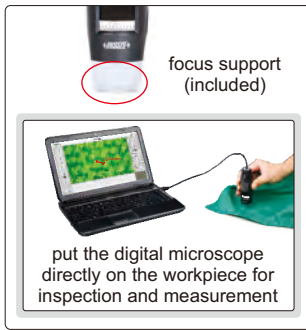
Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	15~100X	30~200X
	focus distance	2.76±.08"	2.76±.08"
	view filed	.63×.43~.1×.06"	.31×.21"~.05×.03"
2X (optional)	magnification	30~200X	60~400X
	focus distance	1.14±.08"	1.14±.08"
	view filed	.31×.21~.05×.03"	.15×.11"~.024×.016"

**SOFTWARE (INCLUDED)**





## DIGITAL MEASURING MICROSCOPES



**ISM-PM200SA**  
computer is optional

- Can take pictures and videos
- Supplied with software
- Calibration rules (graduation .004"/0.1mm and .039"/1mm) are included
- With focus support

### SPECIFICATION

Part No.	ISM-PM200SA	ISM-PM200SB
EDP No.	285000	285007
Magnification	10X~200X	10X~200X
Stand	standard	universal
Pixel	2M (resolution: 1600×1200)	
Illumination	built-in adjustable LED	
Power supply	USB 2.0 cable (voltage required: 5±0.1V)	

### OPTIONAL ACCESSORY

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

### SOFTWARE

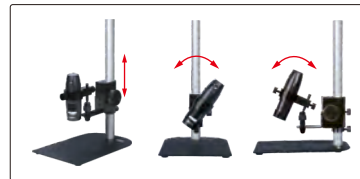
- Language:** English, Japanese, Korean, German, Turkey, Portuguese, Chinese
- Operation system:** Windows 7/8/XP/Vista
- Measuring tools:**

	measure length of line or distance between two points		measure radius, length and angle of arc
	measure area of rectangle		add number with circle
	measure distance between two circles		measure length of continuous line
	measure distance between two parallel lines		measure angle with three points
	measure angle with two lines		measure radius, girth and area of circle
	measure distance between point and line		add text

#### Edge detection measurement tools:

- detect two parallel lines automatically and calculate distance
- detect circle automatically, and calculate radius, girth and area
- detect arc automatically, and calculate radius, angle and arc length
- detect two lines automatically, and calculate angle
- detect line automatically, and calculate length

universal stand (included in ISM-PM200SB)

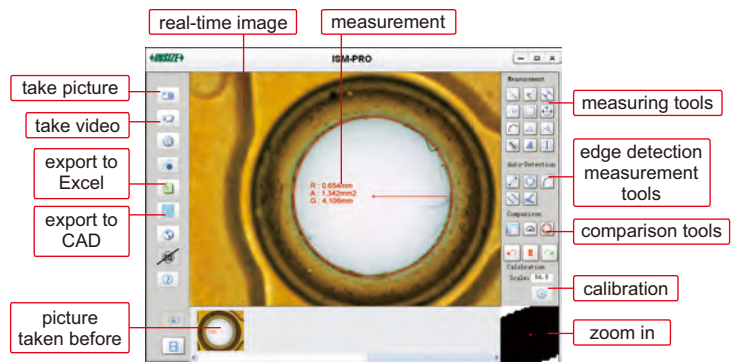


filter (optional)



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

Magnification	Focus distance	View field	Accuracy
50X	.83"	.32×.25"	1.2mil
100X	.51"	.15×.12"	0.6mil
150X	.63"	.10×.08"	0.4mil
200X	.75"	.07×.06"	0.3mil



#### Comparison tools:

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



#### Data export to CAD or Excel:



## WiFi DIGITAL MEASURING MICROSCOPE PART NO. ISM-WF200

- Maximum working distance is 200" under WiFi mode
- Can be connected to multiple iPads, Android devices or computers together under WiFi mode
- Take pictures and videos
- Supplied with software



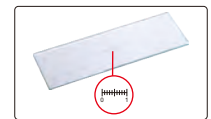
software flash disk (included)



stand (part no. ISM-PM-STAND, optional)



plastic calibration rule (included, graduation .039"/1mm)



glass calibration rule (included, graduation .004"/0.1mm)

### SPECIFICATION

EDP No.	816685
Magnification	10X~200X
Pixel	1.3M (resolution: 1280×1024)
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 .004"/0.1mm)	1 pc
Plastic calibration rule (graduation .039"/1mm)	1 pc
Software and USB cable	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

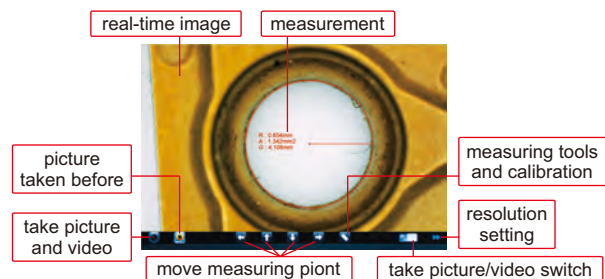


### MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
50X	.83"	.32×.25"	1.2mil
100X	.51"	.15×.12"	0.6mil
150X	.63"	.10×.08"	0.4mil
200X	.75"	.07×.06"	0.3mil

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




- measure length of line or distance between two points
- measure radius, girth and area of circle with three points
- measure angle

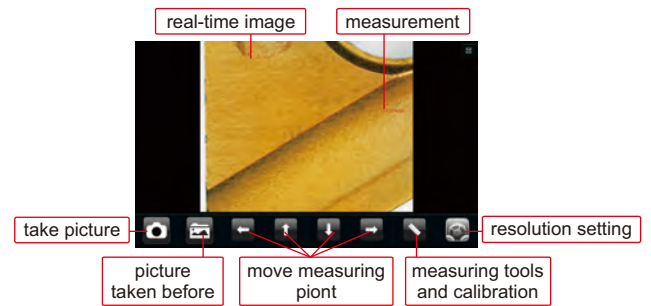


To be continued












Continued from previous page

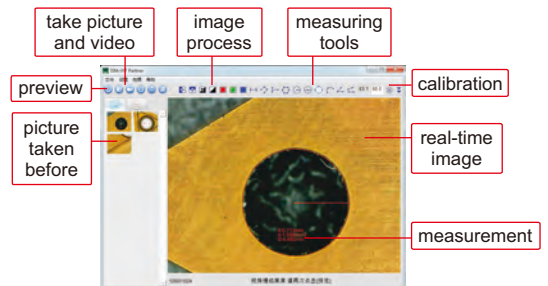
## 2 Software ISM-APK (for Android devices by WiFi)

-  measure length of line or distance between two points
-  measure radius, girth and area of circle with three points
-  measure angle















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

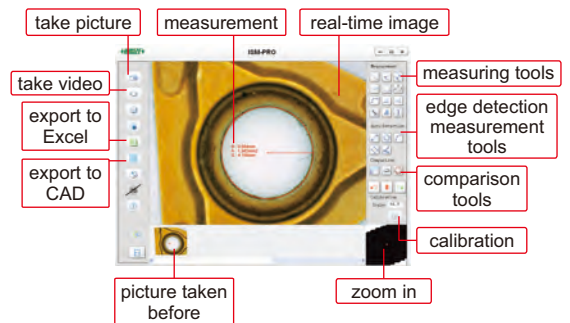
- |   |  |
|---|--|
|  measure length of line or distance between two points       |  measure angle with two lines                             |
|  measure area of polygon                                     |  measure radius, girth and area of circle with two points |
|  measure angle with three points                             |  measure distance between point and line                  |
|  measure radius, girth and area of circle with center point  |  measure radius, length and angle of arc                  |
|  measure length of continuous line                           |  measure area of rectangle                                |
|  measure radius, girth and area of circle with three points |  |



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

### Measuring tools:

- |   |   |
|---|---|
|  measure length of line or distance between two points |  measure distance between point and line |
|  measure length of continuous line                     |  measure area of rectangle               |
|  measure radius, length and angle of arc               |  measure angle with two lines            |
|  measure distance between two circles                  |  add number with circle                  |
|  measure distance between two parallel lines           |  measure angle with three points         |
|  measure radius, girth and area of circle              |  add text                                |

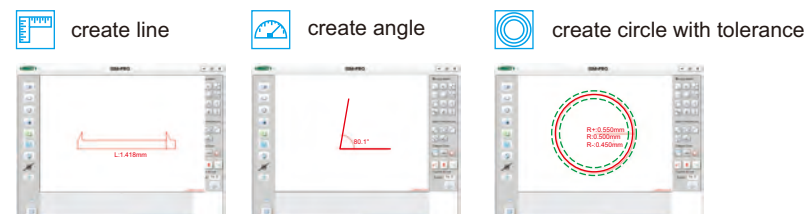


### Edge detection measurement tools:

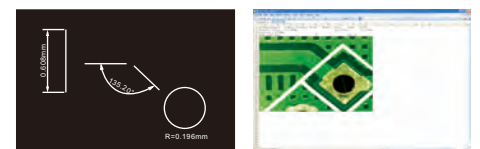
- |  |  |
|--|--|
|  detect line automatically, and calculate length                      |  detect two lines automatically, and calculate angle            |
|  detect arc automatically, and calculate radius, angle and arc length |  detect two parallel lines automatically and calculate distance |
|  detect circle automatically, and calculate radius, girth and area    |  |

### Comparison tools:

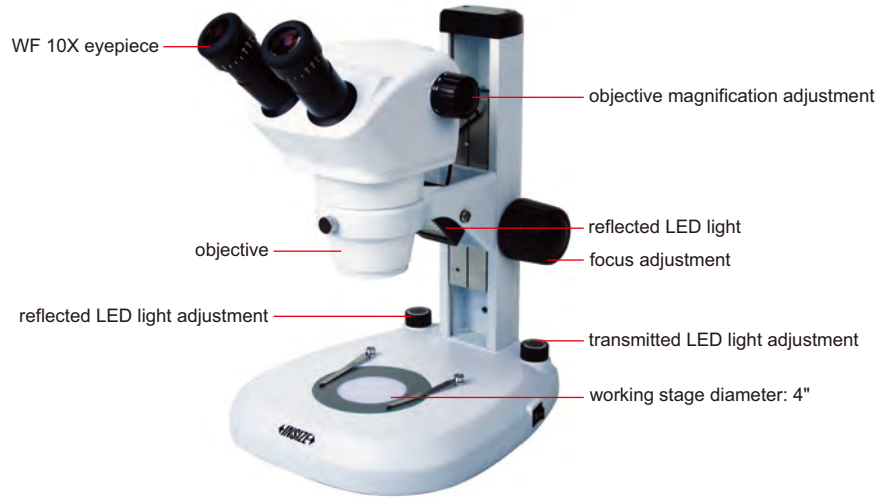
Create line, angle or circle with desired size, to compare with workpieces



### Data export to CAD or Excel:



## ZOOM STEREO MICROSCOPE (STANDARD TYPE)



ISM-ZS50

### SPECIFICATION

Part No.	ISM-ZS50
EDP No.	877232
Optical tube	binocular
Eyepiece (wide field)	10X (view field .87" DIA)
Objective	0.8X~5X (zoom)
Zoom ratio	1:6.3
Pupil distance	2.17~2.95" (adjustable)
Diopter adjustment	±5 diopter (two eyepieces)
Working distance of objective	4.53"
Max. workpiece height	2.95"
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	11.42×10.24×18.90"
Weight	10.80lb



LED ring light (optional)

15

### STANDARD DELIVERY

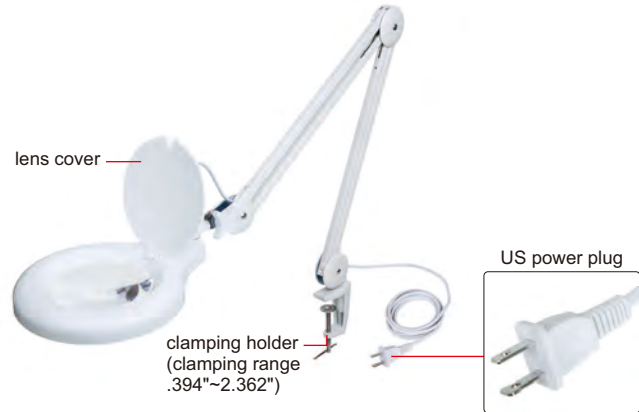
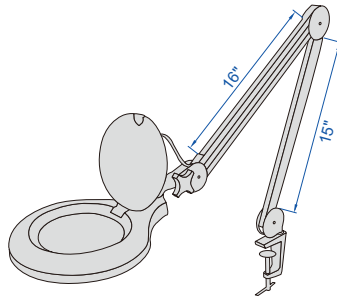
Main unit	1 pc
WF 10X eyepiece	2 pcs
4" DIA glass plate	1 pc
4" DIA white/black plate	1 pc
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X*
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (graduation .004"/0.1mm)	ISM-ZS50-EPD10X
	WF15X (view field .63" DIA)	ISM-ZS50-EP15X
	WF20X (view field .47" DIA)	ISM-ZS50-EP20X
LED ring light		ISM-ZS-RL
Sleeve for auxiliary objective		ISM-ZS200-ADAPTER

\* 0.5X auxiliary objective must be used with ISM-ZS200-ADAPTER

## TABLE MAGNIFIER WITH ILLUMINATION PART NO. 7516-5D-U



- LED illumination, working life 20000h

### SPECIFICATION

EDP No.	877214
Magnification	2.25X
Diopter	5D
Lens diameter	4.803" DIA
Illumination	power: 7W, illumination: 420lm
Power supply	100~240V, 50~60Hz

7516-5D-U

60 pcs LED

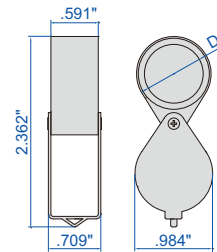


## FOLDING MAGNIFIER

- Glass lens



7511-8

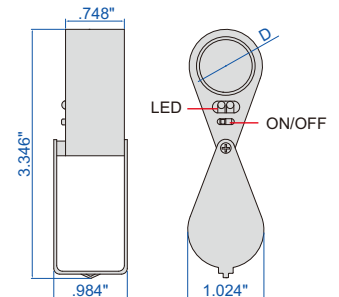


Part No.	EDP No.	Magnification	Lens diameter (D)
7511-8	877424	10X	.827" DIA

## FOLDING MAGNIFIER WITH ILLUMINATION



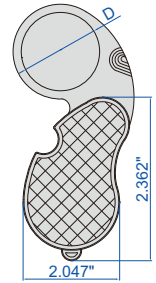
7515-10



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

Part No.	EDP No.	Magnification	Lens diameter (D)
7515-10	877426	10X	.867" DIA

**FOLDING MAGNIFIER WITH ILLUMINATION**



- Resin lens
- Powered by 2xCR1620 batteries (included)
- LED lights up automatically when opened

7514-1

Part No.	EDP No.	Magnification	Lens diameter (D)
7514-1	877425	2.5X	1.772" DIA

**MAGNIFIERS WITH ILLUMINATION**

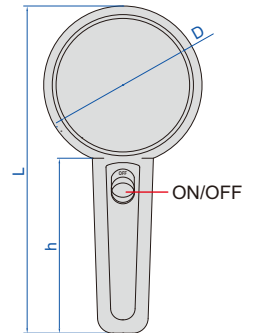
- Glass lens
- Powered by 3xAAA batteries (included)



7513-2



7513-4



Part No.	EDP No.	Magnification	Lens diameter (D)	L	h
7513-2	816388	2X	2.953" DIA	6.693"	3.543"
7513-4	816389	4X	1.969" DIA	5.709"	3.543"

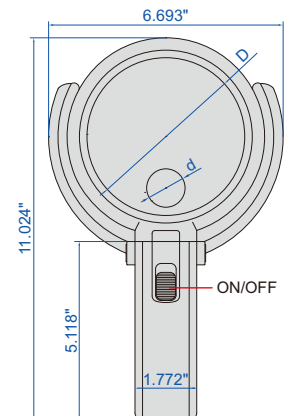
**THREE WAYS MAGNIFIER WITH ILLUMINATION**



three ways use



7512-1



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

Part No.	EDP No.	Magnification	Lens diameter (D/d)
7512-1	816387	2X/4X	4.724" DIA/1.102" DIA

## MAGNIFICATION GLASSES

interchangeable lenses



head band (included)

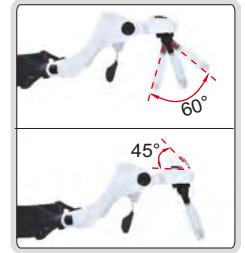


- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)



7523-3D5

adjustable lens and LED angle



adjustable holder angle



moveable lens for focus



2 pcs LED



Part No.	EDP No.	Lens number	Magnification
7523-3D5	877427	5 pcs	1X
			1.5X
			2X
			2.5X
			3.5X

## TELESCOPING INSPECTION MIRROR (WITH ILLUMINATION)

head can bend and rotate



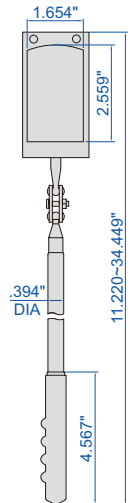
handle length is adjustable



- Inspect hidden areas
- Head can bend and rotate
- Telescoping handle, made of stainless steel
- With two CR2032 batteries

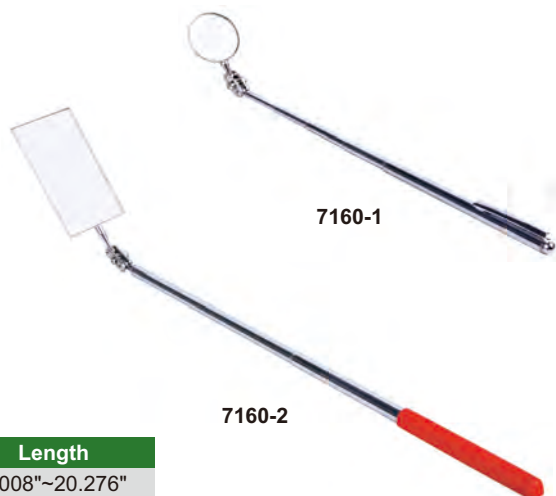


7162-1



Part No.	EDP No.	Size of mirror	Length
7162-1	877409	2.559x1.654"	11.220~34.449"

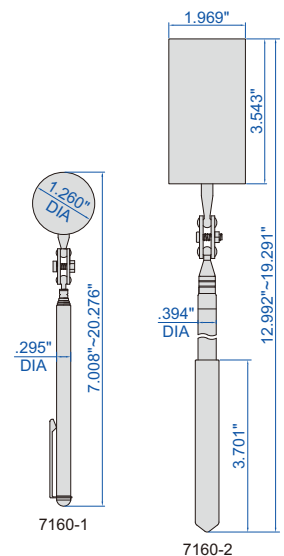
## TELESCOPING INSPECTION MIRRORS



7160-1

7160-2

- Inspect hidden areas
- Rotation of the mirror: 360°
- Length of handle is adjustable, handle is made of stainless steel



Part No.	EDP No.	Size of mirror	Length
7160-1	877204	1.260" DIA	7.008"~20.276"
7160-2	877205	1.969"x3.543"	12.992"~19.291"

**TELESCOPING MAGNETIC PICK-UP AND FLASHLIGHT**



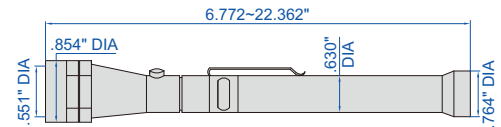
magnetic head



magnetic end to attach on steel surfaces

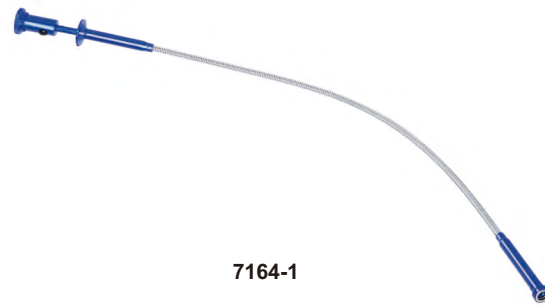
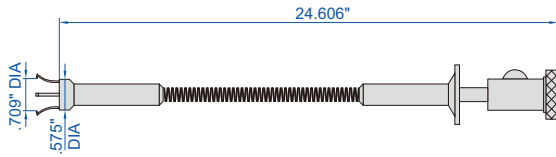
7163-1

- For illumination and pick up steel parts in hidden areas
- Head can bend
- Telescoping handle, made of stainless steel
- Magnetic head and end
- With four LR44 batteries



Part No.	EDP No.	Magnetic force of the end	Magnetic force of the head	Flashlight range	Battery life	Length
7163-1	877410	8lbf	4.6lbf	118"	8h	6.772~22.362"

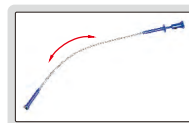
**FLEXIBLE PICK-UP AND FLASHLIGHT**



7164-1

- For illumination and pick up steel parts in hidden areas
- Flexible spring rod, made of stainless steel
- Three LR44 batteries

Part No.	EDP No.	Magnetic force	Flashlight range	Battery life
7164-1	877411	1.98lbf	40"	24h



flexible spring rod



flashlight head

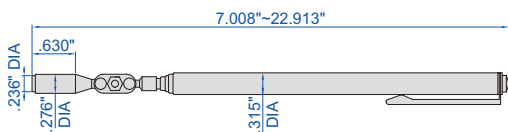


4 retractable claws



magnetic head

**TELESCOPING MAGNETIC PICK-UP**



7161-1

- Pick up steel parts from hidden areas
- Rotation of magnetic head: 360°
- Length of handle is adjustable, handle is made of stainless steel

Part No.	EDP No.	Size of magnetic tip	Magnetic force	Length
7161-1	877206	.236" DIA	.99lbf	7.008~22.913"



BLUETOOTH

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES



## COATING THICKNESS GAGE PART NO. 9501-1200



eddy current probe NFE (optional) with zero calibration block



magnetic induction probe FE90 for bores and grooves (optional)



magnetic induction probe FE10 for large range (optional)



zero calibration block for FE (included)



calibration foils (included)



receiver (optional)



- Magnetic induction probe (FE) measures the thickness of non-magnetic coating and non-metallic coating on magnetic metal 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 metal substrate.**  
 Substrate: copper, aluminum, zinc, non-magnetic stainless steel  
 Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)
- Tolerance measurement
- Data statistic, including average, variance, maximum and minimum values
- Data can be sent to Excel by connecting to computers via bluetooth or cable of receiver
- Support bluetooth printer
- Automatic power off

### SPECIFICATION

EDP No.	877217			
Probe type	<b>FE (included)</b> magnetic induction probe	<b>NFE (optional)</b> eddy current probe	<b>FE90 (optional)</b> magnetic induction probe for bores and grooves	<b>FE10 (optional)</b> magnetic induction probe for large range
Measuring range	0~50mils	0~50mils	0~50mils	20~400mils
Accuracy	±(3%L+.04)mils (range≤50mils) ±(3%L+.4)mils (range>50mils)		L is measuring thickness in mils	
Resolution	.01mils			
Measuring mode	continuous and single			
Minimum substrate thickness	.02"	.01"	.02"	.08"
Minimum measuring area	.3" DIA	.2" DIA	.3" DIA	1.6" DIA
Minimum curvature radius of convex workpiece	.06"	.12"	—	.40"
Memory	600			
Output	USB			
Power supply	2×1.5V AA batteries			
Dimension	5.31×3.03×1.26mm			
Weight	.38lb			

### STANDARD DELIVERY

Main unit	1 pc
Magnetic induction probe (FE)	1 pc
Zero calibration block for FE probe	1 pc
Calibration foils (2/4/10/20/40mils)	1 set
1.5V AA battery	2 pcs
Software and USB cable	1 pc

### OPTIONAL ACCESSORY

Receiver	ISR-C300-RECEIVER
Cable of receiver	9501-1200-CABLE
Bluetooth printer	ISR-C002-PRINTER
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) for large range	9501-1200-FE10

## ULTRASONIC THICKNESS GAGE (BASIC TYPE) PART NO. ISU-100D



- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: steel, stainless steel, glass, copper, brass, polystyrene, titanium, etc.
- Not suitable for castings and aluminum workpieces



### SPECIFICATION (ON STEEL)

EDP No.	816694	
Measuring range	.031~11.811"	
Resolution	.01/.001"	
Accuracy	$\pm .002"$ ( $H < .394"$ ) $\pm (.002" + H/1000)"$ ( $.394" \leq H < 3.937"$ ) $\pm H/333"$ ( $H \geq 3.937"$ ) H is the thickness to be measured in inch	
Transducer	frequency	5MHz
	diameter (d)	.43" DIA
Minimum size of pipes	.79×.05" (diameter×wall thickness)	
Velocity	.0394~.3937inch/ $\mu$ s	
Operation temperature	main unit: -4~122°F transducer: -4~140°F	
Measuring unit	mm/inch	
Power supply	2×AAA batteries	
Dimension	4.49×2.52×1.1"	
Weight	.44lb	



### STANDARD DELIVERY

Main unit	1 pc
Transducer	1 pc
Couplant	1 bottle
Battery (AAA)	2 pcs

## DIGITAL REFRACTOMETER PART NO. ISQ-DRM31

SUITABLE FOR WATER  
BASED COOLANT

- Quickly measure the concentration of coolant, sugar solution, juice and drinks
- Two measurement modes:  
single measurement and automatic average multiple measurement
- Two units: brix and refractive index
- 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  $(2.1 \times 6\%) = 12.6\%$
- Automatic power off



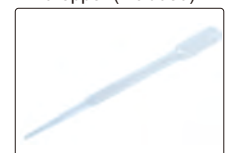
### SPECIFICATION

EDP No.	877433
Measuring range	0~50% (1.3330~1.4200RI)
Accuracy	$\pm 0.2\%$ ( $\pm 0.0003RI$ )
Resolution	0.1% (0.0001RI)
Power supply	1×AAA battery
Dimension	4.76×2.28×.98"
Weight	.2lb

### STANDARD DELIVERY

Main unit	1 pc
Dropper	1 pc
Battery (AAA)	1 pc

dropper (included)



SUITABLE FOR WATER  
BASED COOLANT

## PORTABLE REFRACTOMETER PART NO. ISQ-RM30

- 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

EDP No.	219182
Measuring range	0~32%
Graduation	0.2%
Dimension	1.06×1.57×6.3"
Weight	.39lb

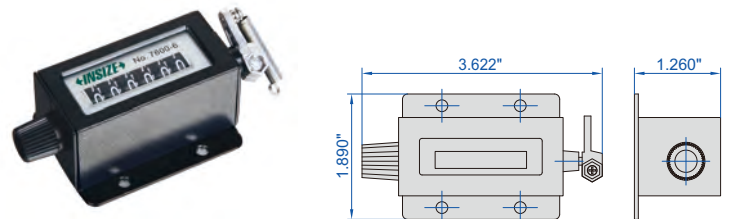


## STROKE COUNTER PART NO. 7600-6

- Accumulate and record the number of mechanical movements
- Rotate back to zero

### SPECIFICATION

Part No.	EDP No.	Number of digits	Range
7600-6	877428	6	0-999999



## ROUGHNESS TESTER (BASIC TYPE) PART NO. ISR-C003

- Unit:  $\mu\text{m}$ ,  $\mu\text{in}$
- Automatic power off
- This roughness tester is not suitable for rough turning, milling and planing workpieces

### SPECIFICATION

EDP No.	219181	
Parameters	Ra, Rz, Rq, Rt	
Range	Ra, Rq: 2~590 $\mu\text{in}$ Rz, Rt: 4~1968 $\mu\text{in}$	
Accuracy	$\pm 10\%$	
Resolution (Ra)	.01 $\mu\text{in}$	
Probe	type	piezoelectric
	stylus radius/angle	393 $\mu\text{in}/90^\circ$
	stylus material	diamond
Measuring force	.012ozf	
Measuring unit	$\mu\text{in}/\mu\text{m}$	
Cut off	.01/.03/.1"	
Evaluation length	.05" for cut off .01"	
	.15" for cut off .03"	
	.2" for cut off .1"	
Moving speed	.03"/s	
Power	built-in rechargeable battery	
Dimension (L×W×H)	4.17×2.75×.94"	
Weight	.44lb	

### STANDARD DELIVERY

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



fixture for small shafts (optional)



### OPTIONAL ACCESSORY

Fixture for small shafts	ISR-C003-FIXTURE
--------------------------	------------------

## METRIC SURFACE ROUGHNESS SPECIMEN SET

**INSIZE PLUS**  
MADE IN EUROPE



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

Part No.	EDP No.	Machining method	Roughness (Ra) *	Roughness (Rz) *	Quantity
ISR-CS130-W	889480	Flat lapping	0.05, 0.1, 0.2 $\mu$ m	0.55, 1, 1.6 $\mu$ m	3 pcs
			2, 4, 8 $\mu$ m		
		Reaming	0.4, 0.8, 1.6 $\mu$ m	3, 6, 10 $\mu$ m	3 pcs
			16, 32, 63 $\mu$ m		
		Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 $\mu$ m	0.55, 1, 1.6, 3, 6, 10 $\mu$ m	6 pcs
			2, 4, 8, 16, 32, 63 $\mu$ m		
		Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu$ m	2.5, 4, 8, 16, 32, 50 $\mu$ m	6 pcs
16, 32, 63, 125, 250, 500 $\mu$ m					
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu$ m	2.5, 4, 8, 16, 32, 50 $\mu$ m	6 pcs		
	16, 32, 63, 125, 250, 500 $\mu$ m				
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu$ m	2.5, 4, 8, 16, 32, 50 $\mu$ m	6 pcs		
	16, 32, 63, 125, 250, 500 $\mu$ m				

\*The actual value is the value to be calibrated

## ROUGHNESS TESTER PART NO. ISR-C002



BLUETOOTH

CAN BE OPERATED BY  
MOBILE PHONES OR COMPUTERS

- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 21 roughness parameters
- Display roughness value, profile and curve
- Memory of maximum 100 results
- Automatic power off



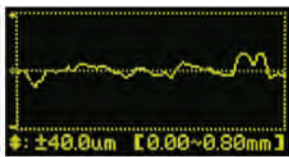
software flash disk  
(included)



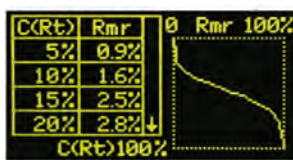
screen display



measurement result



roughness profile



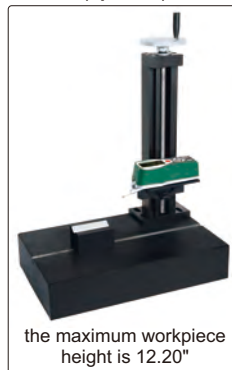
Rmr analysis

light duty test stand  
(optional)



the maximum workpiece height is 8.66"

heavy duty test stand  
(optional)



the maximum workpiece height is 12.20"

probe cover (included)



put the small workpieces directly under the probe for measurement



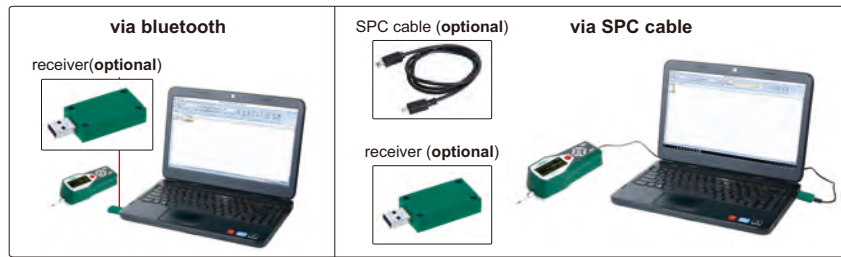
adjustable stand (included)



To be continued

Continued from previous page

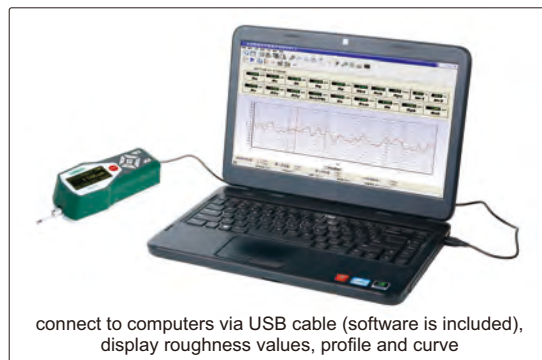
data can be sent to Excel by connecting to computer via bluetooth or SPC cable



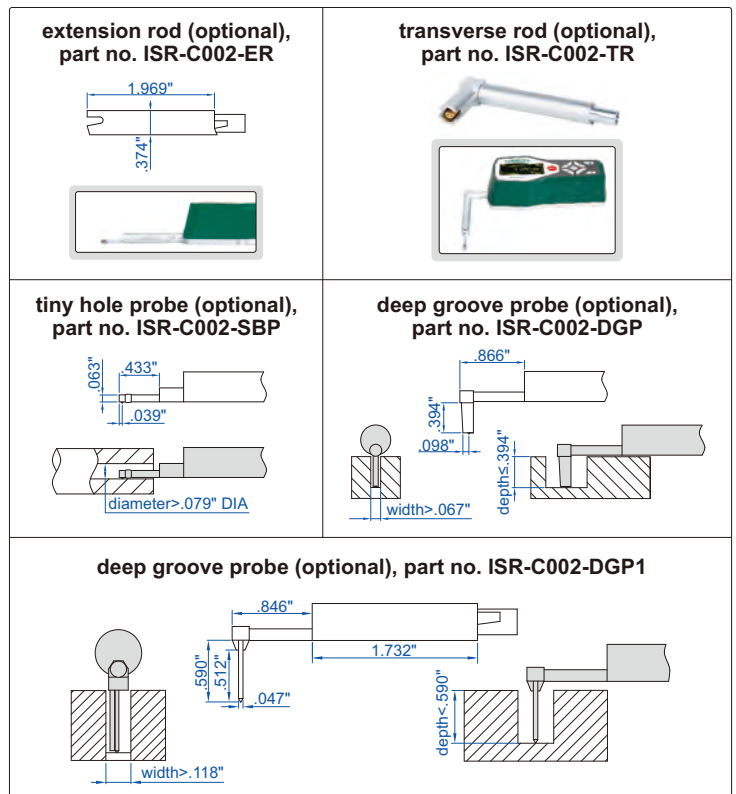
bluetooth printer (optional)



operate roughness tester by computers



operate roughness tester by mobile phones



**SPECIFICATION**

EDP No.	219180	
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	12598µin (-6299µin~6299µin)	
Accuracy	±10%	
Resolution (Ra)	.01µin	
Probe	type	inductive
	stylus radius/angle	196µin/90°
	stylus material	diamond
Measuring force	.01ozf	
Measuring unit	µm/µin	
Cut off	.01/.03/.1"	
Number of cut-off	1 to 5	
Moving speed	.02"/s, .04"/s	
Memory	100 measurement results	
Output	bluetooth and USB	
Power	built-in rechargeable battery	
Dimension (L×W×H)	5.55×2.16×1.57"	
Weight	.89lb	

**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 and USB cable	1 pc
AC/DC adapter	1 pc

**OPTIONAL ACCESSORY**

Extension rod	ISR-C002-ER
Transverse rod	ISR-C002-TR
Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND
Bluetooth printer	ISR-C002-PRINTER
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC

\* Need to be delivered with roughness tester ISR-C002

## ROUGHNESS TESTER (SEPARABLE TYPE) PART NO. ISR-C300

BLUETOOTH

TOUCH SCREEN

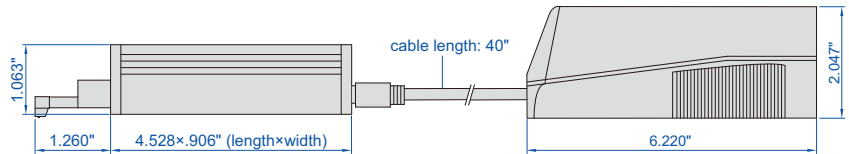
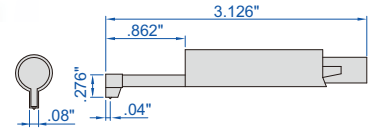
CAN BE OPERATED BY  
COMPUTERS OR MOBILE PHONES



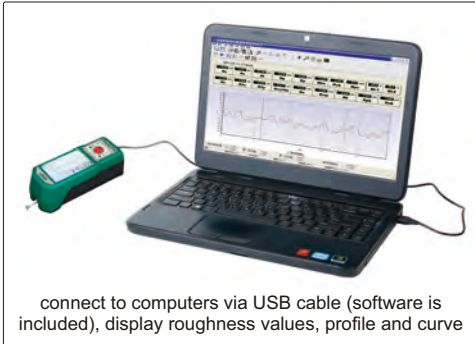
- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve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



software flash disk (included)



operate roughness tester by computers



connect to computers via USB cable (software is included), display roughness values, profile and curve

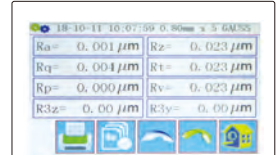
probe and main unit can be combined together



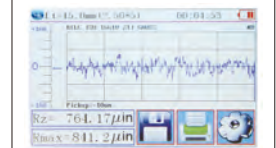
bluetooth printer (optional)



roughness tester screen display



measurement result



roughness profile



Rmr analysis

operate roughness tester by mobile phones



connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

heavy duty test stand (optional)



the maximum workpiece height is 12.20"

light duty test stand (optional)



the maximum workpiece height is 8.66"

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

via bluetooth

receiver (optional)



SPC cable (optional)



receiver (optional)

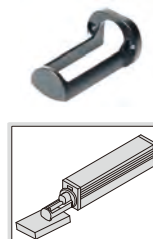


via SPC cable

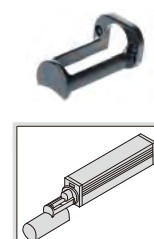


probe support (optional)

support for flat surface

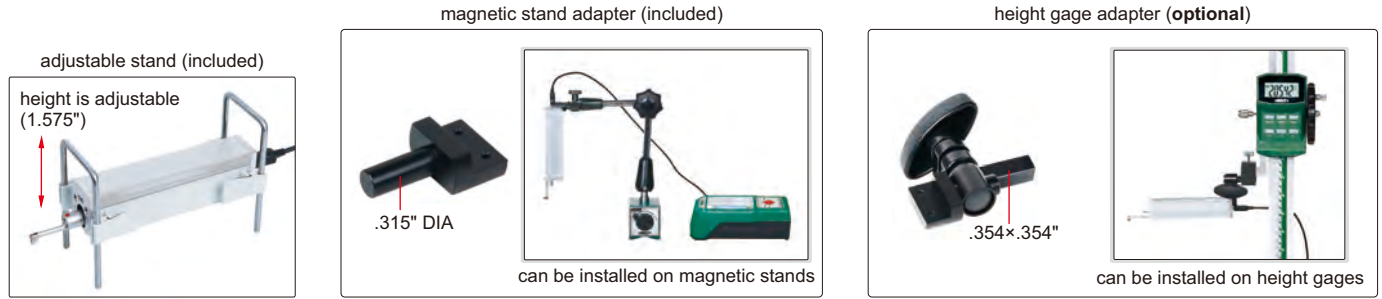


support for cylindrical surface



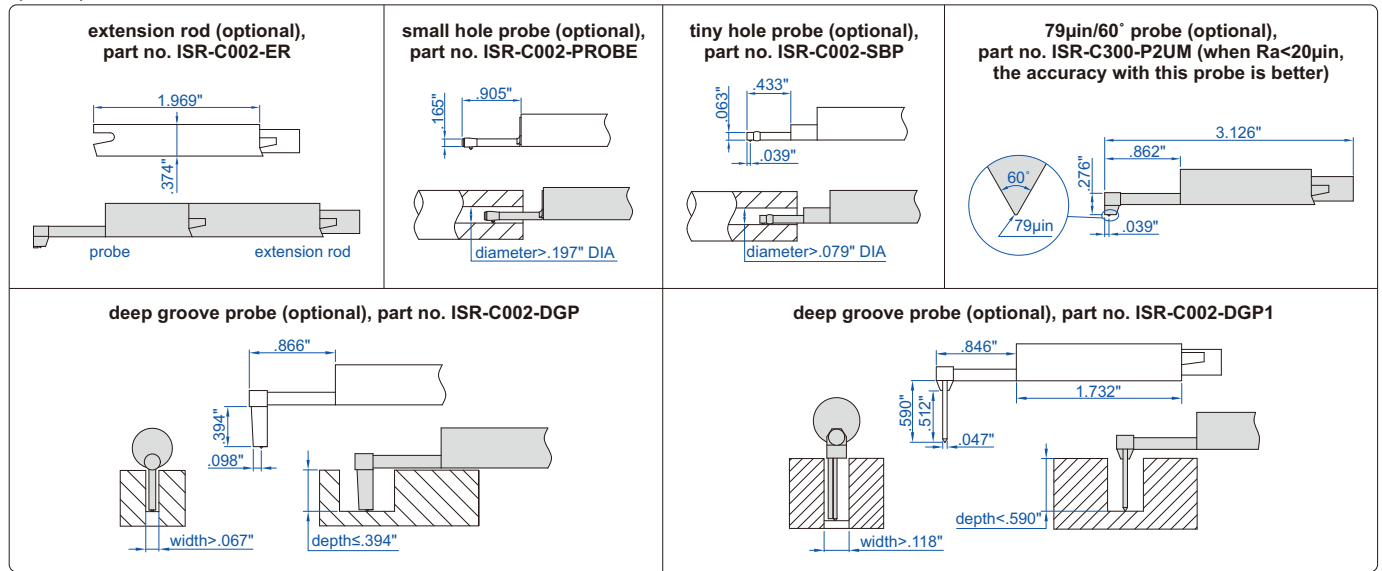
To be continued

Continued from previous page



**NOTE:** Please check 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**

EDP No.	877234	
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	.689"
	Z axis	12598µin (-6299µin~6299µin)
Accuracy	±10%	
Resolution (Ra)	.01µin	
Probe	type	inductive
	stylus radius/angle	196µin/90°
	stylus material	diamond
Measuring force	.01ozf	
Measuring unit	µm/µin	
Cut off	.01/.03/.1"	
Number of cut-offs	1~5	
Moving speed	.005"/s, .02"/s, .04"/s	
Memory	100 measurement results	
Output	bluetooth and USB	
Power	built-in rechargeable battery	
Dimension (L×W×H)	6.22×2.52×2.05"	
Weight	.89lb	

**STANDARD DELIVERY**

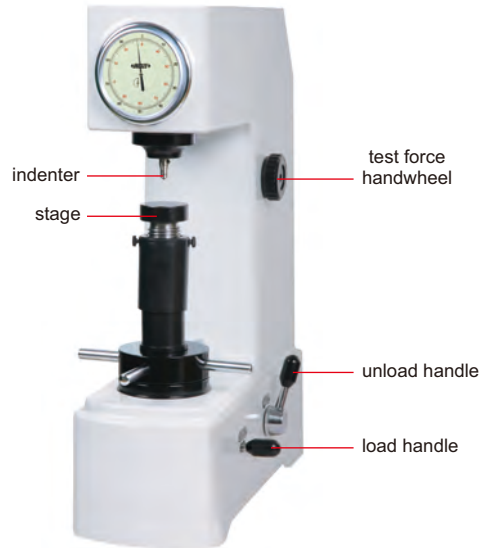
Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Connecting cable (long and short)	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

**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
Deep groove probe	ISR-C002-DGP1*
79µin/60° probe	ISR-C300-P2UM
Bluetooth printer	ISR-C002-PRINTER
Height gage adapter	ISR-C300-LB1
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND

\*Need to be delivered with roughness tester **ISR-C300**

# MANUAL ROCKWELL HARDNESS TESTER (BASIC TYPE) PART NO. HDT-RW160



■ According to ISO 6508



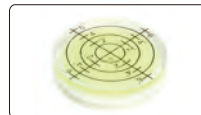
2.28" DIA flat anvil (included)



5.91" DIA flat anvil (included)



V-type anvil (included) for cylinders with diameter .16~2.36" DIA



level (included)



small V-type anvil (optional) for cylinders with diameter .08~.16" DIA



desk (optional)

## SPECIFICATION

EDP No.	877443
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	6.69"
Max. testing width	5.31" (from the center of indenter to the wall of main body)
Dimension	18.35×9.37×24.80"
Weight	154lb

## STANDARD DELIVERY

Main unit	1 pc
2.28" flat anvil	1 pc
5.91" flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
1/16" DIA steel ball indenter	1 pc
1/16" DIA 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

## OPTIONAL ACCESSORY

Hardness test block HRA80~84	HDT-B-HRA
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block HRC35~55	HDT-B-HRC2
Hardness test block HRC60~70	HDT-B-HRC3
Small V-type anvil	HDT-RW160-SV
Desk	HDT-DESK



## PORTABLE LEEB HARDNESS TESTER (BASIC TYPE)

- 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, HRB), Shore (HSD) and tensile strength ( $\sigma_b$ )
- 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
- Operation temperature: 14°F~113°F
- According to ASTM A956, GB/T 17394

### SPECIFICATION

Part No.	HDT-LP200
EDP No.	877444
Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/ 0.1HSD/1 $\sigma_b$
Accuracy	±6HLD (when HLD=800)
Measuring range	HL 170-960/HRC 17-70/HRB 13-109/ HB 20-655/HV 80-940/HSD 32-99.5/ $\sigma_b$ (rm) 255-2639N/mm <sup>2</sup>
Power supply	2xAA battery
Dimension	5.31×3.03×1.26"
Weight	.53lb

### 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 G	HDT-LP200-G
Hardness test block D**	HDT-B-HLD3
Hardness test block G*	HDT-B-HLG2
Support rings	ISH-PH-SP9

\* Hardness test block G (HDT-B-HLG2) is for impact device G (HDT-LP200-G)

\*\* Hardness test block D (HDT-B-HLD3) is for all other impact devices



HDT-LP200



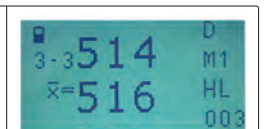
hardness test block D (included)



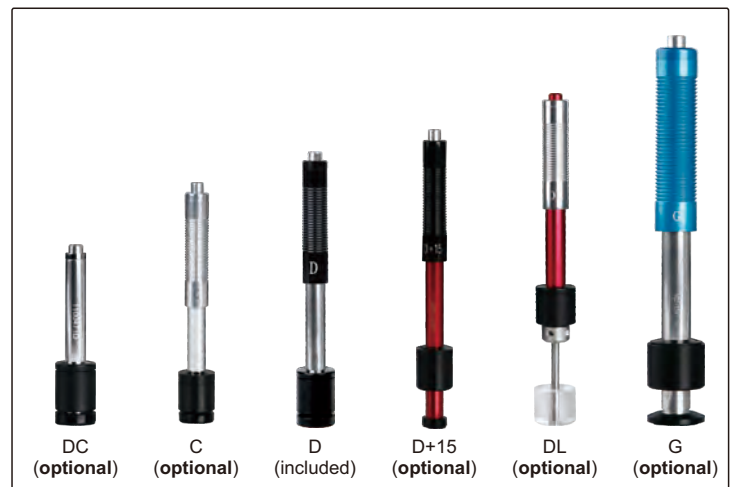
small support ring (included)



large font display



statistics display



### APPLICABLE WORKPIECE

Impact device	DC	C	D	D+15	DL	G
Application	inner wall of small space	small or thin workpiece, coating layer	general use	deep groove	narrow slot or small hole	casting or forging workpiece
Maximum roughness of workpiece (Ra)	80 $\mu$ m	16 $\mu$ m	80 $\mu$ m	80 $\mu$ m	80 $\mu$ m	280 $\mu$ m
Minimum weight of workpiece	direct measurement	11.02lb	3.31lb	11.02lb	11.02lb	33.08lb
	on solid support	4.41lb	1.10lb	4.41lb	4.41lb	11.02lb
	coupled on plate	.11lb	0.04lb	.11lb	.22lb	.11lb
Minimum thickness of workpiece	.12"	.04"	.12"	.12"	.12"	.39"

## PEN-TYPE LEEB HARDNESS TESTER (BASIC TYPE) PART NO. HDT-L411



software flash disk (included)



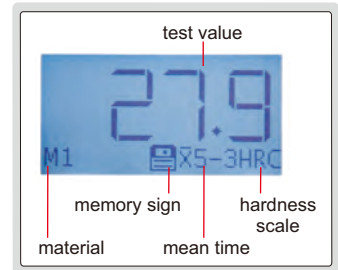
hardness test block D (included)



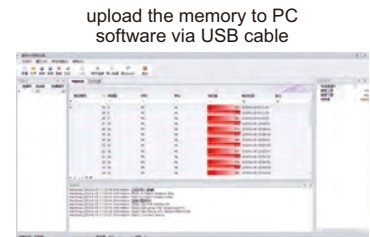
small support ring (included)



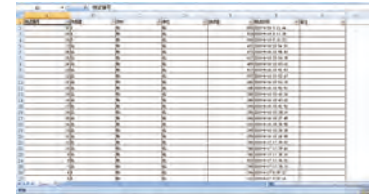
can choose large font display



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



send the stored data to EXCEL



- 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
- Operation temperature: -4°F~113°F
- According to ASTM A956, DIN 50156, GB/T 17394

### SPECIFICATION

<b>EDP No.</b>	877431	
<b>Resolution</b>	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM	
<b>Accuracy</b>	±6HLD (when HLD=800)	
<b>Output</b>	USB	
<b>Measuring range</b>	HL100-960, HRC1-74.7, HRB1.2-140, HB28-1027, HV45-1230, HS4-112, HRA7-88.5, SGM (m) 118-3315N/mm <sup>2</sup>	
<b>Applicable workpiece</b>	minimum weight	11.02lb (direct measurement) 4.41lb (on solid support) .11lb (coupled on plate)
	minimum thickness	.2"
	minimum radius of curved surface	1.18"
	maximum roughness (Ra)	80µin
	<b>Power supply</b>	1xAAA battery
<b>Dimension</b>	5.83×1.77×0.83"	
<b>Weight</b>	.23lb	

### STANDARD DELIVERY

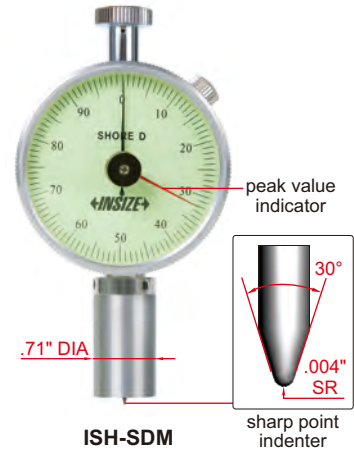
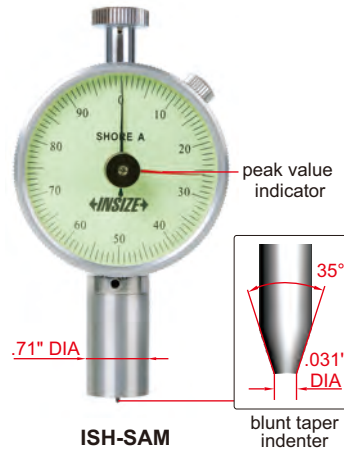
<b>Main unit</b>	1 pc
<b>Hardness test block D</b>	1 pc
<b>Cleaning brush</b>	1 pc
<b>AAA battery</b>	1 pc
<b>Small support ring</b>	1 pc
<b>Software disc and USB cable</b>	1 pc

### OPTIONAL ACCESSORY

<b>Support rings</b>	ISH-PH-SP9
<b>Hardness test block D</b>	HDT-B-HLD3

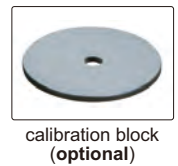
## SHORE DUROMETERS

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



### SPECIFICATION

Part No.	ISH-SAM	ISH-SDM
EDP No.	816696	877432
Scale	Shore A	Shore D
Application	nature rubber, soft elastomer, etc.	hard rubber, plastic, hard elastomer, etc.
Measuring range *	10~90HA	20~90HD
Graduation	1HA	1HD
Indenter protrusion	.10"	
Dimension	4.53×2.36×.98"	
Weight	.35lb	



### OPTIONAL ACCESSORY

Calibration block	ISH-DS-BLOCK
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- \* Use **ISH-SDM** when measuring result is higher than 90HA  
Use **ISH-SAM** when measuring result is lower than 20HD

## TEST STAND FOR DIGITAL FORCE GAGES PART NO. ISF-MT1K

- For digital force gages (part no. **ISF-1DF** and **ISF-DF**)
- To be used in vertical and horizontal orientation

### SPECIFICATION

EDP No.	877226
Load capacity	220lbf
Travel	7.87" (.12" vertical movement per revolution of handwheel)
Dimension	7.72×9.84×17.56"
Weight	28.67lb

force gage is optional



### OPTIONAL ACCESSORY

Digital scale (range: 8", resolution .0005"/0.01mm)	ISF-MT1K-SCALE
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## DIGITAL FORCE GAGES (HIGH ACCURACY)



software flash disk  
(included)



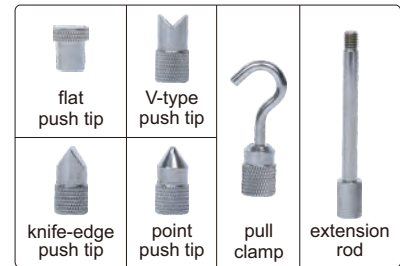
printer (optional)



ISF-DF100A

- Can be used for tension and pressure tests
- Peak (max.) and tracking mode
- Units: mN, N, gf, kgf, ozf, lbf
- Tolerance testing
- 1000 memories
- Automatic power off
- Metal case, touch buttons
- LCD display with backlight
- The display flips over when the bottom faces up
- Overload alarm
- Keyboard signal, can be transmitted to Excel

accessory (included)



### SPECIFICATION

Part No.	ISF-DF50A	ISF-DF100A	ISF-DF200A	ISF-DF500A	ISF-DF1KA
EDP No.	877225	877221	877223	877224	877222
Load capacity (lbf)	11	22	44	110	220
Resolution (lbf)	0.001	0.005	0.01	0.01	0.05
Accuracy	±0.2% (of load capacity)				
Power supply	built-in rechargeable battery				

### STANDARD DELIVERY

Part No.	ISF-DF50A	ISF-DF100A	ISF-DF200A	ISF-DF500A	ISF-DF1KA
Main unit	1 pc				
AC/DC adapter	1 pc				
Software and USB cable	1 pc				
Push/pull accessory	6 pcs (flat push tip, V push tip, knife-edge push tip, point push tip, pull clamp, extension rod)				

### OPTIONAL ACCESSORY

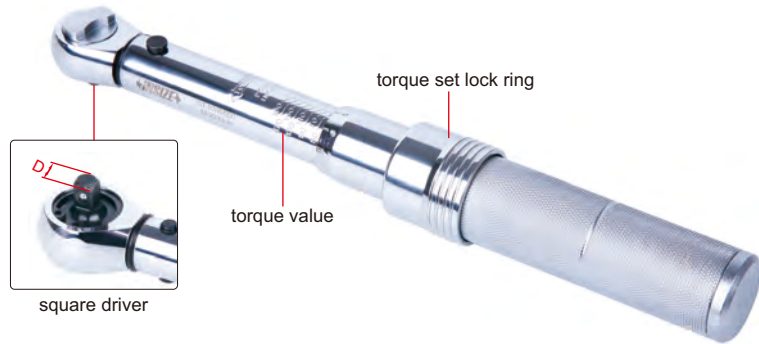
Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

ATTENTION: CLOCKWISE  
OPERATION ONLY



## TORQUE WRENCHES

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



IST-10WM200

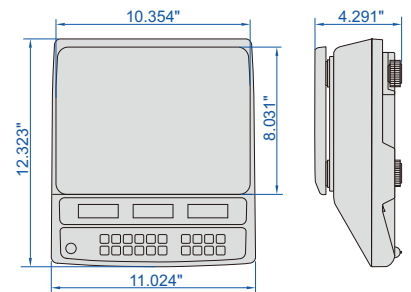
### SPECIFICATION

Part No.	IST-10WM200	IST-10WM250	IST-10WM100	IST-10WM150	IST-10WM250A	IST-10WM600
EDP No.	877238	877239	877236	877237	877240	877241
Range (clockwise)	40~200lb.in	50~250lb.in	20~100lb.ft	30~150lb.ft	50~250lb.ft	100~600lb.ft
Accuracy	±6% (<89lb.in) ±4% (≥89lb.in)	±6% (<89lb.in) ±4% (≥89lb.in)	±4%	±4%	±4%	±4%
Graduation	1lb.in	1lb.in	.5lb.ft	1lb.ft	1lb.ft	2.5lb.ft
Square driver (D)	1/4"	3/8"	3/8"	1/2"	1/2"	3/4"
Length	11.02"	12.40"	16.73"	19.88"	20.67"	41.54"
Weight	1.50lb	1.81lb	2.29lb	2.56lb	2.87lb	13.01lb

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting, accumulation, checking alarm
- Overload alarm
- Units: lb, lb-oz, kg, g, tj, hj



8101-30



### SPECIFICATION

Part No.	8101-15	8101-30
EDP No.	877429	877430
Maximum weighing	30lb/15kg	60lb/30kg
Minimum weighing	.022lb/10g	.044lb/20g
Resolution (d)	.001lb/0.5g	.002lb/1g
Accuracy (m is load)	m≤5.5lb: ±.005lb 5.5lb<m≤22.0lb: ±.01lb m>22.0lb: ±.015lb	m≤11.0lb: ±.01lb 11.0lb<m≤44.0lb: ±.02lb m>44.0lb: ±.03lb
Operation temperature	14~104°F	
Power	rechargeable battery (6V/3.2Ah), power adapter (12V/500mA)	
Dimensions of pan	10.354×8.031"	

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