2025

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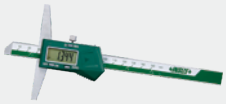

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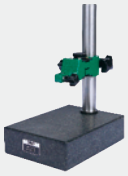
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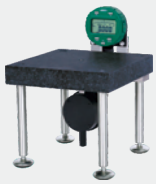
STRAIGHT EDGES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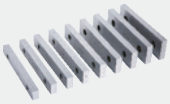
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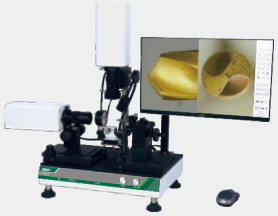
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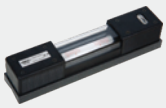
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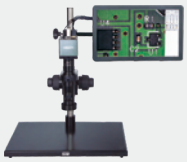
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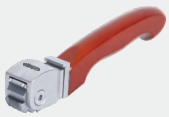
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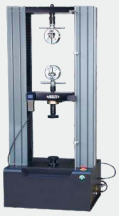
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BORE GAUGES

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DIAL TEST INDICATORS

DIAL INDICATORS

WELDING GAUGES

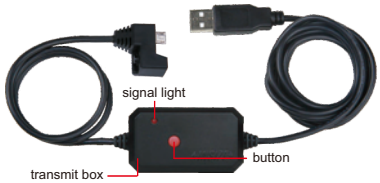
ANGLE PLATE SETS

EDGE FINDERS

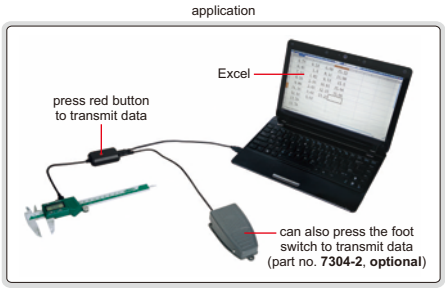
ZERO SETTERS

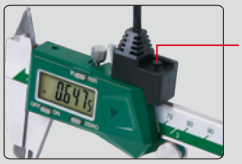
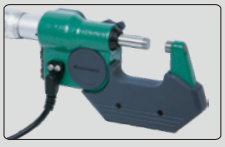
DATA OUTPUT CABLES (KEYBOARD FORMAT)

- 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 key, such as 1.34↙)
- For any softwares which can receive keyboard signal
- Optional accessory: foot switch (part no. **7304-2**), hub (part no. **7324-HUB4**, **7324-HUB7**), extension cables (part no. **7325-ADD5**, **7325-ADD10**)

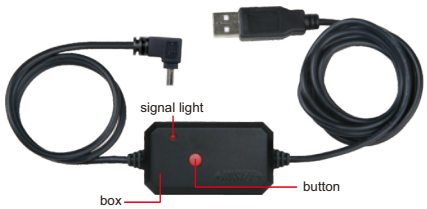


7302-21



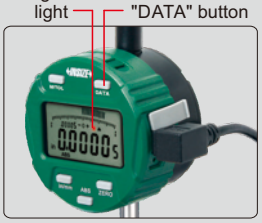
Part No.	Description	Plug	Connecting with measuring tool	Transmit data
7302-21	cable for digital calipers (length 120")		 button	■ Press the button on the plug of cable, can also press the button of the box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7302-22	cable for large digital calipers (length 100")			■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7302-31	cable for digital micrometers (length 100")		"data" button signal light  back	■ Press the "data" button of digital micrometer, can also press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7302-40M	cable for digital indicators (length 100")		"DATA" button signal light for **2108**, **2138**, **2139** series digital indicators	■ Press the "DATA" button of digital indicator, can also press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once Note: long press button to zero the digital indicators
			 for other digital indicators	■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once Note: long press button to zero the digital indicators
7302-50M	cable for digital gauges (length 100")			■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once

DATA OUTPUT CABLE
(TEXT FORMAT, VIRTUAL COM PORT)



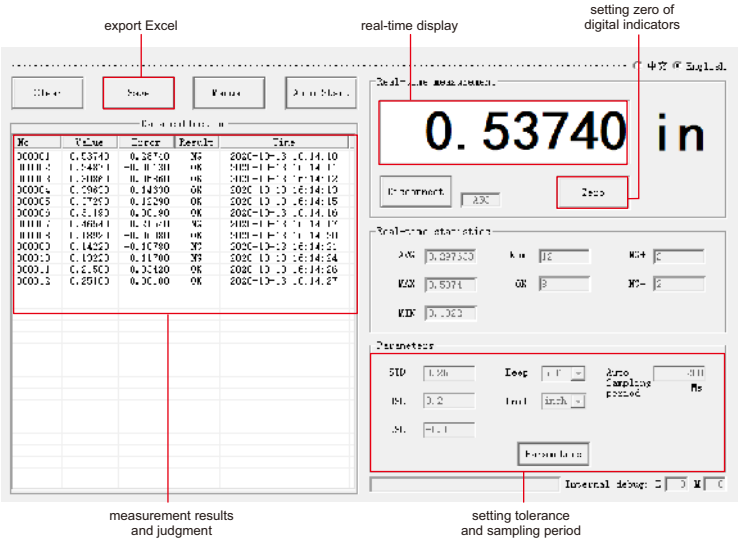
7305-40M

Continuous transmit (can be switched to single transmit)

Part No.	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-40M	cable for digital indicators (length 100")			signal light — "DATA" button  for **2108**, **2138**, **2139** series digital indicators	Continuous transmit is controlled in software Single transmit: ▪ Press the "DATA" button of digital indicator, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once Note: long press button to zero the digital indicators, software of data transmit is included
				for other digital indicators	Continuous transmit is controlled in software Single transmit: ▪ Press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once Note: long press button to zero the digital indicators, software of data transmit is included

Software (included in 7305-40M)

- Real-time display
- Tolerance setting, automatic judgment, out-of-tolerance alarm
- Real time statistics: max, min, average, Go/No-Go number
- Can save results as Excel



communication protocol

- Baud: 9600bps
  Data bit: 8
  Stop bit 1
  Check bit: None
  No flow control

- Data output format with ID number

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21
ID number										Blank	+or-	Data section (floating point)								CR

Data format example

Display	Output
1.234	➡ 4109210605 +0001.234↙
-1.234	➡ 4109210605 -0001.234↙

- Data output format

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
+or-	Data section (floating point)								CR

Data format example

Display	Output
1.234	➡ +0001.234↙
-1.234	➡ -0001.234↙

- Pin definition of RS232 plug:

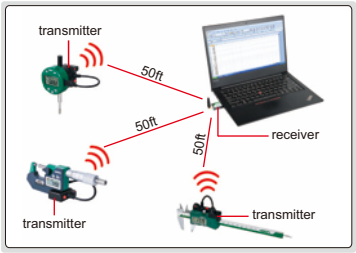
⑤④③②①
⑨⑧⑦⑥

Pin No.	Symbol	Description
2	TXD	Data OUT
3	RXD	Data IN
4	VDD	+5V Power
5	GND	Ground

- The data transmission mode can be switched: single or continuous;
  The data output format can be switched: with ID number or without ID number;
  Data can be transmitted by command;
  The digital indicators can be zeroed by instruction

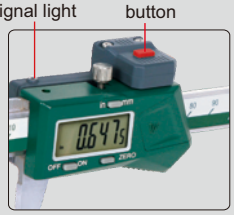
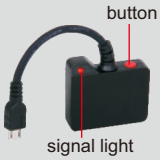
WIRELESS DATA TRANSMISSION SYSTEM (ZIGBEE)

- Through wireless transmission, the readings of measuring tools 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)



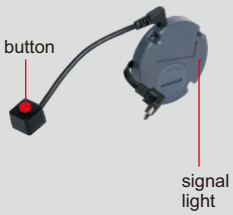
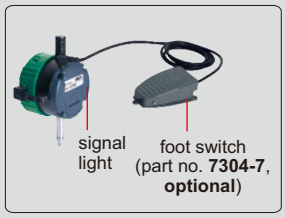
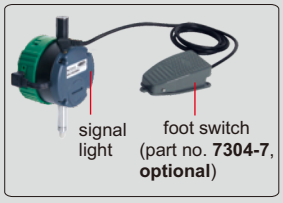
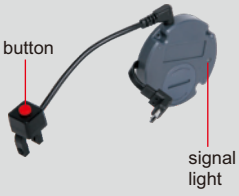
Transmitter

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

Part No.	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-25	transmitter for digital calipers			■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-22	transmitter for large digital calipers			■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-31	transmitter for digital micrometers		back	■ Press the "data" button of digital micrometer ■ Data is transmitted once, the signal light on the digital micrometer flashes once
7315-50M	transmitter for digital indicators			■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once

To be continued

Continued from previous page

Part No.	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-51	transmitter for digital indicators		 for **2108**, **2138**, **2139** series digital indicators  back	■ Press the "DATA" button of digital indicator, can also press the button of the transmitter ■ Transmitter button can be fixed on request ■ Data is transmitted once, the signal light on digital indicator flashes once
			 for other digital indicators  back	■ Press the button of the transmitter Transmitter button can be fixed on request ■ Data is transmitted once, the signal light on digital indicator flashes once
7315-51B	transmitter for digital indicators			■ Press the "DATA" button of digita indicator, can also press the button of the transmitter ■ Data is transmitted once, the signal light on digital indicator flashes once

To be continued

Continued from previous page

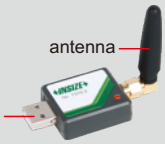
Receiver (keyboard signal)

- 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 12.34↙.
  No need to install drivers and softwares
- Data can be transmitted to excel, word, txt etc.
- For any softwares which can receive keyboard signal

Part No.	Product	Description	Remark
7315-3	USB port	single channel receiver	connected with 1 transmitter only
7315-6	USB port	multichannel receiver	connected with 6 transmitters, each channel has status indicator
7315-7	type-C port		
7315-8	micro USB port		
7315-9	lightning port		

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.	Product	Description	Remark
7315-2	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 readings of 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 gauge at D4-D9, the readings of height gauge 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 gauge at E4-E9, the readings of depth gauge 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

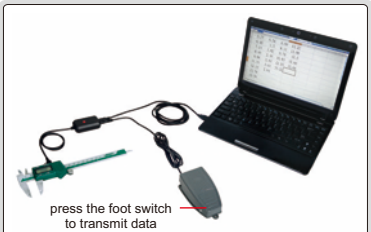
FOOT SWITCH

- For data transmission

7304-2

Part No.	Description	Applicable products
7304-2	data transmission foot switch with cable (length 80")	**7302** series data cables **7305** series data cables

application



press the foot switch to transmit data (part no. **7304-2**, **optional**)

IP67 WATERPROOF DIGITAL CALIPERS

INSIZE PLUS
MADE IN EUROPE

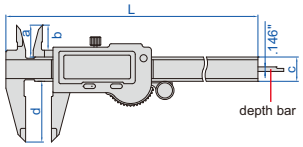
INSPECTION CERTIFICATE | DATA OUTPUT | IP67 WATERPROOF

- IP67 dust/waterproof
- Resolution: .0005"/0.01mm
- Button function: zero, inch/mm, preset, data output
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. **7315-80** receiver is needed, **7302-80**)

1195-150

Part No.	Range	Accuracy	L	a	b	c	d	Remark
1195-150*	0-6"/0-150mm	±.0010"	9.252"	.827"	.650"	.630"	1.575"	with depth bar
1195-200*	0-8"/0-200mm	±.0015"	11.417"	.965"	.787"	.630"	1.969"	with depth bar
1195-300*	0-12"/0-300mm	±.0015"	15.236"	.906"	.728"	.630"	2.520"	without depth bar

*Supplied with manufacturer inspection certificate

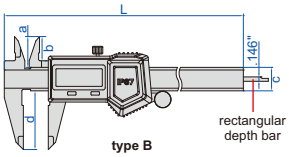


IP67 WATERPROOF DIGITAL CALIPERS

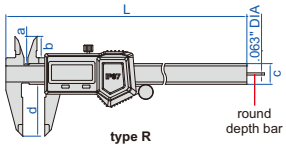
ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME | ATTENTION: NO DATA OUTPUT | IP67 WATERPROOF | INSPECTION CERTIFICATE

- IP67 dust/waterproof
- Resolution .0005"/0.01mm
- Accuracy: ±.0015"
- Button function: zero, on/off, inch/mm, ABS/REL, hold
- Battery CR2032
- Made of stainless steel

1118-150B



1118-150R



Part No.	Range	Type	L	a	b	c	d
1118-150B*	0-6"/0-150mm	B	9.291"	.827"	.630"	.630"	1.575"
1118-200B*	0-8"/0-200mm	B	11.260"	.945"	.748"	.630"	1.969"
1118-300B*	0-12"/0-300mm	B	15.748"	.984"	.807"	.630"	2.362"
1118-150R*	0-6"/0-150mm	R	9.291"	.827"	.630"	.630"	1.575"

*Supplied with manufacturer inspection certificate

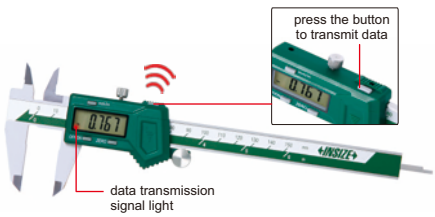
WIRELESS DIGITAL CALIPERS (ZIGBEE)

VIDEO

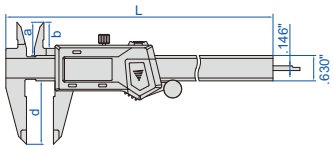
ATTENTION: THE WORKING LIFE OF A BATTERY IS ABOUT 3-5 MONTHS

INSPECTION CERTIFICATE

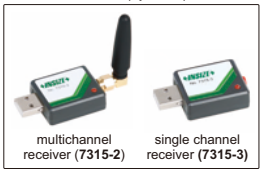
- Non waterproof
- Built-in wireless data transmission module, Zigbee signal
- Transmission distance is 33 feet (under the condition of no obstruction and no electromagnetic interference)
- Resolution .0005"/0.01mm
- Accuracy: ±.0015"
- Buttons: on/off, zero, inch/mm, data transmission
- Automatic power 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**)



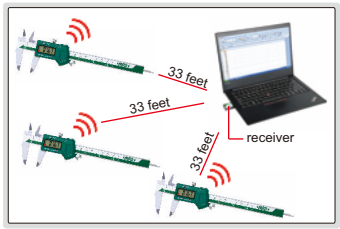
1113-150



receiver (**optional**)



application



Part No.	Range	L	a	b	d
1113-150*	0-6"/0-150mm	9.291"	.827"	.630"	1.575"
1113-200*	0-8"/0-200mm	11.260"	.945"	.748"	1.969"
1113-300*	0-12"/0-300mm	15.748"	.984"	.807"	2.362"

*Supplied with manufacturer inspection certificate

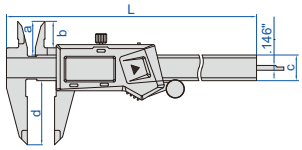
DIGITAL CALIPERS (FRACTION READING)

DATA OUTPUT

INSPECTION CERTIFICATE

inch fraction reading | mm reading | inch reading

1102-150



- Non waterproof
- Resolution: 1/128", 0.01mm, .0005"
- Buttons: unit (inch fraction/mm/inch), on/off, zero
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output (mm and inch)
- Made of stainless steel
- Optional accessory: data output cable (part no. **7315-21** receiver is needed, **7302-21**)

Part No.	Range	Accuracy	L	a	b	c	d
1102-150*	0-6"/0-150mm	±.0010"	9.291"	.827"	.630"	.630"	1.575"
1102-200*	0-8"/0-200mm	±.0015"	11.260"	.945"	.748"	.630"	1.969"
1102-300*	0-12"/0-300mm	±.0015"	15.748"	.984"	.807"	.630"	2.362"

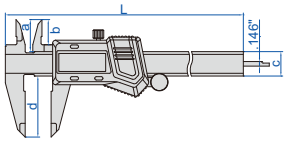
*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS

ATTENTION: NO DATA OUTPUT

INSPECTION CERTIFICATE

1114-150A



- Non waterproof
- Accuracy: ±.0015"
- 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

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

*Supplied with manufacturer inspection certificate

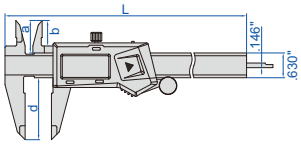
DIGITAL CALIPERS (STANDARD TYPE)

INSPECTION CERTIFICATE

DATA OUTPUT

POPULAR MODEL

1108-150



- 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** receiver is needed, **7302-21**)

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

*Supplied with manufacturer inspection certificate

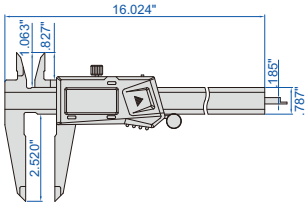
HEAVY DUTY 12" DIGITAL CALIPER

INSPECTION CERTIFICATE

DATA OUTPUT

- Non waterproof
- Resolution .0005"/0.01mm
- Accuracy: ±.0015"
- 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** receiver is needed, **7302-22**)

1196-300



Part No.	Range
1196-300*	0-12"/0-300mm

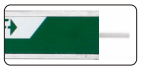
*Supplied with manufacturer inspection certificate

DIGITAL CALIPER WITH ROUND DEPTH BAR

DATA OUTPUT

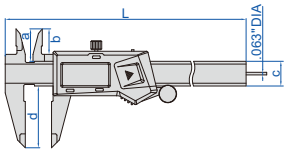
INSPECTION CERTIFICATE

1119-150



round depth bar .063" DIA

- 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** receiver is needed, **7302-21**)



Part No.	Range	Accuracy	L	a	b	c	d
1119-150*	0-6"/0-150mm	±.0015"	9.291"	.827"	.630"	.630"	1.575"

*Supplied with manufacturer inspection certificate

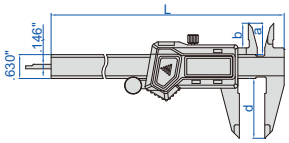
LEFT HAND DIGITAL CALIPERS

INSPECTION CERTIFICATE

DATA OUTPUT

1130-150

- 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** receiver is needed, **7302-22**)



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

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS WITH CARBIDE TIPPED JAWS

INSPECTION CERTIFICATE

DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1110-150A

1110-150B

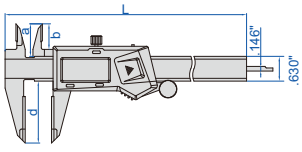
Carbide tipped upper and lower jaws

Part No.	Range	Accuracy	L	a	b	d
1110-150A*	0-6"/0-150mm	±.0015"	9.291"	.827"	.630"	1.575"
1110-200A*	0-8"/0-200mm	±.0015"	11.260"	.945"	.748"	1.969"
1110-300A*	0-12"/0-300mm	±.0015"	15.748"	.984"	.807"	2.362"

Carbide tipped lower jaws

Part No.	Range	Accuracy	L	a	b	d
1110-150B*	0-6"/0-150mm	±.0015"	9.291"	.827"	.630"	1.575"
1110-200B*	0-8"/0-200mm	±.0015"	11.260"	.945"	.748"	1.969"
1110-300B*	0-12"/0-300mm	±.0015"	15.748"	.984"	.807"	2.362"

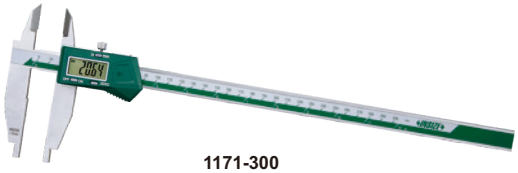
*Supplied with manufacturer inspection certificate



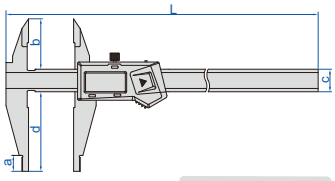
DIGITAL CALIPER

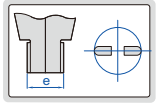
DATA OUTPUT

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



1171-300





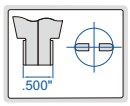
Part No.	Range	Accuracy	a	b	c	d	e	L
1171-300	0-12"/0-300mm	±.0016"	.472"	1.496"	.669"	2.362"	.394"	16.535"

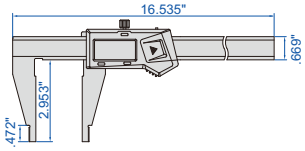
DIGITAL CALIPER

DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1522-127





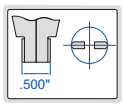
Part No.	Range	Accuracy
1522-127	0-12"/0-300mm	±.0015"

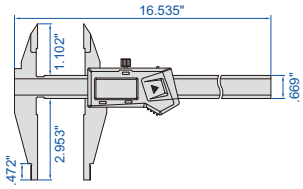
DIGITAL CALIPER

DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1523-127





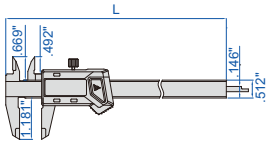
Part No.	Range	Accuracy
1523-127	0-12"/0-300mm	±.0015"

MINI DIGITAL CALIPERS

ATTENTION: NO DATA OUTPUT

1111-100A

- 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



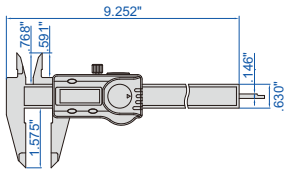
Part No.	Range	Accuracy	L
1111-75A	0-3"/0-75mm	±.0010"	5.669"
1111-100A	0-4"/0-100mm	±.0010"	6.693"

PLASTIC DIGITAL CALIPER

ATTENTION: NO DATA OUTPUT

1139-150

- 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.	Range	Accuracy
1139-150	0-6"/0-150mm	±.004"

DIAL CALIPERS

INSPECTION CERTIFICATE

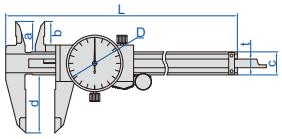
SHOCK PROOF

- Dial indicator graduation .001"
- Shockproof dial indicator
- Made of stainless steel

1311-6

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

*Supplied with manufacturer inspection certificate

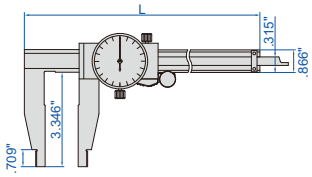


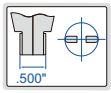
DIAL CALIPERS

SHOCK PROOF

- Shockproof dial indicator
- Graduation .001"
- Accuracy: ±.0020"
- Made of stainless steel

1316-18



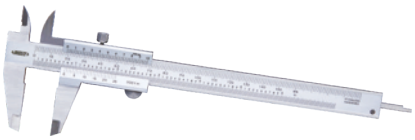


Part No.	Range	L
1316-18	0-18"	22.835"
1316-24	0-24"	28.740"

VERNIER CALIPERS

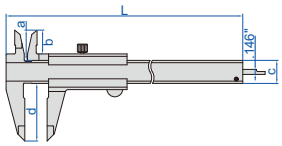
POPULAR MODEL

- Graduation .001"/0.02mm
- Accuracy: ±.0012"
- Made of stainless steel
- Satin chrome plated reading surface



1205-1502E

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



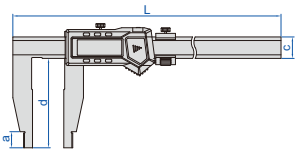
DIGITAL CALIPERS

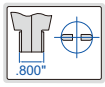
POPULAR MODEL

DATA OUTPUT

- Non waterproof
- Resolution .0005"/0.01mm
- Button function: on/off, zero, inch/mm, ABS, data preset
- Battery CR2032
- Made of stainless steel
- Data output
- Optional accessory: data output cable (part no. **7315-22** receiver is needed, **7302-22**, for **1131-24** and **1131-40**; part no. **7315-20B** receiver is needed, **7302-SPC1A**, for **1131-60**)

1131-24





Part No.	Range	Accuracy	a	c	d	L
1131-24	0-24"/0-600mm	±.0020"	.709"	.945"	3.937"	30.315"
1131-40	0-40"/0-1000mm	±.0030"	.945"	1.220"	5.906"	48.031"
1131-60	0-60"/0-1500mm	±.0045"	.945"	1.654"	5.906"	70.079"

DIGITAL CALIPERS

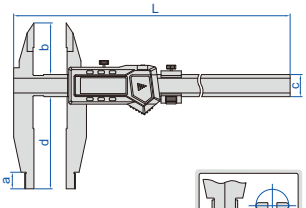
DATA OUTPUT

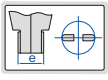
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel

1117-501

With data interface
(data output cable part no. 7315-22 receiver is needed, 7302-22 , optional)

Part No.	Range	Accuracy	a	b	c	d	e	L
1117-301	0-12"/0-300mm	±0.05mm	18mm	56mm	24mm	100mm	20mm	420mm
1117-501	0-20"/0-500mm	±0.05mm	18mm	56mm	24mm	100mm	20mm	675mm
1117-502	0-20"/0-500mm	±0.06mm	24mm	56mm	24mm	150mm	20mm	675mm
1117-601	0-24"/0-600mm	±0.05mm	18mm	56mm	24mm	100mm	20mm	770mm
1117-802	0-32"/0-800mm	±0.07mm	24mm	67mm	31mm	150mm	20mm	1025mm
1117-1002	0-40"/0-1000mm	±0.08mm	24mm	67mm	31mm	150mm	20mm	1220mm



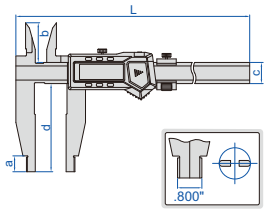


DIGITAL CALIPERS

DATA OUTPUT

- 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** receiver is needed, **7302-22**)

1133-24



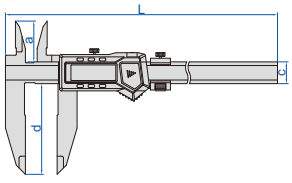
Part No.	Range	Accuracy	a	b	c	d	L
1133-24	0-24"/0-600mm	±.0020"	.709"	1.772"	.945"	3.937"	30.315"
1133-40	0-40"/0-1000mm	±.0030"	.945"	2.362"	1.220"	5.906"	48.031"

DIGITAL CALIPERS

DATA OUTPUT

- 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** receiver is needed, **7302-22**)

1135-601



Part No.	Range	Accuracy	a	c	d	L
1135-451	0-18"/0-450mm	±.0020"	1.772"	.945"	3.937"	24.606"
1135-601	0-24"/0-600mm	±.0020"	1.772"	.945"	3.937"	30.315"
1135-1002	0-40"/0-1000mm	±.0030"	2.362"	1.220"	5.906"	48.031"

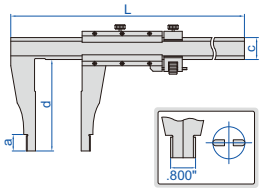
VERNIER CALIPERS (SEPARATE TYPE)

POPULAR MODEL

- Graduation .001"/0.02mm
- Graduation on scale: inch on bottom, metric on top
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

1211-24

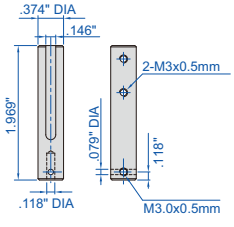
separate type (with screws)

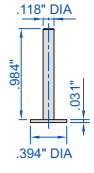


Part No.	Range	Accuracy	a	c	d	L
1211-24	0-24"/0-600mm	±.0020"	.709"	.945"	3.937"	30.315"
1211-40	0-40"/0-1000mm	±.0031"	.945"	1.26"	5.512"	47.874"

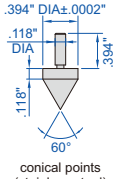
ACCESSORY SET FOR DIGITAL CALIPERS PART NO. 6144

VIDEO

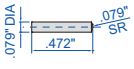




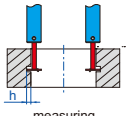
disk points (stainless steel)



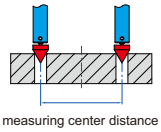
conical points (stainless steel)



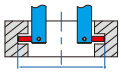
spherical/flat points (stainless steel)



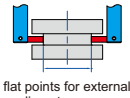
measuring internal groove diameter (h≤.138")



measuring center distance



spherical points for groove diameter (inside hole) measurement



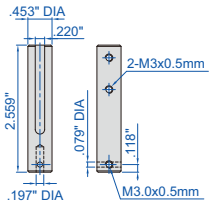
flat points for external groove diameter measurement

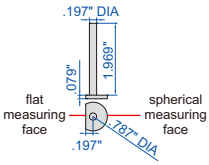
- Suitable for 0-6"/0-150mm and 0-8"/0-200mm digital calipers (thickness of lower jaws≤.146")

Part No.
6144

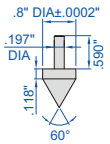
ACCESSORY SET FOR LARGE DIGITAL CALIPERS
PART NO. 6145-500

6145-500

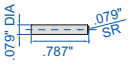




half disk points (stainless steel)



conical points (stainless steel)

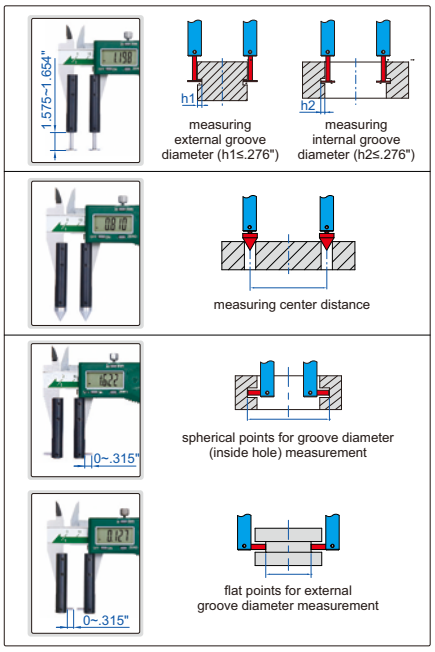


spherical/flat points (stainless steel)

- Suitable for 0-20"/0-500mm and 0-24"/0-600mm digital calipers (thickness of lower jaws≤.220")

Part No.
6145-500

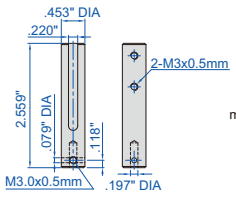
VIDEO

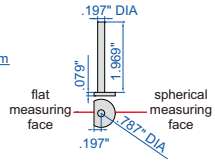


ACCESSORY SET FOR LARGE DIGITAL CALIPERS (WITH SIDE POINTS)
PART NO. 6146-500B

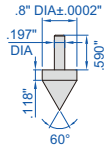
VIDEO

6146-500B





half disk points (stainless steel)

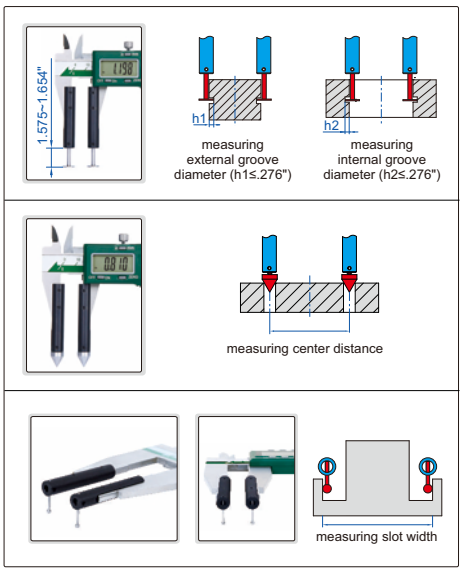


conical points (stainless steel)

ball points (stainless steel)

- Suitable for 0-20"/0-500mm and 0-24"/0-600mm digital calipers (thickness of lower jaws≤.220")

Part No.
6146-500B

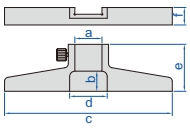


DEPTH BASE ATTACHMENTS

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

6140

6140-16B



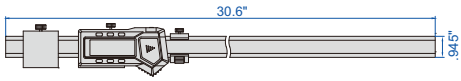
Part No.	a	b	c	d	e	f	Type	Application
6140	.650"	.354"	2.953"	.709"	1.181"	.236"	narrow base (f=.236")	suitable for calipers with beam width (w) .630"
6140-300A	.787"	.591"	4.921"	.866"	1.339"	.354"	narrow base (f=.354")	suitable for calipers with beam width (w) .787"
6140-16B	.630"	.492"	2.953"	.965"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

UNIVERSAL CALIPER

DATA OUTPUT

VIDEO

1125-600



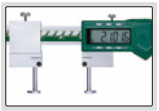
- Non waterproof
- Buttons: on/off, set, inch/mm, ABS, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. **7315-22** receiver is needed, **7302-22**)

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

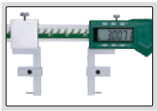
*The range changes according to different points

preset buttons

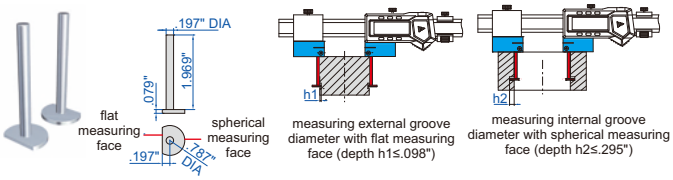
working with stands



working with measuring jaws



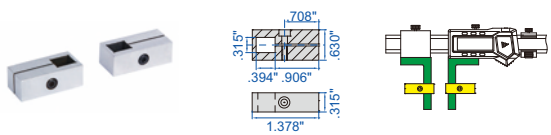
Half disk points (included)



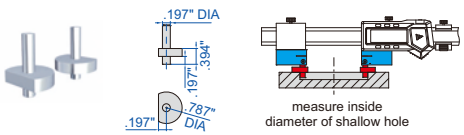
measuring external groove diameter with flat measuring face (depth h1≤.098")

measuring internal groove diameter with spherical measuring face (depth h2≤.295")

Depth stop (included)



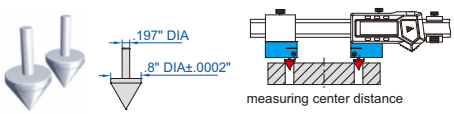
Round shoulder points (optional)



measure inside diameter of shallow hole

Part No.
1125-T102

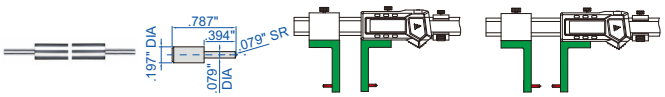
Conical points (optional)



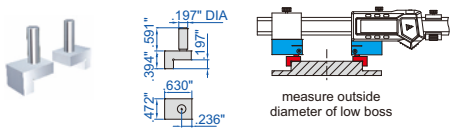
measuring center distance

Part No.
1125-T101-1

Spherical points (included)



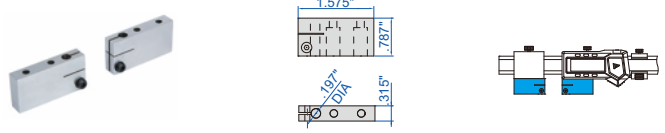
Flat shoulder points (optional)



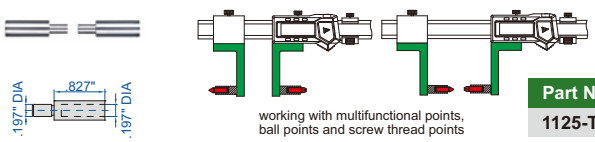
measure outside diameter of low boss

Part No.
1125-T103

Stands (included)



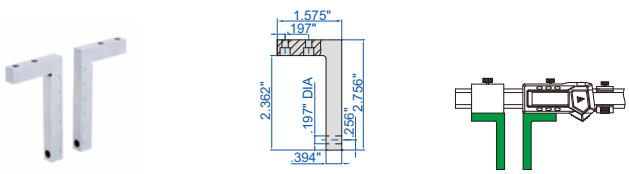
Point sleeve (optional)



working with multifunctional points, ball points and screw thread points

Part No.
1125-T104

Measuring jaws (included)



Multifunctional points 7392*(optional)

Ball points 7391*(optional)

Screw thread points 7381*, 7321* (optional)

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

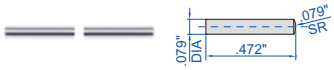
DIGITAL CALIPER WITH INTERCHANGEABLE POINTS
PART NO. 1526-200

DATA OUTPUT

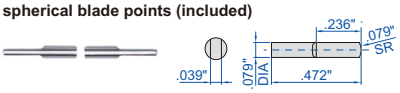
VIDEO

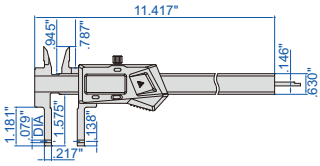
short spherical points (included)

long spherical/flat points (included)

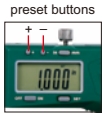


spherical blade points (included)





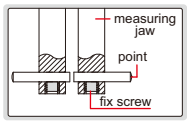
preset buttons



depth stop **6143** (**optional**)

zero setting block for external measurement (included)

install points



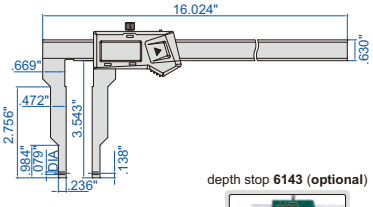
- Non waterproof
- Supplied with 3 pairs of points and zero setting block for external measurement
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional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

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

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS
PART NO. 1124-300A

VIDEO

DATA OUTPUT

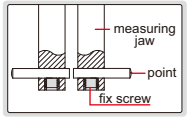


depth stop **6143** (**optional**)

preset buttons

zero setting block for external measurement (included)

install points

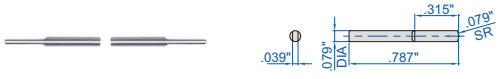


short spherical/flat points (included)

long spherical/flat points (included)

short spherical blade points (included)

long spherical blade points (included)



- 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** receiver is needed, **7302-21**)

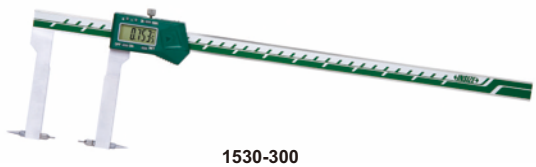
Point	Range	Accuracy	Application
short spherical/ flat points	1-12.7"/24-324mm (internal) 0-11.3"/0-288mm (external)	±.0015"	spherical points for grooves inside hole (small hole) flat points for external grooves
long spherical/ flat points	1.5-13.3"/40-340mm (internal) 0-10.7"/0-272mm (external)	±.0015"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

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS

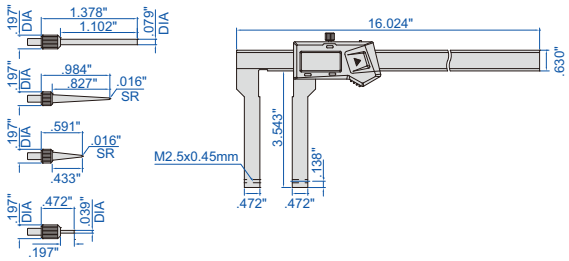
VIDEO

VARIOUS POINTS ARE AVAILABLE

DATA OUTPUT

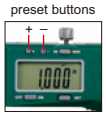


1530-300



- 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, depth stop (part no. **6143**), data output cable (part no. **7315-21** receiver is needed, **7302-21**)

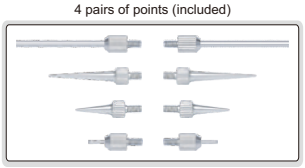
preset buttons



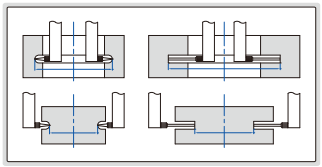
depth stop **6143** (**optional**)

zero setting block for external measurement (included)

4 pairs of points (included)



measure internal and external grooves



Part No.	Range*	Accuracy
1530-300	0-12"/0-300mm	±.0016"

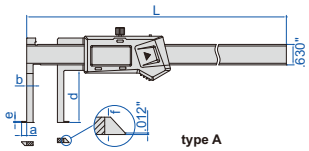
*For different points, the measuring range changes accordingly

DIGITAL INSIDE GROOVE CALIPERS

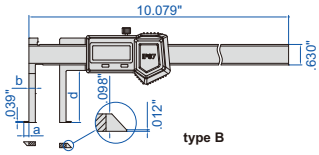
1520-150

1520-150P

- Measure diameter of grooves inside small 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**)



type A

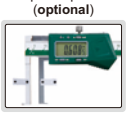


type B

Non waterproof, with data interface (data output cable part no. 7315-21 receiver is needed , 7302-21, optional)

Part No.	Range	Type	Accuracy	L	a	b	d	e	f
1520-150	.43-6"/11-150mm	A	±.0015"	9.291"	.138"	.197"	1.614"	.035"	.098"
1520-200	.63-8"/16-200mm	A	±.0015"	11.220"	.197"	.276"	1.614"	.039"	.118"

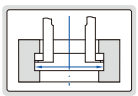
depth stop **6143** (**optional**)



preset buttons

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

Part No.	Range	Type	Accuracy	a	b	d
1520-150P	.56-6"/14-150mm	B	±.0015"	.197"	.276"	1.181"
1520-1501P	.31-6"/8-150mm	B	±.0015"	.079"	.157"	1.575"

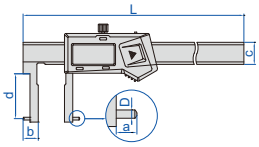


DIGITAL INSIDE POINT CALIPERS

DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1121-150A

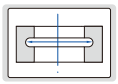


Preset (no need to add the width of the jaws on the reading), with data interface

Part No.	Range	Type	Accuracy	L	a	b	c	d	D
1121-150A	0.94-6"/24-150mm	A	±.0015"	9.843"	.197"	.472"	.630"	1.102"	.079" DIA
1121-1501	1.38-6"/35-150mm	A	±.0020"	9.843"	.236"	.689"	.630"	2.362"	.079" DIA
1121-200A	0.98-8"/25-200mm	A	±.0015"	12.205"	.197"	.492"	.630"	1.457"	.079" DIA
1121-2001	1.57-8"/40-200mm	A	±.0020"	12.205"	.275"	.787"	.630"	2.756"	.118" DIA
1121-300A	1.18-12"/30-300mm	A	±.0030"	16.142"	.197"	.590	.630"	1.968"	.079" DIA
1121-3001A	1.97-12"/50-300mm	A	±.0030"	16.142"	.315"	.984"	.630"	3.031"	.118" DIA

preset buttons

depth stop **6143** (**optional**)

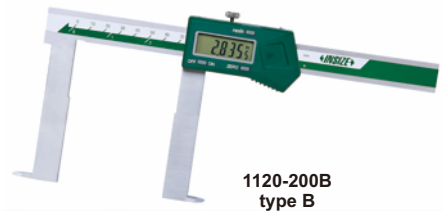


DIGITAL INSIDE GROOVE CALIPERS

preset buttons

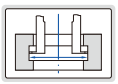
1120-150AE
type A

- Measure groove diameter
- Resolution: .0005"/0.01mm
- Buttons type A: on/off, set, inch/mm, preset (+, -)
  type B: on/off, zero, inch/mm
  type C: on/off, zero, inch/mm, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop
  (part no. **6143**, for calipers with c=.630")

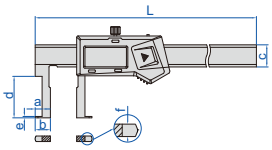


1120-200B
type B

depth stop **6143**
(**optional**)



1120-150P
type C



Non waterproof, preset (no need to add the width of the jaws on the reading), with data interface

Part No.	Range	Type	Accuracy	L	a	b	c	d	e	f	Data output cable (optional)
1120-150AE	1-6"/25.4-150mm	A	±.0015"	9.843"	.197"	.500"	.630"	1.181"	.039"	.157"	**7315-21** receiver is needed, **7302-21**
1120-1501	1.38-6"/35-150mm	A	±.0025"	9.843"	.236"	.689"	.630"	2.362"	.059"	.157"	
1120-200A	.98-8"/25-200mm	A	±.0015"	12.205"	.197"	.492"	.630"	1.575"	.039"	.157"	
1120-2001	1.57-8"/40-200mm	A	±.0025"	12.205"	.276"	.787"	.630"	2.756"	.098"	.157"	
1120-300A	1.18-12"/30-300mm	A	±.0020"	16.142"	.197"	.591"	.630"	1.969"	.059"	.157"	
1120-3001	1.97-12"/50-300mm	A	±.0030"	16.142"	.315"	.984"	.630"	3.150"	.098"	.157"	
1120-500	1.57-20"/40-500mm	A	±.0030"	26.772"	.197"	.787"	.945"	3.543"	.087"	.217"	**7315-22** receiver is needed, **7302-22**

Non waterproof, no preset (need to add the width of the jaws on the reading)

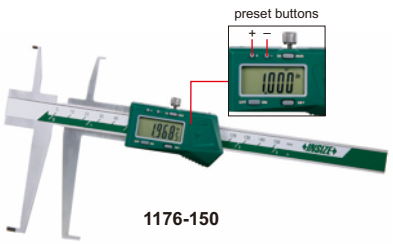
Part No.	Range	Type	Accuracy	L	a	b	c	d	e	f
1120-200B	2.36-8"/60-200mm	B	±.0025"	12.598"	.394"	1.181"	.787"	3.937"	.134"	.157"

IP67 dust/waterproof, no automatic power off, set zero after power on each time, no preset (need to add the width of the jaws on the reading), without data interface

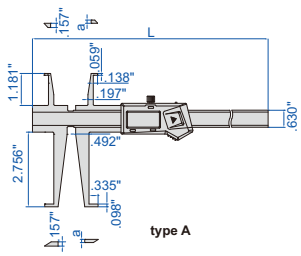
Part No.	Range	Type	Accuracy	L	a	b	c	d	e	f
1120-150P	.87-6"/22-150mm	C	±.0015"	9.843"	.197"	.433"	.630"	1.181"	.039"	.157"

DIGITAL INSIDE GROOVE CALIPERS

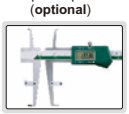
preset buttons



1176-150

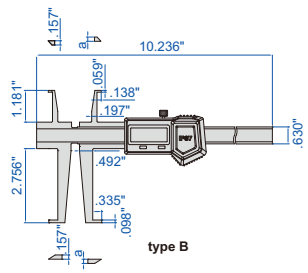


depth stop **6143**
(**optional**)

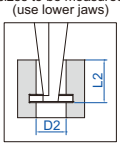


- Measure diameter of grooves inside bores
- Resolution .0005"/0.01mm
- Buttons type A: on/off, set, inch/mm, preset (+, -)
  type B: on/off, zero, inch/mm, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop
  (part no. **6143**)

1176-150P



sizes to be measured
(use lower jaws)



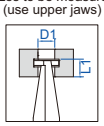
Non waterproof, with data interface (data output cable part no. 7315-21 receiver is needed, 7302-21, optional)

Part No.	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150	.35-6"/9-150mm	.70-6"/17-150mm	A	±.0015"	10.236"	.118"
1176-200	.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.	Range of upper jaw	Range of lower jaw	Type	Accuracy	a
1176-150P	.35-6"/9-150mm	.70-6"/17-150mm	B	±.0015"	.157"

sizes to be measured
(use upper jaws)



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"

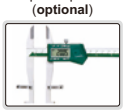
DIGITAL DEEP HOLE INSIDE GROOVE CALIPER

DATA OUTPUT

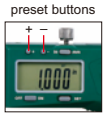
- Non waterproof
- Measure diameter of grooves inside deep holes
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (part no.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

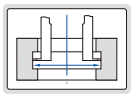
1129-300

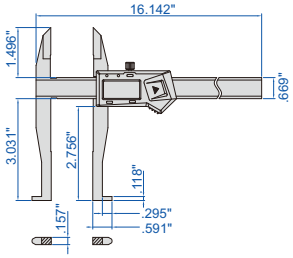
depth stop **6143** (**optional**)



preset buttons







Part No.	Range of upper jaw	Range of lower jaw	Accuracy
1129-300	0-12"/0-300mm	1.2-12"/30-300mm	±.0015"

DIGITAL INSIDE GROOVE CALIPERS

- 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**)

Non waterproof, with data interface (data output cable part no. 7315-21 receiver is needed, 7302-21, optional)

Part No.	Range	Type	Accuracy
1178-300	1.18-12"/25-300mm	A	±.0020"

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

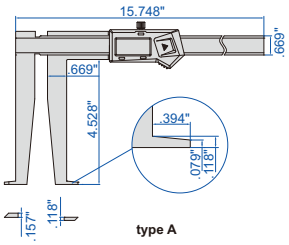
Part No.	Range	Type	Accuracy
1178-300P	1.30-12"/33-300mm	B	±.0020"

preset buttons

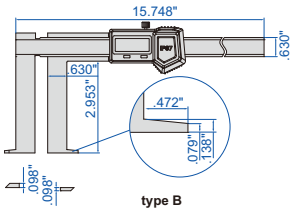
depth stop **6143** (**optional**)

1178-300

1178-300P



type A

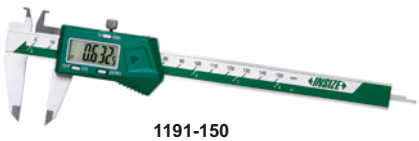


type B

DIGITAL INSIDE GROOVE CALIPERS

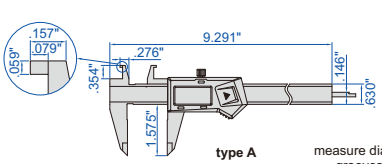
DATA OUTPUT

- Non waterproof
- Upper jaws for measuring diameter of 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** receiver is needed, **7302-21**)

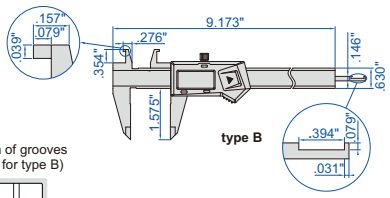


1191-150

1191-150B

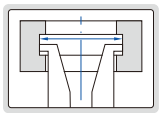


type A

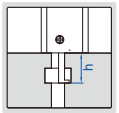


type B

measure diameter of grooves .3-6"



measure depth of grooves (h<.394", only for type B)



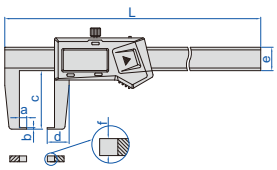
Part No.	Range of upper jaw	Range of lower jaw	Accuracy	Type
1191-150	.3-6"/8-150mm	0-6"/0-150mm	±.0015"	A
1191-150B	.3-6"/8-150mm	0-6"/0-150mm	±.0015"	B

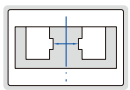
DIGITAL OUTSIDE NECK CALIPERS

DATA OUTPUT

- 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**, for calipers with e=.630")

1187-150A

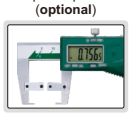




With data interface

Part No.	Range	Accuracy	L	a	b	c	d	e	f	Data output cable (optional)
1187-150A	0-6"/0-150mm	±.0015"	9.843"	.197"	.039"	1.575"	.591"	.630"	.157"	**7315-21** receiver is needed, **7302-21**
1187-200A	0-8"/0-200mm	±.0020"	12.205"	.354"	.059"	3.150"	.906"	.630"	.157"	
1187-300A	0-12"/0-300mm	±.0025"	19.291"	.472"	.079"	5.906"	1.417"	.945"	.157"	**7315-22** receiver is needed, **7302-22**
1187-500A	0-20"/0-500mm	±.0030"	27.165"	.472"	.079"	5.906"	1.417"	.945"	.217"	

depth stop **6143** (**optional**)

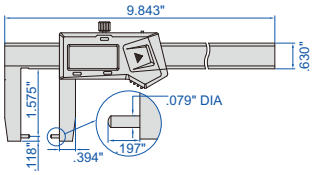


DIGITAL OUTSIDE POINT CALIPER

DATA OUTPUT

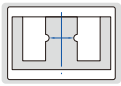
- Non waterproof
- Measure wall thickness inside bores and recesses
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**),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

1185-150A



depth stop **6143** (**optional**)

Part No.	Range	Accuracy
1185-150A	0-6"/0-150mm	±.0015"

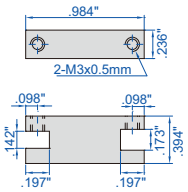


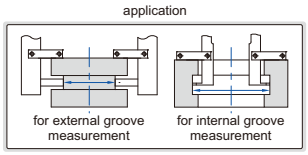
DEPTH STOP FOR CALIPERS

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

Part No.
6143

6143

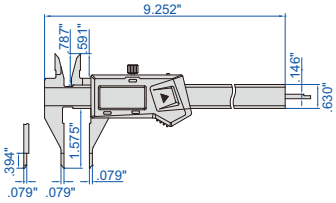




DIGITAL SMALL POINT CALIPER

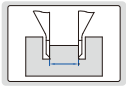
DATA OUTPUT

1169-150



- 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** receiver is needed, **7302-21**)

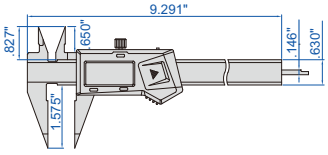
Part No.	Range	Accuracy
1169-150	0-6"/0-150mm	±.0015"



DIGITAL POINT CALIPER

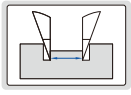
DATA OUTPUT

1183-150A



- 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** receiver is needed, **7302-21**)

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



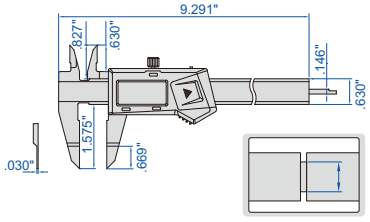
DIGITAL BLADE CALIPER

DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1188-150A

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

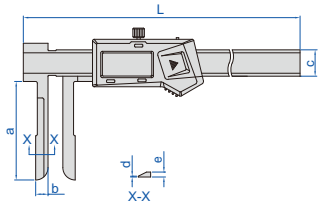


DIGITAL INSIDE KNIFE-EDGE CALIPERS

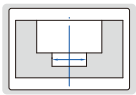
DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1123-150A



Part No.	Range	Accuracy	L	a	b	c	d	e
1123-150A	.6-6"/15-150mm	±.0020"	9.843"	2.362"	.472"	.630"	.012"	.138"
1123-200A	.8-8"/20-200mm	±.0025"	12.008"	3.937"	.669"	.630"	.012"	.138"

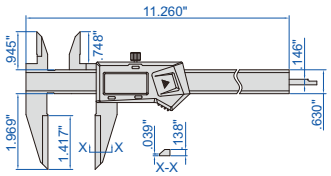


DIGITAL CALIPER WITH KNIFE-EDGE LOWER JAWS

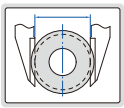
DATA OUTPUT

- Non waterproof
- Measure diameter of narrow 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** receiver is needed, **7302-21**)

1532-200



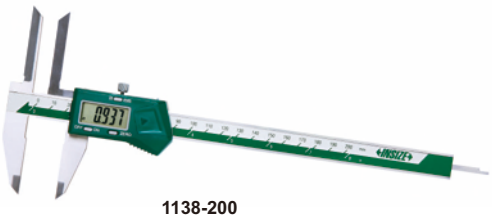
Part No.	Range	Accuracy
1532-200	0-8"/0-200mm	±.0015"



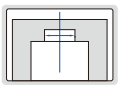
DIGITAL CALIPER WITH LONG UPPER JAWS

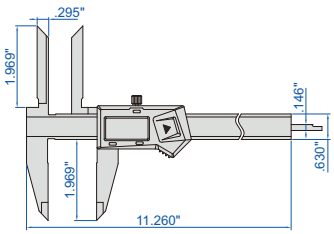
DATA OUTPUT

- Non waterproof
- Long upper jaws for measuring diameter of deep 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** receiver is needed, **7302-21**)



1138-200





Part No.	Range	Accuracy
1138-200	0-8"/0-200mm	±.0015"

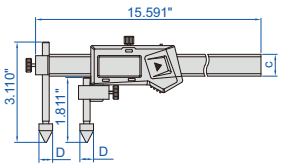
DIGITAL OFFSET CENTERLINE CALIPER

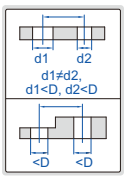
DATA OUTPUT

- Non waterproof
- Measure hole center distance in the same or offset planes
- 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** receiver is needed, **7302-21**)

1192-300AE

preset buttons





Part No.	Range	Accuracy	c	D (DIA)
1192-300AE	.4-12"/10.5-300mm	±.0035"	.630"	.4"

DIGITAL BACK-JAW CENTERLINE CALIPERS

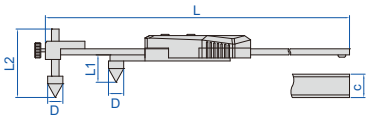
DATA OUTPUT

- Non waterproof
- Measure hole center distance in the same or offset planes
- 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

1177-300E

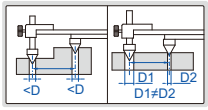
preset buttons

back-jaw



With data interface

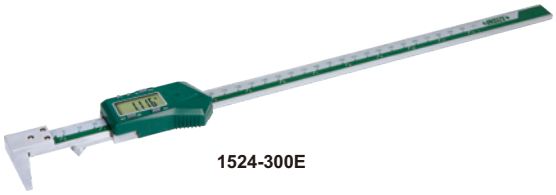
Part No.	Range	Accuracy	c	D (DIA)	L1	L2	L	Data output cable (optional)
1177-300E	.4-12"/10.5-300mm	±.0040"	.630"	.4"	.709"	1.772"	16.142"	**7315-21** receiver is needed, **7302-21**
1177-500E	.8-20"/20.5-500mm	±.0040"	.945"	.8"	1.024"	2.756"	27.244"	**7315-22** receiver is needed, **7302-22**



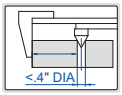
DIGITAL BACK-JAW EDGE TO CENTER CALIPER

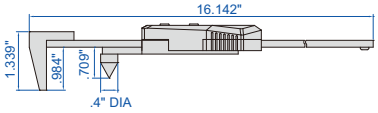
DATA OUTPUT

- Non waterproof
- Measure edge to hole center distance
- 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** receiver is needed, **7302-21**)



1524-300E





preset buttons

back-jaw

Part No.	Range	Accuracy
1524-300E	.2-12"/5.5-300mm	±.0040"

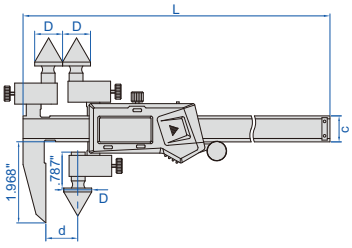
DIGITAL CENTERLINE AND EDGE TO CENTER CALIPERS

DATA OUTPUT

- Non waterproof
- Measure hole center distance in the same or offset planes and edge to hole center distance
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

1521-2002

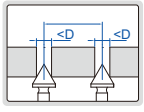
preset buttons



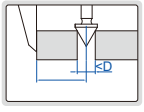
With data interface
(data output cable part no. 7315-21 receiver is needed, 7302-21, optional)

Part No.	Range	Accuracy	D	d	L	c
1521-150	.2-5.5"/5-140mm	±.0020"	.197" DIA	.197"	9.291"	.630"
1521-1501	.4-5.5"/10-140mm	±.0020"	.394" DIA	.394"	9.291"	.630"
1521-1502	.8-5.5"/20-140mm	±.0020"	.787" DIA	.787"	9.291"	.630"
1521-200	.2-7.5"/5-190mm	±.0020"	.197" DIA	.197"	11.220"	.630"
1521-2001	.4-7.5"/10-190mm	±.0020"	.394" DIA	.394"	11.220"	.630"
1521-2002	.8-7.5"/20-190mm	±.0020"	.787" DIA	.787"	11.220"	.630"
1521-300	.2-11.5"/5-290mm	±.0030"	.197" DIA	.197"	15.157"	.669"
1521-3001	.4-11.5"/10-290mm	±.0030"	.394" DIA	.394"	15.157"	.669"
1521-3002	.8-11.5"/20-290mm	±.0030"	.787" DIA	.787"	15.157"	.669"

measure hole center distance



measure edge to hole center distance

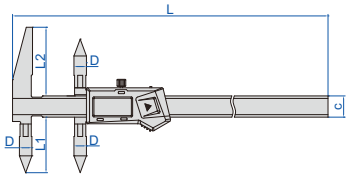


DIGITAL CENTERLINE AND EDGE TO CENTER CALIPERS

DATA OUTPUT

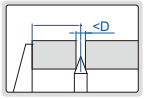
- Non waterproof
- Measure hole center distance or edge to hole center distance
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel

1525-300E

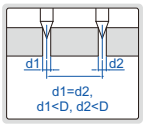


preset buttons

measure edge to hole center distance



measure hole center distance



With data interface

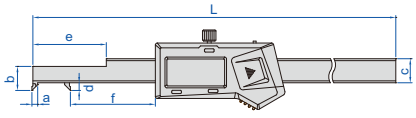
Part No.	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy	c	D (DIA)	L1	L2	L	Data output cable (optional)
1525-300E	.2-12" /5.5-300mm	.4-12"/10.5-300mm	±.0030"	.669"	.4"	1.752"	2.165"	16.142"	**7315-21** receiver is needed, **7302-21**
1525-500E	.4-20"/10.5-500mm	.8-20"/20.5-500mm	±.0035"	.945"	.8"	1.969"	2.362"	27.165"	**7315-22** receiver is needed, **7302-22**

DIGITAL HOOK CALIPERS

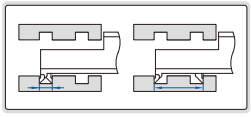
DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1122-300



Part No.	Range	Accuracy	L	a	b	c	d	e	f
1122-150	.12-6"/3-150mm	±.0015"	10.236"	.118"	.472"	.492	.157"	.945"	1.063"
1122-200	.12-8"/3-200mm	±.0015"	12.205"	.118"	.472"	.492	.157"	.945"	1.063"
1122-300	.16-12"/4-300mm	±.0015"	18.346"	.157"	.551"	.591"	.197"	3.386"	3.504"

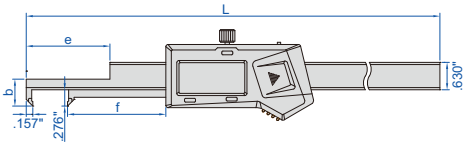


DIGITAL HOOK CALIPERS

DATA OUTPUT

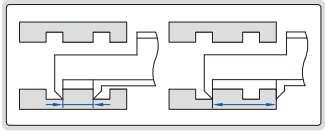
- Non waterproof
- Measure width and distance of grooves inside bores
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel

1164-200



With data interface
(data output cable part no. 7315-21 receiver is needed, 7302-21, optional)

Part No.	Range	Accuracy	L	b	e	f
1164-200	0-8"/0-200mm	±.0015"	12.795"	.551"	2.047"	1.969"
1164-300	0-12"/0-300mm	±.0015"	18.110"	.591"	3.228"	3.150"

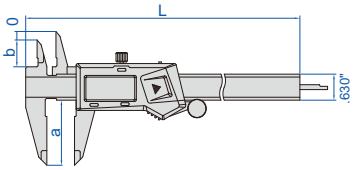


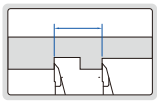
DIGITAL CALIPER WITH ONE DIRECTION UPPER JAWS

DATA OUTPUT

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: zero, power on/off, 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** receiver is needed, **7302-21**)

1184-150





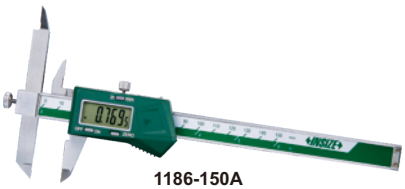
jaws with same height used for measuring the distance in same level

Jaws with same height

Part No.	Range	Accuracy	L	a	b
1184-150	0-6"/0-150mm	±.0015"	9.291"	1.575"	.669"

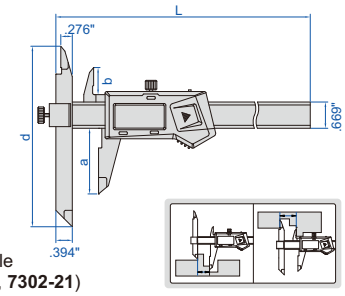
DIGITAL OFFSET CALIPERS

DATA OUTPUT



1186-150A

- 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** receiver is needed, **7302-21**)



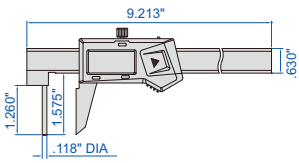
Part No.	Range	Accuracy	L	a	b	d
1186-150A	0-6"/0-150mm	±.0015"	9.803"	1.575"	.650"	4.331"
1186-200A	0-8"/0-200mm	±.0015"	11.772"	1.969"	.768"	4.724"

DIGITAL TUBE THICKNESS CALIPER

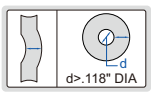
DATA OUTPUT

1161-150A

- 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** receiver is needed, **7302-21**)



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

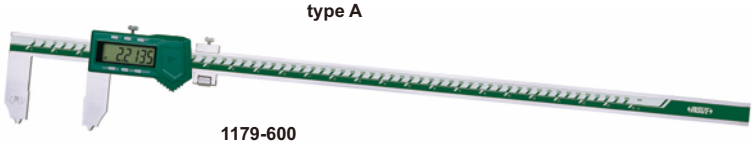


DIGITAL RTJ RING GROOVE CALIPERS

DATA OUTPUT

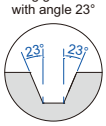
- Non waterproof
- Measure ring grooves of flange
- Resolution .0005"/0.01mm
- Button function: on/off, set, zero, inch/mm, data preset
- Battery CR2032, data output
- Made of stainless steel

1179-300
type A

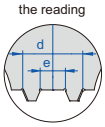


1179-600
type B

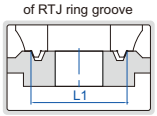
applicable for RTJ ring grooves with angle 23°



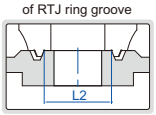
d and **e** need to be added on the reading

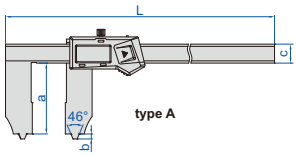


measure outside diameter of RTJ ring groove

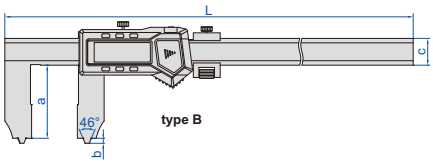


measure inside diameter of RTJ ring groove





type A



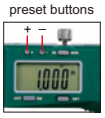
type B

With data interface

Part No.	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Angle of RTJ ring groove	Accuracy	Type	L	a	b	c	d	e	Data output cable (optional)
1179-300	.4-12"/10-300mm	1-12"/25-300mm	23°	±.0025"	A	16.142"	2.500"	.177"	.669"	.984"	.394"	**7315-21** receiver is needed, **7302-21**
1179-600	.4-24"/10-600mm	1-24"/25-600mm	23°	±.0030"	B	30.315"	2.579"	.177"	.945"	.984"	.394"	**7315-22** receiver is needed, **7302-22**

DIGITAL CALIPER WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT

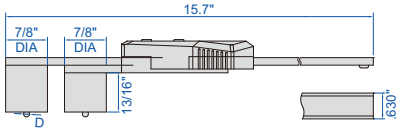


1527-3001

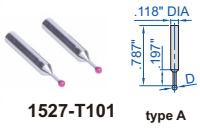
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: ball tips, data output cable (part no. **7315-21** receiver is needed, **7302-21**)

Part No.	Range	Accuracy
1527-3001	(7/8"+D)~12"*	±.0015"

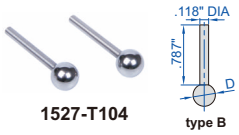
*"D" is the diameter of ball tips.



ball tips (optional, supplied in pair)



1527-T101 type A

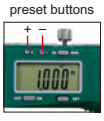


1527-T104 type B

Part No.	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" DIA	.0002"	A	ruby
1527-T102	1/8" DIA	.0002"	B	stainless steel
1527-T103	3/16" DIA	.0002"	B	stainless steel
1527-T104	1/4" DIA	.0002"	B	stainless steel
1527-T105	3/8" DIA	.0002"	B	stainless steel
1527-T106	1/2" DIA	.0002"	B	stainless steel

DIGITAL CALIPER WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT

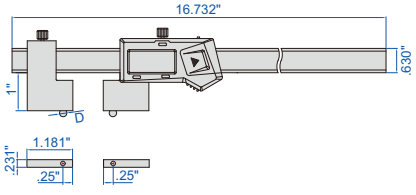


1528-3001

- Non waterproof
- 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: ball tips, data output cable (part no. **7315-21** receiver is needed, **7302-21**)

Part No.	Range	Accuracy
1528-3001	(.5"+D)~12"*	±.0015"

*"D" is the diameter of ball tips.



ball tips (optional, supplied in pair)

1527-T101 type A

1527-T104 type B

Part No.	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" DIA	.0002"	A	ruby
1527-T102	1/8" DIA	.0002"	B	stainless steel
1527-T103	3/16" DIA	.0002"	B	stainless steel
1527-T104	1/4" DIA	.0002"	B	stainless steel
1527-T105	3/8" DIA	.0002"	B	stainless steel
1527-T106	1/2" DIA	.0002"	B	stainless steel

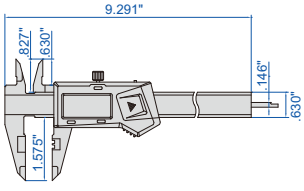
DIGITAL CRIMP HEIGHT CALIPER

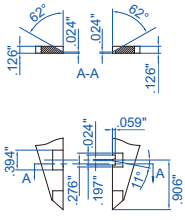
DATA OUTPUT

- Non waterproof
- Measure crimp height
- 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** receiver is needed, **7302-21**)

1165-150A

Part No.	Range	Resolution	Accuracy
1165-150A	0-6"/0-150mm	.0005"/0.01mm	±.0015"



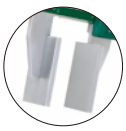


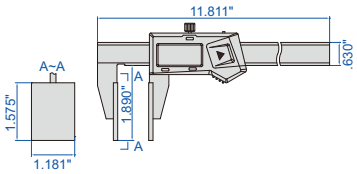
DIGITAL CALIPER WITH LARGE MEASURING FACES

DATA OUTPUT

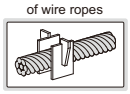
- Non waterproof
- Measure diameter of wire ropes, and thickness of soft materials like rubber, sponge, etc.
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: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

1172-200

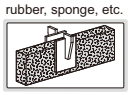




measure diameter of wire ropes



measure thickness of rubber, sponge, etc.



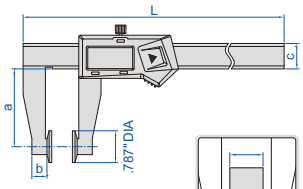
Part No.	Range	Accuracy
1172-200	0-8"/0-200mm	±.0030"

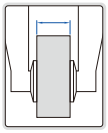
DIGITAL CALIPER WITH DISK FACES

DATA OUTPUT

- Non waterproof
- Measure thickness of soft sheets
- 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** receiver is needed, **7302-21**)

1533-150





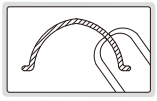
Part No.	Range	Accuracy	L	a	b	c
1533-150	0-6"/0-150mm	±.0015"	9.646"	1.969"	.433"	.630"

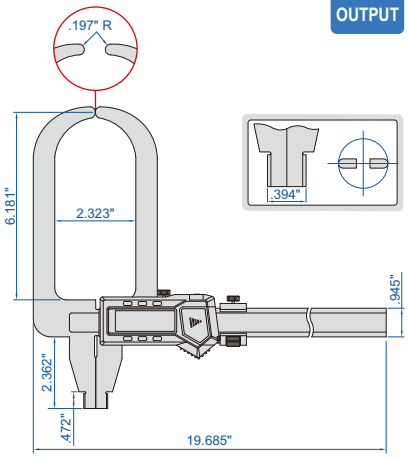
DIGITAL WALL THICKNESS CALIPER

DATA OUTPUT

- 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. **7315-22** receiver is needed, **7302-22**)

1536-300





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

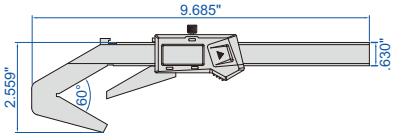
DIGITAL V SHAPE CALIPER

DIRECT READING, CALCULATION IS NOT REQUIRED

DATA OUTPUT

- Non waterproof
- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. **7315-21** receiver is needed, **7302-21**)

1539-3



Part No.	Range	Accuracy
1539-3	.16-1.58" DIA/Ø4-40mm	±.0015"

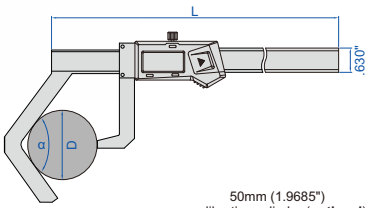
DIGITAL V TYPE CALIPERS

DIRECT READING, CALCULATION IS NOT REQUIRED

DATA OUTPUT

- Non waterproof
- Measure the outside diameter of odd number of flutes (such as taps, reamers, end mills and gears)
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory: 50mm calibration cylinder (part no. **6316-50**), data output cable (part no. **7315-21** receiver is needed, **7302-21**)

1529-5



50mm (1.9685") calibration cylinder (**optional**) part no. **6316-50**

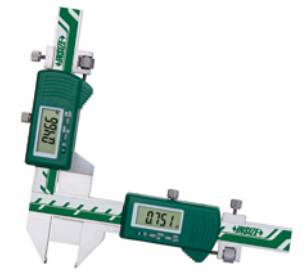
Part No.	Range (D)	Flutes	Accuracy	Angle α	L
1529-3	2-8" DIA/50-200mm	3	±.0024"	60°	15.35"
1529-5	2-8" DIA/50-200mm	5	±.0024"	108°	12.52"
1529-19	2-8" DIA/50-200mm	19	±.0024"	85°15'47"	13.23"
1529-23	2-8" DIA/50-200mm	23	±.0024"	70°26'5"	14.25"
1529-31	2-8" DIA/50-200mm	31	±.0024"	75°29'2"	13.98"

VIDEO

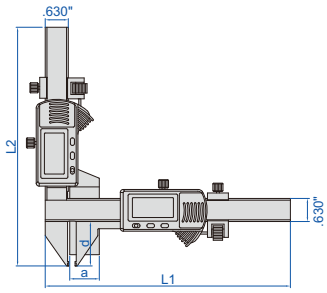
DIGITAL GEAR TOOTH CALIPERS

ATTENTION: NO DATA OUTPUT

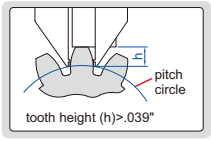
- Non waterproof
- Resolution .0005"/0.01mm
- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height>.039")
- Buttons: zero, on/off, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1181-M25A



Part No.	Range	Accuracy	L1	L2	a	d
1181-M25A	P1-P24	±.0015"	6.693"	6.516"	.827"	1.201"
1181-M50A	P1/2-P5	±.0015"	8.661"	7.480"	1.988"	2.165"



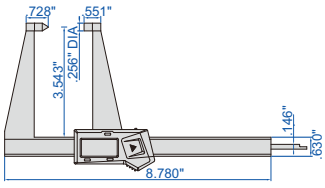
DIGITAL DISK BRAKE CALIPER

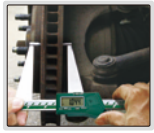
RELATIVE PRODUCT: DISK BRAKE MICROMETER (PART NO. 3288-, 3588-)

DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1162-125A





Part No.	Range	Accuracy
1162-125A	0-5"/0-125mm	±.0020"

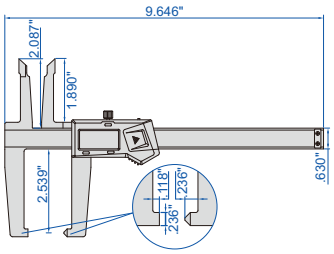
DIGITAL DISK BRAKE AND PAD CALIPER

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

DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1167-150A



Part No.	Range	Accuracy
1167-150A	0-6"/0-150mm	±.0030"

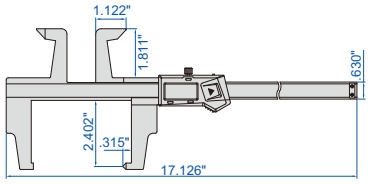
DIGITAL DRUM BRAKE CALIPER

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

DATA OUTPUT

- Non waterproof
- Measure internal and external diameter of drum 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** receiver is needed, **7302-21**)

1168-300A

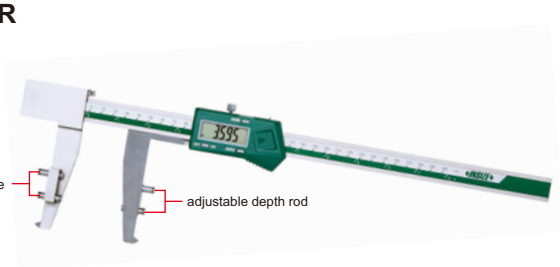


Part No.	Range	Accuracy
1168-300A	0-12"/0-300mm	±.0030"

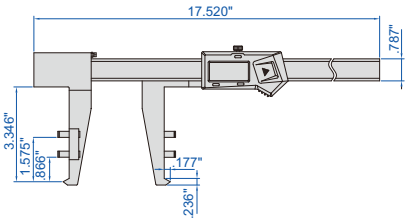
DIGITAL DRUM BRAKE CALIPER

DATA OUTPUT

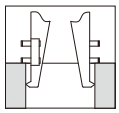
- Non waterproof
- Measure internal diameter of drum brakes
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (part no. **7315-22**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



1538-300



calibration block (included)



Part No.	Range	Accuracy
1538-300	1.2-12"/30-300mm	±.0020"

IP67 WATERPROOF DIGITAL DEPTH GAUGES

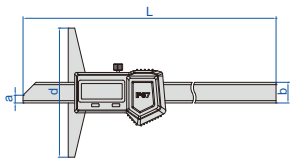
IP67 WATERPROOF

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

ATTENTION: 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

1149-150



Part No.	Range	Accuracy	L	a	b	d
1149-150	0-6"/0-150mm	±.0015"	9.449"	.236"	.630"	3.937"
1149-200	0-8"/0-200mm	±.0015"	11.417"	.236"	.630"	3.937"
1149-300	0-12"/0-300mm	±.0015"	15.354"	.236"	.630"	5.906"

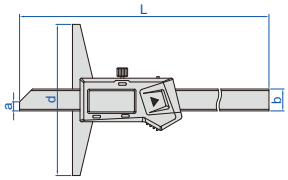
DIGITAL DEPTH GAUGES (STANDARD TYPE)

DATA OUTPUT

POPULAR MODEL

- 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

1141-150A



With data interface
(data output cable part no. 7315-21 receiver is needed, 7302-21, optional)

Part No.	Range	Accuracy	L	a	b	d
1141-150A	0-6"/0-150mm	±.0015"	9.055"	.236"	.571"	3.937"
1141-200A	0-8"/0-200mm	±.0015"	11.024"	.236"	.571"	3.937"
1141-300A	0-12"/0-300mm	±.0015"	14.961"	.236"	.571"	5.906"

With data interface
(data output cable part no. 7315-22 receiver is needed, 7302-22, optional)

Part No.	Range	Accuracy	L	a	b	d
1141-500A	0-20"/0-500mm	±.0020"	23.031"	.276"	.591"	5.906"
1141-5001A	0-20"/0-500mm	±.0020"	23.031"	.276"	.591"	7.874"
1141-1000A	0-40"/0-1000mm	±.0028"	46.772"	.276"	.709"	5.906"
1141-10001A	0-40"/0-1000mm	±.0028"	46.772"	.276"	.709"	7.874"
1141-10002A	0-40"/0-1000mm	±.0028"	46.772"	.276"	.709"	9.843"
1141-10003A	0-40"/0-1000mm	±.0028"	46.772"	.276"	.709"	11.811"
1141-1500A	0-60"/0-1500mm	±.0043"	66.732"	.276"	.709"	7.874"

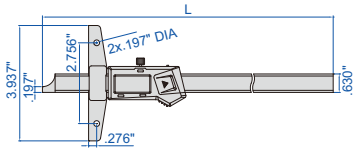
DIGITAL DEPTH GAUGES WITH MOUNTING HOLES FOR EXTENSION BASE

DATA OUTPUT

- 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** receiver is needed, **7302-21**) , extension base (part no. **6141**)

1147-300

Part No.	Range	Accuracy	L
1147-150	0-6"/0-150mm	±.0015"	9.331"
1147-200	0-8"/0-200mm	±.0015"	11.299"
1147-300	0-12"/0-300mm	±.0015"	15.866"
1147-500	0-20"/0-500mm	±.0020"	23.819"



extension base (**optional**)

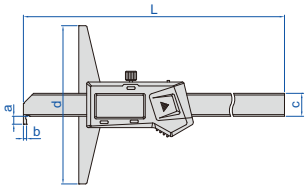
6141 series

DIGITAL HOOK DEPTH GAUGES

DATA OUTPUT

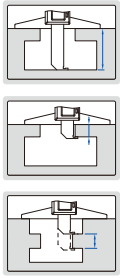
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel

1142-150A



With data interface

Part No.	Range	Accuracy	L	d	a	b	c	Data output cable (optional)
1142-150A	0-6"/0-150mm	±.0015"	9.055"	3.937"	.197"	.079"	.571"	**7315-21** receiver is needed, **7302-21**
1142-200A	0-8"/0-200mm	±.0015"	11.024"	3.937"	.197"	.079"	.571"	
1142-300A	0-12"/0-300mm	±.0015"	14.961"	5.906"	.197"	.079"	.571"	
1142-500A	0-20"/0-500mm	±.0020"	23.031"	5.906"	.315"	.118"	.591"	**7315-22** receiver is needed, **7302-22**
1142-5001A	0-20"/0-500mm	±.0020"	23.031"	7.874"	.315"	.118"	.591"	
1142-1000A	0-40"/0-1000mm	±.0030"	46.772"	5.906"	.394"	.157"	.709"	
1142-10001A	0-40"/0-1000mm	±.0030"	46.772"	7.874"	.394"	.157"	.709"	
1142-10002A	0-40"/0-1000mm	±.0030"	46.772"	9.843"	.394"	.157"	.709"	

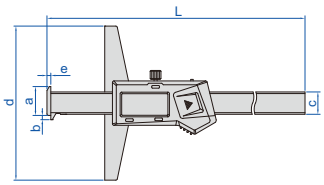


DIGITAL DOUBLE HOOK DEPTH GAUGES

DATA OUTPUT

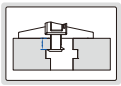
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel

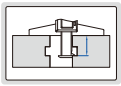
1144-150A



With data interface

Part No.	Range	Accuracy	L	d	a	b	c	e	Data output cable (optional)
1144-150A	0-6"/0-150mm	±.0015"	9.173"	3.937"	.846"	.138"	.571"	.098"	**7315-21** receiver is needed, **7302-21**
1144-200A	0-8"/0-200mm	±.0015"	11.142"	3.937"	.846"	.138"	.571"	.098"	
1144-300A	0-12"/0-300mm	±.0015"	15.079"	5.906"	.846"	.138"	.571"	.098"	
1144-500A	0-20"/0-500mm	±.0020"	23.031"	5.906"	.984"	.197"	.571"	.118"	**7315-22** receiver is needed, **7302-22**
1144-5001A	0-20"/0-500mm	±.0020"	23.031"	7.874"	.984"	.197"	.591"	.118"	



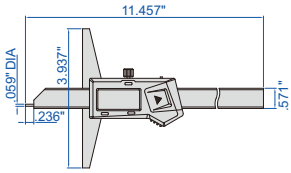


DIGITAL POINT DEPTH GAUGE

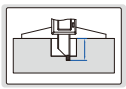
DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1143-200A



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



DIGITAL DEPTH GAUGES WITH ROUND DEPTH BAR

DATA OUTPUT | MEASURE WIDTH AND DEPTH OF GROOVES INSIDE BORE | MEASURE DEPTH OF SMALL HOLES (>.157" DIA)

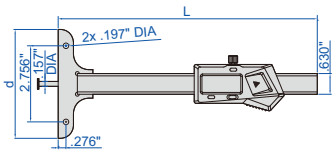
VIDEO

1148-200E

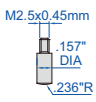
preset buttons

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

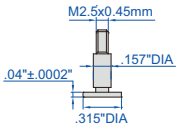
6141 series



flat point

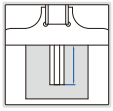


spherical point

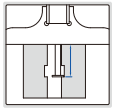


disk point

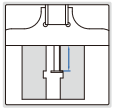
measure depth of small holes (>.157" DIA)



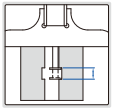
measure depth of grooves inside bore



measure depth of grooves inside bore



measure width of grooves inside bore



- 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: data output cable (part no. **7315-21** receiver is needed, **7302-21**), extension base (part no. **6141**, for **1148-200E**)

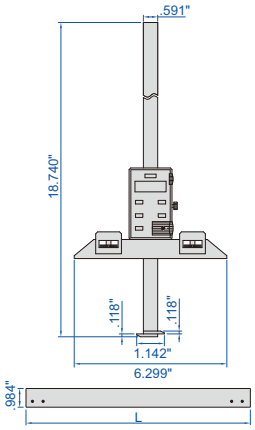
Part No.	Range*	Accuracy	L	d	Remark
1148-100E	0-4"/0-100mm	±.0010"	7.874"	3.346"	
1148-120E	0-4.7"/0-120mm	±.0015"	11.811"	3.976"	one-hand use, with mounting holes for extension base
1148-200E	0-8"/0-200mm	±.0015"	11.811"	3.976"	with mounting holes for extension base

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

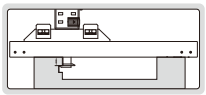
DIGITAL DOUBLE HOOK DEPTH GAUGE

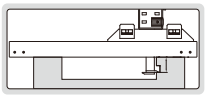
DATA OUTPUT

1540-300E



gauge block for zero setting (included)





- 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
- Made of stainless steel
- LR44 battery, data output
- Supplied with gauge block for zero setting
- Optional accessory: extension base, wireless transmitter (part no. **7315-1150** receiver is needed), data output cable (part no. **7302-SPC7**, keyboard format)

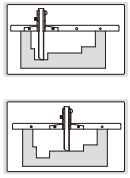
Part No.	Range	Accuracy
1540-300E	0-12"/0-300mm	±.0015"

extension base (optional)

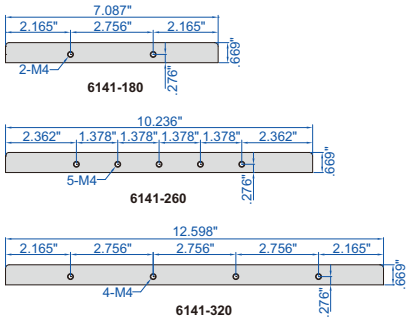
Part No.	L
1540-L300	11.811"
1540-L400	15.748"
1540-L500	19.685"
1540-L600	23.622"
1540-L800	31.496"

EXTENSION BASES

6141-260



- Supplied with two screws
- Made of stainless steel
- Suitable for depth gauges series **1147** and **1148**



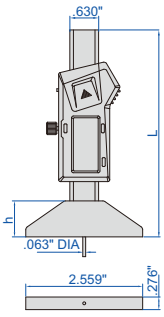
Part No.	Length
6141-180	7.087"
6141-260	10.236"
6141-320	12.598"

MINI DIGITAL DEPTH GAUGES WITH ROUND BAR

DATA OUTPUT

- 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** receiver is needed, **7302-21**)

1140-25



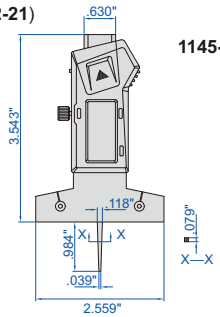
Part No.	Range	Accuracy	L	h
1140-25	0-1"/0-25mm	±.0010"	4.488"	.787
1140-50	0-2"/0-50mm	±.0010"	5.512"	.787
1140-100	0-4"/0-100mm	±.0010"	7.480"	.787
1140-150	0-6"/0-150mm	±.0015"	9.291"	.630

MINI DIGITAL DEPTH GAUGE

DATA OUTPUT

- Non waterproof
- Measure depth of small groove and hole, also measure depth of tire tread
- 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** receiver is needed, **7302-21**)

1145-25A

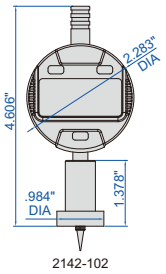


Part No.	Range	Accuracy	Resolution
1145-25A	0-1"/0-25mm	±.0015"	.0005"/0.01mm

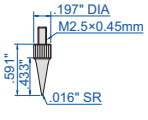
DIGITAL DEPTH GAUGE

DATA OUTPUT

- 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
- Pointed tip
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M**)



2142-102



pointed tip

2142-102

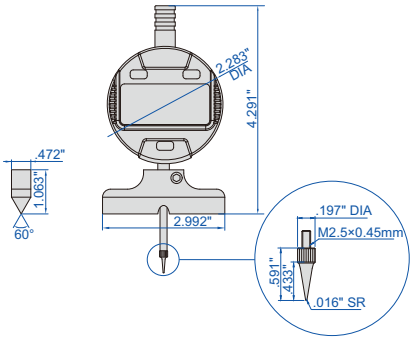
Part No.	Range	Digital indicator stroke	Digital indicator resolution	Accuracy	Base
2142-102	0-.5"/0-12.7mm	.5"/12.7mm	.0005"/0.01mm	±.0008"	.630"

DIGITAL DEPTH GAUGE (60° KNIFE EDGE BASE)

DATA OUTPUT

- 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 with 60° knife edge
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M**)

front view **2143-101** side view

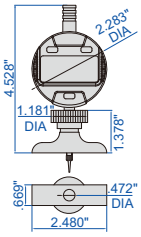


Part No.	Range	Digital indicator stroke	Digital indicator resolution	Accuracy
2143-101	0-.5"/0-12.7mm	.5"/12.7mm	.0005"/0.01mm	±.0010"

DIGITAL DEPTH GAUGES

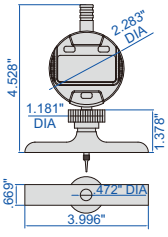
DATA OUTPUT

2141-202A



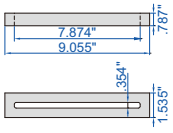
2141-201A/2141-301

- Range: 0-12"/0-300mm
- Digital indicator stroke .5"/12.7mm
- 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** receiver is needed, **7302-40M**), granite extension holder (part no. **2141-10**)

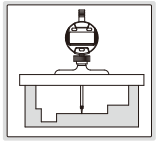


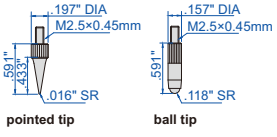
2141-202A/2141-302

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

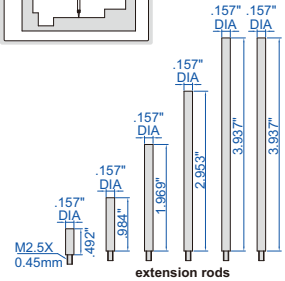


application





pointed tip **ball tip**

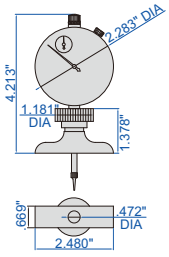


extension rods

Part No.	Digital indicator resolution	Accuracy	Base
2141-201A	.0005"/0.01mm	±.0008"	2.480x.669"
2141-202A	.0005"/0.01mm	±.0008"	3.996x.669"
2141-301	.00005"/0.001mm	±.0002"	2.480 x.669"
2141-302	.00005"/0.001mm	±.0002"	3.996 x.669"

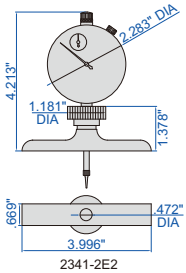
DIAL DEPTH GAUGES

2341-2E2



2341-2E1

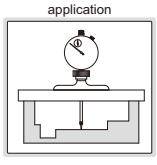
- Dial indicator graduation .001"
- Stainless steel base
- Extension rods: 1" (1 pc), 2" (1 pc), 3" (1 pc), 4" (2 pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: granite extension holder (part no. **2141-10**)

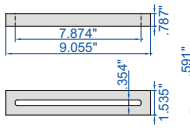


2341-2E2

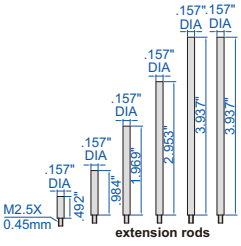
2141-10 (**optional**), can be customized according to workpieces

application





pointed tip **ball tip**



extension rods

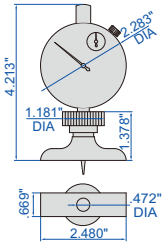
Part No.	Range	Dial indicator stroke	Accuracy	Base
2341-2E1	0-12"	1"	±.002"	2.480x.669"
2341-2E2	0-12"	1"	±.002"	3.996x.669"

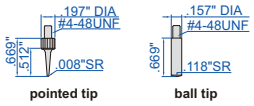
DIAL DEPTH GAUGE

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

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

2341-E1

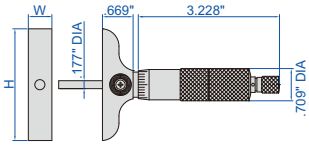


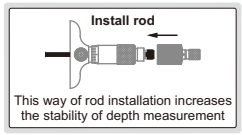


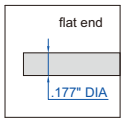
DEPTH MICROMETERS

- Graduation .001"
- Micrometer head accuracy: ±.00012"
- Rod accuracy: ±[.001+.0005(L/3)]", L is the measuring range in inch
- Rods with flat end
- Ratchet stop

3241-4







Base: H x W=2.480 x .669"

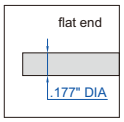
Part No.	Range	Rods
3241-B1	0-1"	1 pc
3241-B4	0-4"	4 pcs

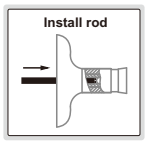
Base: L×W=3.996×.669"

Part No.	Range	Rods
3241-1	0-1"	1 pc
3241-2	0-2"	2 pcs
3241-3	0-3"	3 pcs
3241-4	0-4"	4 pcs
3241-6	0-6"	6 pcs
3241-8	0-8"	8 pcs
3241-12	0-12"	12 pcs

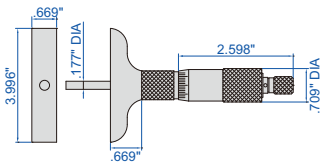
DEPTH MICROMETER

3240-6





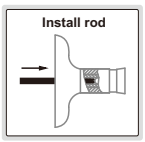
- Graduation .001"
- Micrometer head accuracy: ±.00012"
- Rod accuracy: ±[.001+.0005(L/3)]", L is the measuring range in inch
- Rods with flat end
- Ratchet stop

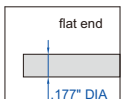


Part No.	Range	Rods
3240-6	0-6"	6 pcs

DIGITAL DEPTH MICROMETERS

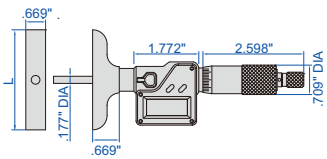
IP65 WATERPROOF **DATA OUTPUT**





3540-150E

- Resolution .00005"/0.001mm
- Micrometer head accuracy: ±.00012"
- Rod accuracy: ±[.001+.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** receiver is needed, **7302-31**)



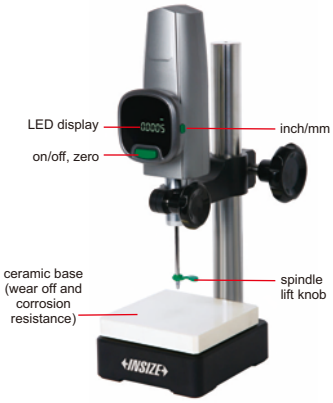
Part No.	Range	Rods	L	Micrometer head accuracy
3540-50E	0-2"/0-50mm	2 pcs	3.996"	±.00012"
3540-150E	0-6"/0-150mm	6 pcs	3.996"	±.00012"
3540-300E	0-12"/0-300mm	12 pcs	3.996"	±.00012"

HIGH PRECISION DIGITAL HEIGHT GAUGES

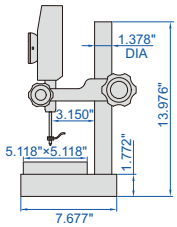
VIDEO

DATA OUTPUT

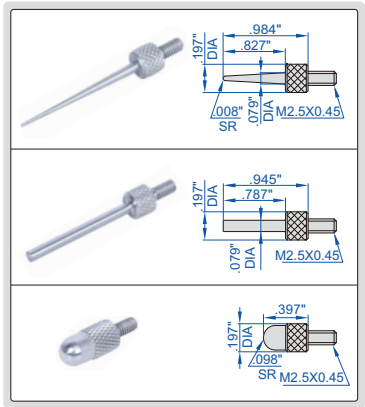
- Power supply: 5V/1A (adapter or charge pal)
- High stability, high precision, high response speed (200"/s)
- High brightness LED display
- Ceramic base flatness: 39μin

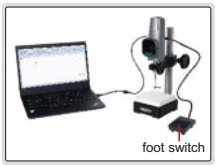


1155-505

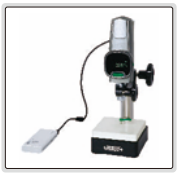


measuring tips (included)





data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero



power supplied by charge pal

Part No.	Range	Resolution	Accuracy (at 68°F)	Measuring force	Output
1155-505	0~2"	.00002"/.5μm (can switch to .00005"/1μm)	59μin	.18lbf~.27lbf	USB
1155-510	0~2"	.000005"/.1μm (can switch to .00005"/1μm)	39μin	.18lbf~.27lbf	USB

STANDARD DELIVERY

Main unit	1 pc

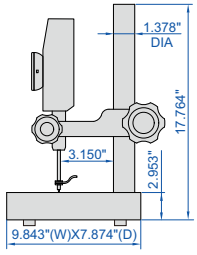
OPTIONAL ACCESSORY

Contact point	part no. 6282
Charge pal	1155-5-POB
Data output cable (including foot switch)	1155-5-FOS

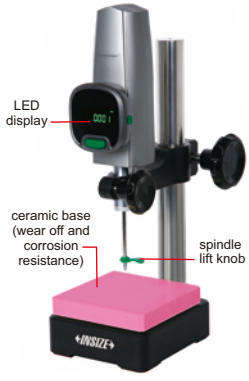
DIGITAL HEIGHT GAUGES

DATA OUTPUT

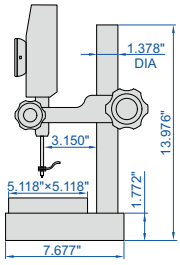
1157-501



1157-501

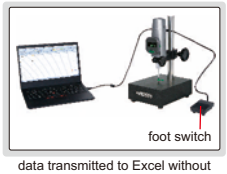


1157-502



1157-502

power supplied by charge pal

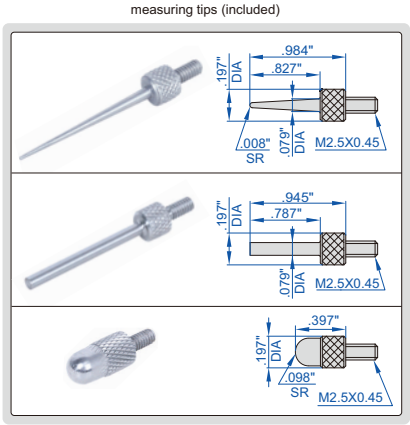


data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero

- Accuracy (at 68°F): 118μin
- Measuring force .18lbf~.27lbf
- Power supply: 5V/1A (adapter or charge pal)
- Buttons: on/off, zero, inch/mm, max/min/max-min
- High response speed (200"/s)
- High brightness LED display

VIDEO

measuring tips (included)



Part No.	Range	Resolution	Output	Base
1157-501	0~2"	.00005"/1μm	USB	granite (flatness: 78μin)
1157-502	0~2"	.00005"/1μm	USB	ceramic (flatness: 39μin)

STANDARD DELIVERY

Main unit	1 pc

OPTIONAL ACCESSORY

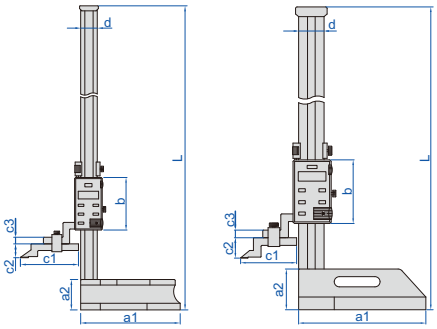
Contact point	part no. 6282
Charge pal	1155-5-POB
Data output cable (including foot switch)	1155-5-FOS

DIGITAL HEIGHT GAUGES

DATA OUTPUT

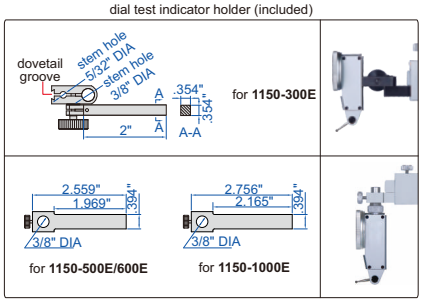
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Carbide tipped scriber
- Made of stainless steel (except the base)
- LR44 battery, data output
- Supplied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

1150-300E **1150-500E** **1150-1000E**

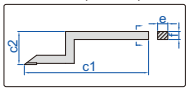


type A, type B **type C**

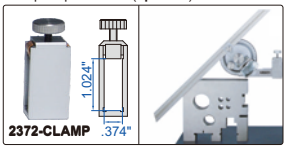
dial test indicator holder (included)



scriber (included)



clamp for protractors (**optional**) for **1150-300E**



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

DIGITAL HEIGHT GAUGES WITH DRIVING WHEEL

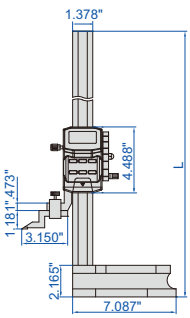
POPULAR MODEL

INSPECTION CERTIFICATE

DATA OUTPUT

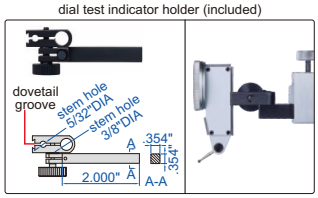
VIDEO

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, preset +, 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** receiver is needed, **7302-22**), clamp for protractors (part no. **2372-CLAMP**)

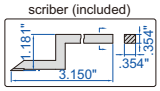


1156-300E

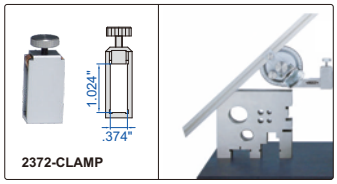
dial test indicator holder (included)



scriber (included)



clamp for protractors (**optional**)



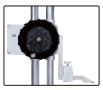
Part No.	Range	Accuracy	L
1156-300E*	0-12"/0-300mm	±.0015"	20.276"
1156-600E*	0-24"/0-600mm	±.0020"	32.867"

*Supplied with manufacturer inspection certificate

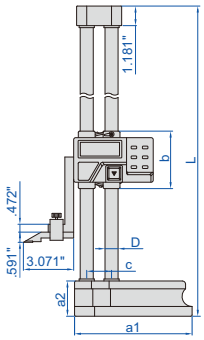
DIGITAL HEIGHT GAUGES

DATA OUTPUT

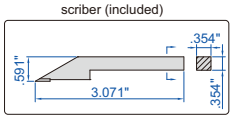
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm, data hold, ABS/INC, preset
- ABS/INC is for absolute and incremental measurement
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032, data output
- 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** receiver is needed), data output cable (part no. **7302-1151**, keyboard format)



driving wheel on the back

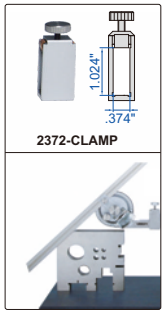


scriber (included)

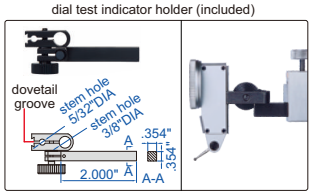


1151-300AE

clamp for protractors (**optional**)



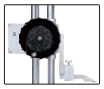
dial test indicator holder (included)



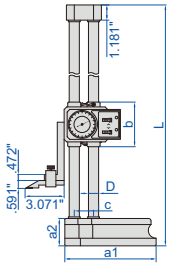
Part No.	Range	Accuracy	L	a1	a2	b	c	D
1151-300AE	0-12"/0-300mm	±.0015"	18.701"	5.315"	1.693"	3.307"	1.299"	.591" DIA
1151-450AE	0-18"/0-450mm	±.0020"	25.984"	7.087"	2.126"	3.465"	1.496"	.787" DIA
1151-600AE	0-24"/0-600mm	±.0020"	31.890"	7.087"	2.126"	3.465"	1.496"	.787" DIA

DIAL HEIGHT GAUGES

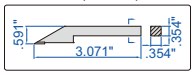
- Dial indicator graduation .001"
- One counter reads in the plus direction and another in the minus direction, so incremental measurement can be made in either direction
- Carbide tipped scriber
- Made of stainless steel (except the base)
- With driving wheel
- With dial test indicator holder
- Supplied with dust cover
- Optional accessory: clamp for protractors (part no. **2372-CLAMP**)



driving wheel on the back

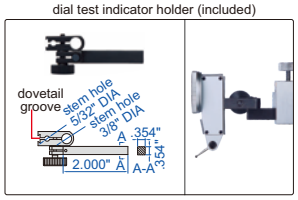


scriber (included)

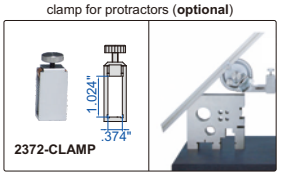


1351-12

dial test indicator holder (included)



clamp for protractors (**optional**)



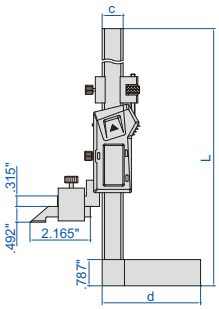
Part No.	Range	Accuracy	L	a1	a2	b	c	D
1351-12	0-12"	±.0016"	18.701"	5.315"	1.693"	3.307"	1.299"	.591" DIA
1351-18	0-18"	±.0020"	25.984"	7.087"	2.126"	3.465"	1.496"	.787" DIA

MINI DIGITAL HEIGHT GAUGES

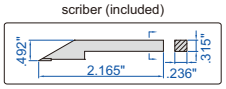
DATA OUTPUT

- 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
- Optional accessory: dial test indicator holder (part no. **7151-CL2**)

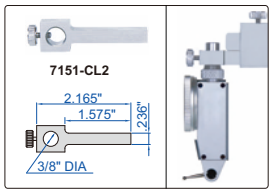
1154-150



scriber (included)



dial test indicator holder (**optional**)



With data interface

Part No.	Range	Accuracy	L	c	d	Data output cable (optional)
1154-150	0-6"/0-150mm	±.0015"	11.024"	.630"	2.953"	**7315-21** receiver is need, **7302-21**
1154-200	0-8"/0-200mm	±.0015"	13.386"	.787"	3.543"	**7315-22** receiver is need, **7302-22**

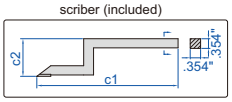
Built-in wireless (receiver part no. 7315-2/3/6/7/8/9 is needed)

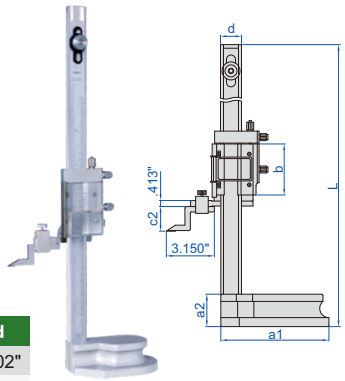
Part No.	Range	Accuracy	L	c	d
1154-150WL	0-6"/0-150mm	±.0015"	11.024"	.630"	2.953"

VERNIER HEIGHT GAUGES

- 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**)

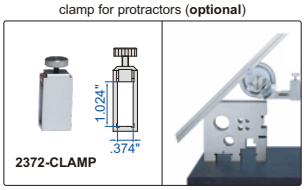
scriber (included)



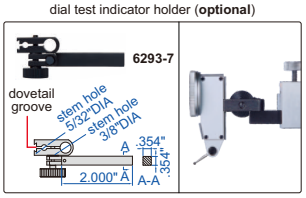


1250-300

clamp for protractors (**optional**)



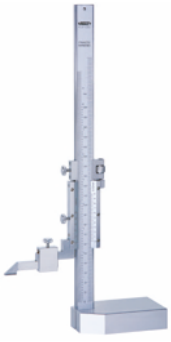
dial test indicator holder (**optional**)

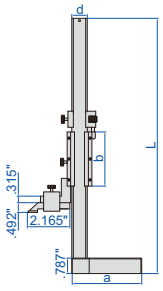


Part No.	Range	Accuracy	L	a1	a2	b	c2	d
1250-300	0-12"/0-300mm	±.0016"	21.457"	5.315"	1.693"	2.953"	1.181"	1.102"
1250-450	0-18"/0-450mm	±.0020"	28.346"	7.087"	2.126"	3.346"	1.614"	1.378"
1250-600	0-24"/0-600mm	±.0020"	34.252"	7.087"	2.126"	3.346"	1.614"	1.378"

MINI VERNIER HEIGHT GAUGES

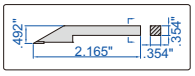
- Graduation .001"/0.02mm
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Optional accessory:
  dial test indicator holder (part no. **7151-CL2**)



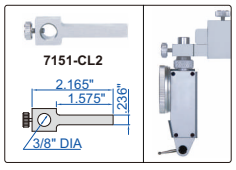


1253-200

scriber (included)



dial test indicator holder (**optional**)

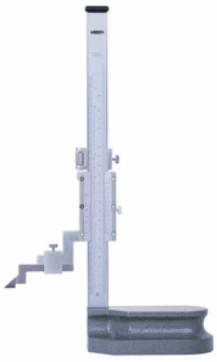


Part No.	Range	Accuracy	L	a	b	d
1253-150	0-6"/0-150mm	±.0012"	10.433"	2.953"	2.244"	.630"
1253-200	0-8"/0-200mm	±.0012"	12.795"	3.543"	2.756"	.787"

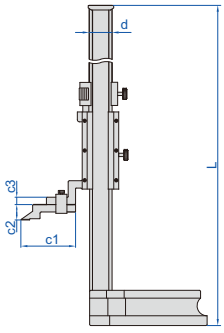
VERNIER HEIGHT GAUGES (BASIC TYPE)

POPULAR MODEL

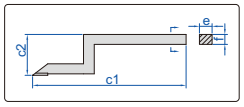
- Graduation .001"/0.02mm
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- With dial test indicator holder
- Supplied with dust cover



1251-200E

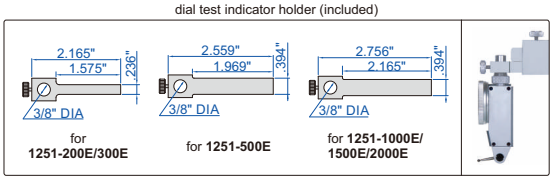


scriber (included)



Part No.	Range	Accuracy	L	c1	c2	c3	d	e	f
1251-200E	0-8"/0-200mm	±.0012"	14.567"	2.992"	.984"	.394"	.906"	.236"	.315"
1251-300E	0-12"/0-300mm	±.0016"	18.504"	2.992"	.984"	.394"	.906"	.236"	.315"
1251-500E	0-20"/0-500mm	±.0020"	28.346"	4.134"	.984"	.472"	1.181"	.394"	.472"
1251-1000E	0-40"/0-1000mm	±.0028"	50.197"	4.331"	1.535"	.591"	1.969"	.394"	.591"
1251-1500E	0-60"/0-1500mm	±.0043"	70.472"	4.331"	1.535"	.591"	1.969"	.394"	.591"
1251-2000E	0-80"/0-2000mm	±.0055"	90.157"	4.331"	1.535"	.591"	1.969"	.394"	.591"

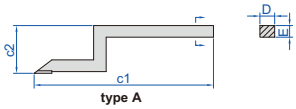
dial test indicator holder (included)



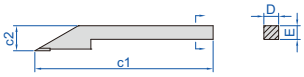
SCRIBERS FOR HEIGHT GAUGES

- Carbide tipped

7150-SC3



type A



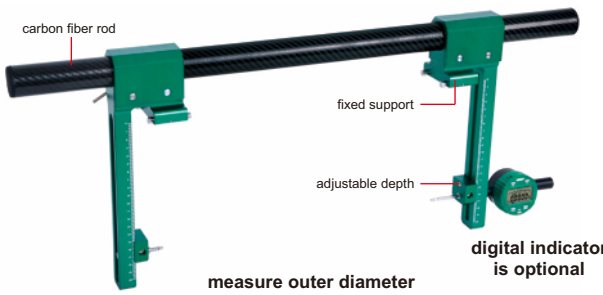
type B

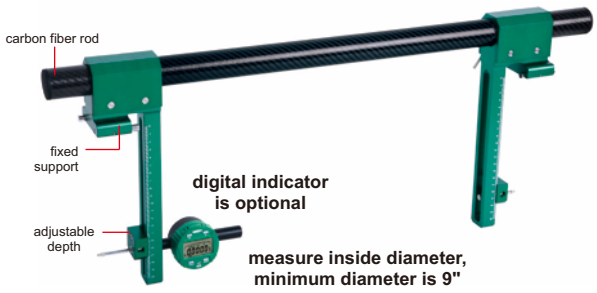
Part No.	For height gauges	Type	c1	c2	D	E
7150-SC3	1150-1000E, 1150-1500E, 1150-2000E	A	4.331"	1.535"	.394"	.591"
7150-SC4	1351-12, 1351-18, 1351-24, 1151-300E, 1151-450E,1151-600E,	B	3.071"	.591"	.354"	.354"

CARBON FIBER COMPARISON GAUGES

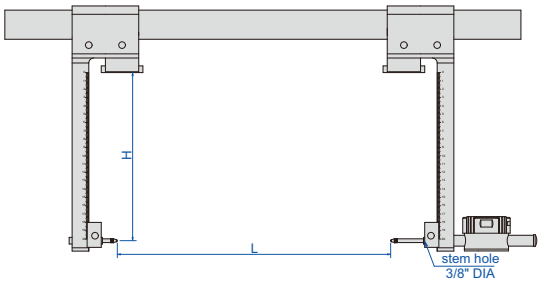
CARBON FIBER RODS, LIGHT WEIGHT, NOT EASY TO DEFORM, NO TEMPERATURE EXPAND, SUITABLE FOR THIN-WALL WORKPIECES AND LARGE-SIZE WORKPIECES

VIDEO





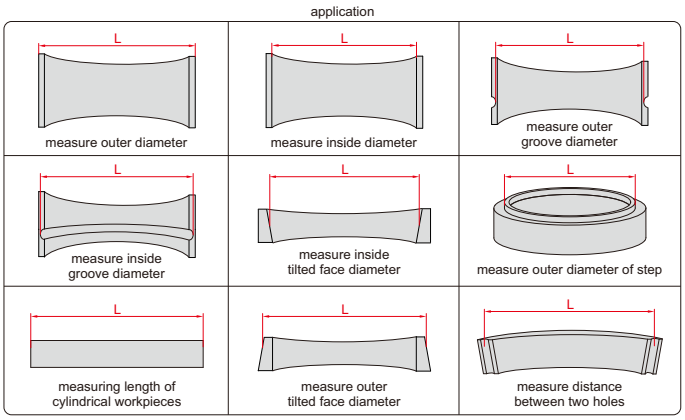
2931-D1000AE



Part No.	Maximum measuring range (L)	Measuring depth (H)	Repeatability	Weight
2931-D1000AE	40"	0-4"/0-100mm	.0002"	4.41lb
2931-D1000BE	40"	0-8"/0-200mm	.0004"	5.07lb
2931-D1000CE	40"	0-12"/0-300mm	.0010"	5.73lb
2931-D1500AE	60"	0-4"/0-100mm	.00035"	5.07lb
2931-D1500BE	60"	0-8"/0-200mm	.0006"	5.73lb
2931-D1500CE	60"	0-12"/0-300mm	.0012"	6.39lb
2931-D2000AE	80"	0-4"/0-100mm	.0004"	5.73lb
2931-D2000BE	80"	0-8"/0-200mm	.0008"	6.39lb
2931-D2000CE	80"	0-12"/0-300mm	.0014"	7.05lb
2931-D2500AE	100"	0-4"/0-100mm	.0005"	6.39lb
2931-D2500BE	100"	0-8"/0-200mm	.0010"	7.05lb
2931-D2500CE	100"	0-12"/0-300mm	.0020"	7.72lb
2931-D3000AE	120"	0-4"/0-100mm	.0006"	7.05lb
2931-D3000BE	120"	0-8"/0-200mm	.0012"	7.72lb
2931-D3000CE	120"	0-12"/0-300mm	.0024"	8.38lb
2931-D4000AE	160"	0-4"/0-100mm	.00065"	8.38lb
2931-D4000BE	160"	0-8"/0-200mm	.0014"	9.06lb
2931-D4000CE	160"	0-12"/0-300mm	.0026"	9.70lb
2931-D5000AE	200"	0-4"/0-100mm	.0010"	9.70lb
2931-D5000BE	200"	0-8"/0-200mm	.0016"	10.36lb
2931-D5000CE	200"	0-12"/0-300mm	.0028"	11.02lb
2931-D6000AE	240"	0-4"/0-100mm	.00115"	18.52lb
2931-D6000BE	240"	0-8"/0-200mm	.0020"	19.40lb
2931-D6000CE	240"	0-12"/0-300mm	.00315"	20.28lb
2931-D7000AE	280"	0-4"/0-100mm	.0012"	20.28lb
2931-D7000BE	280"	0-8"/0-200mm	.0022"	21.16lb
2931-D7000CE	280"	0-12"/0-300mm	.00395"	22.05lb
2931-D8000AE	320"	0-4"/0-100mm	.0013"	22.05lb
2931-D8000BE	320"	0-8"/0-200mm	.0024"	22.93lb
2931-D8000CE	320"	0-12"/0-300mm	.00435"	23.81lb
2931-D9000AE	360"	0-4"/0-100mm	.0014"	23.59lb
2931-D9000BE	360"	0-8"/0-200mm	.0028"	24.47lb
2931-D9000CE	360"	0-12"/0-300mm	.00475"	25.35lb

- Measure outer diameter, inside diameter, holes distance and cylindrical workpiece length
- Carbon fiber rods, light weight, not easy to deform, no temperature expand
- Optional accessory: cylinder gauge blocks (part no. **4001**), digtial indicators (part no. **2138-25ESP/2139-25ESP/2103-25ESP/2104-25ESP**)

application



Calibration bracket (optional)

Part No.	Remark
2931-J□□□□□	can be customized according to carbon fiber comparison gauges,in cluding 2 measuring brackets and multiple support brackets to support gauge blocks

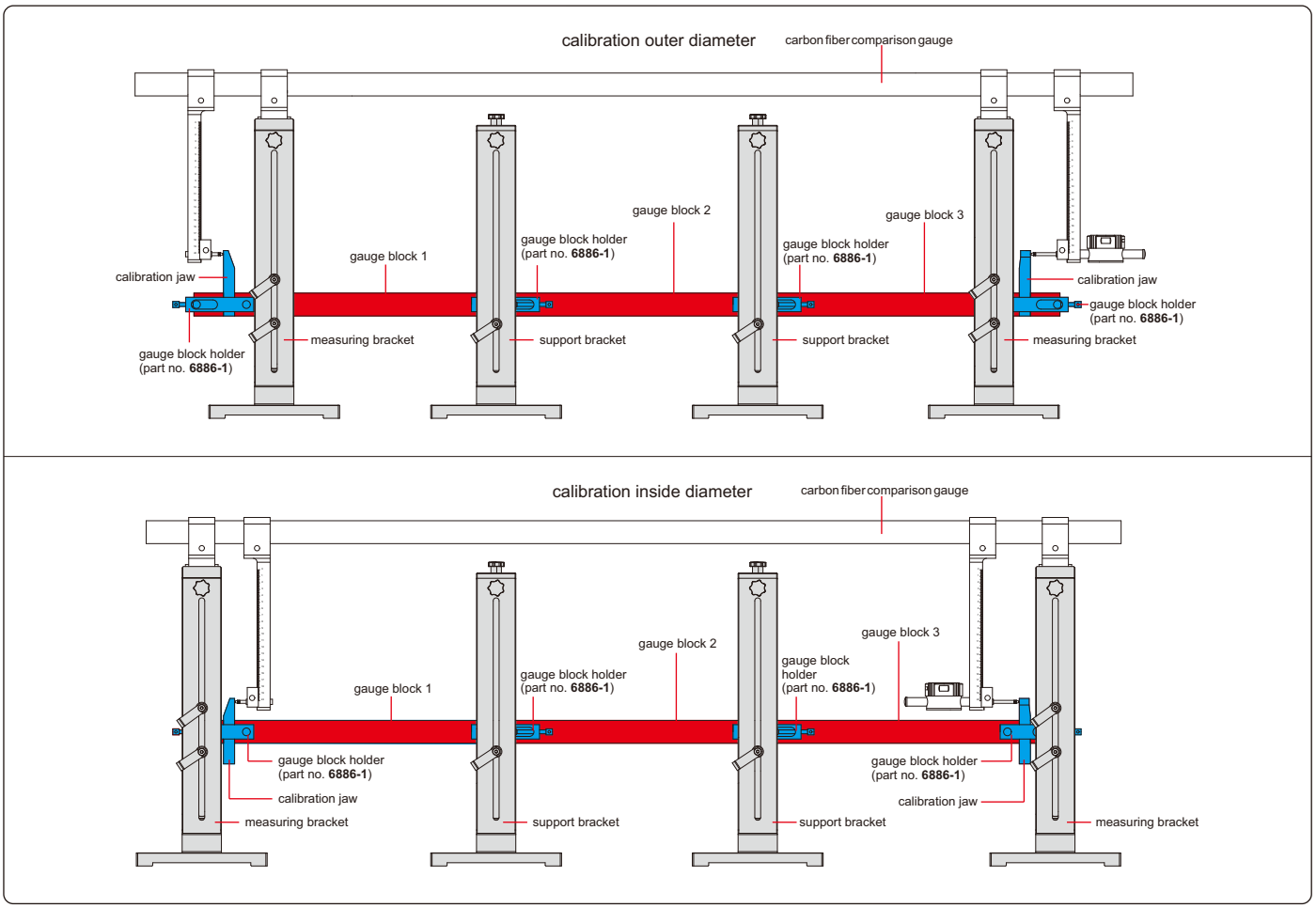
Calibration jaw (optional, supplied in pair)

Part No.	Remark
2931-F	made of carbide

To be continued

Continued from previous page

application



COMPARISON GAUGES

CUSTOMIZABLE MEASURING JAWS AND POINTS

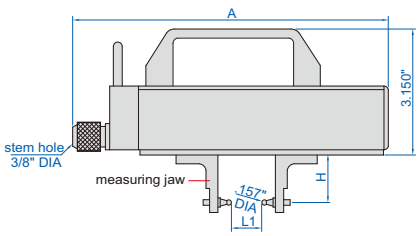
VIDEO

digital indicator is optional

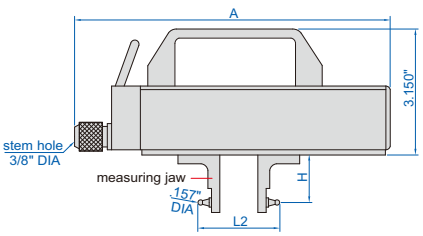
measure external diameter 2252-110E

digital indicator is optional

measure internal diameter 2252-220E



2252-101E, 2252-102E, 2252-110E, 2252-120E



2252-201E, 2252-202E, 2252-210E, 2252-220E

Measure external diameter

Part No.	Range of external diameter (L1)	Accuracy*	Repeatability	A	H
2252-101E	1-3.54"/25-90mm	±.0002"	.00005"	7.677"	1.575"
2252-102E	1-5.51"/25-140mm	±.0002"	.00005"	9.646"	1.575"
2252-110E	1-3.54"/25-90mm	±.0002"	.00010"	7.677"	2.756"
2252-120E	1-5.51"/25-140mm	±.0002"	.00010"	9.646"	2.756"

Measure internal diameter

Part No.	Range of internal diameter (L2)	Accuracy*	Repeatability	A	H
2252-201E	1.65-4.13"/42-105mm	±.0002"	.00005"	7.677"	1.575"
2252-202E	1.65-6.30"/42-160mm	±.0002"	.00005"	9.646"	1.575"
2252-210E	1.65-4.13"/42-105mm	±.0002"	.00010"	7.677"	2.756"
2252-220E	1.65-6.30"/42-160mm	±.0002"	.00010"	9.646"	2.756"

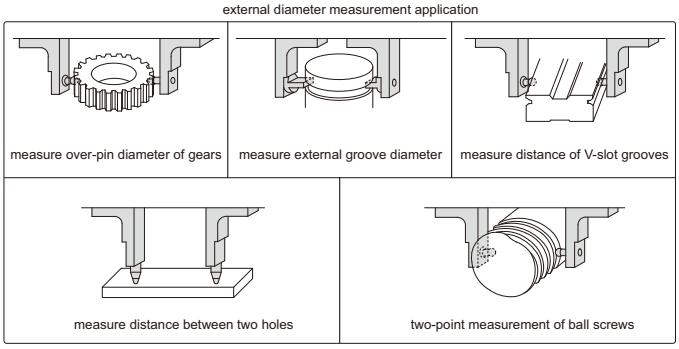
*Within ±.08" effective range

- Measure external diameter, internal diameter and over-pin diameter of gears
- Total range of movable point: .32", effective range of movable point: ±.08"
- Optional accessory: digital indicator (part no. **2138-10FE**), gauge block grade AS-1 (**4112-B** series)

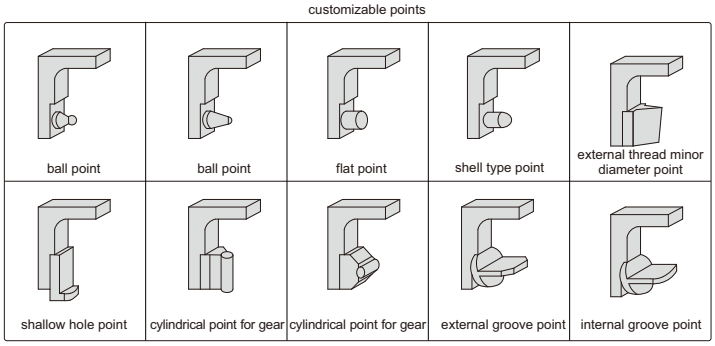
To be continued

Continued from previous page

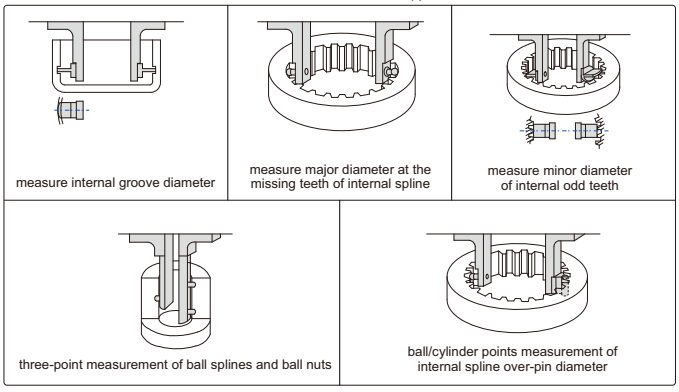
external diameter measurement application



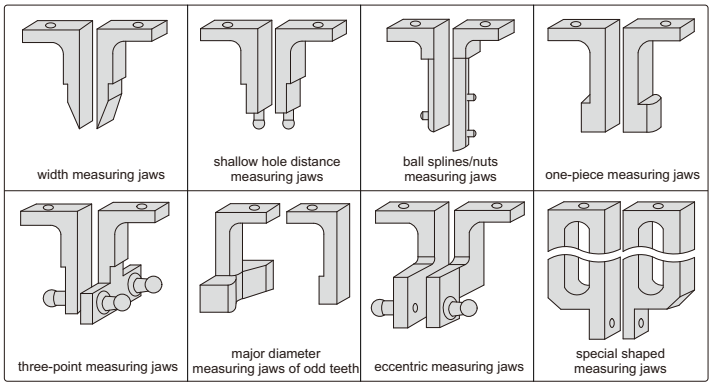
customizable points



internal diameter measurement application



customizable measuring jaws



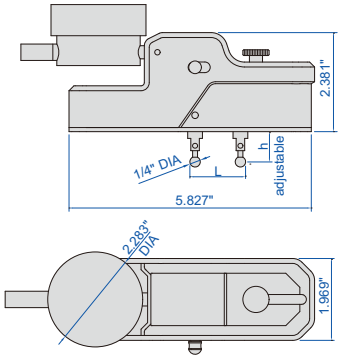
DIGITAL INTERNAL MEASURING GAUGES

DATA OUTPUT

VIDEO

- Measure internal dimensions
- Resolution: .00005"/0.001mm
- Accuracy: .00025"
- Repeatability: .00005"
- Movable point stroke: .02"/5mm
- Point height is adjustable, h=.08-1"
- CR2032 battery, automatic power off (time is adjustable)
- Data output

2932-451

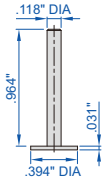


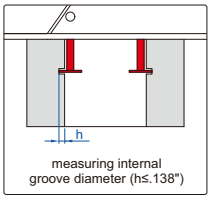
Part No.	Measuring range (L) *	Indicator	Data output cable (optional)
2932-45	.95-2"/24-50mm	Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement	**7315-50M** receiver is needed, **7302-40M**
2932-451	.95-2"/24-50mm	With transmission button and signal light; Reading in digital and analog; Display can be rotated by 320°; Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display	**7315-51** receiver is needed, **7302-40M**

* The measuring range will change accordingly for different measuring points

Disk points (optional, supplied in pair)

2932-S101

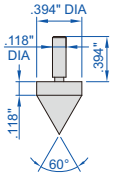


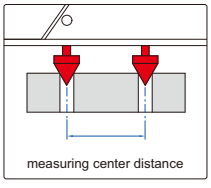


Part No.	Measuring range	Material
2932-S101	1.2-2.2"/30-55mm	stainless steel

Conical points (optional, supplied in pair)

2932-S102





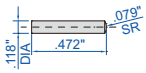
Part No.	Measuring range	Material
2932-S102	.8-1.8"/20-45mm	stainless steel

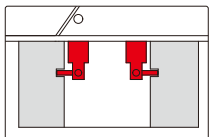
To be continued

Continued from previous page

Spherical points (optional, supplied in pair)

2932-S103



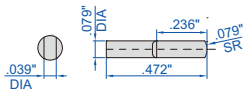


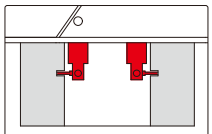
spherical points for groove (inside hole) measurement

Part No.	Measuring range	Material
2932-S103	1.2-2.4"/30-60mm	stainless steel

Spherical blade points (optional, supplied in pair)

2932-S104



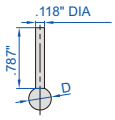


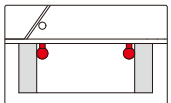
spherical blade points for narrow groove (inside hole) measurement

Part No.	Measuring range	Material
2932-S104	1.2-2.4"/30-60mm	stainless steel

Ball points (optional, supplied in pair)

1527-T104



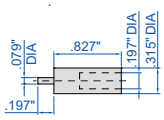


ball points for internal diameter measurement

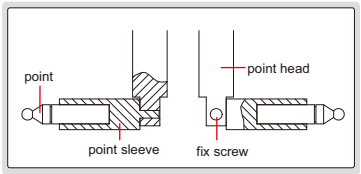
Part No.	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" DIA	±.0002"	stainless steel
1527-T103	3/16" DIA	±.0002"	stainless steel
1527-T104	1/4" DIA	±.0002"	stainless steel
1527-T105	3/8" DIA	±.0002"	stainless steel
1527-T106	1/2" DIA	±.0002"	stainless steel

Point sleeve (optional, supplied in pair)

1526-T101



installation



Part No.
1526-T101

Multifunctional points (optional, supplied in pair)

7392-T1

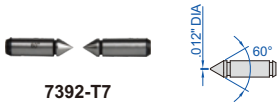
7392-T2

7392-T3

7392-T4

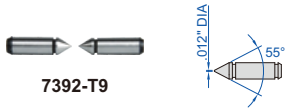
7392-T5

7392-T6



7392-T7

7392-T8



7392-T9

Part No.	Type
7392-T1*	flat
7392-T2*	spherical
7392-T3*	spline

Part No.	Type
7392-T4*	disk
7392-T5*	blade
7392-T6*	knife-edge

Part No.	Type
7392-T7*	point
7392-T8*	knife-edge
7392-T9*	point

Measuring range **
3.2-4.2"/80-105mm

**After installing points and point sleeve

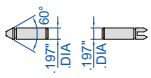
*It is necessary to use point sleeve (part no.**1526-T101**) for these points

Screw thread points (optional, supplied in pair)

Internal thread (60° thread angle)

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

7321-T16



Measuring range **
3.2-4.2"/80-105mm

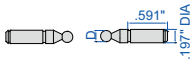
**After installing points and point sleeve

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

Ball points (optional, supplied in pair)

Part No.	Ball dia. (D)
7391-T2*	.059" DIA
7391-T3*	.079" DIA
7391-T4*	.098" DIA
7391-T5*	.118" DIA
7391-T6*	.138" DIA
7391-T7*	.157" DIA
7391-T8*	.177" DIA
7391-T9*	.197" DIA
7391-T10*	.236" DIA

7391-T5



Measuring range **
3.2-4.2"/80-105mm

**After installing points and point sleeve

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

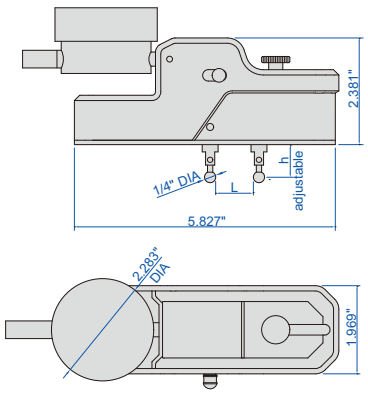
DIGITAL EXTERNAL MEASURING GAUGES

DATA OUTPUT

VIDEO

- Measure external dimensions
- Resolution: .00005"/0.001mm
- Accuracy: .00025"
- Repeatability: .00005"
- Movable point stroke: .02"/5mm
- Point height is adjustable, h=.08-1"
- CR2032 battery, automatic power off (time is adjustable)
- Data output

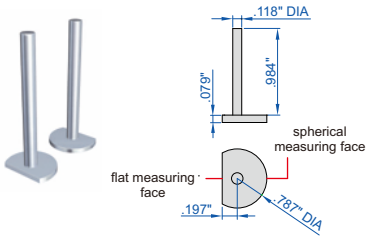
2934-401

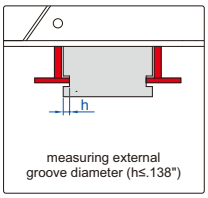


Part No.	Measuring range (L)*	Indicator	Data output cable (optional)
2934-40	.51-1.5"/13-38mm	Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement	**7315-50M** receiver is needed, **7302-40M**
2934-401	.51-1.5"/13-38mm	With transmission button and signal light Reading in digital and analog Display can be rotated by 320° Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display	**7315-51** receiver is needed, **7302-40M**

*The measuring range will change accordingly for different measuring points

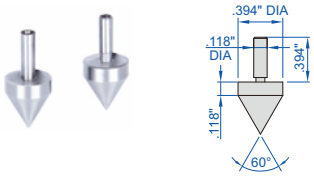
Disk points (optional, supplied in pair)

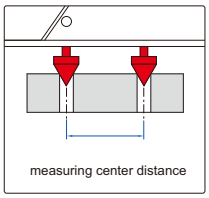




Part No.	Measuring range	Material
2934-S101	.4-1.4"/10-35mm	stainless steel

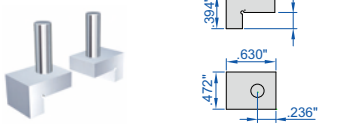
Conical points (optional, supplied in pair)

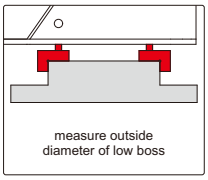




Part No.	Measuring range	Material
2932-S102	.8-1.8"/20-45mm	stainless steel

Flat shoulder points (optional, supplied in pair)

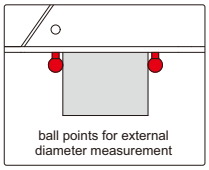




Part No.	Measuring range	Material
2934-S102	1.2-2.2"/30-55mm	stainless steel

Ball points (optional, supplied in pair)

1527-T104

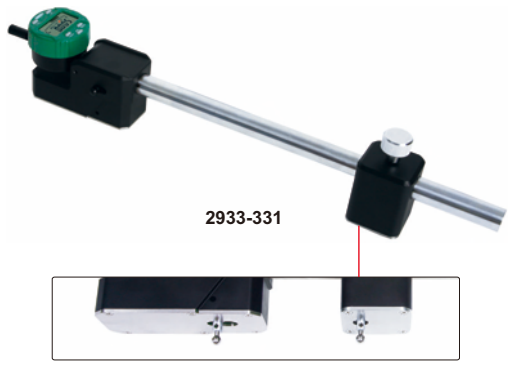


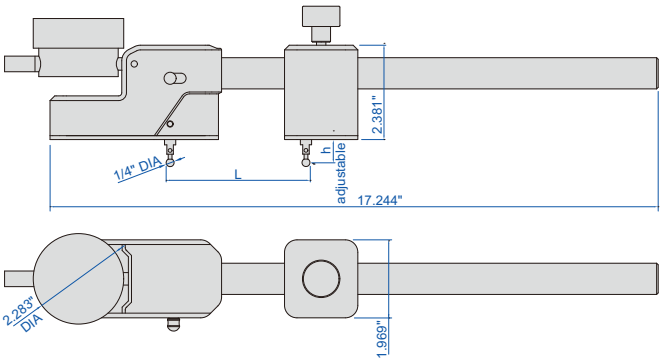
Part No.	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" DIA	±.0002"	stainless steel
1527-T103	3/16" DIA	±.0002"	stainless steel
1527-T104	1/4" DIA	±.0002"	stainless steel
1527-T105	3/8" DIA	±.0002"	stainless steel
1527-T106	1/2" DIA	±.0002"	stainless steel

LARGE RANGE DIGITAL INTERNAL MEASURING GAUGES

VIDEO

DATA OUTPUT



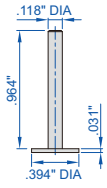


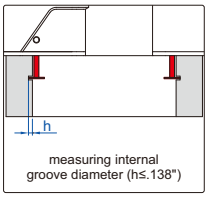
- Measure internal dimensions
- Resolution: .00005"/0.001mm
- Accuracy: .00025"
- Repeatability: .00005"
- Movable point stroke: .02"/5mm
- Point height is adjustable, h=.08-1"
- CR2032 battery, automatic power off (time is adjustable)
- Data output

Part No.	Measuring range (L)*	Indicator	Data output cable (optional)
2933-330	1.89-13"/48-330mm	Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement	**7315-50M** receiver is needed, **7302-40M**
2933-331	1.89-13"/48-330mm	With transmission button and signal light Reading in digital and analog Display can be rotated by 320° Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display	**7315-51** receiver is needed, **7302-40M**

*The measuring range will change accordingly for different measuring points

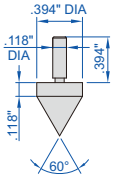
Disk points (optional, supplied in pair)

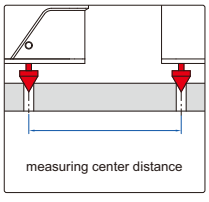




Part No.	Measuring range	Material
2932-S101	2.05-13"/52-330mm	stainless steel

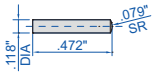
Conical points (optional, supplied in pair)

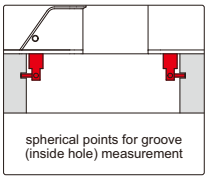




Part No.	Measuring range	Material
2932-S102	1.65-13"/42-320mm	stainless steel

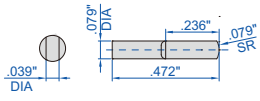
Spherical points (optional, supplied in pair)

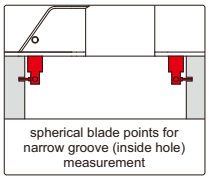




Part No.	Measuring range	Material
2932-S103	2.16-13"/55-330mm	stainless steel

Spherical blade points (optional, supplied in pair)





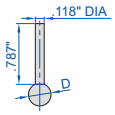
Part No.	Measuring range	Material
2932-S104	2.16-13"/55-330mm	stainless steel

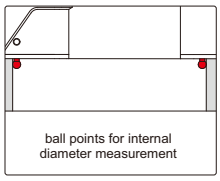
To be continued

Continued from previous page

Ball points (optional, supplied in pair)

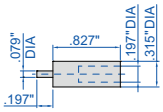
1527-T104

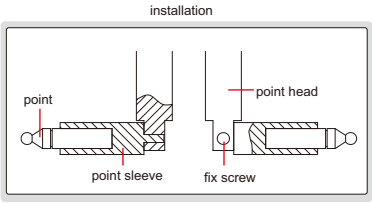




Part No.	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" DIA	±.0002"	stainless steel
1527-T103	3/16" DIA	±.0002"	stainless steel
1527-T104	1/4" DIA	±.0002"	stainless steel
1527-T105	3/8" DIA	±.0002"	stainless steel
1527-T106	1/2" DIA	±.0002"	stainless steel

Point sleeve (optional, supplied in pair)

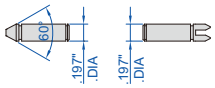




Part No.
1526-T101

Screw thread points (optional, supplied in pair)

7321-T16



Internal thread (60° thread angle)

Part No.	Pitch
7321T11 *	64-48TPI/0.4-0.5mm
7321-T12*	44-28TPI/0.6-0.9mm
7321-T13*	24-14TPI/1-1.75mm

Part No.	Pitch
7321-T14*	13-9TPI/2-3mm
7321-T15*	8-5TPI/3.5-5mm
7321-T16*	4.5-3.5TPI/5.5-7mm

Part No.	Pitch
7321-T1S*	6 pairs/set, including all above points

Measuring range**
3.94-14.5"/100-370mm

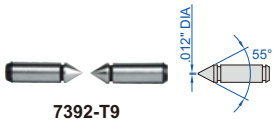
**After installing points and point sleeve

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

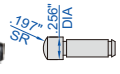
Multifunctional points (optional, supplied in pair)

7392-T1

7392-T5



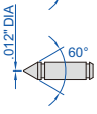
7392-T9



7392-T2

7392-T6

7392-T3



7392-T7

7392-T4

7392-T8

Measuring Range**
3.94-14.5"/100-370mm

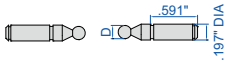
**After installing points and point sleeve

Part No.	Type
7392-T1 *	flat
7392-T2 *	spherical
7392-T3 *	spline
7392-T4 *	disk
7392-T5 *	blade
7392-T6 *	knife-edge
7392-T7 *	point
7392-T8 *	knife-edge
7392-T9 *	point

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

Ball points (optional, supplied in pair)

7391-T5



Part No.	Ball dia. (D)
7391-T2 *	.059" DIA
7391-T3 *	.079" DIA
7391-T4 *	.098" DIA

Part No.	Ball dia. (D)
7391-T5 *	.118" DIA
7391-T6 *	.138" DIA
7391-T7 *	.157" DIA

Part No.	Ball dia. (D)
7391-T8 *	.177" DIA
7391-T9 *	.197" DIA
7391-T10*	.236" DIA

Measuring range**
3.94-14.5"/100-370mm

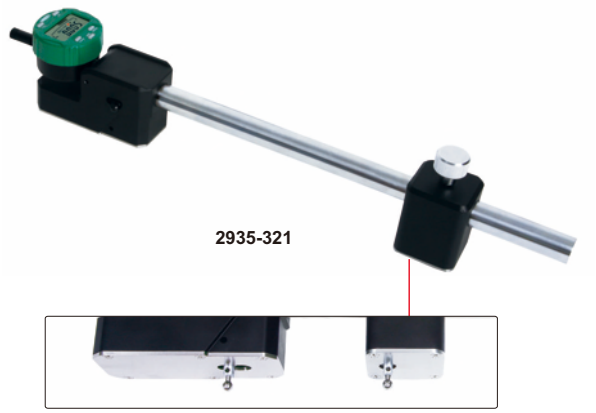
**After installing points and point sleeve

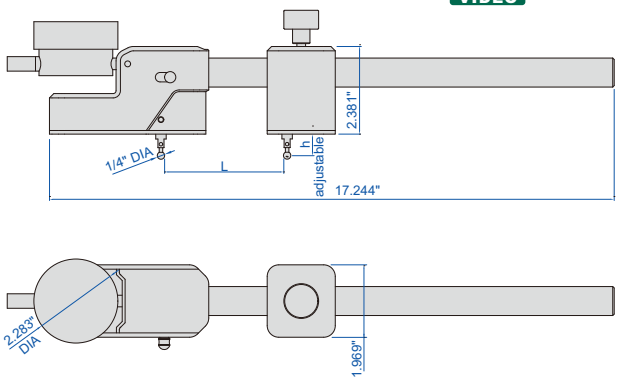
*It is necessary to use point sleeve (part no. **1526-T101**) for these points

LARGE RANGE DIGITAL EXTERNAL MEASURING GAUGES

VIDEO

DATA OUTPUT



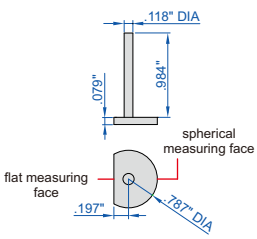


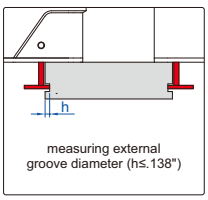
- Measure external dimensions
- Resolution: .00005"/0.001mm
- Accuracy: .00025"
- Repeatability: .00005"
- Movable point stroke: .02"/5mm
- Point height is adjustable, h=.08-1"
- CR2032 battery, automatic power off (time is adjustable)
- Data output

Part No.	Measuring range (L)*	Indicator	Data output cable (optional)
2935-320	1.4-12.6"/35-320mm	Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement	**7315-50M** receiver is needed, **7302-40M**
2935-321	1.4-12.6"/35-320mm	With transmission button and signal light Reading in digital and analog Display can be rotated by 320° Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display	**7315-51** receiver is needed, **7302-40M**

*The measuring range will change accordingly for different measuring points

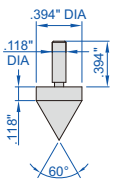
Disk points (optional, supplied in pair)

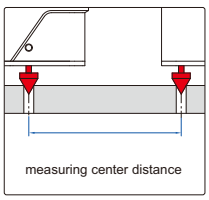




Part No.	Measuring range	Material
2934-S101	1.26-12.6"/32-320mm	stainless steel

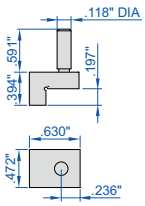
Conical points (optional, supplied in pair)

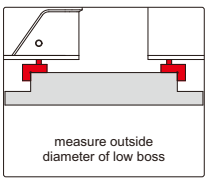




Part No.	Measuring range	Material
2932-S102	1.65-13"/42-320mm	stainless steel

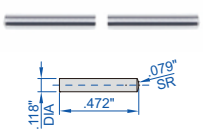
Flat shoulder points (optional, supplied in pair)

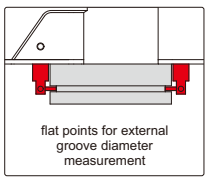




Part No.	Measuring range	Material
2934-S102	2.05-12.6"/52-320mm	stainless steel

Spherical points (optional, supplied in pair)





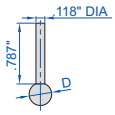
Part No.	Measuring range	Material
2932-S103	1.2-12.6"/30-320mm	stainless steel

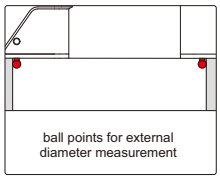
To be continued

Continued from previous page

Ball points (optional, supplied in pair)

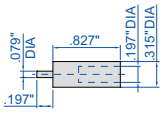
1527-T104



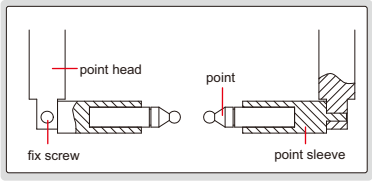


Part No.	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" DIA	±.0002"	stainless steel
1527-T103	3/16" DIA	±.0002"	stainless steel
1527-T104	1/4" DIA	±.0002"	stainless steel
1527-T105	3/8" DIA	±.0002"	stainless steel
1527-T106	1/2" DIA	±.0002"	stainless steel

Point sleeve (optional, supplied in pair)



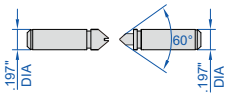
installation



Part No.
1526-T101

Screw thread points (optional, supplied in pair)

7381-T16



External thread (60° thread angle)

Part No.	Pitch
7381-T11*	64-48TPI/0.4-0.5mm
7381-T12*	44-28TPI/0.6-0.9mm
7381-T13*	24-14TPI/1-1.75mm

Part No.	Pitch
7381-T14*	13-9TPI/2-3mm
7381-T15*	8-5TPI/3.5-5mm
7381-T16*	4.5-3.5TPI/5.5-7mm

Part No.	Pitch
7381-TS*	6 pairs/set, including all above points

Measuring range**
0-11.8"/0-300mm

**After installing points and point sleeve

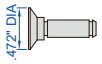
*It is necessary to use point sleeve (part no. **1526-T101**) for these points

Multifunctional points (optional, supplied in pair)

7392-T1

7392-T2

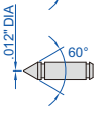
7392-T3



7392-T4

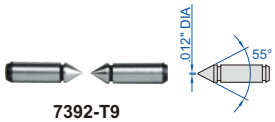
7392-T5

7392-T6



7392-T7

7392-T8



7392-T9

Measuring Range**
0-11.8"/0-300mm

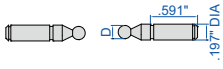
**After installing points and point sleeve

Part No.	Type
7392-T1*	flat
7392-T2*	spherical
7392-T3*	spline
7392-T4*	disk
7392-T5*	blade
7392-T6*	knife-edge
7392-T7*	point
7392-T8*	knife-edge
7392-T9*	point

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

Ball points (optional, supplied in pair)

7391-T5



Part No.	Ball dia. (D)
7391-T2*	.059" DIA
7391-T3*	.079" DIA
7391-T4*	.098" DIA

Part No.	Ball dia. (D)
7391-T5*	.118" DIA
7391-T6*	.138" DIA
7391-T7*	.157" DIA

Part No.	Ball dia. (D)
7391-T8*	.177" DIA
7391-T9*	.197" DIA
7391-T10*	.236" DIA

Measuring range**
0-11.8"/0-300mm

**After installing points and point sleeve

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

HIGH PRECISION DIGITAL MICROMETERS/SNAP GAUGES

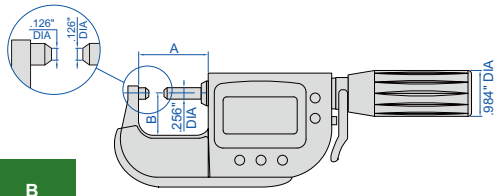
NON-ROTATING SPINDLE | ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

INSPECTION CERTIFICATE | DATA OUTPUT | IP65 WATERPROOF | MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE | ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF | ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

VIDEO

- Absolute encoder, the original data remains after power off
- Resolution .00001"/0.0001mm
- One turn of sleeve makes .4" spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts .12"
- Carbide spindle and anvil
- Measuring force 5-10N
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch
- Power: rechargeable battery, for 24 hours continuous working

3359-25



With data interface
Optional accessory:
wireless transmitter, part no. **7315-3350** receiver is needed
data output cable (keyboard format), part no. **7302-3350**

Part No.	Range	Accuracy	Repeatability	Measuring faces		A	B
				Flatness	Parallelism		
3359-25 *	0-1"/0-25mm	±.00002"	.00002"	.00002"	.00003"	1.496"	.945"

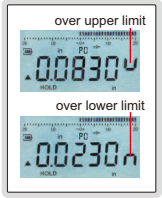
Built-in wireless
Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), part no. **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), part no. **2134-R2**

Part No.	Range	Accuracy	Repeatability	Measuring faces		A	B
				Flatness	Parallelism		
3359-25WL*	0-1"/0-25mm	±.00002"	.00002"	.00002"	.00003"	1.496"	.945"

*Supplied with manufacturer inspection certificate

wireless receiver
2134-R1, 2134-R2 (optional)

alarm when over tolerance



DIGITAL MICROMETERS/SNAP GAUGES (BASIC TYPE)

IP65 WATERPROOF | MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE | ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

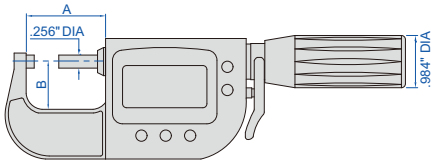
INSPECTION CERTIFICATE | DATA OUTPUT | NON-ROTATING SPINDLE | ONE TURN OF SLEEVE MAKES 10MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM | ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

- Absolute encoder, the original data remains after power off
- Resolution .00005"/0.001mm
- One turn of sleeve makes .4" spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts .12"
- Carbide spindle and anvil
- Measuring force 5-10N
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, inch/mm
- Supplied with gauge blocks for zero setting (except 0-1"/0-25mm)
- Power: rechargeable battery, for 24 hours continuous working

POPULAR MODEL

VIDEO

3358-25



With data interface
Optional accessory:
wireless transmitter, part no. **7315-3350** receiver is needed
data output cable (keyboard format), part no. **7302-3350**

Part No.	Range	Accuracy	Repeatability	Measuring faces		A	B
				Flatness	Parallelism		
3358-25 *	0-1"/0-25mm	±.00010"	.00005"	.00002"	.00005"	1.496"	.945"
3358-50 *	1-2"/25-50mm	±.00010"	.00005"	.00002"	.00005"	2.520"	1.280"
3358-75 *	2-3"/50-75mm	±.00015"	.00005"	.00002"	.00007"	3.504"	1.811"
3358-100 *	3-4"/75-100mm	±.00015"	.00005"	.00002"	.00007"	4.488"	2.362"

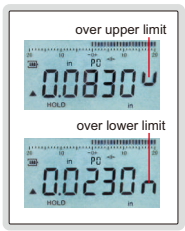
Built-in wireless
Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), part no. **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), part no. **2134-R2**

Part No.	Range	Accuracy	Repeatability	Measuring faces		A	B
				Flatness	Parallelism		
3358-25WL*	0-1"/0-25mm	±.00010"	.00005"	.00002"	.00005"	1.496"	.945"
3358-50WL*	1-2"/25-50mm	±.00010"	.00005"	.00002"	.00005"	2.520"	1.280"
3358-75WL*	2-3"/50-75mm	±.00015"	.00005"	.00002"	.00007"	3.504"	1.811"
3358-100WL*	3-4"/75-100mm	±.00015"	.00005"	.00002"	.00007"	4.488"	2.362"

*Supplied with manufacturer inspection certificate

wireless receiver
2134-R1, 2134-R2 (optional)

alarm when over tolerance



DIGITAL MICROMETERS/SNAP GAUGES

VIDEO

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

IP65 WATERPROOF

NON-ROTATING SPINDLE

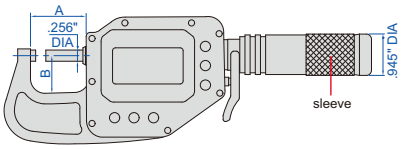
DATA OUTPUT

ONE TURN OF SLEEVE MAKES .2" SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS .12"

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

INSPECTION CERTIFICATE

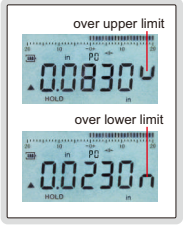
3350-25



- Absolute encoder, the original data remains after power off
- Adjustable resolution .00001"/0.0002mm
  .00005"/0.001mm
  .0005"/0.01mm
- One turn of sleeve makes .2" spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts .12"
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N.
  Customizable measuring force range 2-12N.
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, inch/mm, adjust resolution
- Supplied with gauge blocks for zero setting (except 0-1"/0-25mm)
- Power: rechargeable battery, for 24 hours continuous working

wireless receiver
2134-R1, 2134-R2 (optional)

alarm when over tolerance



With data interface
Optional accessory:
wireless transmitter, part no. **7315-3350** receiver is needed
data output cable (keyboard format), part no. **7302-3350**

Part No.	Range	Accuracy	Repeatability	Measuring faces		A	B
				Flatness	Parallelism		
3350-25*	0-1"/0-25mm	±.00005"	.00002"	.00002"	.00004"	1.496"	.945"
3350-50*	1-2"/25-50mm	±.00006"	.00004"	.00002"	.00004"	2.480"	1.102"
3350-75*	2-3"/50-75mm	±.00007"	.00004"	.00002"	.00004"	3.464"	1.772"
3350-100*	3-4"/75-100mm	±.00008"	.00004"	.00002"	.00004"	4.449"	2.244"

Built-in wireless
Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), part no. **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), part no. **2134-R2**

Part No.	Range	Accuracy	Repeatability	Measuring faces		A	B
				Flatness	Parallelism		
3350-25WL*	0-1"/0-25mm	±.00005"	.00002"	.00002"	.00004"	1.496"	.945"
3350-50WL*	1-2"/25-50mm	±.00006"	.00004"	.00002"	.00004"	2.480"	1.102"
3350-75WL*	2-3"/50-75mm	±.00007"	.00004"	.00002"	.00004"	3.464"	1.772"
3350-100WL*	3-4"/75-100mm	±.00008"	.00004"	.00002"	.00004"	4.449"	2.244"

*Supplied with manufacturer inspection certificate

DIGITAL MICROMETERS/SNAP GAUGES

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

IP65 WATERPROOF

DATA OUTPUT

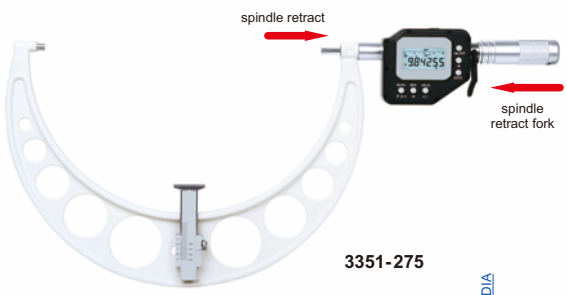
ONE TURN OF SLEEVE MAKES .2" SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS .12"

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

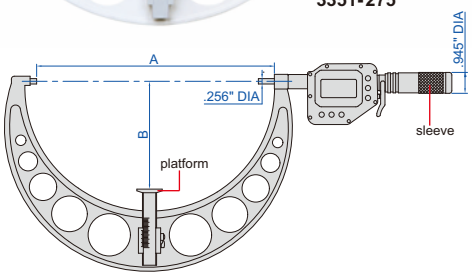
NON-ROTATING SPINDLE

INSPECTION CERTIFICATE

- Absolute encoder, the original data remains after power off
- Adjustable resolution .00001"/0.0002mm
  (when the reading exceeds 10", .00001" is automatically switched to .0001")
  .00005"/0.001mm
  (when the reading exceeds 10", .00005" is automatically switched to .0001")
  .0005"/0.01mm
- One turn of sleeve makes .2" spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts .12"
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 5-8N
- Customizable measuring force range 2-12N
- Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, inch/mm, adjust resolution
- Supplied with gauge blocks for zero setting
- Power: rechargeable battery, for 24 hours continuous working



3351-275



gauge blocks for zero setting (included)

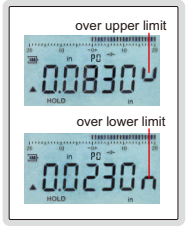
With data interface
Optional accessory:
wireless transmitter, part no. **7315-3350** receiver is needed
data output cable (keyboard format), part no. **7302-3350**

Part No.	Range	Accuracy	Repeatability	Measuring faces		A	B
				Flatness	Parallelism		
3351-125 *	4-5"/100-125mm	±.00012"	.00004"	.00002"	.00008"	5.039"	2.461"
3351-150 *	5-6"/125-150mm	±.00012"	.00004"	.00002"	.00008"	6.024"	2.953"
3351-175 *	6-7"/150-175mm	±.00016"	.00004"	.00002"	.00010"	7.008"	3.445"
3351-200 *	7-8"/175-200mm	±.00016"	.00004"	.00002"	.00010"	7.992"	3.937"
3351-225 *	8-9"/200-225mm	±.00020"	.00004"	.00002"	.00012"	8.976"	4.429"
3351-250 *	9-10"/225-250mm	±.00020"	.00004"	.00002"	.00012"	9.961"	4.921"
3351-275 *	10-11"/250-275mm	±.00024"	.00004"	.00002"	.00014"	10.945"	5.413"

*Supplied with manufacturer inspection certificate

VIDEO

alarm when over tolerance



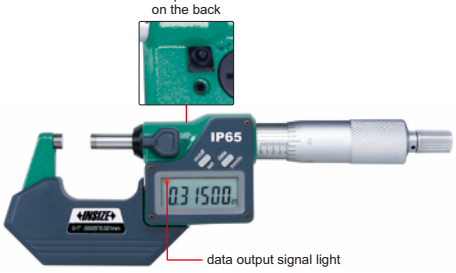
WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITH DATA OUTPUT)

INSPECTION CERTIFICATE

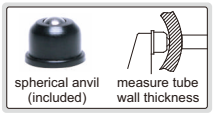
POPULAR MODEL

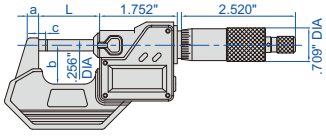
IP65 WATERPROOF

DATA OUTPUT



3101-25E





- Ratchet stop
- Resolution .00005"/0.001mm
- 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** receiver is needed, **7302-31**)

Individual

Part No.	Range	Accuracy	L	a	b	c
3101-25E *	0-1"/0-25mm	±.00010"	1.358"	.236"	.984"	.118"
3101-50E *	1-2"/25-50mm	±.00010"	2.343"	.315"	1.260"	.118"
3101-75E *	2-3"/50-75mm	±.00015"	3.327"	.315"	1.752"	.118"
3101-100E *	3-4"/75-100mm	±.00015"	4.311"	.315"	2.244"	.118"
3101-125E	4-5"/100-125mm	±.00015"	5.315"	.394"	2.756"	.118"
3101-150E	5-6"/125-150mm	±.00015"	6.319"	.394"	3.228"	.118"
3101-175E	6-7"/150-175mm	±.00020"	7.323"	.472"	3.720"	.217"

3101-33E

3101-66E

Set

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

*Supplied with manufacturer inspection certificate

WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)

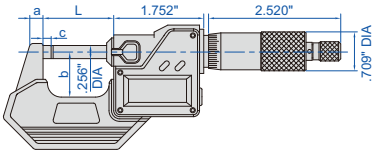
INSPECTION CERTIFICATE

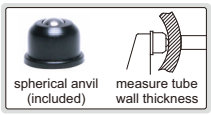
ATTENTION: NO DATA OUTPUT

IP65 WATERPROOF

3108-1

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





Ratchet stop type

Part No.	Range	Accuracy	L	a	b	c
3108-1 *	0-1"/0-25mm	±.00010"	1.358"	.236"	.984"	.118"
3108-2 *	1-2"/25-50mm	±.00010"	2.343"	.315"	1.260"	.118"
3108-3 *	2-3"/50-75mm	±.00015"	3.327"	.315"	1.752"	.118"
3108-4 *	3-4"/75-100mm	±.00015"	4.311"	.315"	2.244"	.118"
3108-5	4-5"/100-125mm	±.00015"	5.315"	.394"	2.756"	.118"
3108-6	5-6"/125-150mm	±.00015"	6.319"	.394"	3.228"	.118"
3108-7	6-7"/150-175mm	±.00020"	7.323"	.472"	3.720"	.217"
3108-8	7-8"/175-200mm	±.00020"	8.327"	.472"	4.213"	.217"

Friction thimble type

Part No.	Range	Accuracy	L	a	b	c
3108-1F *	0-1"/0-25mm	±.00010"	1.358"	.236"	.984"	.118"

Set (ratchet stop type)

Part No.	Range	Micrometers included	Packaging
3108-33 *	0-3"/0-75mm	3108-1, 3108-2, 3108-3	blow mould case
3108-44 *	0-4"/0-100mm	3108-1, 3108-2, 3108-3, 3108-4	blow mould case
3108-66	0-6"/0-150mm	3108-1, 3108-2, 3108-3, 3108-4, 3108-5, 3108-6	aluminum box

*Supplied with manufacturer inspection certificate

3108-33

3108-66

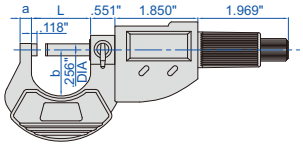
DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITHOUT DATA OUTPUT)

INSPECTION CERTIFICATE

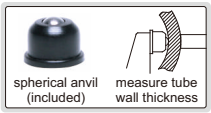
ATTENTION: NO DATA OUTPUT

POPULAR MODEL

3109-25E



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



3109-33E

3109-66E

Individual

Part No.	Range	Accuracy	L	a	b
3109-25E*	0-1"/0-25mm	±.00010"	1.260"	.236"	1.102"
3109-50E*	1-2"/25-50mm	±.00010"	2.244"	.315"	1.457"
3109-75E*	2-3"/50-75mm	±.00015"	3.228"	.315"	1.969"
3109-100E*	3-4"/75-100mm	±.00015"	4.213"	.394"	2.402"
3109-125E	4-5"/100-125mm	±.00015"	5.197"	.394"	2.874"
3109-150E	5-6"/125-150mm	±.00015"	6.181"	.394"	3.346"
3109-175E	6-7"/150-175mm	±.00020"	7.165"	.787"	4.094"
3109-200E	7-8"/175-200mm	±.00020"	8.150"	.787"	4.606"

*Supplied with manufacturer inspection certificate

Set

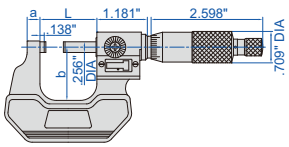
Part No.	Range	Micrometers included	Packaging
3109-33E*	0-3"/0-75mm	3109-25E, 3109-50E, 3109-75E	blow mould case
3109-44E*	0-4"/0-100mm	3109-25E, 3109-50E, 3109-75E, 3109-100E	blow mould case
3109-66E	0-6"/0-150mm	3109-25E, 3109-50E, 3109-75E, 3109-100E, 3109-125E, 3109-150E	aluminum box

OUTSIDE MICROMETERS WITH COUNTER

INSPECTION CERTIFICATE

3400-1

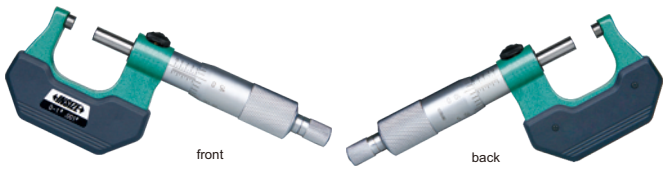
- Counter resolution .001"
- Thimble graduation .0001"
- Carbide measuring faces
- Ratchet stop
- Supplied with setting standards (except 0-1")



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

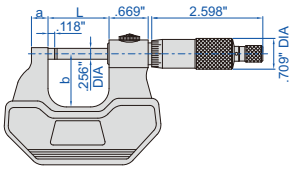
*Supplied with manufacturer inspection certificate

OUTSIDE MICROMETERS FOR LEFT OR RIGHT HANDERS



3236-1B

- Graduations on two sides
- Ratchet stop
- Carbide measuring faces

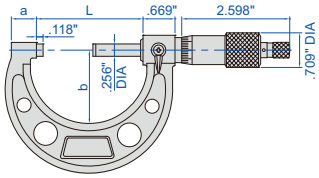


Part No.	Range	Graduation	Accuracy	L	a	b
3236-1B	0-1"	.001"	.00015"	1.260"	.236"	.945"
3236-2B	1-2"	.001"	.00015"	2.244"	.315"	1.260"

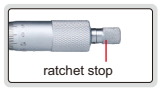
OUTSIDE MICROMETERS

INSPECTION CERTIFICATE

POPULAR MODEL



3203-2A



- Graduation .0001"
- Carbide measuring faces
- Ratchet stop
- Supplied with setting standards (except 0-1")

Individual

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

Set

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

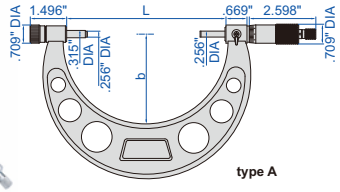
*Supplied with manufacturer inspection certificate

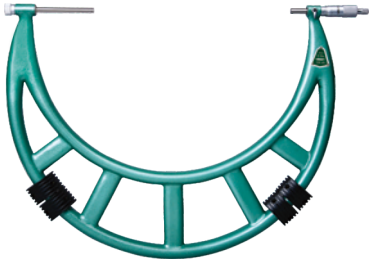
3203-44A

3203-126A

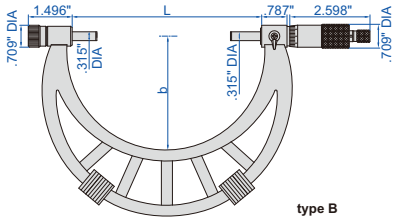
OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

3206-6



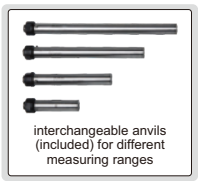


3206-16



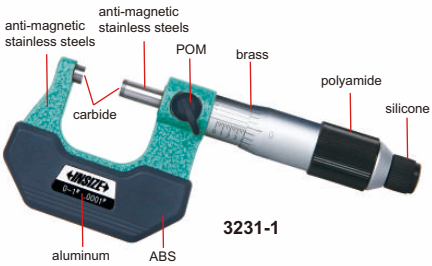
Part No.	Range	Type	Accuracy	L	b	Setting standard (included)
3206-4	0-4"	A	.00020"	4.252"	2.244"	1", 2", 3"
3206-6	0-6"	A	.00025"	6.220"	3.228"	1", 2", 3", 4", 5"
3206-61	2-6"	A	.00025"	6.220"	3.228"	2", 3", 4", 5"
3206-8	4-8"	A	.00030"	8.189"	4.488"	4", 5", 6", 7"
3206-12	6-12"	A	.00035"	12.126"	6.496"	6", 7", 8", 9", 10", 11"
3206-121	8-12"	A	.00035"	12.126"	6.496"	8", 9", 10", 11"
3206-16	12-16"	B	.00045"	16.102"	8.819"	13", 15"
3206-20	16-20"	B	.00050"	20.039"	10.827"	17", 19"
3206-24	20-24"	B	.00055"	23.976"	12.638"	21", 23"
3206-28	24-28"	B	.00065"	27.913"	14.606"	25", 27"
3206-32	28-32"	B	.00070"	31.850"	16.772"	29", 31"
3206-36	32-36"	B	.00080"	35.787"	18.740"	33", 35"
3206-40	36-40"	B	.00085"	39.724"	22.677"	37", 39"

- Graduation .0001" (within 12")
  .001" (over 12")
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards

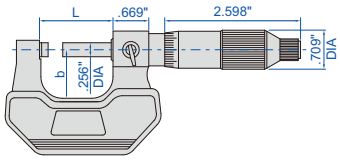


NON MAGNETIC MICROMETER

- Suitable for magnetic materials
- Non magnetic carbide measuring faces
- Ratchet stop



3231-1

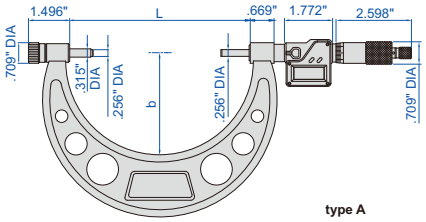


Part No.	Range	Graduation	Accuracy	L	b
3231-1	0-1"	.0001"	.00015"	1.260"	.945"

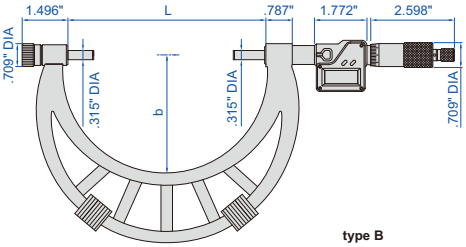
DIGITAL OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

DATA OUTPUT

IP65 WATERPROOF



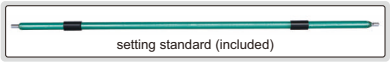
type A



type B

3506-400E

- Resolution .0001"/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
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)



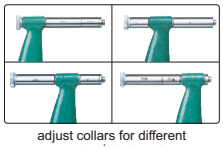
setting standard (included)

Part No.	Range	Type	Accuracy	L	b	Setting standard (included)
3506-300E	6-12"/150-300mm	A	±.00030"	12.008"	6.496"	6", 7", 8", 9", 10"
3506-301E	8-12"/200-300mm	A	±.00030"	12.008"	6.496"	8", 9", 10", 11"
3506-400E	12-16"/300-400mm	B	±.00035"	15.945"	8.819"	13", 15"
3506-500E	16-20"/400-500mm	B	±.00045"	19.882"	10.827"	17", 19"

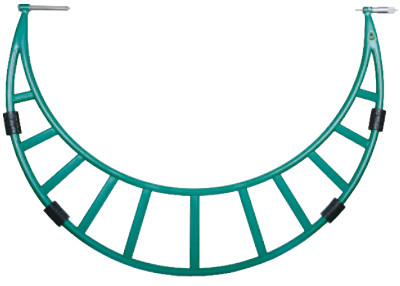
interchangeable anvils (included) for different measuring ranges

OUTSIDE MICROMETERS WITH EXTENSION ANVIL COLLAR

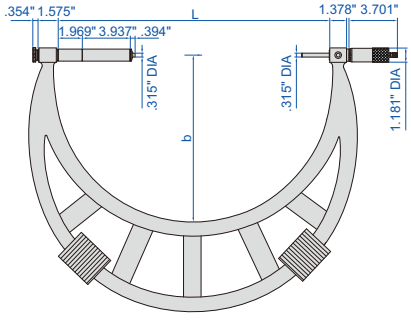
- Adjust collars for different measuring ranges
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards

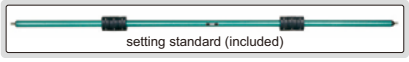


adjust collars for different measuring ranges



3205-48





setting standard (included)

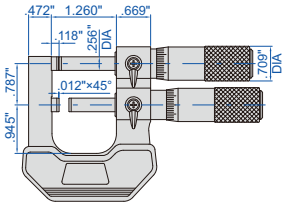
Part No.	Range	Graduation	Accuracy	L	b	Setting standard (included)
3205-48	40-48"	.0005"	.00085"	47.638"	25.394"	42", 46"
3205-56	48-56"	.0005"	.00095"	55.512"	29.331"	50", 54"
3205-64	56-64"	.0005"	.00110"	63.386"	33.268"	58", 62"
3205-72	64-72"	.0005"	.00125"	71.260"	37.205"	66", 70"
3205-80	72-80"	.0005"	.00135"	79.134"	41.142"	74", 78"

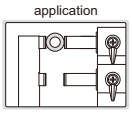
LIMIT MICROMETER

- Used as Go/No-Go gauge by setting upper and lower limits
- Carbide measuring face

Part No.	Range	Graduation	Accuracy
3235-1	0-1"	.0001"	.00015"

3235-1

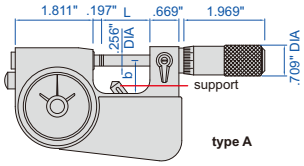




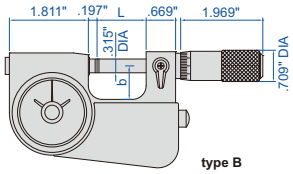
INDICATING MICROMETERS

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

3332-1



3332-1B

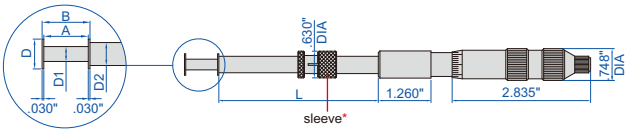


- Micrometer head graduation .0001"
- Micrometer head accuracy .00015"
- Dial indicator: range ±.0015", graduation .00005", accuracy .00005"
- Carbide measuring faces
- Optional accessory: gauge blocks grade 0 (**4112-A** series), for zero setting

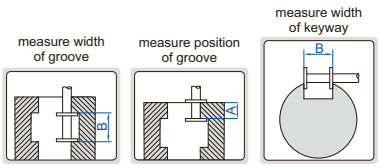
Part No.	Micrometer head range	Type	L	b	Remark
3332-1	0-1"	A	1.122"	.748"	with support
3332-2	1-2"	A	2.106"	1.181"	with support
3332-1B	0-1"	B	1.122"	.748"	without support

GROOVE MICROMETERS

3287-1B



- Accuracy .00039"
- Graduation .001"
- Measure width of grooves inside bores, measure width of keyway
- Non-rotating spindle
- Two graduations for inside and outside measurement
- Two-directional ratchet stop



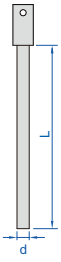
Part No.	Range (outside A)	Range (inside B)	L	D (DIA)	D1 (DIA)	D2 (DIA)
3287-1B	0-1"	.06-1.05"	4.724"	.512"	.256"	.394"
3287-2B	1-2"	1.05-2.05"	4.724"	.512"	.256"	.394"
3287-3B	2-3"	2.05-3.05"	4.724"	.512"	.256"	.394"
3287-4B	3-4"	3.05-4.05"	4.724"	.512"	.256"	.394"
3287-1AB*	0-1"	.06-1.05"	3.543"	.256"	.118"	.197"

*3287-1AB does not have sleeve

3-WIRES

CUSTOMIZABLE DIAMETER d

INSPECTION CERTIFICATE



7394-23E

- Length L=1.772"
- d≤.0120", made of alloy steel, hardness HRC60; d>.0120", made of carbide, hardness HRA90
- Diameter accuracy: ±.00002"
- Cylindricity .00002"
- Supplied with manufacturer inspection certificate

Part No.	Diameter (d)	Threads per inch
7394-1E*	.00601"	95TPI
7394-2E*	.00642"	90TPI
7394-3E*	.00722"	80TPI
7394-4E*	.00802"	72TPI
7394-5E*	.00902"	64TPI
7394-6E*	.01031"	56TPI
7394-7E*	.01155"	50TPI
7394-8E	.01203"	48TPI
7394-9E	.01312"	44TPI
7394-10E	.01443"	40TPI
7394-11E	.01604"	36TPI
7394-12E	.01804"	32TPI
7394-13E	.01925"	30TPI
7394-14E	.02062"	28TPI
7394-15E	.02138"	27TPI
7394-16E	.02221"	26TPI
7394-17E	.02406"	24TPI

Part No.	Diameter (d)	Threads per inch
7394-18E	.02624"	22TPI
7394-19E	.02887"	20TPI
7394-20E	.03208"	18TPI
7394-21E	.03608"	16TPI
7394-22E	.04124"	14TPI
7394-23E	.04441"	13TPI
7394-24E	.04811"	12TPI
7394-25E	.05020"	11.5TPI
7394-26E	.05249"	11TPI
7394-27E	.05774"	10TPI
7394-28E	.06415"	9TPI
7394-29E	.07217"	8TPI
7394-30E	.07698"	7.5TPI
7394-31E	.08248"	7TPI
7394-32E	.09623"	6TPI
7394-33E	.10497"	5.5TPI
7394-34E	.11547"	5TPI

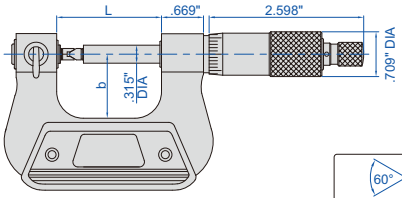
*Made of alloy steel

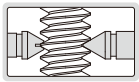
SCREW THREAD MICROMETERS

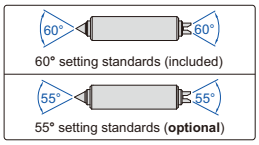
NON-ROTATING SPINDLE

- Measures pitch diameter of screw threads
- Graduation .001"
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-1")
- Optional accessory:
  55° setting standards,
  measuring tips (part no. **7381**)

3281-1
(measuring tips are optional)







Measuring tips are optional

Part No.	Range	L	b	55° setting standard (optional)
3281-1	0-1"	1.654"	1.024"	-
3281-2	1-2"	2.638"	1.496"	**3281-SPE1**
3281-3	2-3"	3.622"	1.969"	**3281-SPE2**
3281-4	3-4"	4.630"	2.441"	**3281-SPE3**
3281-5	4-5"	5.630"	2.756"	**3281-SPE4**
3281-6	5-6"	6.622"	3.228"	**3281-SPE5**
3281-7	6-7"	7.559"	3.720"	**3281-SPE6**

accuracy of micrometers with tips

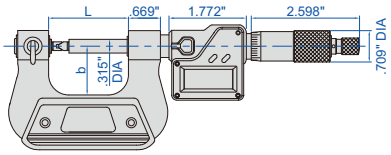
Pitch	Range					
	0-1"	1-2"	2-3"	3-4"	4-5"	5-8"
64~48TPI	±.00040"	-	-	-	-	-
44~32TPI	±.00040"	±.00050"	-	-	-	-
28~20TPI	±.00045"	±.00060"	±.00065"	±.00065"	-	-
18~13TPI	±.00055"	±.00065"	±.00075"	±.00075"	±.00080"	±.00090"
12~7TPI	±.00065"	±.00075"	±.00085"	±.00085"	±.00090"	±.00100"
6~3.5TPI	-	±.00085"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

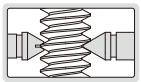
DIGITAL SCREW THREAD MICROMETERS

NON-ROTATING SPINDLE

DATA OUTPUT

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
- Optional accessory: 55° setting standards,
  data output cable (part no. **7302-31**)
  wireless data transmission
  (transmitter part no. **7315-31** receiver is needed)

Measuring tips are optional

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

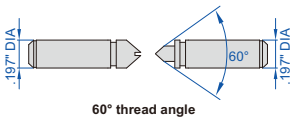
accuracy of micrometer with tips

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

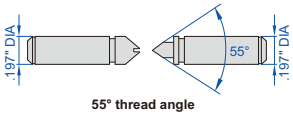
MEASURING TIPS FOR SCREW THREAD MICROMETERS

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

7381-T13



60° thread angle



55° thread angle

Unified and metric thread (60° thread angle)

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

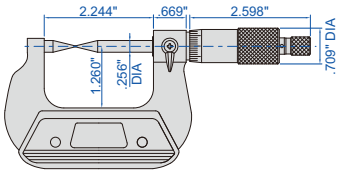
Whitworth thread (55° thread angle)

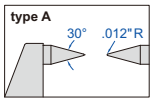
Part No.	Pitch
7381-T25	24-18TPI
7381-T26	18-14TPI
7381-T2S	10 pairs/set, including all above tips

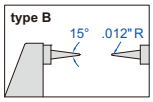
POINT MICROMETERS

- Measure the web thickness of drills, small grooves and keyways
- Ratchet stop
- Carbide tips

3230-1







Part No.	Range	Type	Accuracy	Graduation
3230-1	0-1"	A	.00015"	.0001"
3230-1B	0-1"	B	.00015"	.0001"

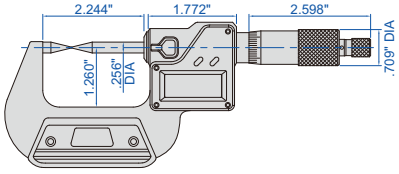
DIGITAL POINT MICROMETER

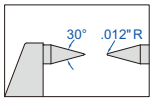
DATA OUTPUT

IP65 WATERPROOF

- 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
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)

3530-25E





Part No.	Range	Accuracy
3530-25E	0-1"/0-25mm	±.00015"

DIGITAL POINT MICROMETER/SNAP GAUGE

NON-ROTATING SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

IP65 WATERPROOF

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

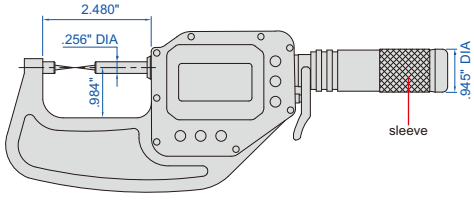
DATA OUTPUT

INSPECTION CERTIFICATE

ONE TURN OF SLEEVE MAKES .2" SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS .12"

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

3354-25



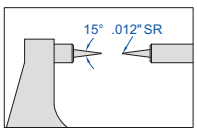
- Measure the web thickness of drills, small grooves and keyways
- Absolute encoder, the original data remains after power off
- Adjustable resolution .00001"/0.0002mm
  .00005"/0.001mm
  .0005"/0.01mm
- One turn of sleeve makes .2" spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts .12"
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
- Customizable measuring force range 2-12N
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, inch/mm, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working

With data interface
Optional accessory:
wireless transmitter, part no. **7315-3350** receiver is needed
data output cable (keyboard format), part no. **7302-3350**

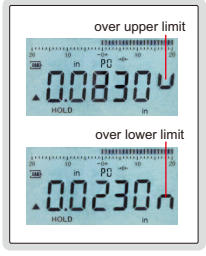
Part No.	Range	Accuracy	Repeatability
3354-25*	0-1"/0-25mm	±.00008"	.00004"

*Supplied with manufacturer inspection certificate

VIDEO



alarm when over tolerance

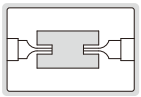


BLADE MICROMETERS

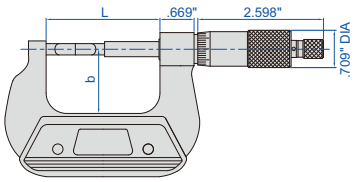
NON-ROTATING SPINDLE

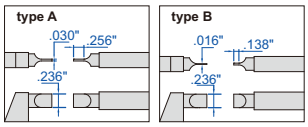
- Measure the groove diameter of shafts and keyways
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-1")

3232-1



Part No.	Range	Type	Accuracy	Graduation	L	b
3232-1	0-1"	A	.00015"	.0001"	2.244"	1.260"
3232-2	1-2"	A	.00015"	.0001"	3.228"	1.752"
3232-3	2-3"	A	.00020"	.0001"	4.213"	2.244"
3232-4	3-4"	A	.00020"	.0001"	5.220"	2.736"
3232-5	4-5"	A	.00025"	.0001"	6.220"	3.228"
3232-6	5-6"	A	.00025"	.0001"	7.220"	3.720"
3232-7	6-7"	A	.00030"	.0001"	8.220"	4.213"
3232-1B	0-1"	B	.00015"	.0001"	2.244"	1.260"



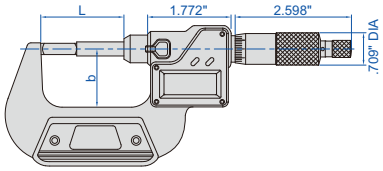


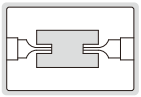
DIGITAL BLADE MICROMETERS

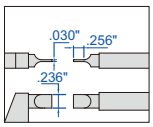
NON-ROTATING SPINDLE | DATA OUTPUT

- Measure the groove diameter of shafts and keyways
- Resolution .00005"/0.001mm
- 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** receiver is needed, **7302-31**)

3532-25E





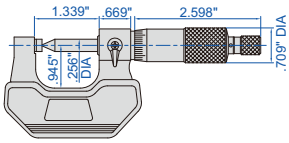


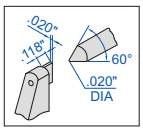
Part No.	Range	Accuracy	L	b
3532-25E	0-1"/0-25mm	±.00015"	2.244"	1.260"
3532-50E	1-2"/25-50mm	±.00015"	3.228"	1.752"

CRIMP HEIGHT MICROMETER

- Measure the height of crimp contact
- Graduation .0001"
- Ratchet stop

3266-1B





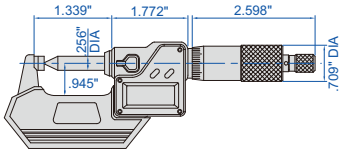
Part No.	Range	Accuracy
3266-1B	0-1"	.00015"

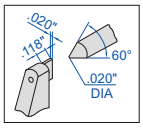
DIGITAL CRIMP HEIGHT MICROMETER

DATA OUTPUT | IP65 WATERPROOF

- Measure the height of crimp contact
- 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** receiver is needed, **7302-31**)

3566-25BE

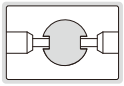


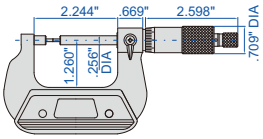


Part No.	Range	Accuracy
3566-25BE	0-1"/0-25mm	±.00015"

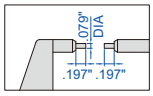
SPLINE MICROMETER

3233-1





- Measure splined shafts, slots and keyways
- Graduation .0001"
- Ratchet stop
- Carbide measuring faces



Part No.	Range	Accuracy
3233-1	0-1"	.00015"

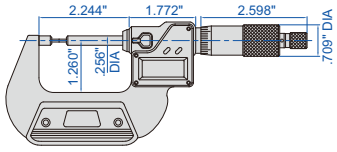
DIGITAL SPLINE MICROMETER

IP65 WATERPROOF

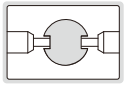
DATA OUTPUT

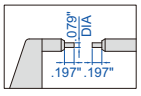
3533-25E

- Measure splined shafts, slots 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 measuring faces
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)



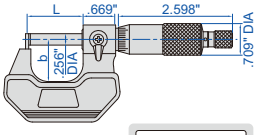
Part No.	Range	Accuracy
3533-25E	0-1"/0-25mm	±.00015"

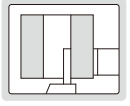




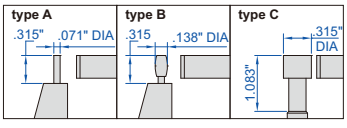
CYLINDRICAL ANVIL TUBE MICROMETERS

3261-1





- Measure wall thickness of tubes
- Graduation .0001"
- Ratchet stop
- Carbide spindle tip

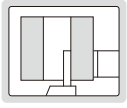


Part No.	Range	Type	Graduation	Accuracy	L	b
3261-1	0-1"	A	.0001"	.00025"	1.417"	.984"
3261-1B	0-1"	B	.0001"	.00025"	1.417"	.984"
3261-1C	0-1"	C	.0001"	.00025"	1.417"	.984"

DIGITAL CYLINDRICAL ANVIL TUBE MICROMETER

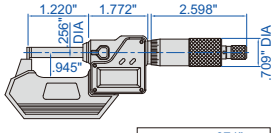
DATA OUTPUT

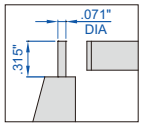
IP65 WATERPROOF



3561-25E

- 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 spindle tip
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)

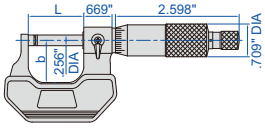


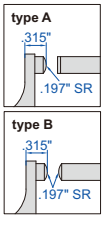


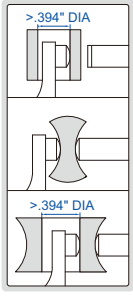
Part No.	Range	Accuracy
3561-25E	0-1"/0-25mm	±.00025"

SPHERICAL ANVIL TUBE MICROMETERS

3260-1S







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

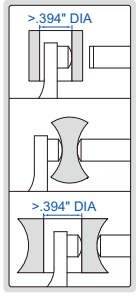
Part No.	Range	Type	Graduation	Accuracy	L	b
3260-1	0-1"	A	.0001"	.00015"	1.260"	.945"
3260-2	1-2"	A	.0001"	.00015"	2.244"	1.260"
3260-1S	0-1"	B	.0001"	.00015"	1.260"	.945"

DIGITAL SPHERICAL ANVIL TUBE MICROMETERS

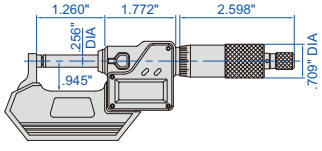
IP65 WATERPROOF

DATA OUTPUT

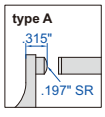
3560-25E

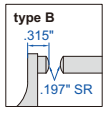


- Measure wall thickness of tubes
- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)



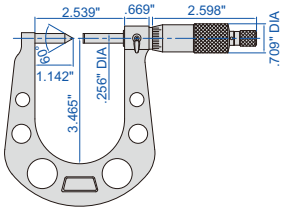
Part No.	Range	Type	Accuracy
3560-25E	0-1"/0-25mm	A	±.00015"
3560-25SE	0-1"/0-25mm	B	±.00015"





DISK BRAKE MICROMETER

3288-1



- Measure thickness of disk brakes
- Graduation .0001"
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards

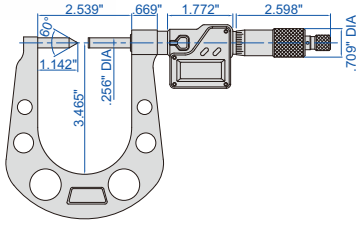
Part No.	Range	Accuracy
3288-1	.3-1.3"	.00020"

DIGITAL DISK BRAKE MICROMETER

IP65 WATERPROOF

DATA OUTPUT

3588-33E

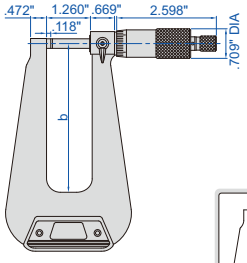


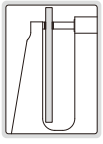
- Measure thickness of disk brakes
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)

Part No.	Range	Resolution	Accuracy
3588-33E	.3-1.3"/7.6-33mm	.00005"/0.001mm	±.00020"

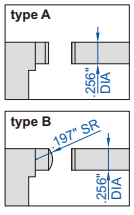
SHEET METAL MICROMETERS

3239-13



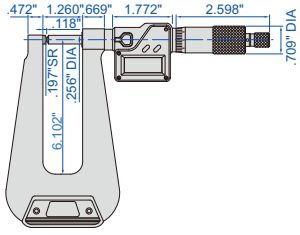


- Deep frame suitable for sheet metal, paper and plastic
- Ratchet stop
- Carbide measuring faces



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

DIGITAL SHEET METAL MICROMETER

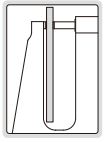


IP65 WATERPROOF

DATA OUTPUT

3539-253SE

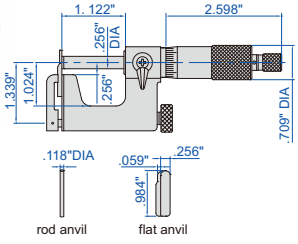
- Deep frame suitable for sheet metal, paper and plastic
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output, automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)



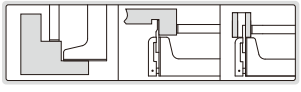
Part No.	Range	Accuracy	Resolution
3539-253SE	0-1"/0-25mm	±.00030"	.00005"/0.001mm

INTERCHANGEABLE ANVIL MICROMETER

3262-1



- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Graduation .0001"
- Ratchet stop
- Carbide spindle tip



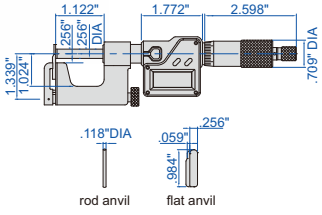
Part No.	Range	Accuracy
3262-1	0-1"	.00015"

DIGITAL INTERCHANGEABLE ANVIL MICROMETER

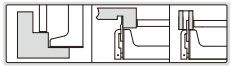
IP65 WATERPROOF

DATA OUTPUT

3562-25E



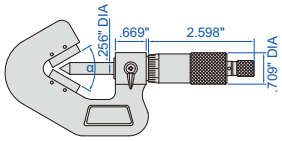
- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output, automatic power off
- Ratchet stop
- Carbide spindle tip
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)



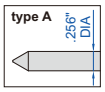
Part No.	Range	Resolution	Accuracy
3562-25E	0-1"/0-25mm	.00005"/0.001mm	±.00015"

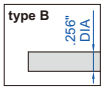
V-ANVIL MICROMETERS

3290-063



- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- Graduation .0001"
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards





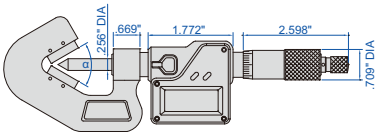
Part No.	Range	Flutes	Accuracy	α	Type
3290-063	.04-.6"	3	.00015"	60º	A
3290-083	.2-.8"	3	.00015"	60º	B

DIGITAL V-ANVIL MICROMETER

IP65 WATERPROOF

DATA OUTPUT

3590-153E



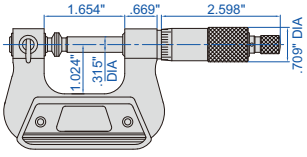
- Resolution .00005"/0.001mm
- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)

Part No.	Range	Flutes	α	Accuracy
3590-153E	.04-.6"/1-15mm	3	60º	±.00015"

NON-ROTATING SPINDLE UNIVERSAL MICROMETER

NON-ROTATING SPINDLE

3280-1



Part No.	Range
3280-1	0-1"

- Accuracy .00015"
- Graduation .0001"
- Non-rotating spindle
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Optional accessory: 55° anvil/spindle tip

Anvil/spindle tip (included)

Flat	.256" DIA	
Spherical	.197" SR, .256" DIA	
Spline	.079" DIA, .118"	
Disk	.472" DIA	
Blade	.028", .118"	
Knife-edge	.014", 60°	
Point	.012" DIA, 60°	

55°anvil/spindle tip (**optional**)

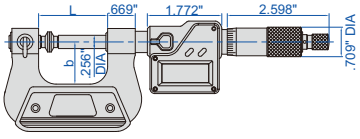
Part No. **3280-SP1** Knife-edge	.014", 55°	
Part No. **3280-SP2** Point	.012" DIA, 55°	

DIGITAL UNIVERSAL MICROMETER

NON-ROTATING SPINDLE

DATA OUTPUT

3580-25E



- Accuracy ±.00015"
- Resolution .00005"/0.001mm
- Non-rotating spindle
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Optional accessory: 55° anvil/spindle tip part no. **3280-SP1** and **3280-SP2**, data output cable (part no. **7315-31** receiver is needed, **7302-31**)

Part No.	Range
3580-25E	0-1"/0-25mm

Anvil/spindle tip (included)

Flat	.256" DIA	
Spherical	.197" SR, .256" DIA	
Spline	.079" DIA, .118"	
Disk	.472" DIA	
Blade	.028", .118"	
Knife-edge	.014", 60°	
Point	.012" DIA, 60°	

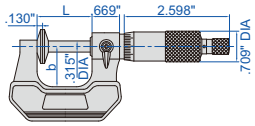
55°anvil/spindle tip (**optional**)

Part No. **3280-SP1** Knife-edge	.014", 55°	
Part No. **3280-SP2** Point	.012" DIA, 55°	

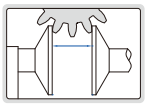
DISK MICROMETERS

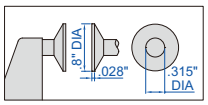
- Measure root tangent length of gear
- Ratchet stop
- Supplied with setting standards

3282-1



Part No.	Range	Graduation	Accuracy	Parallelism	L	b
3282-1	0-1"	.0001"	.00015"	.00020"	1.339"	.945"
3282-2	1-2"	.0001"	.00015"	.00020"	2.323"	1.260"
3282-3	2-3"	.0001"	.00020"	.00020"	3.346"	1.772"
3282-4	3-4"	.0001"	.00020"	.00020"	4.331"	2.244"



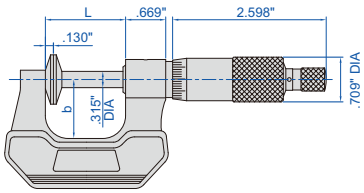


NON-ROTATING SPINDLE DISK MICROMETERS

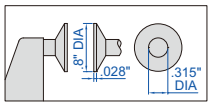
NON-ROTATING SPINDLE

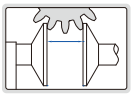
- Measure root tangent length of gear
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards

3294-1



Part No.	Range	Graduation	Accuracy	Parallelism	L	b
3294-1	0-1"	.0001"	.00015"	.00020"	1.339"	.945"
3294-2	1-2"	.0001"	.00015"	.00020"	2.323"	1.260"
3294-3	2-3"	.0001"	.00020"	.00020"	3.346"	1.772"
3294-4	3-4"	.0001"	.00020"	.00020"	4.331"	2.244"





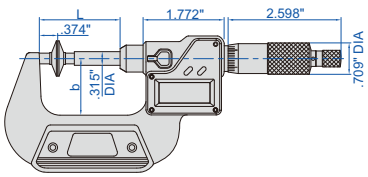
DIGITAL NON-ROTATING SPINDLE DISK MICROMETERS

DATA OUTPUT

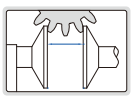
NON-ROTATING SPINDLE

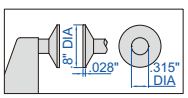
- Parallelism: ±.00020"
- Measure root tangent length of gear
- Resolution .00005"/0.001mm
- Non-rotating spindle
- Button function: on/off, set, inch/mm, data transmit
- Data output, automatic power off
- Ratchet stop
- Supplied with setting standards
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)

3594-1



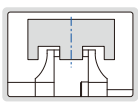
Part No.	Range	Accuracy	L	b
3594-1	0-1"/0-25mm	±.00015"	1.693"	1.260"
3594-2	1-2"/25-50mm	±.00015"	2.677"	1.752"
3594-3	2-3"/50-75mm	±.00020"	3.661"	2.244"
3594-4	3-4"/75-100mm	±.00020"	4.665"	2.756"

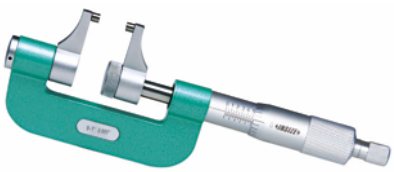




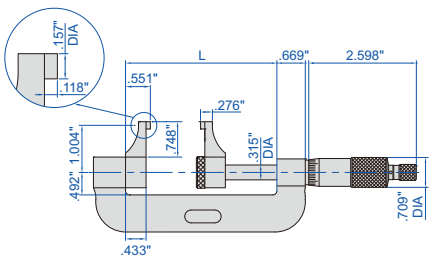
CALIPER TYPE MICROMETERS

- Graduation .001"
- Non-rotating spindle
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-1")





3238-1

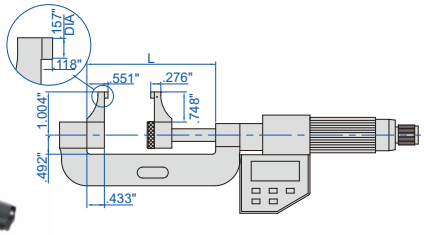


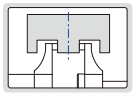
Part No.	Range	Graduation	Accuracy	L
3238-1	0-1"	.001"	.00040"	2.205"
3238-2	1-2"	.001"	.00040"	3.189"

DIGITAL CALIPER TYPE MICROMETERS

- Resolution .00005"/0.001mm
- Non-rotating spindle
- Buttons: on/off, data set, inch/mm, ABS/INC
- Data output
- Automatic power off
- Ratchet friction thimble
- Carbide measuring faces
- Supplied with setting standards (except 0-1"/0-25mm)

3538-25





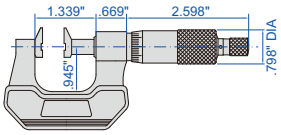
Part No.	Range	Accuracy	L
3538-25	0-1"/0-25mm	±.00040"	2.205"
3538-50	1-2"/25-50mm	±.00040"	3.189"
3538-75	2-3"/50-75mm	±.00045"	4.173"

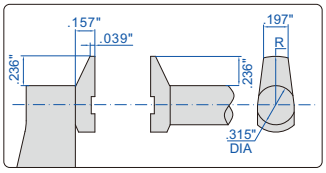
JAW TYPE MICROMETER

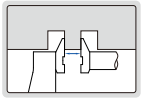
NON-ROTATING SPINDLE

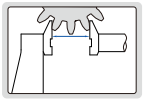
- Graduation .0001"
- Non-rotating spindle
- Ratchet stop

3283-1









Part No.	Range	Accuracy	R
3283-1	0-1"	.00015"	.394"

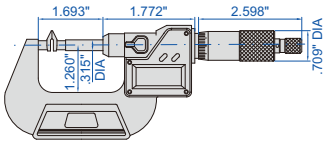
DIGITAL JAW TYPE MICROMETER

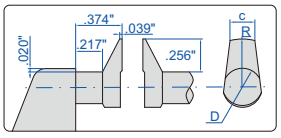
NON-ROTATING SPINDLE

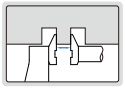
DATA OUTPUT

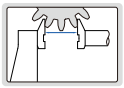
- Resolution .00005"/0.001mm
- Non-rotating spindle
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)

3583-25AE





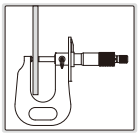




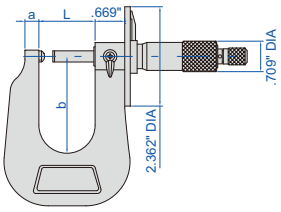
Part No.	Range	Accuracy	c	R	D
3583-25AE	0-1"/0-25mm	±.00015"	.197"	.394"	.315" DIA

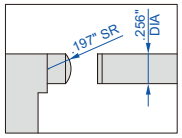
SHEET METAL MICROMETER

- Measure thickness of sheet metal, paper, plastic and rubber parts
- Graduation .001"
- Ratchet stop
- Carbide measuring faces



3263-1





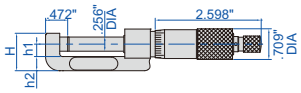
Part No.	Range	Accuracy	L	a	b
3263-1	0-1"	.00015"	1.260"	.315"	1.969"

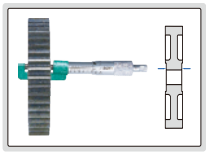
HUB MICROMETERS

- Measure hub thickness and shoulder inside a bore
- Graduation .0001"
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-1")

3292-1

Part No.	Range	Accuracy	h1	h2	H
3292-1	0-1"	.00015"	.236"	.354"	.736"
3292-2	1-2"	.00015"	.256"	.433"	.835"
3292-3	2-3"	.00020"	.256"	.433"	.835"
3292-4	3-4"	.00020"	.256"	.433"	.835"



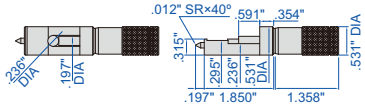


CAN SEAM MICROMETERS

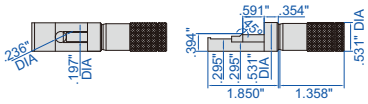
3293-061

3293-062

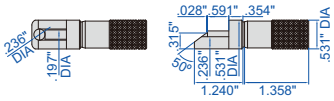
3293-063



3293-061



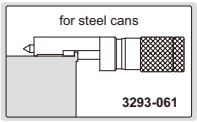
3293-062

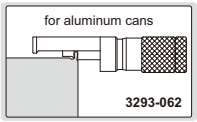


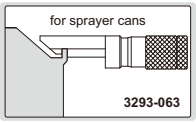
3293-063

Part No.	Range	Accuracy
3293-061	0-.5"	.00015"
3293-062	0-.5"	.00015"
3293-063	0-.5"	.00015"

- Measure the width, height and depth of can seams
- Graduation .001"



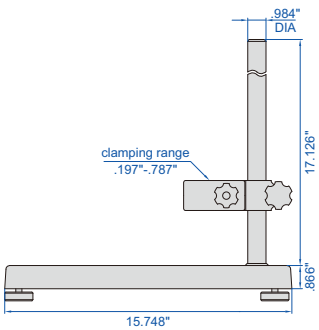




MICROMETER STAND

- Suitable for 4-12" outside micrometers

6302

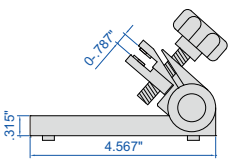


Part No.
6302

MICROMETER STAND

- Suitable for outside micrometers up to 4"

6300



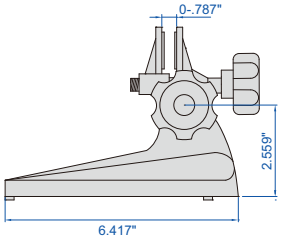
Part No.
6300

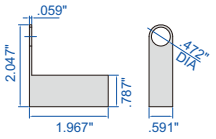
MICROMETER STAND

6301

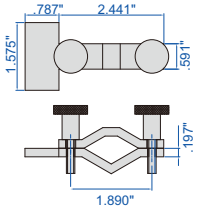
6301-1

6301-2





- Suitable for inside micrometers



- Suitable for three points internal micrometers

- Suitable for outside micrometers up to 4"

Part No.
6301

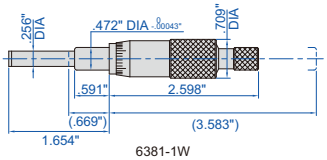
Part No.	Description	Applicable products
6301-1	clamp for inside micrometers	all sizes of **3220** series

Part No.	Description	Applicable products
6301-2	clamp for three points internal micrometers	up to 4" of **3127** and **3227** series

MICROMETER HEAD

- Ratchet stop

6381-1W



6381-1W

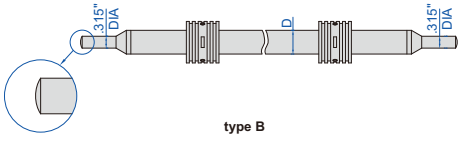
Part No.	Range	Graduation	Spindle tip	Accuracy
6381-1W	0-1"	.001"	flat (carbide)	.00015"

MICROMETER SETTING STANDARDS

6311-4

6311-12

type A



type B

Part No.	Length	Type	Accuracy	D (DIA)
6311-1	1"	A	±.00006"	.276"
6311-2	2"	A	±.00008"	.276"
6311-3	3"	A	±.00010"	.276"
6311-4	4"	A	±.00012"	.315"
6311-5	5"	A	±.00014"	.315"
6311-6	6"	A	±.00016"	.315"
6311-7	7"	A	±.00018"	.315"
6311-8	8"	A	±.00020"	.315"
6311-9	9"	A	±.00022"	.315"
6311-10	10"	A	±.00024"	.315"
6311-11	11"	A	±.00026"	.315"
6311-12	12"	B	±.00028"	.630"
6311-13	13"	B	±.00030"	.630"
6311-14	14"	B	±.00031"	.630"
6311-15	15"	B	±.00033"	.630"
6311-16	16"	B	±.00035"	.630"
6311-17	17"	B	±.00037"	.630"
6311-18	18"	B	±.00039"	.630"
6311-19	19"	B	±.00041"	.630"
6311-20	20"	B	±.00043"	.630"

INSIDE MICROMETERS (ECONOMIC TYPE)

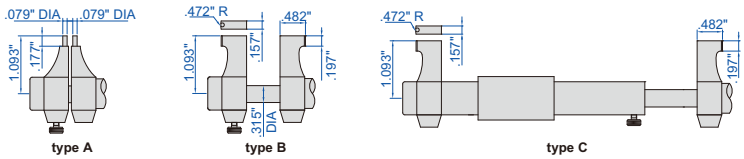
ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES

- Graduation .001"
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting ring (part no. **6313**), micrometer stand and clamp (part no. **6301** and **6301-1**)

3220-2

micrometer stand with clamp (**optional**)

Part No.	Range	Type	Setting ring	Accuracy
3220-1	.2-1.2"	A	.2" DIA (included)	.00030"
3220-2	1-2"	B	1" DIA (included)	.00035"
3220-3	2-3"	B	2" DIA **(optional)**	.00035"
3220-4	3-4"	C	3" DIA **(optional)**	.00040"



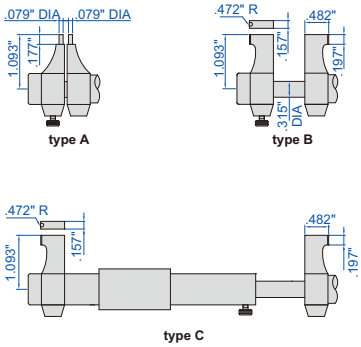
DIGITAL INSIDE MICROMETERS (ECONOMIC TYPE)

ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES

DATA OUTPUT

- 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** receiver is needed, **7302-31**), setting ring (part no. **6313**)

3520-30E



Part No.	Range	Type	Setting ring	Accuracy
3520-30E	.2-1.2"/5-30mm	A	.2" DIA (included)	±.00020"
3520-50E	1-2"/25-50mm	B	1" DIA (included)	±.00025"
3520-75E	2-3"/50-75mm	B	2" DIA (**optional**)	±.00030"
3520-100E	3-4"/75-100mm	C	3" DIA (**optional**)	±.00035"

DIGITAL TUBULAR INSIDE MICROMETERS

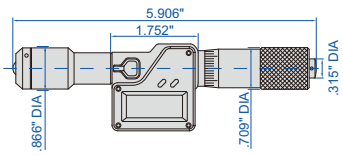
IP65 WATERPROOF

DATA OUTPUT

- Micrometer head: 6-7"
- Graduation .00005"/0.001mm
- Accuracy: [.00005(3+n+L/2)]"
  n=number of rods
  L=maximum measuring length (inch)
- Carbide measuring faces
- The diameter of extension rods is .866"
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmit
- Data output
- Automatic power off
- Supplied with setting standards
- Optional accessory: data output cable (part no. **7315-31** receiver is needed, **7302-31**)

3521-40

Part No.	Range	Travel of micrometer head	Extension rods
3521-7	6-7" (150-175mm)	1"	—
3521-40	6-40" (150-1000mm)	1"	1", 2" (2 pcs), 4", 8", 16"
3521-60	6-60" (150-1500mm)	1"	1", 2" (2 pcs), 4" (2 pcs), 8", 16" (2 pcs)

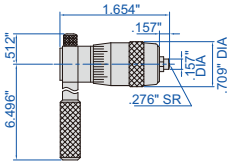


TUBULAR INSIDE MICROMETERS

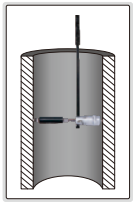
- Graduation .001"
- Accuracy: [.0003+.00005(L/2)]",
  L=maximum measuring length (inch)
- Optional accessory: setting ring (part no. **6313**),
  gauge block accessory (part no. **6881**),
  cylinder gauge block (part no. **4001**),
  caliper/height gauge checker (part no. **6884**)

3221-8

Part No.	Range	Travel of micrometer head	Extension rods
3221-2	1-2"	.25"	2 pcs
3221-25	2-2.5"	.5"	—
3221-8	2-8"	.5"	6 pcs
3221-12	2-12"	.5"	10 pcs
3221-9	8-9"	1"	—
3221-20	8-20"	1"	3 pcs
3221-40	8-40"	1"	8 pcs



application

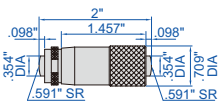


TUBULAR INSIDE MICROMETERS

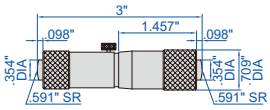
- Carbide measuring faces
- Optional accessory:
  gauge block accessory (part no. **6881**),
  cylinder gauge block (part no. **4001**),
  caliper/height gauge checker (part no. **6884**)

3229-9

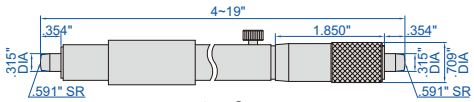
Part No.	Range	Type	Graduation	Accuracy
3229-3	2-3"	A	.001"	.00020"
3229-4	3-4"	B	.001"	.00020"
3229-5	4-5"	C	.001"	.00025"
3229-6	5-6"	C	.001"	.00025"
3229-7	6-7"	C	.001"	.00030"
3229-8	7-8"	C	.001"	.00030"
3229-9	8-9"	C	.001"	.00035"
3229-10	9-10"	C	.001"	.00035"
3229-11	10-11"	C	.001"	.00035"
3229-12	11-12"	C	.001"	.00035"
3229-13	12-13"	C	.001"	.00035"



type A



type B



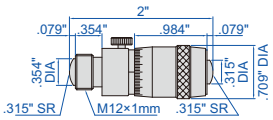
type C

TUBULAR INSIDE MICROMETERS

- Micrometer head 2-6"
- Graduation .001"
- Accuracy: [.00005(3+n+L/2)]"
  n=number of rods
  L=maximum measuring length (inch)
- Travel of micrometer head .5"
- Supplied with setting standards
- Carbide measuring faces

3222-6

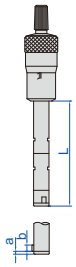
Part No.	Range	Graduation	Micrometer head	Travel of micrometer head	Extension rods
3222-6	2-6"	.001"	2-2.5"	.5"	.5", 1", 2"
3222-12	2-12"	.001"	2-2.5"	.5"	.5", 1", 2" (2 pcs), 4"
3222-20	2-20"	.001"	2-2.5"	.5"	.5", 1", 2" (2 pcs), 4", 8"
3222-24	2-24"	.001"	2-2.5"	.5"	.5", 1", 2", 4", 6", 8"
3222-40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



THREE POINTS INTERNAL MICROMETERS

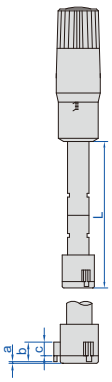
INSPECTION CERTIFICATE

3227-E035



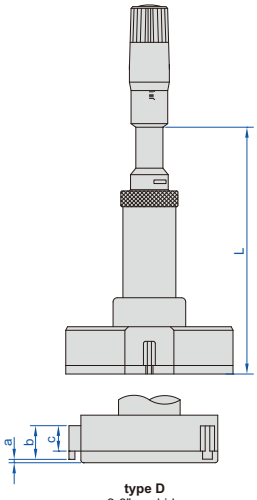
type B
.275-.5", steel
measuring points
three points

3227-E065



type C
.5-2", carbide
measuring points
three points

3227-E4



type D
2-8", carbide
measuring points
three points

- .275-.5": graduation .0001"
  .5-8": graduation .0002"
- Ratchet stop
- Optional accessory:
  setting rings (part no. **6313**),
  micrometer stand and clamp
  (part no. **6301** and **6301-2**)

micrometer stand with clamp (**optional**)

setting ring

.275-4": included
4-8": **optional**

extension rod

included

Individual

Part No.	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3227-E035 *	.275-.35"	B (three points)	.00015"	.275" DIA (included)	4"	2.146"	.059"	.098"	—
3227-E0425 *	.35-.425"	B (three points)	.00015"	.35" DIA (included)	4"	2.146"	.059"	.098"	—
3227-E05 *	.425-.5"	B (three points)	.00015"	.5" DIA (included)	4"	2.146"	.059"	.098"	—
3227-E065 *	.5-.65"	C (three points)	.00015"	.65" DIA (included)	6"	3.150"	.020"	.236"	.177"
3227-E08 *	.65-.8"	C (three points)	.00015"	.65" DIA (included)	6"	3.150"	.020"	.236"	.177"
3227-E1 *	.8-1"	C (three points)	.00015"	1" DIA (included)	6"	3.543"	.020"	.315"	.236"
3227-E112 *	1-1.2"	C (three points)	.00015"	1" DIA (included)	6"	3.543"	.020"	.315"	.236"
3227-E16 *	1.2-1.6"	C (three points)	.00015"	1.6" DIA (included)	6"	3.819"	.020"	.551"	.472"
3227-E2 *	1.6-2"	C (three points)	.00020"	1.6" DIA (included)	6"	3.819"	.020"	.551"	.472"
3227-E25 *	2-2.5"	D (three points)	.00020"	2.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3227-E3 *	2.5-3"	D (three points)	.00020"	2.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3227-E35 *	3-3.5"	D (three points)	.00020"	3.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3227-E4 *	3.5-4"	D (three points)	.00020"	3.5" DIA (included)	6"	4.488"	.020"	.689"	.571"
3227-E5 *	4-5"	D (three points)	.00025"	**optional**	6"	5.512"	.035"	1.142"	.984"
3227-E6 *	5-6"	D (three points)	.00025"	**optional**	6"	5.512"	.035"	1.142"	.984"
3227-E7 *	6-7"	D (three points)	.0002"	**optional**	6"	5.512"	.035"	1.142"	.984"
3227-E8 *	7-8"	D (three points)	.0002"	**optional**	6"	5.512"	.035"	1.142"	.984"

Set

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

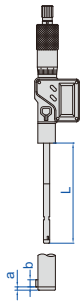
*Supplied with manufacturer inspection certificate

3227-E24

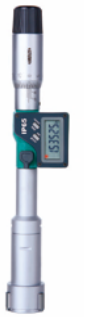
DIGITAL THREE POINTS INTERNAL MICROMETERS

DATA OUTPUT | IP65 WATERPROOF | INSPECTION CERTIFICATE

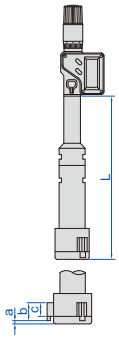
3127-E05



type B
.275-.5", steel measuring points three points

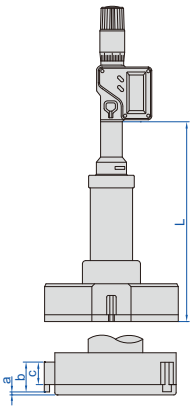


3127-E16



type C
.5-2", carbide measuring points three points

3127-E5



type D
2-8", carbide measuring points three points

- 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** receiver is needed, **7302-31**), setting ring (part no. **6313**), micrometer stand and clamp (part no. **6301** and **6301-2**)

setting ring

.275-4": included
4-8": **optional**

extension rod

included

micrometer stand with clamp (**optional**)

Individual

Part No.	Range	Type	Accuracy	Setting ring	Extension rod	L	a	b	c
3127-E035 *	.275-.35"/7-9mm	B (three points)	.00015"	.275" DIA (included)	4" (included)	2.146"	.059"	.098"	—
3127-E0425 *	.35-.425"/9-11mm	B (three points)	.00015"	.35" DIA (included)	4" (included)	2.146"	.059"	.098"	—
3127-E05 *	.425-.5"/11-13mm	B (three points)	.00015"	.5" DIA (included)	4" (included)	2.146"	.059"	.098"	—
3127-E065 *	.5-.65"/13-17mm	C (three points)	.00015"	.65" DIA (included)	6" (included)	3.150"	.020"	.236"	.177"
3127-E08 *	.65-.8"/17-20mm	C (three points)	.00015"	.65" DIA (included)	6" (included)	3.150"	.020"	.236"	.177"
3127-E1 *	.8-1"/20-25mm	C (three points)	.00015"	1" DIA (included)	6" (included)	3.543"	.020"	.315"	.236"
3127-E112 *	1-1.2"/25-30mm	C (three points)	.00015"	1" DIA (included)	6" (included)	3.543"	.020"	.315"	.236"
3127-E16 *	1.2-1.6"/30-40mm	C (three points)	.00015"	1.6" DIA (included)	6" (included)	3.819"	.020"	.551"	.472"
3127-E2 *	1.6-2"/40-51mm	C (three points)	.00020"	1.6" DIA (included)	6" (included)	3.819"	.020"	.551"	.472"
3127-E25 *	2-2.5"/51-63mm	D (three points)	.00020"	2.5" DIA (included)	6" (included)	4.488"	.020"	.689"	.571"
3127-E3 *	2.5-3"/63-76mm	D (three points)	.00020"	2.5" DIA (included)	6" (included)	4.488"	.020"	.689"	.571"
3127-E35 *	3-3.5"/76-89mm	D (three points)	.00020"	3.5" DIA (included)	6" (included)	4.488"	.020"	.689"	.571"
3127-E4 *	3.5-4"/89-101mm	D (three points)	.00020"	3.5" DIA (included)	6" (included)	4.488"	.020"	.689"	.571"
3127-E5 *	4-5"/101-127mm	D (three points)	.00025"	**optional**	6" (included)	5.512"	.035"	1.142"	.984"
3127-E6 *	5-6"/127-152mm	D (three points)	.00025"	**optional**	6" (included)	5.512"	.035"	1.142"	.984"
3127-E7 *	6-7"/152-178mm	D (three points)	.00030"	**optional**	6" (included)	5.512"	.035"	1.142"	.984"
3127-E8 *	7-8"/178-203mm	D (three points)	.00030"	**optional**	6" (included)	5.512"	.035"	1.142"	.984"

3127-E082

Set

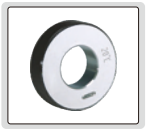
Part No.	Range	Micrometers included	Setting ring (included)	Extension rod
3127-E053 *	.275-.5"/7-13mm	.275-.35"/7-9mm, .35-.425"/9-11mm, .425-.5"/11-13mm	.275" DIA, .35" DIA, .5" DIA	4" (included)
3127-E082 *	.5-.8"/13-20mm	.5-.65"/13-17mm, .65-.8"/17-20mm	.65" DIA	6" (included)
3127-E24 *	.8-2"/20-51mm	.8-1"/20-25mm, 1-1.2"/25-30mm, 1.2-1.6"/30-40mm, 1.6-2"/40-51mm	1" DIA, 1.6" DIA	6" (included)
3127-E44 *	2-4"/51-101mm	2-2.5"/51-63mm, 2.5-3"/63-76mm, 3-3.5"/76-89mm, 3.5-4"/89-101mm	2.5" DIA, 3.5" DIA	6" (included)

*Supplied with manufacturer inspection certificate

DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETERS

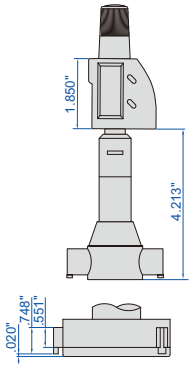
INSPECTION CERTIFICATE | DATA OUTPUT | IP54 WATERPROOF

- Resolution .00005"/0.001mm (resolution of **3128-12** is .0001"/0.001mm)
- IP54 dust/waterproof
- Buttons: on/off, set, inch/mm
- 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** receiver is needed, **7302-30**)


setting ring

extension rod (included)

3128-28

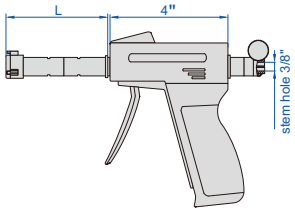


Part No.	Range	Accuracy	Setting ring	Extension rod (included)
3128-28 *	2-2.8"/51-71mm	.00020"	2" DIA (included)	6"
3128-4 *	2.8-4"/71-101mm	.00020"	2.8" DIA (included)	6"
3128-6 *	4-6"/101-152mm	.00025"	4" DIA (included)	6"
3128-10 *	6-10"/152-254mm	.00035"	6" DIA (included)	6"
3128-12 *	8-12"/203-305mm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

*Supplied with manufacturer inspection certificate

PISTOL GRIP THREE POINTS BORE GAUGES

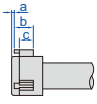
INSPECTION CERTIFICATE



type A
.275"-.5", steel measuring points

digital indicator is optional

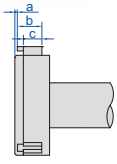
2124-E035



type B
.5"-2", carbide measuring points

digital indicator is optional

2124-E1



type C
2-6", carbide measuring points

digital indicator is optional

2124-E5

- Optional accessory: digital indicators (part no. **2103-10FE**, resolution .00005"/0.001mm), setting rings (part no. **6313**)

Individual

Part No.	Range	Type	Accuracy (without digital indicator)	Setting ring	Extension rod (included)	L	a	b	c
2124-E035 *	.275-.35"	A	.00015"	.275" DIA (included)	4"	2"	.059"	.098"	—
2124-E0425 *	.35-.425"	A	.00015"	.35" DIA (included)	4"	2"	.059"	.098"	—
2124-E05 *	.425-.5"	A	.00015"	.5" DIA (included)	4"	2"	.059"	.098"	—
2124-E065 *	.5-.65"	B	.00015"	.65" DIA (included)	6"	2.6"	.020"	.236"	.177"
2124-E08 *	.65-.8"	B	.00015"	.65" DIA (included)	6"	2.6"	.020"	.236"	.177"
2124-E1 *	.8-1"	B	.00015"	1" DIA (included)	6"	3.64"	.020"	.315"	.236"
2124-E112 *	1-1.2"	B	.00015"	1" DIA (included)	6"	3.64"	.020"	.315"	.236"
2124-E16 *	1.2-1.6"	B	.00015"	1.6" DIA (included)	6"	3.88"	.020"	.551"	.472"
2124-E2 *	1.6-2"	B	.00020"	1.6" DIA (included)	6"	3.88"	.020"	.551"	.472"
2124-E25 *	2-2.5"	C	.00020"	2.5" DIA (included)	6"	4.48"	.020"	.689"	.571"
2124-E3 *	2.5-3"	C	.00020"	2.5" DIA (included)	6"	4.48"	.020"	.689"	.571"
2124-E35 *	3-3.5"	C	.00020"	3.5" DIA (included)	6"	4.48"	.020"	.689"	.571"
2124-E4 *	3.5-4"	C	.00020"	3.5" DIA (included)	6"	4.48"	.020"	.689"	.571"
2124-E5 *	4-5"	C	.00025"	**optional**	6"	5.51"	.035"	1.142"	.984"
2124-E6 *	5-6"	C	.00025"	**optional**	6"	5.51"	.035"	1.142"	.984"

setting ring

.275-4": included
4-6": **optional**

extension rod

included

Set

Part No.	Range	Probes included	Setting ring (included)	Extension rod
2124-E053 *	.275-.5"	.275-.35", .35-.425", .425-.5"	.275" DIA, .35" DIA, .5" DIA	4" (included)
2124-E082 *	.5-.8"	.5-.65", .65-.8"	.65" DIA	6" (included)
2124-E24 *	.8-2"	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA, 1.6" DIA	6" (included)
2124-E44 *	2-4"	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA, 3.5" DIA	6" (included)

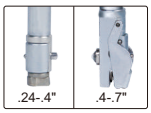
*Supplied with manufacturer inspection certificate

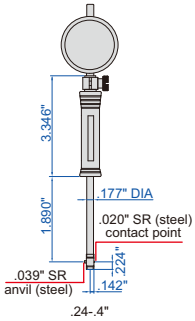
2124-E24

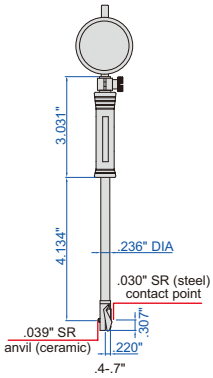
BORE GAUGES FOR SMALL HOLES (WITH DIAL INDICATOR)

ATTENTION: NOT SUITABLE FOR .00005" OR .0001" DIAL INDICATORS

- Optional accessory: setting ring (part no. **6313**), bore gauge setter







2323-04

2123-07A

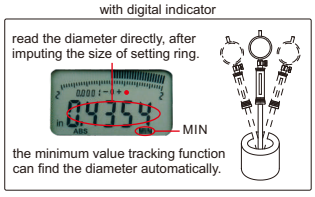
With dial indicator

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

With digital indicator
(data output cable part no. 7315-51B receiver is needed, 7302-40M, optional)

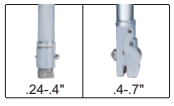
Part No.	Range	Indicator	Accuracy	Repeatability
2123-04A	.24-.4"	digital indicator, range .5"/12.7mm, resolution .0001"/0.002mm (can switch to .0005"/0.01mm)	±.00075"	.0001"
2123-07A	.4-.7"		±.00075"	.0001"

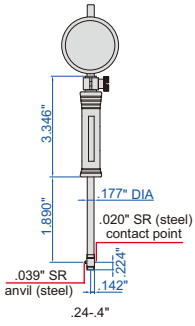
with digital indicator

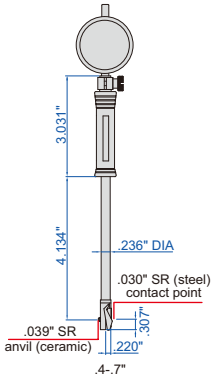


PRECISION BORE GAUGES FOR SMALL HOLES (WITH DIAL INDICATOR)

- Optional accessory: setting ring (part no. **6313**), bore gauge setter







2721-04

2722-07

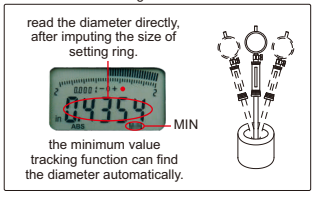
With dial indicator

Part No.	Range	Indicator	Accuracy	Repeatability
2721-04	.24-.4"	dial indicator, range .05", graduation .0001" (part no. **2315-05**)	±.0003"	.00006"
2721-07	.4-.7"		±.0003"	.00006"

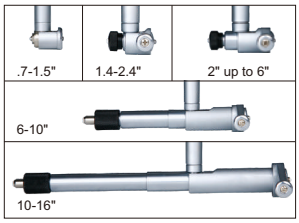
With digital indicator
(data output cable part no. 7315-51B receiver is needed, 7302-40M, optional)

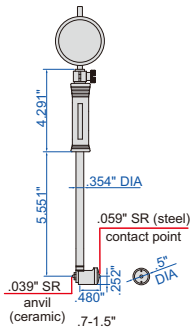
Part No.	Range	Indicator	Accuracy	Repeatability
2722-04	.24-.4"	digital indicator, (part no. **2108-101EF**) range .5"/12.7mm, resolution .00005"/0.001mm	±.0003"	.0001"
2722-07	.4-.7"		±.0003"	.0001"

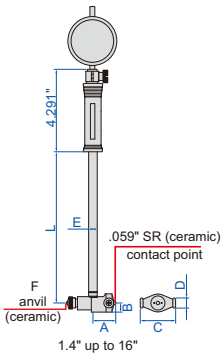
with digital indicator



PRECISION BORE GAUGES (WITH DIAL INDICATOR)







2826-6

2720-15

- Optional accessory: setting ring (part no. **6313**), bore gauge setter

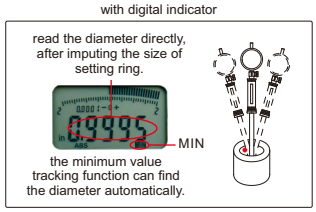
With dial indicator

Part No.	Range	Indicator	Accuracy	Repeatability
2826-15	.7-1.5"	dial indicator, range .05", graduation .0001" (part no. **2315-05**)	±.0003"	.00006"
2826-24	1.4-2.4"		±.0003"	.00006"
2826-4	2-4"		±.0003"	.00006"
2826-6	2-6"		±.0003"	.00006"
2826-10	6-10"		±.0003"	.00006"
2826-16	10-16"		±.0003"	.00006"

With digital indicator
(data output cable part no. 7315-51B receiver is needed, 7302-40M, optional)

Part No.	Range	Indicator	Accuracy	Repeatability
2720-15	.7-1.5"/18-38mm	digital indicator, part no. **2108-101EF** range .5"/12.7mm, resolution .00005"/0.001mm	±.0003"	.0001"
2720-24	1.4-2.4"/35.5-61mm		±.0003"	.0001"
2720-4	2-4"/51-101.5mm		±.0003"	.0001"
2720-6	2-6"/51-152.5mm		±.0003"	.0001"
2720-10	6-10"/152.5-254mm		±.0003"	.0001"
2720-16	10-16"/254-406.5mm		±.0003"	.0001"

with digital indicator



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

BORE GAUGES (WITH DIAL INDICATOR)

ATTENTION: NOT SUITABLE FOR .00005" OR .0001" DIAL INDICATORS

POPULAR MODEL

VIDEO

- Optional accessory: setting ring (part no. **6313**), long handle (part no. **7351**), bore gauge setter

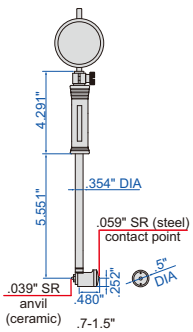
With dial indicator

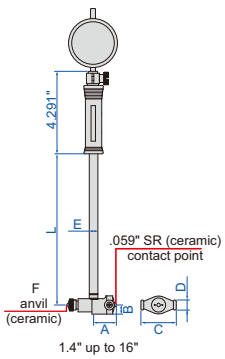
Part No.	Range	Indicator	Accuracy	Repeatability
2323-15	.7-1.5"	dial indicator, range .25", graduation .0005"	±.00075"	.00015"
2323-24	1.4-2.4"		±.0009"	.00015"
2323-6	2-6"		±.0009"	.00015"
2323-10	6-10"		±.0009"	.00015"
2323-16	10-16"		±.0009"	.00015"

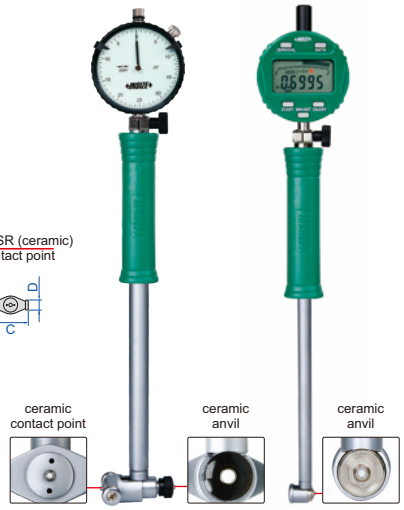
With digital indicator
(data output cable part no. 7315-51B receiver is needed, 7302-40M, optional)

Part No.	Range	Indicator	Accuracy	Repeatability
2123-15A	.7-1.5"	digital indicator, range .5"/12.7mm, resolution .0001"/0.002mm (can switch to .0005"/0.01mm)	±.00075"	.0001"
2123-24A	1.4-2.4"		±.0009"	.0001"
2123-6A	2-6"		±.0009"	.0001"
2123-10A	6-10"		±.0009"	.0001"
2123-16A	10-16"		±.0009"	.0001"

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

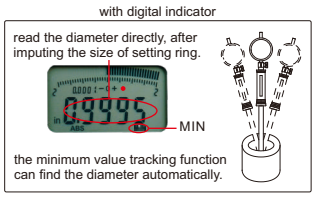


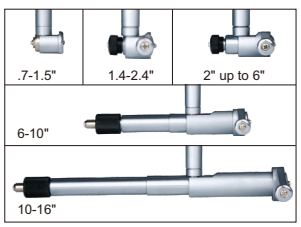




2323-6 2123-15A

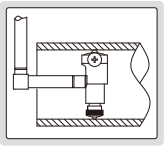
with digital indicator





BORE GAUGES (WITH DIAL INDICATOR)

- Optional accessory: setting ring (part no. **6313**), long handle (part no. **7351**), bore gauge setter

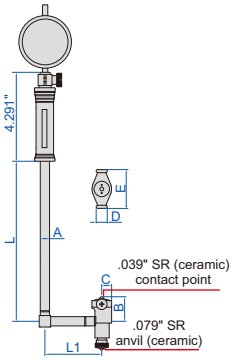


Range	A (DIA)	B	C	D (DIA)	E	L	L1
2-6"	.504"	1.122"	.362"	.512"	1.378"	5.551"	3.000"
6-10"	.571"	2.441"	.500"	.591"	2.933"	15.394"	3.937"
10-16"	.571"	3.602"	.591"	.591"	3.996"	15.394"	3.937"

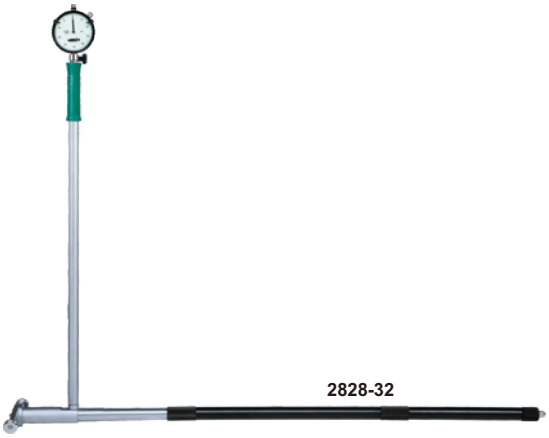
Part No.	Range	Indicator	Accuracy	Repeatability
2827-6	2-6"	dial indicator range .25", graduation .0005"	±.0009"	.00015"
2827-10	6-10"		±.0009"	.00015"
2827-16	10-16"		±.0009"	.00015"

2827-6

ATTENTION: NOT SUITABLE FOR .00005" OR .0001" DIAL INDICATORS

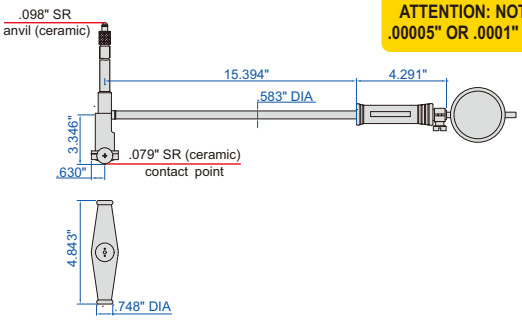


BORE GAUGE (WITH DIAL INDICATOR)



2828-32

ATTENTION: NOT SUITABLE FOR .00005" OR .0001" DIAL INDICATORS



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

BORE GAUGE SETS (WITH DIAL INDICATOR)

ATTENTION: NOT SUITABLE FOR .00005" OR .0001" DIAL INDICATORS

- Optional accessory: setting ring (part no. **6313**), long handle (part no. **7351**), bore gauge setter

packaging (part no. **2824-S3E**)

With dial indicator

Part No.	Range	Indicator	Bore gauges included	Accuracy	Repeatability
2824-S2E	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"	.0001"
2824-S3E	.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"	.0001"

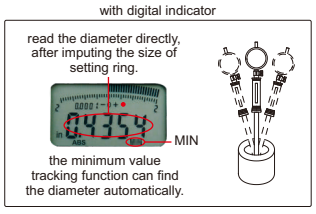
With digital indicator (data output cable part no. 7315-51B receiver is needed, 7302-40M, optional)

Part No.	Range	Indicator	Bore gauges included	Accuracy	Repeatability
2724-S2E	1.4-6"	digital indicator, range .5"/12.7mm, resolution .0001"/0.002mm (can switch to .0005"/0.01mm)	① 1.4-2" (dial indicator and handle are not included) ② 2-6"	1.4-2" ±.0009" 2-6" ±.0009"	.0001"
2724-S3E	.7-6"	digital indicator, range .5"/12.7mm, resolution .0001"/0.002mm (can switch to .0005"/0.01mm)	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"	.0001"

2824-S2E

2724-S3E

with digital indicator

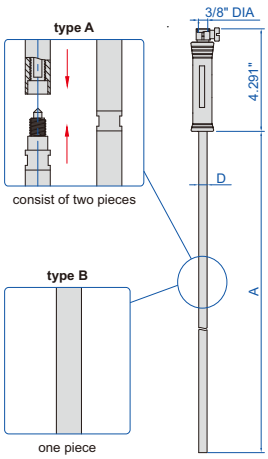


LONG HANDLES

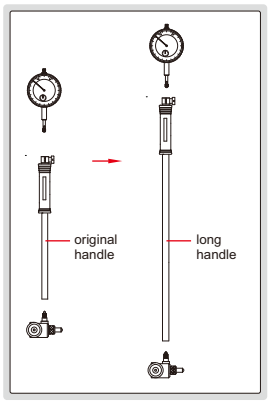
- To assist deep-hole measurement
- Can be used for bore gauges **2122, 2322, 2824, 2724, 2127** and **2827**

Part No.	Applicable bore gauges	A	D	Type
7351-1EX11	1.4-2.4", 2-6"	18.7"	.512" DIA	B
7351-1EX12		38.5"	.512" DIA	
7351-1EX13		58.2"	.571" DIA	A
7351-1EX14		77.8"	.571" DIA	
7351-1EX21	6-10", 10-16"	18.7"	.571" DIA	B
7351-1EX22		38.5"	.571" DIA	
7351-1EX23		58.2"	.571" DIA	A
7351-1EX24		77.8"	.571" DIA	

7351-1EX11



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



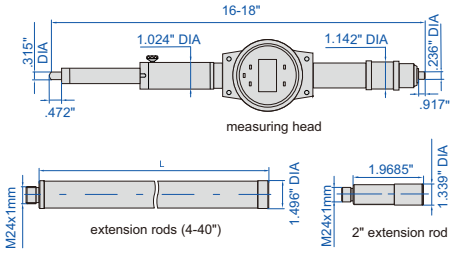
CARBON FIBER BORE GAUGES

SPRING LOADED MEASURING POINT

CARBON FIBER EXTENSION RODS, LIGHT WEIGHT, NOT EASY TO DEFORM, LOW THERMAL EXPANSION

DATA OUTPUT

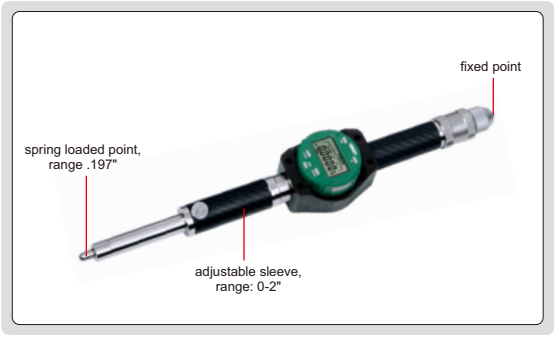
3522-1500



- Carbon fiber extension rods, light weight, not easy to deform, low thermal expansion
- Carbide measuring faces
- Data output
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Supplied with 400mm (15.7480") setting standard
- Optional accessory: data output cable (part no. **7302-40M**), wireless data transmission (transmitter part no. **7315-51** receiver is needed)

setting standard (included), used to set the micrometer head

spring loaded point, and max./min. value tracking make it easy to find the right measuring position



Measuring head

Range	Resolution	Accuracy	Repeatability	Weight
16-18"	.00005"/0.001mm	±.00015"	±.00010"	2.2lb

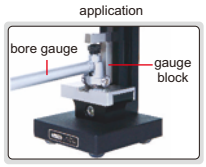
Extension rods

Length (L)	Accuracy	Weight	Material
1.9685"	±.00010"	0.5lb	steel
3.9370"	±.00010"	0.7lb	carbon fiber
7.8740"	±.00020"	0.9lb	carbon fiber
11.8110"	±.00025"	1.0lb	carbon fiber
23.6220"	±.00035"	1.6lb	carbon fiber
39.3701"	±.00045"	2.2lb	carbon fiber

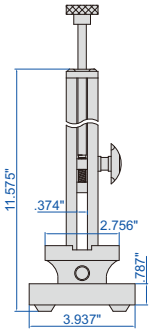
Part No.	Range	Weight	Extension rods (mm)
3522-1000	16-40"	8.4lb	50 (1.9685"), 100 (3.9370"), 200 (7.8740"), 300 (11.8110")
3522-1500	16-60"	9.9lb	50 (1.9685"), 100 (3.9370"), 200 (7.8740"), 300 (11.8110"), 600 (23.6220")
3522-2000	16-80"	11.7lb	50 (1.9685"), 100 (3.9370"), 200 (7.8740"), 300 (11.8110"), 600 (23.6220", 2 pcs)
3522-2400	16-96"	13.2lb	50 (1.9685"), 100 (3.9370"), 200 (7.8740"), 300 (11.8110"), 600 (23.6220", 3 pcs)
3522-3400	16-136"	14.8lb	50 (1.9685"), 100 (3.9370"), 200 (7.8740"), 300 (11.8110"), 600 (23.6220", 4 pcs)
3522-6400	16-256"	20.9lb	50 (1.9685"), 100 (3.9370"), 200 (7.8740"), 300 (11.8110"), 600 (23.6220"), 1000 (39.3701", 5 pcs)

BORE GAUGE SETTERS

- Repeatability .00005"
- Vertical and horizontal use
- To be used with gauge blocks



7353-6



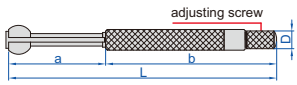
gauge blocks for **7353-6**

Part No.	Range	Remark
7353-6	0-6"	with gauge block set
7353-160W	0-6"	without gauge block set

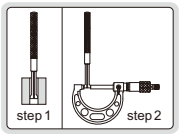
Gauge block set for 7353-6

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-.5	.1"	5 pcs	
	1		1 pc	
	2		1 pc	
	4		1 pc	

SMALL HOLE GAUGE SET



4208-1



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

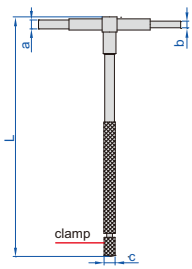
- 4 gauges per set
- For small holes, slots and grooves, etc.
- Satin chrome finish

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

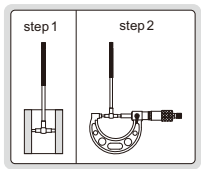
TELESCOPING GAUGE SET

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

4206-1



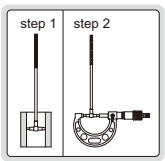
Range	L	a (DIA)	b (DIA)	c (DIA)
5/16~1/2"	4.528"	.154"	.114"	.185"
1/2~3/4"	4.528"	.209"	.150"	.185"
3/4~1-1/4"	4.528"	.209"	.150"	.185"
1-1/4~2-1/8"	5.394"	.299"	.240"	.244"
2-1/8~3-1/2"	5.394"	.299"	.240"	.244"
3-1/2~6"	5.394"	.299"	.240"	.244"



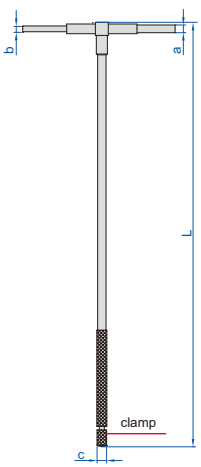
Part No.	Total range	Gauges included
4206-1	5/16~6"	5/16~1/2", 1/2~3/4", 3/4~1-1/4", 1-1/4~2-1/8", 2-1/8~3-1/2", 3-1/2~6"

LONG HANDLE TELESCOPING GAUGES

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



Part No.	Range	L	a	b	c
4209-1	5/16~1/2"	11.811"	.154" DIA	.114" DIA	.244" DIA
4209-2	1/2~3/4"	11.811"	.209" DIA	.150" DIA	.244" DIA
4209-3	3/4~1-1/4"	11.811"	.209" DIA	.150" DIA	.244" DIA
4209-4	1-1/4~2-1/8"	11.811"	.299" DIA	.240" DIA	.283" DIA
4209-5	2-1/8~3-1/2"	11.811"	.299" DIA	.240" DIA	.283" DIA
4209-6	3-1/2~6"	11.811"	.299" DIA	.240" DIA	.283" DIA



4209-6

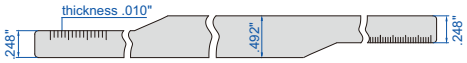
DIAMETER METERS

CAN BE CUSTOM-MADE

- Measure diameter of pipes, trees, tires, etc.
- Made of stainless steel

Part No.	Diameter range	Graduation	Accuracy
7135-12	2-12" DIA	.001"	±.003"
7135-24	12-24" DIA	.001"	±.003"
7135-36	24-36" DIA	.001"	±.003"
7135-48	36-48" DIA	.001"	±.004"

7135-24



DIGITAL RADIUS GAUGES

DATA OUTPUT

VIDEO

2188-55

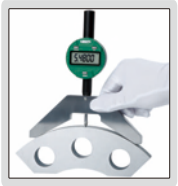
2188-143

2188-233

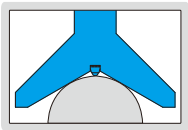
2188-323

- Measure radius of external arc, arc angle of measured surface should be larger than 60°
- Display radius value, no need to calculate
- Button function: on/off, zero, data preset, inch/mm
- Keep preset data in memory after restart
- CR2032 battery
- Automatic power off (time is adjustable), data output
- Stainless steel base
- Optional accessory: setting standards, data output cable (part no. **7315-50M** receiver is needed, **7302-40M**)

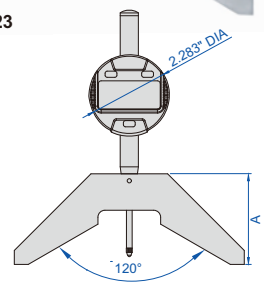
setting standard application

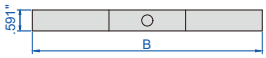


application



2188-P143





Part No.	Range (radius)	Resolution	Accuracy	A	B
2188-55	.16-2.09"/4-53mm	.0005"/0.01mm	±.001"	1.575"	2.559"
2188-143	1.89-5.63"/48-143mm	.0005"/0.01mm	±.0015"	2.559"	6.496"
2188-233	5.43-9.17"/138-233mm	.0005"/0.01mm	±.0015"	3.346"	10.039"
2188-323	8.98-12.72"/228-323mm	.0005"/0.01mm	±.002"	3.740"	13.582"

Setting standards

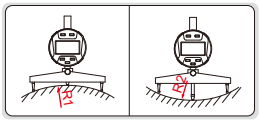
Part No.	Setting standards	Remark
4110-10D00	setting standard for **2188-55**	included
2188-P143	setting standard for **2188-143**	**optional**
2188-P233	setting standard for **2188-233**	**optional**
2188-P323	setting standard for **2188-323**	**optional**

DIGITAL RADIUS GAUGE (LOW ACCURACY)

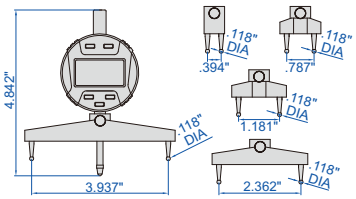
DATA OUTPUT

VIDEO

- 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 320º
- Supplied with 5 jaws for different sizes of arc
- Battery CR2032
- Automatic power off (time is adjustable)
- Optional accessory: data output cable (part no. **7315-2183** receiver is needed, **7302-2183**)



2183



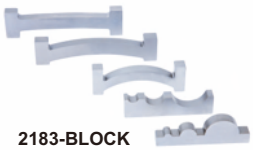
Part No.	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (inch)
2183	.2-35.83"/5-910mm	.3-35.83"/7-910mm	±0.01R*

*R is the radius to be measured. For example, radius is 4", the accuracy is ±.01x4=±.04"

Calibration standard (optional)

Part No.	Remark
2183-BLOCK	includes 5 standard blocks

calibration standard application



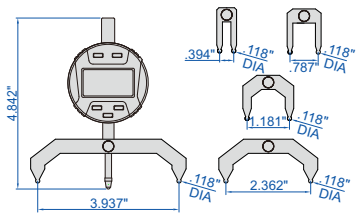
2183-BLOCK

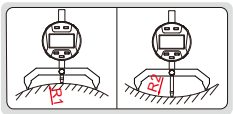
DIGITAL RADIUS GAUGE

DATA OUTPUT

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

2511





Part No.	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (inch)
2511	.2-35.83"/5-910mm	.3-35.83"/7-910mm	±.005R*

*R is the radius to be measured. For example, radius is 4", the accuracy is ±.005x4=±.02"

Calibration standard (optional)

Part No.	Remark
2183-BLOCK	includes 5 standard blocks

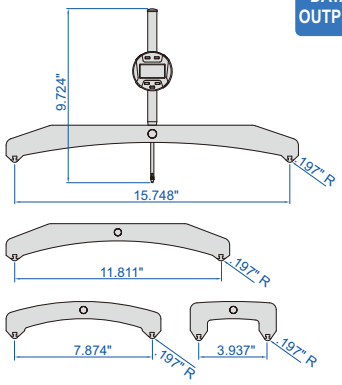
calibration standard application

2183-BLOCK

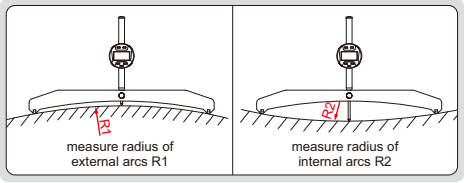
LARGE RANGE DIGITAL RADIUS GAUGE

DATA OUTPUT

2197



- Measure radius of internal or external arcs
- Resolution .001"/0.01mm
- Buttons: on/off, hold, inch/mm, s (select jaws), zero
- Display can be rotated by 320º
- Supplied with 4 jaws for different sizes of arc
- Data output
- Battery CR2032, automatic power off (time is adjustable)
- Optional accessory: data output cable (part no. **7315-2183** receiver is needed, **7302-2183**)



Part No.	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (inch)
2197	4-590"/100-15000mm	4-590"/100-15000mm	±.005R*

*R is the radius to be measured. For example, radius is 4", the accuracy is ±.005x4=±.02"

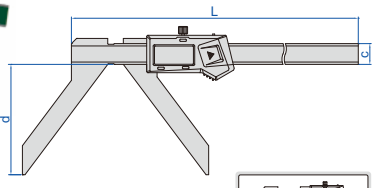
DIGITAL ARC RADIUS CALIPERS

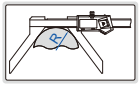
VIDEO

DATA OUTPUT

- Non waterproof
- Measure the radius of arc less than half round
- 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** receiver is needed, **7302-21**)

1189-200B





Part No.	Range (R)	Accuracy	L	c	d
1189-150B	.2-6"/5-150mm	±.0020"	10.354"	.630"	2.559"
1189-200B	.2-8"/5-200mm	±.0030"	12.323"	.630"	3.346"

DIGITAL RADIUS CALIPERS

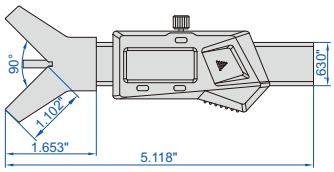
DIRECT READING, CALCULATION IS NOT REQUIRED

DATA OUTPUT

VIDEO

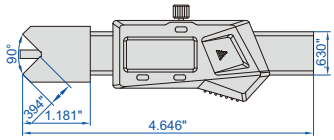
- Non waterproof
- Measure radius of external arc, arc angle of measured surface should be larger than 90°
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with pin gauge for zero setting
- Optional accessory: data output cable (part no. **7315-21** receiver is needed, **7302-21**)

1501-25



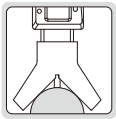
1501-25

1501-10



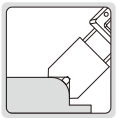
1501-10

application



pin gauge (included)

1501-10 can measure small workpieces or workpieces with steps



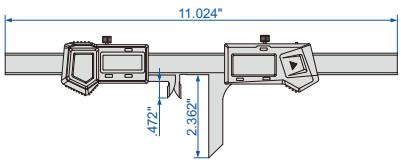
Part No.	Range (radius)	Accuracy
1501-25	.079-1"/2-25mm	±.0020"
1501-10	.079-.394"/2-10mm	±.0020"

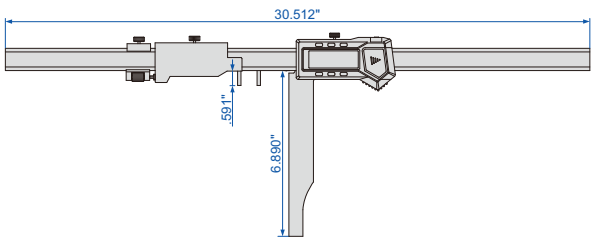
KEYWAY SYMMETRY DIGITAL CALIPERS

DATA OUTPUT

1531-60

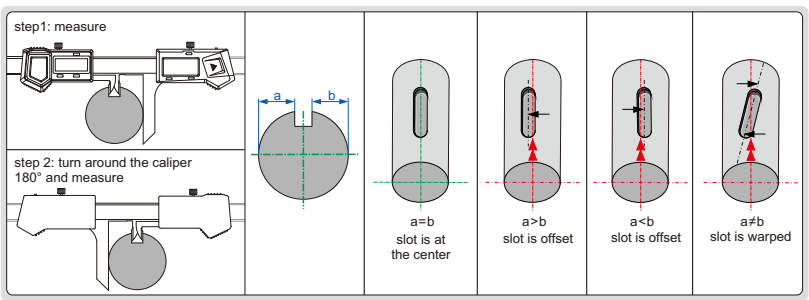
1531-200





VIDEO

- Non waterproof
- Used to measure the symmetry of shaft keyways
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, made of stainless steel
- Optional accessory: data output cable (part no. **7315-22** receiver is needed, **7302-22**)



Part No.	Width of keyway	Diameter of shaft	Accuracy	Remark
1531-60	.24-1.77"	.40-4.72" DIA	±.0020"	can measure keyway width
1531-200	.12-9.84"	.24-13.77" DIA	±.0020"	cannot measure keyway width

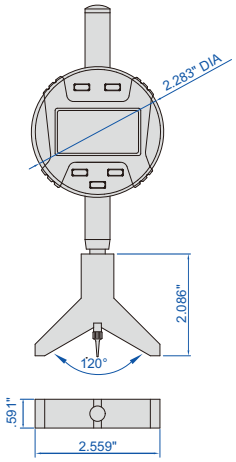
DIGITAL KEYWAY DEPTH GAUGE

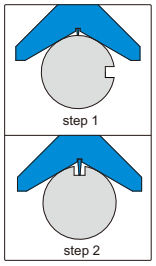
DATA OUTPUT

VIDEO

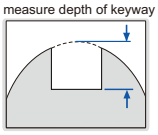
- Measure keyway depth of cylindrical workpieces with .4"~4" DIA
- Button function: on/off, zero, inch/metric conversion, absolute/incremental measurement, data preset, measuring direction change
- CR2032 battery, data output
- Automatic power off (time is adjustable)
- Stainless steel base
- Pointed tip
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M**)

2182-25





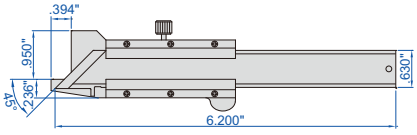
measure depth of keyway



Part No.	Range	Accuracy	Resolution
2182-25	0-1"/0-25.4mm	±.001"	.0005"/0.01mm

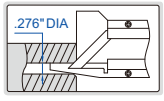
CHAMFER GAUGE

1267-02

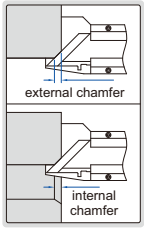


- Made of stainless steel
- Satin chrome plated reading surface

for internal chamfer measurement, diameter should be larger than D



measure chamfer dimension



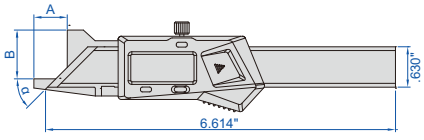
Part No.	Range	Graduation	Accuracy	Chamfer (α)	D
1267-02	0-.2"	.001"	±.003"	45º	.276" DIA

DIGITAL CHAMFER GAUGES

DATA OUTPUT

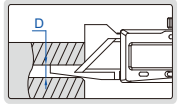
- Non waterproof
- Measure 30º/45º/60º chamfer dimension
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable (part no. **7315-21** receiver is needed, **7302-21**)

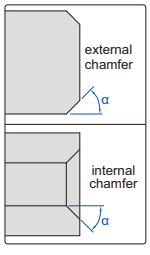
1180-6



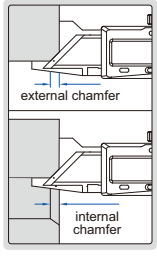
Part No.	Range	Accuracy	Chamfer (α)	A	B	D (DIA)
1180-6	0-.39"/0-10mm	±.0025"	45º	.591"	.866"	.276"
1180-61	0-.39"/0-10mm	±.0025"	15º	1.299"	.787"	.433"
1180-62	0-.39"/0-10mm	±.0025"	20º	1.299"	.787"	.433"
1180-63	0-.39"/0-10mm	±.0025"	30º	.591"	.866"	.315"
1180-66	0-.39"/0-10mm	±.0025"	60º	.551"	.827"	.276"

for internal chamfer measurement, diameter should be larger than D





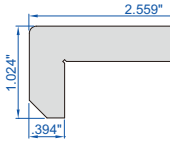
measure chamfer dimension

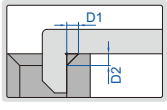


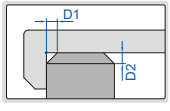
CHAMFER GAUGE

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

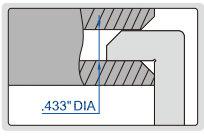
4844-1E







for internal chamfer measurement, diameter should be larger than D



Part No.	Graduation	Accuracy
4844-1E	1/32"	±.01"

DIGITAL CHAMFER GAUGES

ATTENTION: CHAMFER OF HOLES CANNOT BE MEASURED

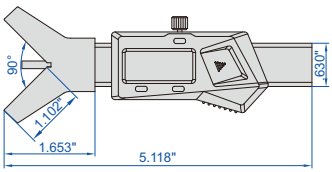
DATA OUTPUT

DIRECT READING, CALCULATION IS NOT REQUIRED

VIDEO

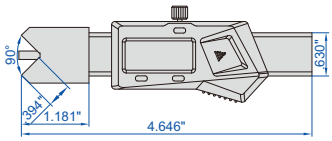
- Non waterproof
- Measure 45º chamfer length
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with pin gauge for zero setting
- Optional accessory: data output cable (part no. **7315-21** receiver is needed, **7302-21**)

1537-20



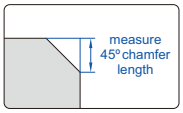
1537-20

1537-8

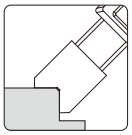


1537-8

Part No.	Range	Accuracy
1537-20	0-.787"/0-20mm	±.0020"
1537-8	0-.315"/0-8mm	±.0020"



1537-8 can measure small workpieces or workpieces with steps



pin gauge (included)

DIAL TEST INDICATOR

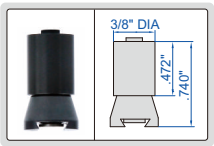
INSIZE PLUS

MADE IN EUROPE

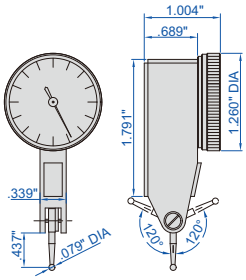
INSPECTION CERTIFICATE

- Graduation .0005"
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: 3/8" DIA
- Optional accessory: styli

clamp (included)



2835-03



Part No.	Range	Graduation	Accuracy	Range/rev	Dial reading
2835-03*	.03"	.0005"	±.0005"	.015"	0-15-0

*Supplied with manufacturer inspection certificate

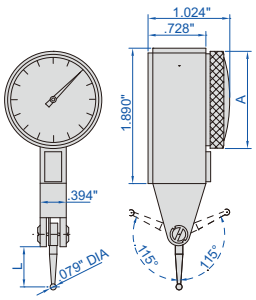
DIAL TEST INDICATORS

INSPECTION CERTIFICATE

JEWELED BEARING

POPULAR MODEL

2380-31

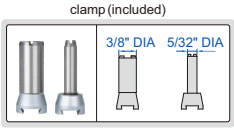


Dial reading: 0-15-0

Part No.	Range	Graduation	Accuracy	A (DIA)	L
2380-31*	.03"	.001"	±.001"	1.181"	.50"
2380-35*	.03"	.0005"	±.0005"	1.181"	.50"
2381-31*	.03"	.001"	±.001"	1.457"	.50"
2381-35*	.03"	.0005"	±.0005"	1.457"	.50"

- 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

clamp (included)



Dial reading: 0-40-0

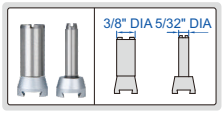
Part No.	Range	Graduation	Accuracy	A (DIA)	L
2380-301*	.008"	.0001"	±.0001"	1.181"	.563"
2381-301*	.008"	.0001"	±.0001"	1.457"	.563"

*Supplied with manufacturer inspection certificate

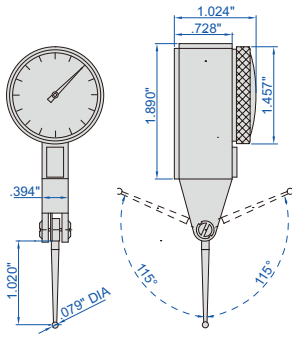
LONG STYLI DIAL TEST INDICATOR

INSPECTION CERTIFICATE

JEWELED BEARING



2383-35A



- 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

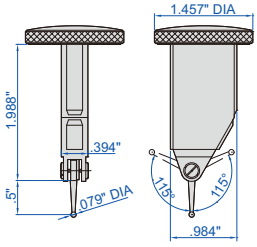
Part No.	Range	Graduation	Accuracy	Dial reading
2383-35A*	.03"	.0005"	±.0005"	0-15-0

*Supplied with manufacturer inspection certificate

VERTICAL TYPE DIAL TEST INDICATOR

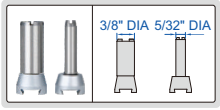
JEWELED BEARING

INSPECTION CERTIFICATE



2398-03

- 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



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

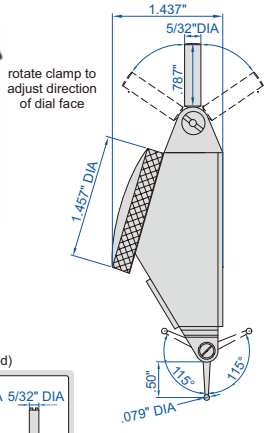
*Supplied with manufacturer inspection certificate

LARGE RANGE DIAL TEST INDICATOR

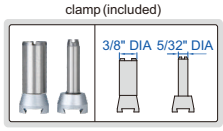
JEWELED BEARING

INSPECTION CERTIFICATE

2386-006A



- 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



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

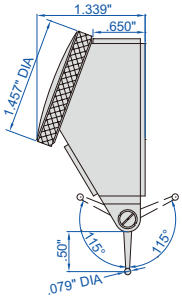
*Supplied with manufacturer inspection certificate

TILTED FACE TYPE DIAL TEST INDICATOR

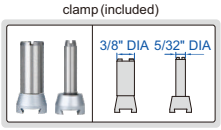
JEWELED BEARING

INSPECTION CERTIFICATE

2399-03



- 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



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

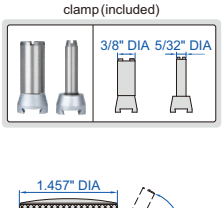
*Supplied with manufacturer inspection certificate

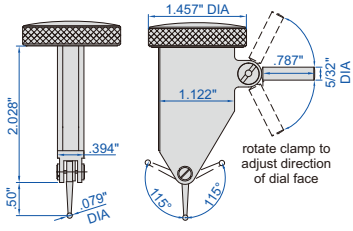
LARGE RANGE BACK PLUNGER TYPE DIAL TEST INDICATOR

INSPECTION CERTIFICATE

JEWELED BEARING

2480-06





- 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

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

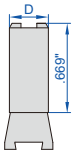
*Supplied with manufacturer inspection certificate

CLAMPS FOR DIAL TEST INDICATORS

Part No.	D
6298-1E	5/32" DIA
6298-2E	3/8" DIA

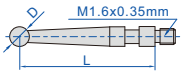
6298-1E

6298-2E



STYLI FOR DIAL TEST INDICATORS

6284-10



Part No.	For dial test indicator	Material of contact point	L	D
6284-9	2380-31,2380-35, 2381-31, 2381-35, 2398-03, 2399-03	steel	.50"	.039" DIA
6284-10		carbide	.50"	.079" DIA
6284-11		ruby	.50"	.079" DIA
6284-12		carbide	.50"	.118" DIA
6284-13	2380-301, 2381-301	steel	.563"	.039" DIA
6284-14		carbide	.563"	.079" DIA
6284-15		ruby	.563"	.079" DIA
6284-16		carbide	.563"	.118" DIA

Part No.	For dial test indicator	Material of contact point	L	D
6284-17	2383-35A	steel	1.020"	.039" DIA
6284-18		carbide	1.020"	.079" DIA
6284-19		ruby	1.020"	.079" DIA
6284-20		carbide	1.020"	.118" DIA
6284-65	2386-006A, 2480-06	steel	.50"	.039" DIA
6284-66		carbide	.50"	.079" DIA
6284-67		ruby	.50"	.079" DIA
6284-68		carbide	.50"	.118" DIA

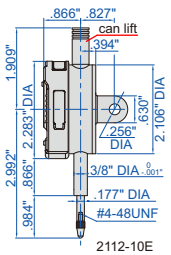
DIGITAL INDICATORS (STANDARD TYPE)

INSPECTION CERTIFICATE

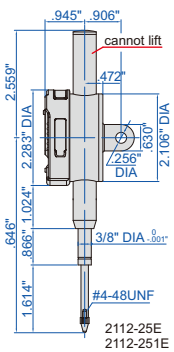
DATA OUTPUT

POPULAR MODEL

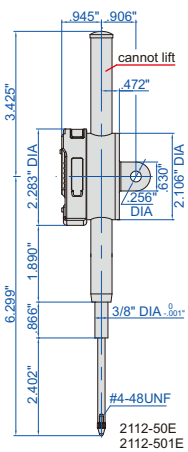
spindle lift knob is included



2112-10E



2112-251E



2112-501E

Resolution .00005"/0.001mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2112-101E*	.5"/12.7mm	±.00015"	.00005"	.337lbf	can lift	lug back
2112-251E*	1"/25.4mm	±.00015"	.00005"	.495lbf	cannot lift	lug back
2112-501E*	2"/50.8mm	±.00015"	.00005"	.562lbf	cannot lift	lug back

Resolution .0005"/0.01mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2112-10E*	.5"/12.7mm	±.0015"	.0005"	.337lbf	can lift	lug back
2112-25E*	1"/25.4mm	±.0015"	.0005"	.495lbf	cannot lift	lug back
2112-50E*	2"/50.8mm	±.0015"	.0005"	.562lbf	cannot lift	lug back

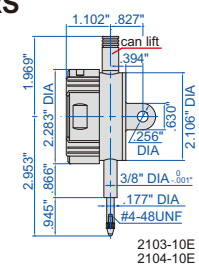
*Supplied with manufacturer inspection certificate

- 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** receiver is needed, **7302-40M**, **7305-40M**), backs, contact points

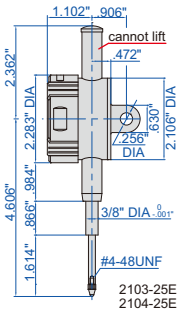
DIGITAL INDICATORS (ADVANCED TYPE)

INSPECTION CERTIFICATE

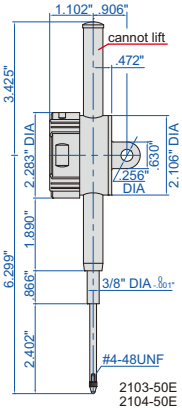
DATA OUTPUT



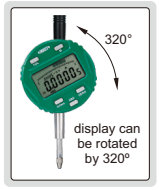
2103-10E

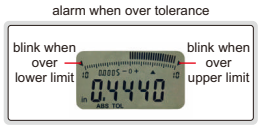


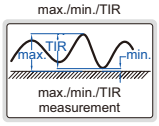
2104-25E



2103-50E







Resolution .00005"/0.001mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2103-10FE*	.5"/12.7mm	±.00015"	.00005"	.337lbf	can lift	flat back
2103-10E*	.5"/12.7mm	±.00015"	.00005"	.337lbf	can lift	lug back
2103-25E*	1"/25.4mm	±.00015"	.00005"	.495lbf	cannot lift	lug back
2103-50E*	2"/50.8mm	±.00015"	.00005"	.562lbf	cannot lift	lug back

Resolution .0005"/0.01mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2104-10E*	.5"/12.7mm	±.0015"	.0005"	.337lbf	can lift	lug back
2104-25E*	1"/25.4mm	±.0015"	.0005"	.495lbf	cannot lift	lug back
2104-50E*	2"/50.8mm	±.0015"	.0005"	.562lbf	cannot lift	lug back

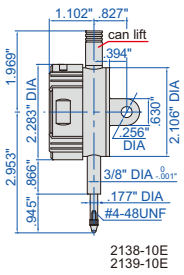
*Supplied with manufacturer inspection certificate

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

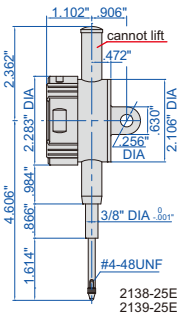
DIGITAL INDICATORS (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)

INSPECTION CERTIFICATE

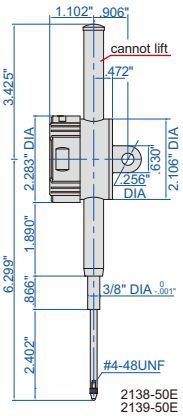
DATA OUTPUT



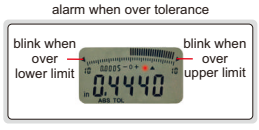
2138-10E



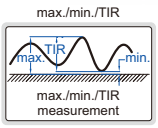
2139-25E

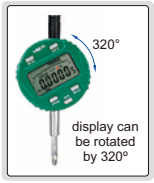


2138-50E



VIDEO





Resolution .00005"/0.001mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2138-10FE*	.5"/12.7mm	±.00015"	.00005"	.337lbf	can lift	flat back
2138-10E*	.5"/12.7mm	±.00015"	.00005"	.337lbf	can lift	lug back
2138-25E*	1"/25.4mm	±.00015"	.00005"	.495lbf	cannot lift	lug back
2138-50E*	2"/50.8mm	±.00015"	.00005"	.562lbf	cannot lift	lug back

Resolution .0005"/0.01mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2139-10E*	.5"/12.7mm	±.0015"	.0005"	.337lbf	can lift	lug back
2139-25E*	1"/25.4mm	±.0015"	.0005"	.495lbf	cannot lift	lug back
2139-50E*	2"/50.8mm	±.0015"	.0005"	.562lbf	cannot lift	lug back

*Supplied with manufacturer inspection certificate

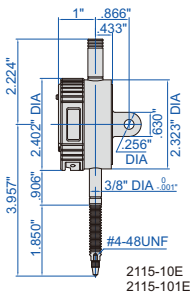
- Meet ASME B89.1.10M-2001
- Reading in digital and analog
- Display can be rotated by 320º
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (flat back: part no. **7315-51** reveiver is needed, **7302-40M**, **7305-40M**; lug back: part no. **7315-50M** reveiver is needed, **7302-40M**, **7305-40M**), backs, contact points

WATERPROOF DIGITAL INDICATORS

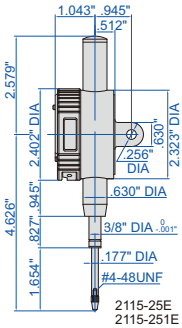
INSPECTION CERTIFICATE

WATERPROOF

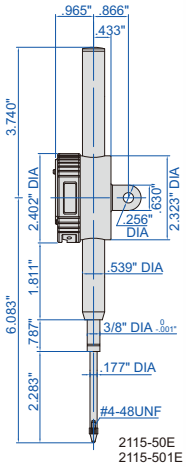
DATA OUTPUT



2115-10E



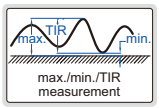
2115-25E



2115-50E

spindle lift knob is included (except **2115-10E/101E**)

max./min./TIR



Resolution .00005"/0.001mm

Part No.	Range	Dust/ waterproof	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2115-101E*	.5"/12.7mm	IP65	±.00015"	.00005"	.337lbf	cannot lift	lug back
2115-251E*	1"/25.4mm	IP54	±.00015"	.00005"	.495lbf	cannot lift	lug back
2115-501E*	2"/50.8mm	IP54	±.00015"	.00005"	.562lbf	cannot lift	lug back

Resolution .0005"/0.01mm

Part No.	Range	Dust/ waterproof	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2115-10E*	.5"/12.7mm	IP65	±.0015"	.0005"	.337lbf	cannot lift	lug back
2115-25E*	1"/25.4mm	IP54	±.0015"	.0005"	.495lbf	cannot lift	lug back
2115-50E*	2"/50.8mm	IP54	±.0015"	.0005"	.562lbf	cannot lift	lug back

*Supplied with manufacturer inspection certificate

alarm when over tolerance

- Meet ASME B89.1.10M-2001
- Dust/waterproof
- 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
- Data output, with lug back
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M, 7305-40M**), backs, contact points

DIGITAL INDICATORS FOR BORE GAUGES (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)

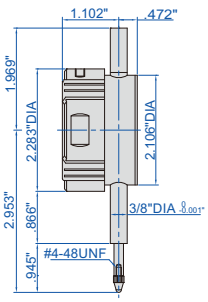
THE ORIGINAL DATA REMAINS AFTER POWER OFF

DATA OUTPUT

INSPECTION CERTIFICATE

- Specially designed for bore gauges
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after imputing the size of setting ring
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: on/off, minimum value tracking, calibration, data preset, inch/metric conversion
- Data remains after power off, no need to recalibrate after power on
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-51B** receiver is needed, **7302-40M**), backs, contact points, spindle lift knob (part no. **7332**)

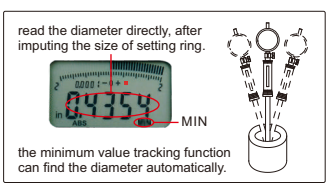
2108-10EF



analog pointer

Part No.	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2108-10EF*	.5"/12.7mm	.0001"/0.002mm (can switch to .0005"/0.01mm)	±.0015"	.0005"	.337lbf	cannot lift	flat back
2108-101EF*	.5"/12.7mm	.00005"/0.001mm	±.00015"	.00005"	.337lbf	cannot lift	flat back

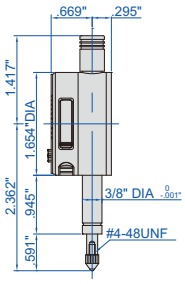
*Supplied with manufacturer inspection certificate



COMPACT DIGITAL INDICATORS

INSPECTION CERTIFICATE

DATA OUTPUT



2114-51FE

- 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
  0/ON: short press to turn on when power is off
  short press to set zero when power is on long press to turn off
- Keep preset data in memory after restart
- CR1632 battery, automatic power off
- Data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M, 7305-40M**), contact points

Part No.	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2114-5FE*	.2"/5mm	.0005"/0.01mm	±.0015"	.0005"	.337lbf	can lift	flat back
2114-51FE*	.2"/5mm	.00005"/0.001mm	±.00015"	.00005"	.337lbf	can lift	flat back

*Supplied with manufacturer inspection certificate

BLUETOOTH HIGH PRECISION DIGITAL INDICATORS

IP54 WATERPROOF

BUILT-IN BLUETOOTH

ABSOLUTE ENCODER, THE ORIGINAL

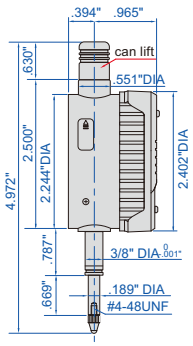
INSPECTION CERTIFICATE

COLOR DISPLAY LARGE CHARACTERS WITH BACKLIGHT

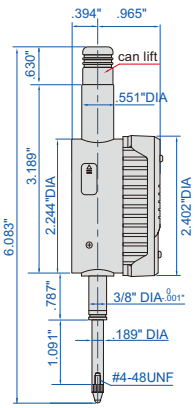
ATTENTION: RECHARGEABLE BATTERY, FOR 30 HOURS CONTINUOUS WORKING

VIDEO

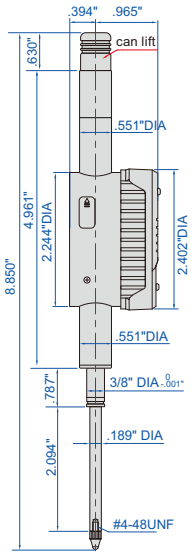
2135-10E



2135-25E



2135-50E

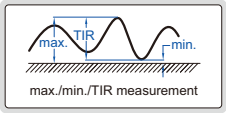


- IP54 dust/waterproof (when cap is lifted, no dust/waterproof)
- Color display, large characters with backlight
- Absolute encoder, the original data remains after power off
- Automatic power off
- Display can be rotated by 270°
- Adjustable resolution: .00002"/0.0005mm
  .00005"/0.001mm
- Button function: on/off, zero setting, data preset, tolerance
- Go and No-Go display,data hold, mm/inch, measuring direction change, blue tooth, max./min./TIR, adjust resolution, absolute/incremental measurement, data output
- Android and iPhone APP, USB type-C cable are included
- Power: rechargeable Li-battery, for 30 hours continuous working (bluetooth transmission reduce working hours)

alarm in red when over tolerance

spindle lift knob is included

max./min./TIR



Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2135-10E*	.5"/12.7mm	±.00008"	.00006"	.337lbf	can lift	flat back
2135-25E*	1"/25.4mm	±.00008"	.00006"	.405lbf	can lift	flat back
2135-50E*	2"/50.8mm	±.00016"	.00008"	.517lbf	can lift	flat back

*Supplied with manufacturer inspection certificate

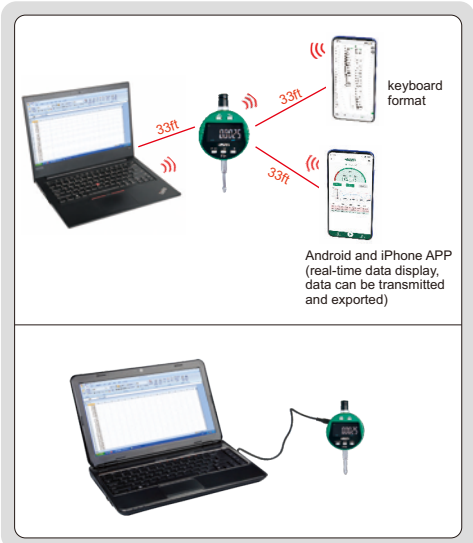
To be continued

Continued from previous page

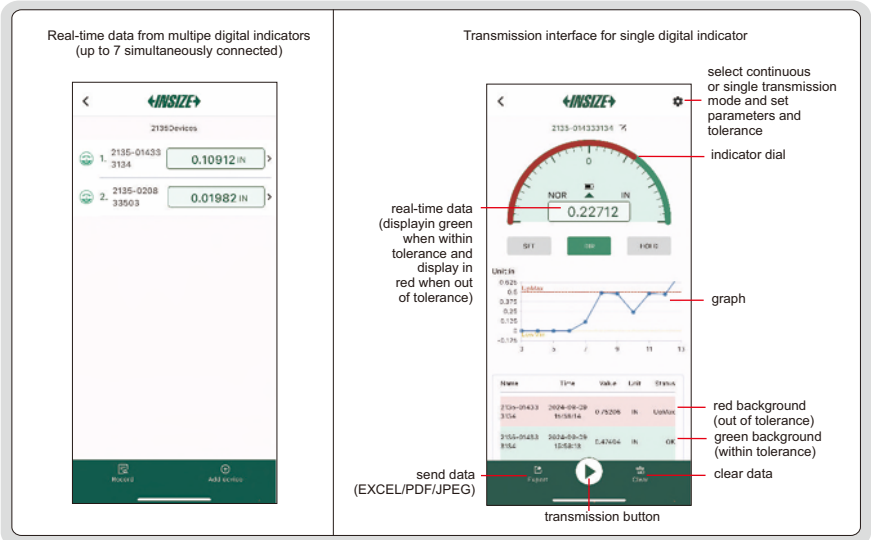
Data output

Data output with bluetooth (transmission distance is 33ft)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single or continuous transmission (the fastest data output is 15 pcs per 10s)
	virtual com port	data can be transmitted to Android and iPhone APP	real-time display (continuous transmission) or single transmission
Data output with USB cabl (cable length 5.9ft)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single or continuous transmission (the fastest data output is 40 pcs per 10s)
	virtual com port and 485 data output can be customized		

Data output with bluetooth and USB cable (included)



Android and iPhone APP (included), can choose real-time display (continuous transmission) or single transmission



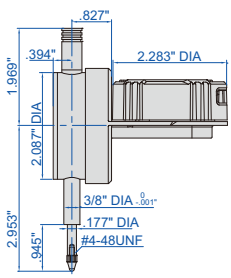
BACK PLUNGER TYPE DIGITAL INDICATOR

INSPECTION CERTIFICATE

DATA OUTPUT

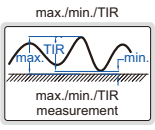
- Display can rotate 320º, and display direction is changeable
- Reading in digital and analog
- Meet ASME B89.1.10-2001
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- With flat back
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M, 7305-40M**), backs, contact points

2118-10E



spindle lift knob is included

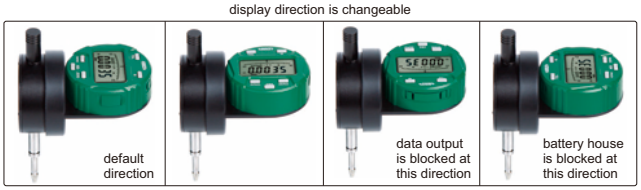
max./min./TIR



analog pointer

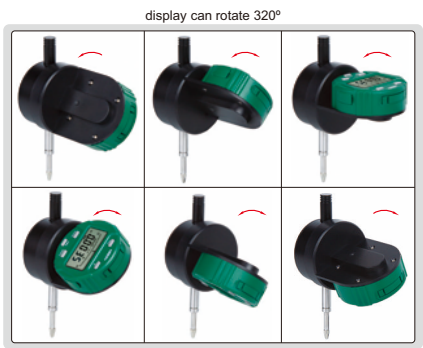
alarm when over tolerance

display direction is changeable



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

display can rotate 320º



Part No.	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2118-10E*	.5"/12.7mm	.0005"/0.01mm	±.0015"	.0005"	.337lbf	can lift	flat back

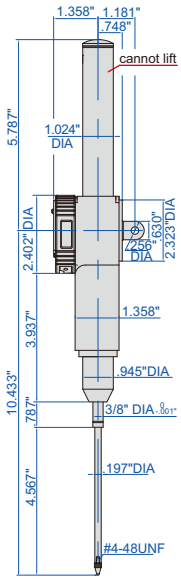
*Supplied with manufacturer inspection certificate

LARGE STROKE DIGITAL INDICATORS

DATA OUTPUT

- 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
- Data output
- With lug back
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M, 7305-40M**), backs, contact points

2117-100E



Resolution .0005"/0.01mm

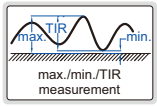
Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2117-100E	4"/100mm	±.0015"	.0005"	.719lbf	cannot lift	lug back

Resolution .00005"/0.001mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2117-1001E	4"/100mm	±.00030"	.0001"	.719lbf	cannot lift	lug back

spindle lift knob is included

max./min./TIR



HIGH PRECISION DIGITAL INDICATOR

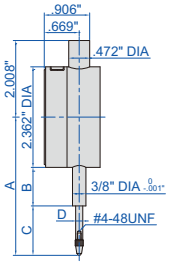
LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE | DATA OUTPUT | ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

INSPECTION CERTIFICATE

- Linear ball bearings for ten million times use
- Absolutely encoder, the original data remains after power off
- Reading in digital and analog
- Data output
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, inch/mm, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Optional accessory: contact points wireless transmitter, part no. **7315-60** receiver is needed
  data output cable (keyboard format), part no. **7302-60**
  data output cable (serial port format), part no. **7305-G60**
  (cable length 10ft, optional cable length maximum 50ft; RS232 protocol, optional RS485 protocol)

2133-101E



2133-101E

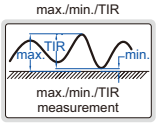
analog pointer

High accuracy
Ruby probe
Adjustable resolution .00001"/0.0002mm
.00005"/0.001mm
.0005"/0.01mm

Part No.	Range	Accuracy	Hysteresis	D (DIA)	Maximum measuring force	Cap	Remark
2133-101E*	.5"/12.7mm	±.00006"	.00004"	.157"	.337lbf	can lift	flat back

*Supplied with manufacturer inspection certificate

max./min./TIR



spindle lift knob is included

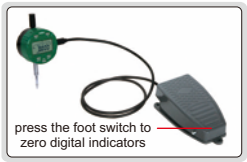
ZEROING FOOT SWITCH

- For zeroing of digital indicators

7360-1M

Part No.	Description	Interface of digital indicators	Applicable products
7360-1M	zeroing foot switch with cable (length 100")		for digital indicators

application

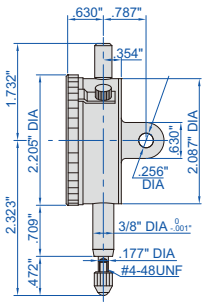


PRECISION DIAL INDICATOR

SHOCK PROOF | JEWELED BEARING | INSPECTION CERTIFICATE

- Meet ASME B89.1.10M-2001
- Shockproof
- Jeweled bearing
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

2315-05



Part No.	Range	Graduation	Accuracy		Range/rev	Maximum measuring force	Cap	Dial reading
			First 2.5 rev	Overall				
2315-05*	.05"	.0001"	±.0001"	±.0003"	.01"	.562lbf	cannot lift	0-100

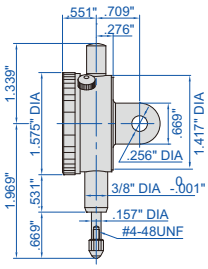
*Supplied with manufacturer inspection certificate

COMPACT DIAL INDICATORS

INSPECTION CERTIFICATE

- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

2304-01



Part No.	Range	Graduation	Accuracy		Range/rev	Maximum measuring force	Cap	Dial reading
			First 2.5 rev	Overall				
2304-01*	.1"	.001"	—	±.001"	.1"	.405lbf	can lift	0-100
2304-02*	.2"	.001"	—	±.001"	.1"	.405lbf	can lift	0-100
2304-025*	.25"	.001"	±.001"	±.001"	.1"	.405lbf	can lift	0-100
2304-015*	.1"	.0005"	—	±.0005"	.05"	.562lbf	cannot lift	0-50
2304-0205*	.2"	.0005"	±.0005"	±.0015"	.05"	.562lbf	cannot lift	0-50
2304-0255*	.25"	.0005"	±.0005"	±.0015"	.05"	.562lbf	cannot lift	0-50

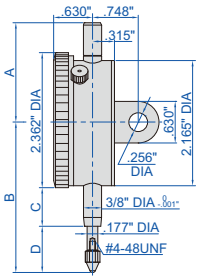
*Supplied with manufacturer inspection certificate

DIAL INDICATORS

INSPECTION CERTIFICATE

- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

2307-1



Part No.	Range	Graduation	Accuracy		Range/rev	Maximum measuring force	Cap	Dial reading
			First 2.5 rev	Overall				
2307-025 *	.25"	.001"	±.001"	±.001"	.1"	.405lbf	can lift	0-100
2307-05 *	.5"	.001"	±.001"	±.002"	.1"	.405lbf	can lift	0-100
2307-1 *	1"	.001"	±.001"	±.002"	.1"	.405lbf	can lift	0-100
2307-2 *	2"	.001"	±.001"	±.004"	.1"	.562lbf	cannot lift	0-100
2307-0255 *	.25"	.0005"	±.0005"	±.0015"	.05"	.405lbf	can lift	0-50
2307-055 *	.5"	.0005"	±.0005"	±.0015"	.05"	.405lbf	can lift	0-50
2307-105 *	1"	.0005"	±.0005"	±.002"	.05"	.405lbf	can lift	0-50
2307-205 *	2"	.0005"	±.0005"	±.002"	.05"	.562lbf	cannot lift	0-50

*Supplied with manufacturer inspection certificate

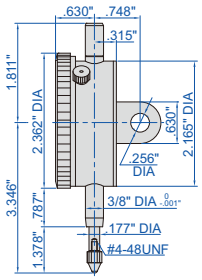
Range	A	B	C	D
.25"	1.811"	2.953"	.787"	.984"
.5"	1.811"	2.953"	.787"	.984"
1"	1.811"	3.346"	.787"	1.378"
2"	4.370"	5.472"	1.969"	2.323"

REVERSE READING DIAL INDICATORS

INSPECTION CERTIFICATE

- Meet ASME B89.1.10M-2001
- With flat back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

2307-1RF



2307-1R

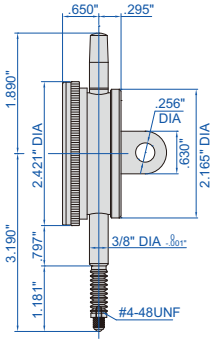
Part No.	Range	Graduation	Accuracy		Range/rev	Maximum measuring force	Cap	Dial reading
			First 2.5 rev	Overall				
2307-1RF *	1"	.001"	±.001"	±.002"	.1"	.405lbf	can lift	100-0
2307-1R *	1"	.001"	±.001"	±.002"	.1"	.405lbf	can lift	100-0

*Supplied with manufacturer inspection certificate

WATERPROOF DIAL INDICATORS

INSPECTION CERTIFICATE

IP54 WATERPROOF



2324-04A

- Meet ASME B89.1.10M-2001
- IP54 dust/waterproof
- With limit pointers
- Optional accessory: backs, contact points

Part No.	Range	Graduation	Accuracy		Range/rev	Dial reading	Maximum measuring force	Cap	Remark
			First 2.5 rev	Overall					
2324-04FA *	.4"	.0005"	±.0005"	±.0015"	.05"	0-50	.337lbf	cannot lift	flat back
2324-04A *	.4"	.0005"	±.0005"	±.0015"	.05"	0-50	.337lbf	cannot lift	lug back

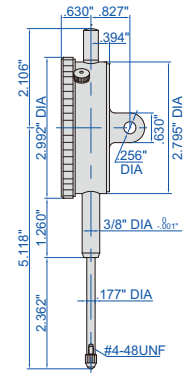
*Supplied with manufacturer inspection certificate

LARGE DIAL FACE DIAL INDICATORS

INSPECTION CERTIFICATE

- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: contact points

2312-15



Part No.	Range	Graduation	Accuracy		Range/rev	Maximum measuring force	Cap	Dial reading
			First 2.5 rev	Overall				
2312-15*	1.5"	.001"	±.001"	±.004"	.1"	.562lbf	can lift	0-100
2312-2*	2"	.001"	±.001"	±.004"	.1"	.562lbf	can lift	0-100

*Supplied with manufacturer inspection certificate

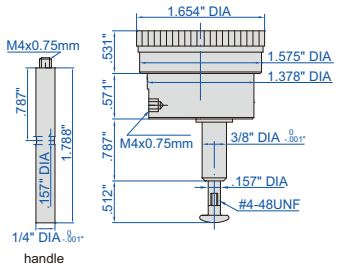
BACK PLUNGER TYPE DIAL INDICATOR

INSPECTION CERTIFICATE

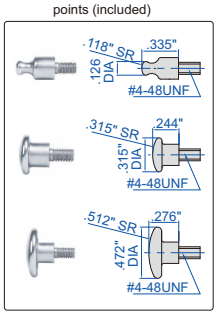
- Graduation .001"
- Dial reading: 0-100
- Supplied with handle
- Optional accessory: contact points

handle can be removed

2320-02



points (included)



Part No.	Range	Accuracy	Hysteresis	Range/rev	Maximum measuring force
2320-02*	.2"	±.001"	.00033"	.1"	.405lbf

*Supplied with manufacturer inspection certificate

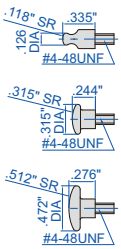
BACK PLUNGER TYPE DIAL INDICATOR SET

INSPECTION CERTIFICATE

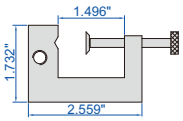
application

- Graduation .001"

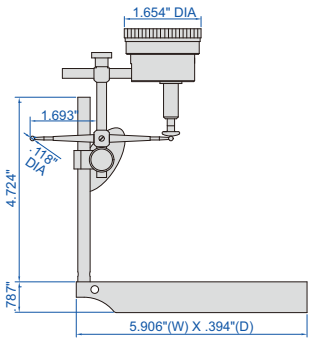
2224-02



points



G clamp



Part No.	Range*	Accuracy	Range/rev	Maximum measuring force	Dial reading
2224-02	.2"	±.001"	.1"	.405lbf	0-100

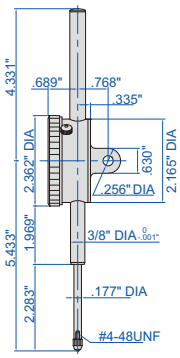
*When using double-end lever styli, the range is .1"

LONG STROKE DIAL INDICATOR

INSPECTION CERTIFICATE

- Graduation .001"
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

2326-2



Part No.	Range	Accuracy		Range/rev	Maximum measuring force	Cap	Dial reading
		First 2.5 rev	Overall				
2326-2*	2"	±.001"	±.004"	.1"	.562lbf	cannot lift	0-100

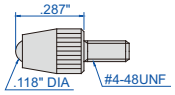
*Supplied with manufacturer inspection certificate

BALL POINTS

6282-0102

BALL POINT

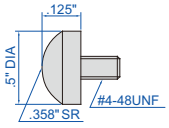
Part No.	Material of measuring face
6282-0102	carbide



6282-0402

SPHERICAL POINT

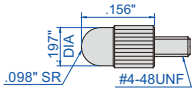
Part No.	Material of measuring face
6282-0402	steel



6282-0201

SHELL TYPE POINT

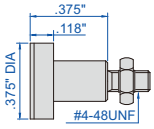
Part No.	Material of measuring face
6282-0201	steel



6282-1207

FLAT POINT

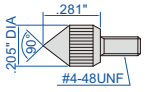
Part No.	Material of measuring face
6282-1207	steel



6282-0702

CONICAL POINT

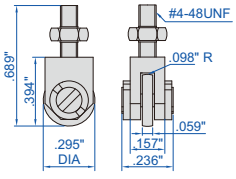
Part No.	Material of measuring face
6282-0702	steel



6282-1902

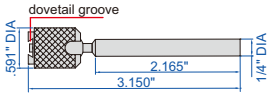
ROLLER POINT

Part No.	Material of measuring face
6282-1902	steel



DIAL TEST INDICATOR UNIVERSAL HOLDER

6293-5

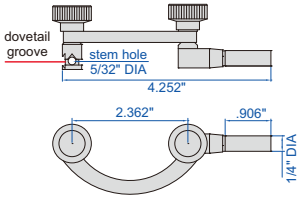


- Set the indicators at the desired attitude to the workpiece

Part No.
6293-5

DIAL TEST INDICATOR HOLDER

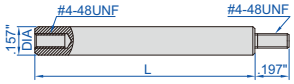
6291-2



- Can be used with dial test indicators

Part No.
6291-2

EXTENSION RODS

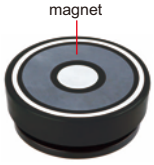


6282-2018

Part No.	Material	L
6282-2018	steel	1"
6282-2019	steel	2"
6282-2020	steel	4"

MAGNETIC BACKS

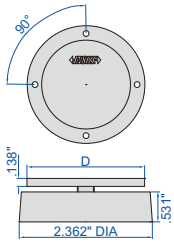
front



back

7331-M2

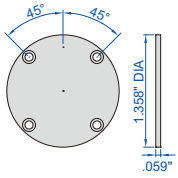
Part No.	D	For digital/ dial indicators
7331-M1	2.028" DIA	2103, 2104, 2112, 2115, 2117, 2118
7331-M2	2.126" DIA	2307



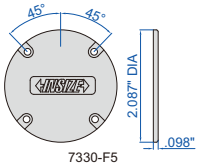
FLAT BACKS

Part No.	For digital/ dial indicators
7330-F4	2304
7330-F5	2103
	2104
	2112
	2115
	2117
7330-F6	2118
	2307
	2326

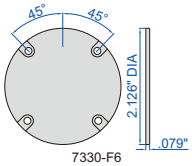
7330-F5



7330-F4



7330-F5

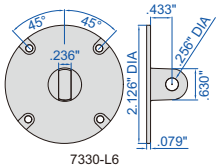


7330-F6

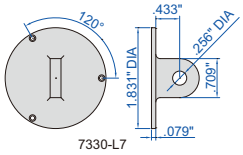
LUG BACKS

Part No.	For digital/ dial indicators
7330-L6	2307
	2318
	2326
7330-L7	2830
	2837
	2882
	2885
	2888
	2889
	2891
	2892

7330-L6



7330-L6



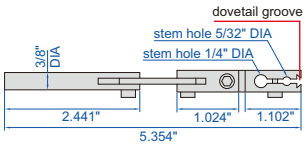
7330-L7

DIAL TEST INDICATOR HOLDER

6296-2

- Supplied with hex key

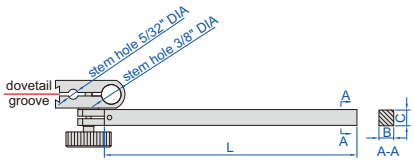
Part No.
6296-2



DIAL TEST INDICATOR HOLDERS

6293-7

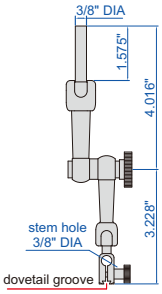
6293-3



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

DIAL TEST INDICATOR HOLDER

- Can be used with dial test indicators

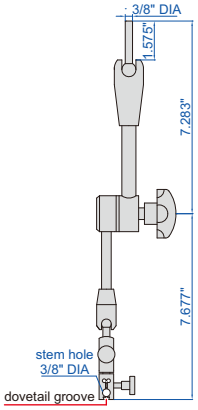


6295-1AE

Part No.
6295-1AE

DIAL INDICATOR HOLDER

- Can be used with dial test indicators or dial indicators

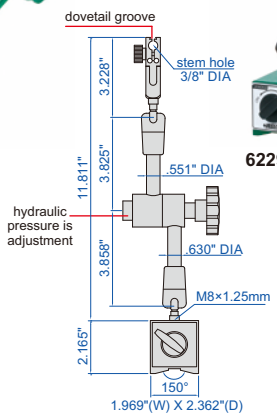


6294-1AE

Part No.
6294-1AE

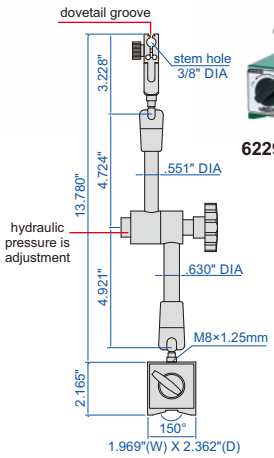
HYDRAULIC UNIVERSAL MAGNETIC STANDS

6229-60E



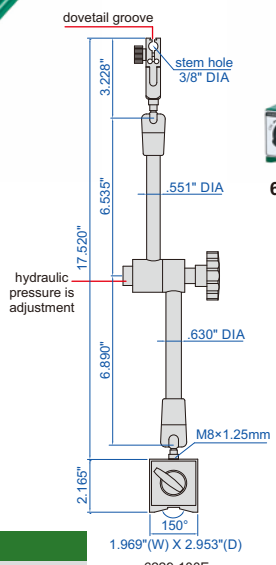
6229-60E

6229-80E



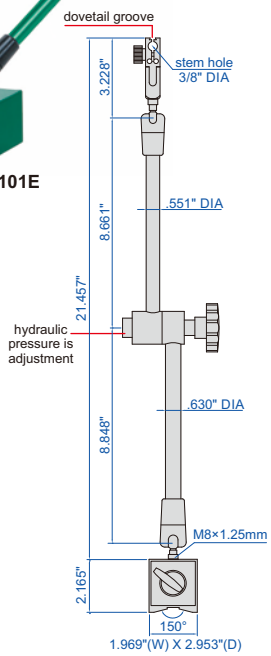
6229-80E

6229-100E



6229-100E

6229-101E



6229-101E

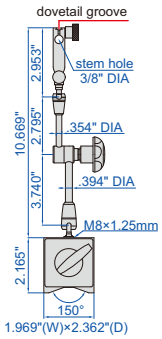
- Hydraulic pressure is adjustment
- For digital/dial indicators and dial test indicators

Part No.	Magnetic force	Applicable holding stem	Remark
6229-60E	132lbf	3/8" DIA	with fine adjustment and dovetail groove
6229-80E	176lbf	3/8" DIA	with fine adjustment and dovetail groove
6229-100E	220lbf	3/8" DIA	with fine adjustment and dovetail groove
6229-101E	220lbf	3/8" DIA	with fine adjustment and dovetail groove

UNIVERSAL MAGNETIC STANDS

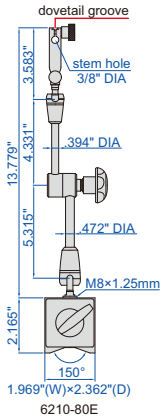
POPULAR MODEL

6210-81E



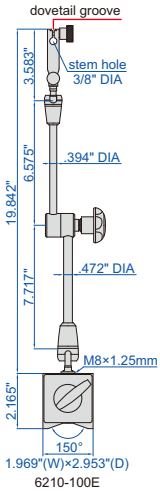
6210-81E

6210-80E



6210-80E

6210-100E



6210-100E

- For digital/dial indicators and dial test indicators

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

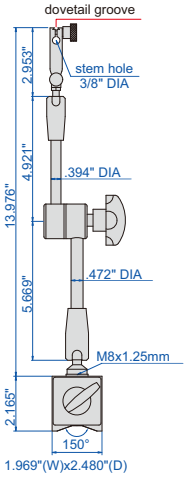
UNIVERSAL MAGNETIC STAND (ECONOMIC TYPE)

ATTENTION: LOW LOCKING FORCE

- For electronic/dial indicators and dial test indicators

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

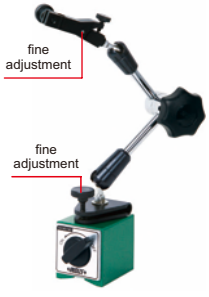
6208-80E



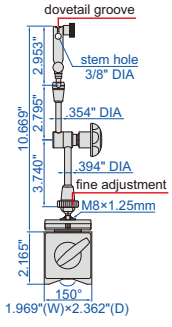
MAGNETIC STAND WITH TWO FINE ADJUSTMENTS

- For digital/dial indicators and dial test indicators
- Applicable holding stem: 3/8" DIA
- With two fine adjustments and dovetail groove
- With two fine adjustments on the head and on the base

Part No.	Magnetic force
6272-80E	176lbf



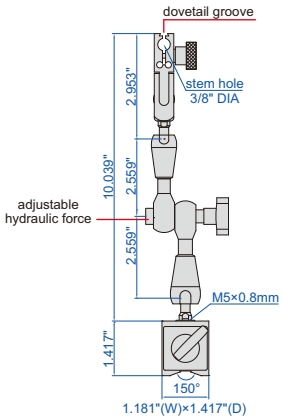
6272-80E



HYDRAULIC MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

6228-40E



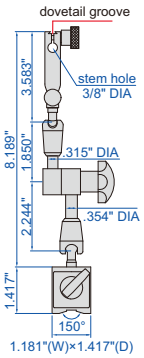
- For dial test indicators
- With fine adjustment and dovetail groove
- Adjustable hydraulic force

Part No.	Magnetic force	Applicable holding stem
6228-40E	88lbf	3/8" DIA

MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

6224-40E

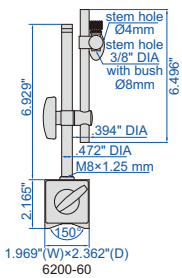


- For dial test indicators
- Applicable holding stem: 3/8" DIA
- With fine adjustment and dovetail groove

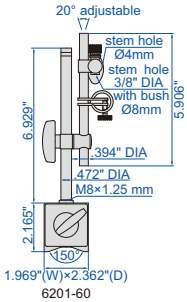
Part No.	Magnetic force
6224-40E	88lbf

MAGNETIC STANDS

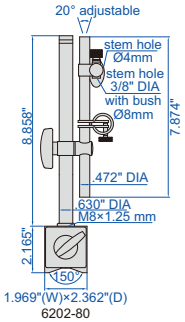
POPULAR MODEL



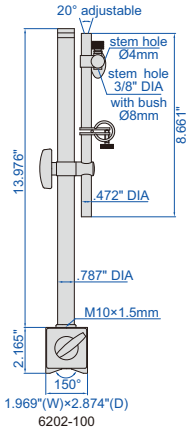
6200-60

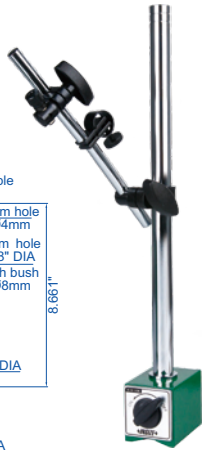


6201-60



6202-80





6202-100

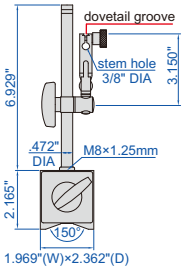
- For digital/dial indicators and dial test indicators

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

MAGNETIC STAND
(FOR .00005" DIAL AND TEST INDICATORS)

- For .00005", .0001" and .0005" dial and test indicators
- With fine adjustment and dovetail groove

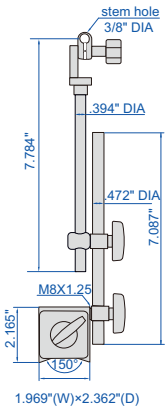
6221-80E



Part No.	Magnetic force	Applicable holding stem
6221-80E	176lbf	3/8" DIA

MAGNETIC STAND

6231-60E



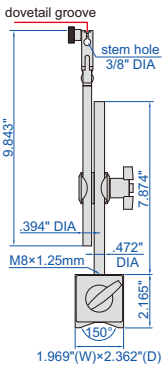
- For digital/dial indicators and dial test indicators

Part No.	Magnetic force	Applicable holding stem	Remark
6231-60E	132lbf	3/8" DIA	without fine adjustment or dovetail groove

MAGNETIC STAND

- For digital/dial indicators and dial test indicators
- Applicable holding stem: 3/8" DIA
- With fine adjustment and dovetail groove

6216-80E



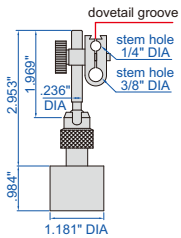
Part No.	Magnetic force
6216-80E	176lbf

MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators
- With dovetail groove

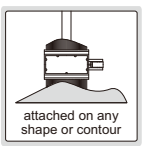
6211-10E



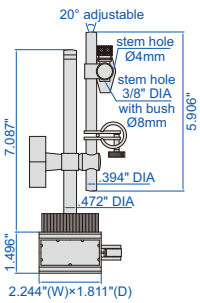
Part No.	Magnetic force	Applicable holding stem
6211-10E	22lbf	1/4" DIA, 3/8" DIA

MAGNETIC STAND FOR UNEVEN SURFACES

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



6215-60



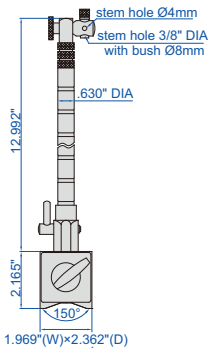
Part No.	Magnetic force	Applicable holding stem
6215-60	132lbf	3/8" DIA, Ø8mm, Ø4mm

FLEX ARM MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

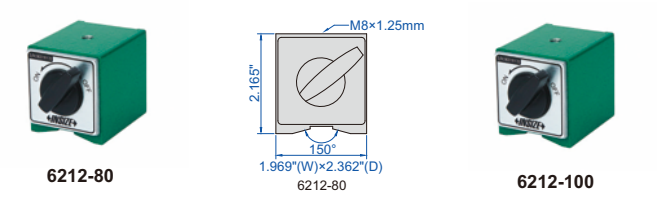
- For dial test indicators
- Applicable holding stem: 3/8" DIA, Ø8mm, Ø4mm

6207-80A



Part No.	Magnetic force
6207-80A	176lbf

MAGNETIC BASES

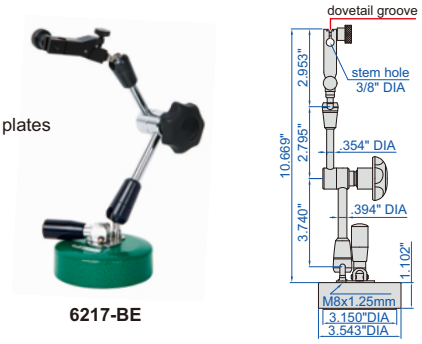


6212-80 6212-100

Part No.	Magnetic force
6212-80	176lbf
6212-100	220lbf

VACUUM STAND

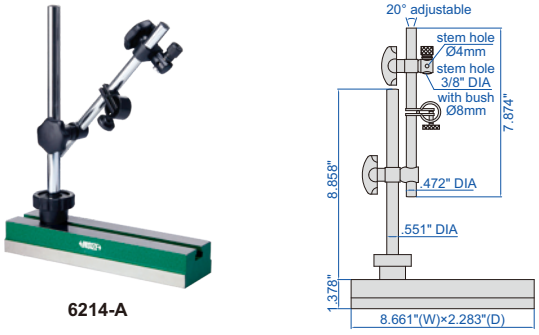
- Suitable for granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators
- With fine adjustment and dovetail groove



6217-BE

Part No.	Diameter of vacuum disc	Vacuum force	Applicable holding stem
6217-BE	3.150" DIA	176lbf	3/8" DIA

UNIVERSAL STAND

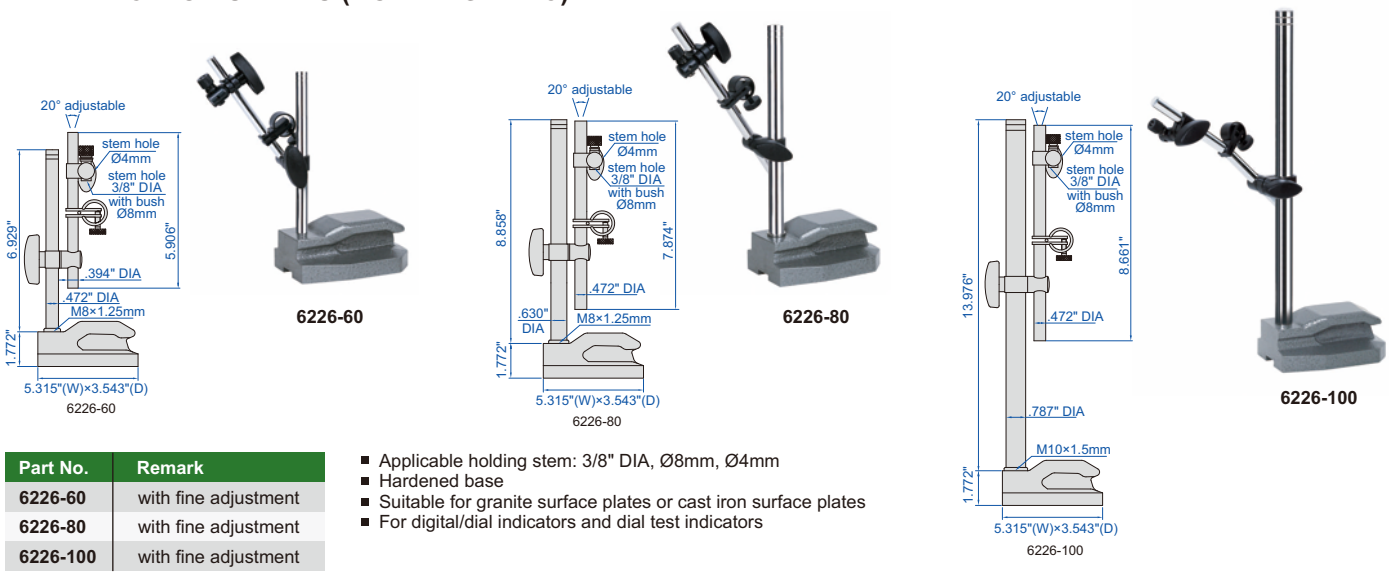


6214-A

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

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

DIAL INDICATOR STANDS (NON-MAGNETIC)

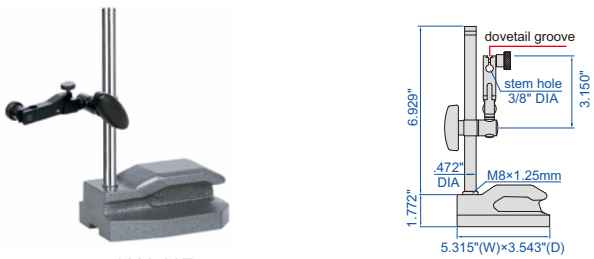


Part No.	Remark
6226-60	with fine adjustment
6226-80	with fine adjustment
6226-100	with fine adjustment

- Applicable holding stem: 3/8" DIA, Ø8mm, Ø4mm
- Hardened base
- Suitable for granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators

DIAL INDICATOR STAND (FOR .00005" DIAL AND TEST INDICATORS)

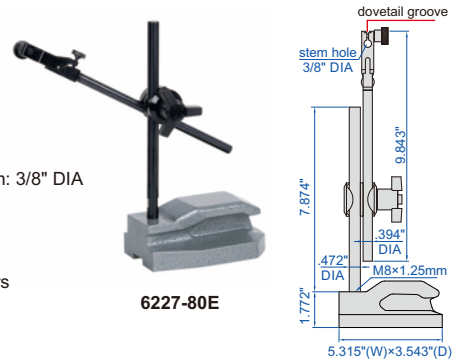
- Non-magnetic and hardened base
- Suitable for granite surface plates or cast iron surface plates
- For .00005", .0001" and .0005" dial and test indicators
- With fine adjustment and dovetail groove



6230-60E

Part No.	Applicable holding stem
6230-60E	3/8" DIA

DIAL INDICATOR STAND (NON-MAGNETIC)

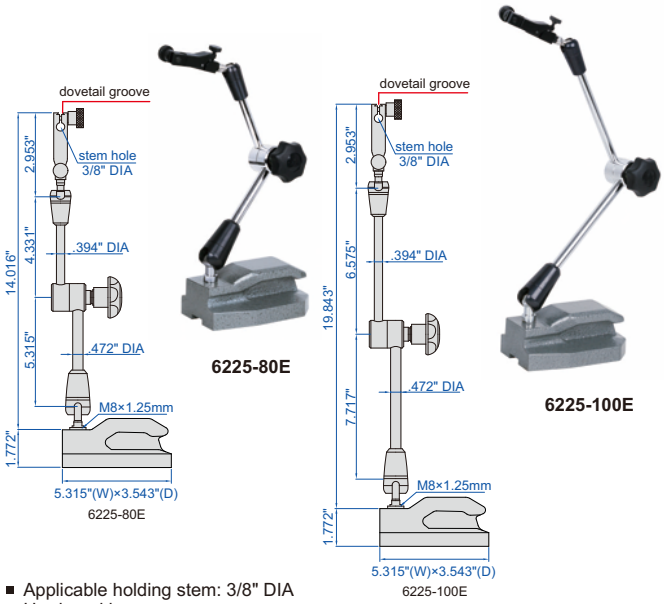


6227-80E

- Applicable holding stem: 3/8" DIA
- Hardened base
- Suitable for granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators

Part No.	Remark
6227-80E	with fine adjustment and dovetail groove

UNIVERSAL DIAL INDICATOR STANDS (NON-MAGNETIC)



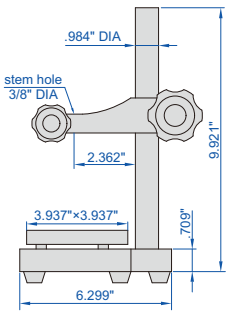
- Applicable holding stem: 3/8" DIA
- Hardened base
- Suitable for granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators

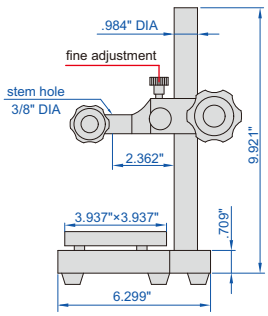
Part No.	Remark
6225-80E	with fine adjustment and dovetail groove
6225-100E	with fine adjustment and dovetail groove

DIAL INDICATOR STANDS

6876-150E

6876-150DE





- Applicable holding stem: 3/8" DIA
- Vertical travel of holder: 6"
- Ceramic anvil
- Supplied with dust cover
- Anvil: ceramic, plain, flatness 59μin

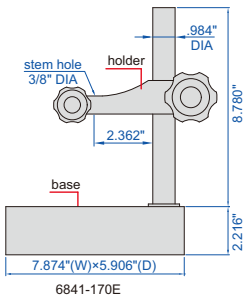
Part No.	Remark
6876-150E	without fine adjustment
6876-150DE	with fine adjustment, fine adjustment range .118"

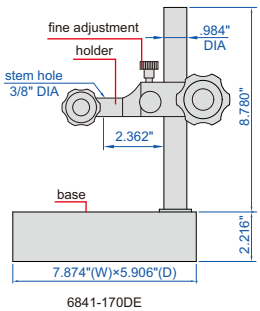
GRANITE DIAL INDICATOR STANDS (BASIC TYPE)

POPULAR MODEL

6841-170E

6841-170DE

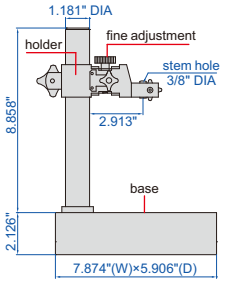


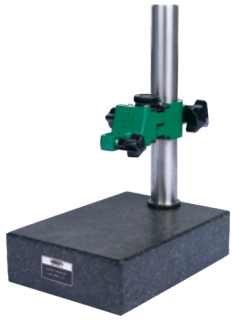


- Vertical travel of holder: 6.7"
- Applicable holding stem: 3/8" DIA
- Base: flatness 98μin
- Supplied with dust cover

Part No.	Remark
6841-170E	without fine adjustment
6841-170DE	with fine adjustment, fine adjustment range .118"

GRANITE DIAL INDICATOR STAND





6866-150E

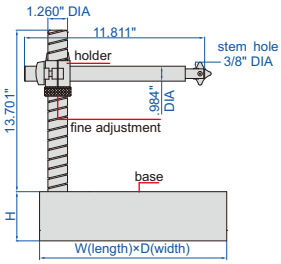
- Vertical travel of holder: 5.906"
- Fine adjustment range .079"
- Supplied with dust cover

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

GRANITE DIAL INDICATOR STANDS

6867-250E

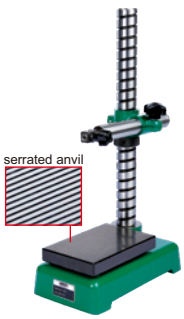
6867-400E



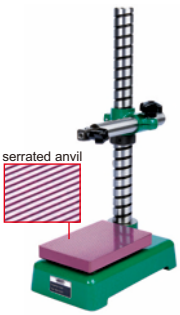
- Applicable holding stem: 3/8" DIA
- Vertical travel of holder: 9.843"
- Fine adjustment range: entire stroke
- Supplied with dust cover

Part No.	W	D	H	Base
6867-250E	11.811"	11.811"	2.953"	flatness 110μin
6867-400E	15.748"	11.811"	3.937"	flatness 118μin

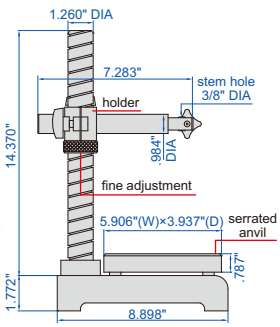
DIAL INDICATOR STANDS



6864-250E



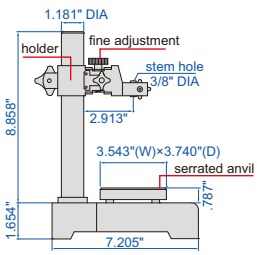
6864-250TE

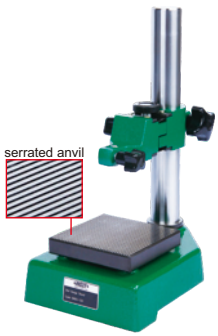


- Vertical travel of holder: 9.843"
- Applicable holding stem: 3/8" DIA
- Fine adjustment range: entire stroke
- Supplied with dust cover

Part No.	Anvil
6864-250E	steel (hardness HRC60±2) serrated, flatness 59μin
6864-250TE	ceramic, serrated, flatness 59μin

DIAL INDICATOR STAND





6863-150E

- Vertical travel of holder: 5.906"
- Fine adjustment range .079"
- Applicable holding stem: 3/8" DIA
- Supplied with dust cover

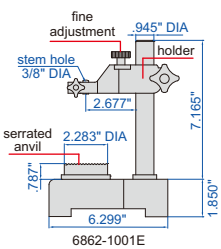
Part No.	Anvil
6863-150E	steel (hardness HRC60±2), serrated, flatness 59μin

DIAL INDICATOR STANDS

- Vertical travel of holder: 3.937"
- Fine adjustment range .079"
- Applicable holding stem: 3/8" DIA
- Supplied with dust cover

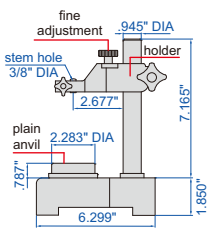
Part No.	Anvil
6862-1001E	steel (hardness HRC60±2), serrated, flatness 59μin
6862-1002E	steel (hardness HRC60±2), plain, flatness 59μin

6862-1001E



6862-1001E

6862-1002E

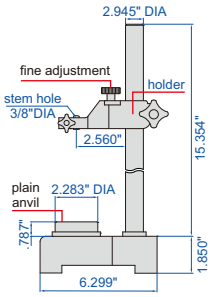


6862-1002E

TRANSFER STANDS

- Vertical travel of holder: 13.189"
- Fine adjustment range .079"
- Applicable holding stem: 3/8" DIA
- Supplied with dust cover

Part No.	Anvil
6865-300E	steel (hardness HRC60±2), plain, flatness 59µin
6865-300TE	ceramic, plain, flatness 59µin



6865-300E

6865-300TE

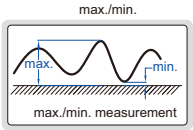
application

rigid construction, designed to make comparison height measurement (set zero with gauge block then measure height of workpiece) with dial indicators or digital indicators (variation of measuring force is high)

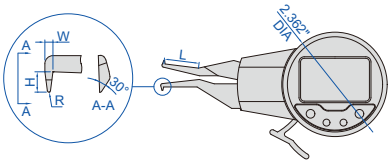
DIGITAL INTERNAL CALIPER GAUGES

DATA OUTPUT

- Resolution .0002"/0.005mm
- Reading in digital and analog
- Display can be rotated by 170º
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, data output
- Automatic power off
- Optional accessory: data output cable (part no. **7315-30** receiver is needed, **7302-30**)

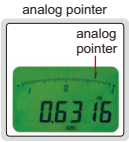


2121-15

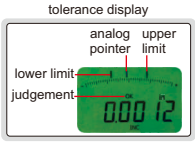


Part No.	Range	Accuracy	L	H	W	R	Repeatability
2121-15	.2-.6"/5-15mm	±.0012"	.787"	.079"	.059"	.012"R	.0004"
2121-25	.2-1.0"/5-25mm	±.0012"	1.378"	.059"	.039"	.012"R	.0004"
2121-31	.4-1.2"/10-30mm	±.0012"	2.165"	.217"	.098"	.020"R	.0004"
2121-41	.8-1.6"/20-40mm	±.0012"	3.150"	.236"	.118"	.020"R	.0004"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

analog pointer



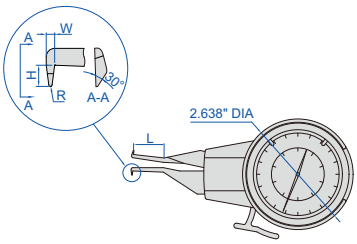
tolerance display



INTERNAL DIAL CALIPER GAUGES

Part No.	Range	Accuracy	Graduation	L	H	W	R
2222-E06	.2-.6"	±.0012"	.0005"	.787"	.079"	.059"	.012"R
2222-E10	.2-1.0"	±.0012"	.0005"	1.378"	.059"	.039"	.012"R
2222-E121	.4-1.2"	±.0012"	.0005"	2.165"	.217"	.098"	.020"R
2222-E161	.8-1.6"	±.0012"	.0005"	3.150"	.236"	.118"	.020"R
2222-E201	1.2-2.0"	±.0012"	.0005"	3.150"	.315"	.118"	.020"R

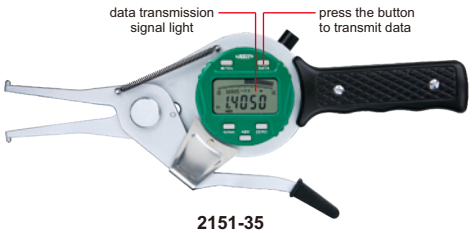
2222-E06



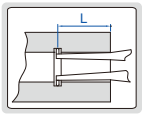
DIGITAL INTERNAL CALIPER GAUGES

DATA OUTPUT

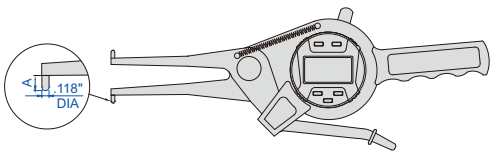
- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320º
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-50M**)



2151-35



Part No.	Range	Resolution	Accuracy	L	A
2151-35	.6-1.4"/15-35mm	.0005"/0.01mm	±.0016"	<1.969"	.118"
2151-AL35	.6-1.4"/15-35mm	.0005"/0.01mm	±.0016"	<7.874"	.118"
2151-55	1.4-2.2"/35-55mm	.0005"/0.01mm	±.0016"	<3.150"	.236"
2151-AL55	1.4-2.2"/35-55mm	.0005"/0.01mm	±.0016"	<9.843"	.315"
2151-75	2.2-3"/55-75mm	.0005"/0.01mm	±.0016"	<3.543"	.315"
2151-AL75	2.2-3"/55-75mm	.0005"/0.01mm	±.0016"	<9.843"	.315"

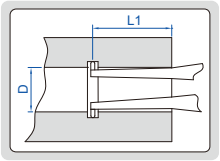


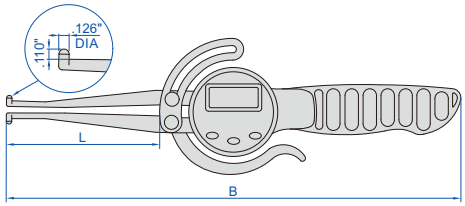
DIGITAL INTERNAL CALIPER GAUGE (ECONOMIC TYPE)

- Button function: on/off, zero, inch/mm, data hold
- Battery CR2032, automatic power off
- Repeatability:.01"

2711-165

sizes to be measured



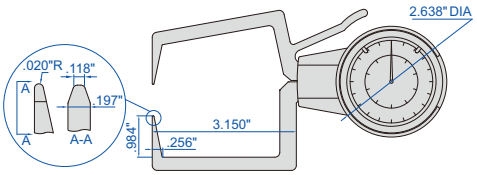


Part No.	Range	Resolution	Accuracy	L	B
2711-165	.5-6.5"/12.7-165mm	.01"/0.1mm	±.01"	3.346"	9.921"

Part No. 2711-165	
D	L1
.512" DIA	<1.654"
.591" DIA	<1.772"
.669" DIA	<1.969"
.787" DIA	<2.362"
.984" DIA	<2.953"
1.063" DIA	<3.150"
1.142~6.496" DIA	<2.346"

EXTERNAL DIAL CALIPER GAUGE

2333-E081



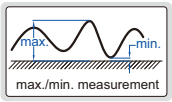
Part No.	Range	Graduation	Accuracy
2333-E081	0-.8"	.0005"	±.0012"

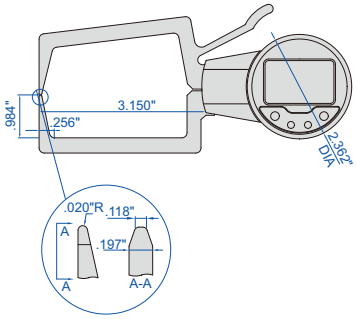
DIGITAL EXTERNAL CALIPER GAUGE

DATA OUTPUT

2131-21

max./min.

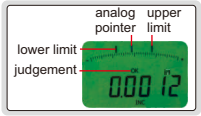




- Accuracy: ±.0012"
- Resolution .0002"/0.005mm
- Repeatability .0004"
- Reading in digital and analog
- Display can be rotated by 170º
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery
- Data output
- Automatic power off
- Optional accessory: data output cable (part no. **7315-30** receiver is needed, **7302-30**)

analog pointer

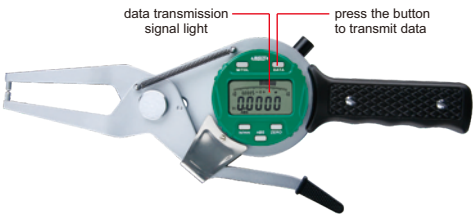
tolerance display



Part No.	Range
2131-21	0-.8"/0-20mm

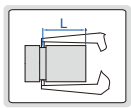
DIGITAL EXTERNAL CALIPER GAUGES

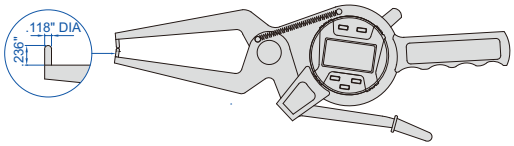
DATA OUTPUT



2132-20

- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320º
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-50M**)





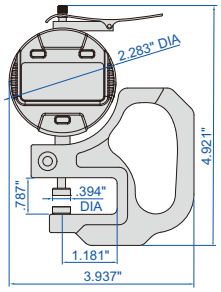
Part No.	Range	Resolution	Accuracy	L
2132-20	0-.8"/0-20mm	.0005"/0.01mm	±.0016"	<2.362"
2132-40	.8-1.6"/20-40mm	.0005"/0.01mm	±.0016"	<2.362"

DIGITAL THICKNESS GAUGES

POPULAR MODEL

DATA OUTPUT

2871-101

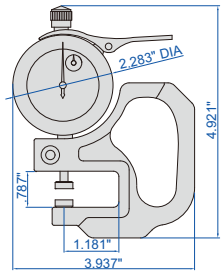


- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, data output
- Automatic power off (time is adjustable)
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-50M**)

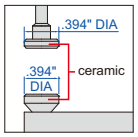
Part No.	Range	Resolution	Accuracy
2871-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"
2871-101	0-.4"/0-10mm	.00005"/0.001mm	±.0002"

THICKNESS GAUGE

2364-055



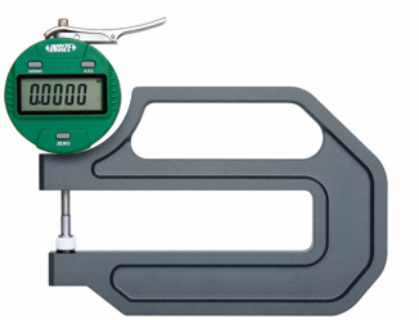
Part No.	Range	Graduation	Accuracy
2364-055	0-.5"	.0005"	±.0008"



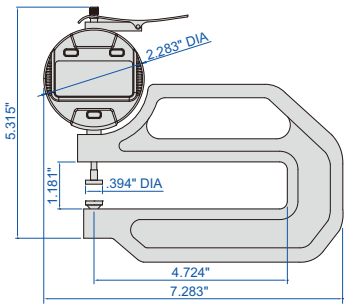
DIGITAL THICKNESS GAUGES

DATA OUTPUT

- 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
- Automatic power off (time is adjustable), data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-50M**)



2872-10

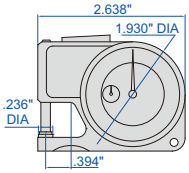


measuring tips and anvils can be custom-made

Part No.	Range	Resolution	Accuracy
2872-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"
2872-101	0-.4"/0-10mm	.00005"/0.001mm	±.0004"

THICKNESS GAUGE

2363-055

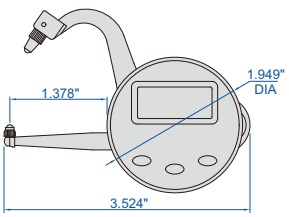


- Stainless steel spindle tip and anvil

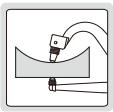
Part No.	Range	Graduation	Accuracy
2363-055	0-.5"	.0005"	±.0015"

DIGITAL THICKNESS GAUGE

2710-25



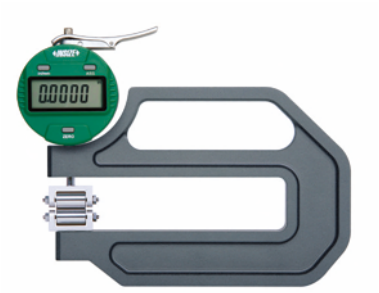
- Resolution .001", 1/64", 0.01mm
- Buttons: on/off, zero, unit (mm/in/fraction), data hold
- Battery CR2032, automatic power off



Part No.	Range	Accuracy	Repeatability
2710-25	0-1"/0-25.4mm	.002"	.001"

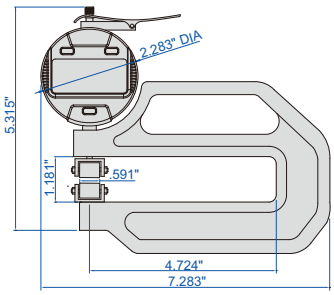
DIGITAL ROLLER THICKNESS GAUGES

DATA OUTPUT

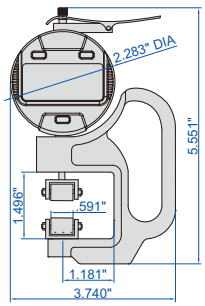


2877-4

2877-10



2877-4



2877-10

- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-50M**)

Part No.	Range	Resolution	Accuracy
2877-4	0-.14"/0-3.5mm	.0005"/0.01mm	±.001"
2877-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"

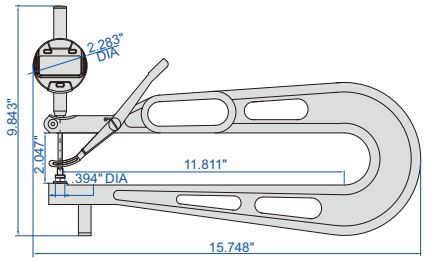
DIGITAL THICKNESS GAUGE

INSIZE PLUS
MADE IN EUROPE

DATA OUTPUT

INSPECTION CERTIFICATE

2860-25



- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M**)

Part No.	Range	Resolution	Accuracy
2860-25*	0-1"/0-25.4mm	.0005"/0.01mm	±.002"

*Supplied with manufacturer inspection certificate

HIGH PRECISION DIGITAL THICKNESS GAUGES

ATTENTION: RECHARGEABLE BATTERY, FOR 12 HOURS CONTINUOUS WORKING

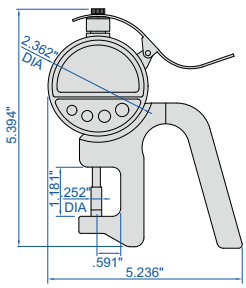
ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

MEASURING TIPS AND ANVILS CAN BE CUSTOM-MADE

DATA OUTPUT

VIDEO

2879-10

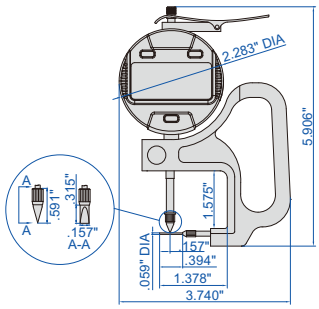


- Absolute encoder, the original data remains after power off
- Button function: on/off, zero, tolerance, absolute/incremental measurement, max./min./TIR, data preset, mm/inch, data output, data hold
- Measuring force .11-.22lbf
- Reading in digital and analog
- Power: rechargeable battery, for 12 hours continuous working
- Data output
- Supplied with data output cable (keyboard format)

Part No.	Range	Resolution	Accuracy	Repeatability
2879-10	0-.4"/0-10mm	.00005"/0.001mm	±.0001"	.00005"
2879-101	0-.4"/0-10mm	.00002"/0.0005mm	±.00006"	.00002"

DIGITAL TUBE THICKNESS GAUGE

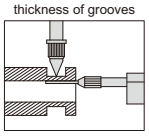
DATA OUTPUT



2873-10

- 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** receiver is needed, **7302-50M**)

measure wall thickness of grooves

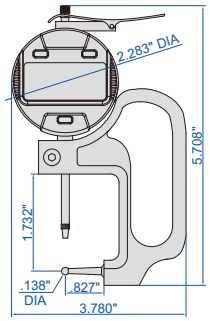


Part No.	Range	Resolution	Accuracy
2873-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"

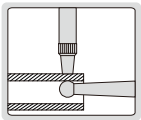
DIGITAL TUBE THICKNESS GAUGE

DATA OUTPUT

2876-10



- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-50M**)

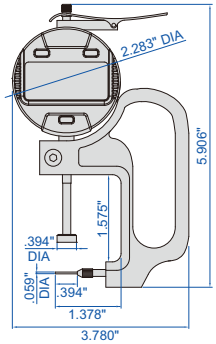


Part No.	Range	Resolution	Accuracy
2876-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"

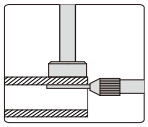
DIGITAL TUBE THICKNESS GAUGES

DATA OUTPUT

2859-101



- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-50M**)



Part No.	Range	Resolution	Accuracy
2859-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"
2859-101	0-.4"/0-10mm	.00005"/0.001mm	±.0002"

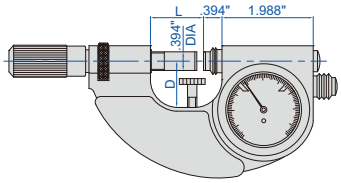
DIAL SNAP GAUGE (ECONOMIC TYPE)

IP54 WATERPROOF

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

- Quick measurement for mass production
- Dial indicator: range ±.0015", graduation .00005", accuracy .00004"
- IP54 dust/waterproof
- Measuring force: 1.125-2.25lbf
- Carbide measuring faces
- Optional accessory: gauge blocks grade 0, for zero setting

3334-1



Part No.	Range	L	D
3334-1	0-1"	1.122"	.984"

DIAL SNAP GAUGES

VIDEO

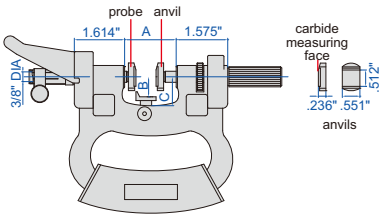
INSPECTION CERTIFICATE

QUICK AND ACCURATE MEASUREMENT OF CYLINDRICAL WORKPIECES

digital indicator is optional

2186-25E

application



- Left anvil retracting stroke .079"
- Measuring force: 1.35-1.8lbf
- Flatness of anvil: 59µin
- Repeatability: 39µin
- Carbide measuring faces for anvils
- Front edges of anvils are chamfered for easy workpiece insertion
- Optional accessory: dial indicators and digital indicators (reading .00005" or .0005")

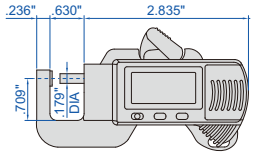
Part No.	Range	Parallelism of measuring faces	A	B	C
2186-25E*	0-1"	.00016"	1.654"	.433-.709"	.787"
2186-50E*	1-2"	.00016"	2.717"	.433-1.260"	1.614"
2186-75E*	2-3"	.00020"	3.701"	.669-1.614"	2.008"
2186-100E*	3-4"	.00024"	4.685"	1.220-2.165"	2.559"
2186-125E*	4-5"	.00024"	5.669"	1.654-2.756"	2.953"
2186-150E*	5-6"	.00032"	6.654"	2.165-3.228"	3.543"
2186-175E*	6-7"	.00032"	7.638"	2.677-3.740"	3.937"
2186-200E*	7-8"	.00040"	8.622"	3.346-4.331"	4.528"
2186-225E*	8-9"	.00040"	9.606"	3.740-4.724"	5.118"
2186-250E*	9-10"	.00040"	10.591"	4.331-5.315"	5.709"
2186-275E*	10-11"	.00047"	11.575"	4.724-5.906"	6.299"
2186-300E*	11-12"	.00047"	12.559"	5.039-6.299"	6.693"

*Supplied with manufacturer inspection certificate

DIGITAL SNAP GAUGE

ATTENTION: NO DATA OUTPUT

2166-12

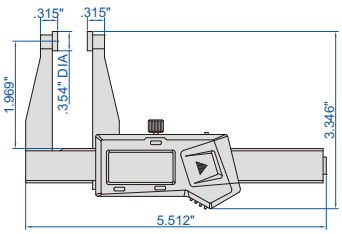


Part No.	Range	Resolution	Accuracy
2166-12	0-.5"/0-12mm	.0005"/0.01mm	±.0015"

DIGITAL SNAP GAUGE

DATA OUTPUT

1163-50A



- 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
- Optional accessory: data output cable (part no. **7315-21** receiver is needed, **7302-21**)

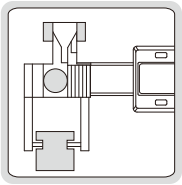
Part No.	Range	Accuracy	Resolution
1163-50A	0-2"/0-50mm	±.0012"	.0005"/0.01mm

DIGITAL 3-PURPOSE SNAP GAUGE

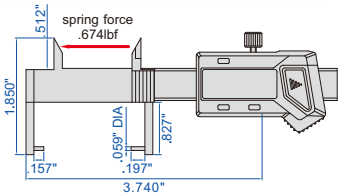
SUITABLE FOR JEWELLERY

ATTENTION: NO DATA OUTPUT

VIDEO



2164-25A



- Non waterproof
- Accuracy: ±.0012"
- Buttons: zero, inch/mm, on/off
- Battery LR44
- Made of stainless steel

Part No.	Range	Resolution
2164-25A	0-1"/0-25mm	.0005"/0.01mm

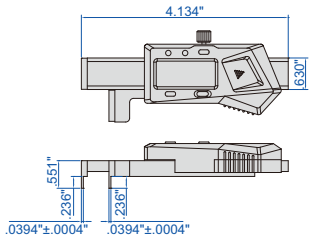
STEP AND GAP GAUGE

DATA OUTPUT

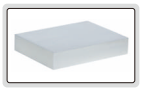
front

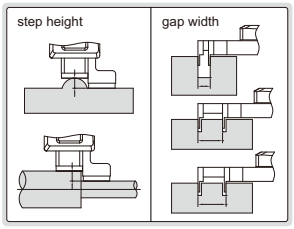
back

2168-12



zero setting block (included)





- Non waterproof
- Measure step height and gap width
- 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** receiver is needed, **7302-21**)

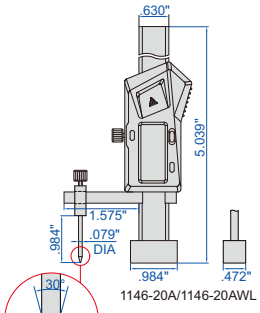
Part No.	Range	Accuracy	Resolution
2168-12	0-.5"/0-12.7mm	±.0015"	.0005"/0.01mm

MINI DIGITAL HEIGHT GAUGES

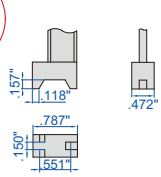
DATA OUTPUT

1146-20A

1146-20B



1146-20A/1146-20AWL



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

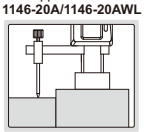
With data interface (data output cable part no. 7315-21 receiver is needed, 7302-21, optional)

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

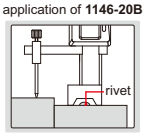
Built-in wireless (part no. 7315-2/3/6/7/8/9 receiver is needed)

Part No.	Range	Accuracy
1146-20AWL	0-.8"/0-20mm	±.0010"

application of **1146-20A/1146-20AWL**



application of **1146-20B**

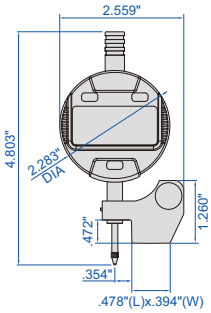


DIGITAL HEIGHT GAUGES

DATA OUTPUT

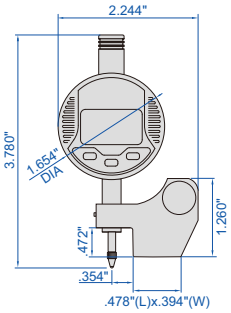
- Measure height difference of two surfaces
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/increment measurement
- Keep preset data in memory after restart
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M**)

2146-4A



2146-4A
2146-41A

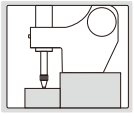
2146-4B



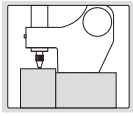
2146-4B
2146-41B

Part No.	Range (adjustable)	Digital indicator stroke	Digital indicator resolution	Accuracy
2146-4A	0~.16"/0~4mm (sinked) 0~.5"/0~12.7mm (raised)	.5"/12.7mm	.0005"/0.01mm	±.001"
2146-41A		.5"/12.7mm	.00005"/0.001mm	±.0002"
2146-4B	0~.16"/0~4mm (sinked) 0~.2"/0~5mm (raised)	.2"/5mm	.0005"/0.01mm	±.001"
2146-41B		.2"/5mm	.00005"/0.001mm	±.0002"

measure sinked step



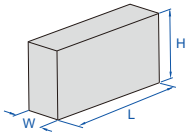
measure raised step



CERAMIC GAUGE BLOCK SETS

INSPECTION CERTIFICATE

- Made of ceramic, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ASME B89.1.9
- Supplied with manufacturer inspection certificate



4005-181

Dimension:

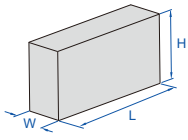
Size (L)	W	H
.02≤L≤.394"	.354"	1.181"
L>.394"	.354"	1.378"

Blocks per set	Gauge blocks included in set			Part No.	
	Size (inch)	Step (inch)	Quantity	Grade 0	Grade AS-1
36	.05 .1001 - .1009 .101 - .109 .11 - .19 .1 - .5 1 2 4	.0001 .001 .01 .1	1 9 9 9 5 1 1 1	**4005-36**	**4005-136**
81	.1001 - .1009 .101 - .149 .05 - .95 1 - 4	.0001 .001 .05 1	9 49 19 4	**4005-81**	**4005-181**

STEEL GAUGE BLOCK SETS

INSPECTION CERTIFICATE

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



4102-81

Dimension:

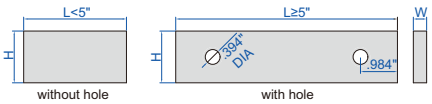
Size (L)	W	H
.02≤L≤.394"	.354"	1.181"
L>.394"	.354"	1.378"

Blocks per set	Gauge blocks included in set			Part No.		
	Size (inch)	Step (inch)	Quantity	Grade 0	Grade AS-1	Grade AS-2
36	.05 .1001 - .1009 .101 - .109 .11 - .19 .1 - .5 1 2 4	.0001 .001 .01 .1	1 9 9 9 5 1 1 1	**4102-36**	**4102-136**	**4102-236**
81	.1001 - .1009 .101 - .149 .05 - .95 1 - 4	.0001 .001 .05 1	9 49 19 4	**4102-81**	**4102-181**	**4102-281**

STEEL INDIVIDUAL GAUGE BLOCKS

INSPECTION CERTIFICATE

CUSTOM-MADE
CAN SUPPLY ANY SIZES FROM .02" TO 40", SUCH AS 3.876"



4112-C3

Dimension:

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

- Grade AS-2
- Made of alloy steel
- Meet ASME B89.1.9
- Gauge blocks with clamping holes: 5", 6", 7", 8", 10", 12", 16", 20"
- Supplied with manufacturer inspection certificate

Part No.	Size (L)
4112-CD1	.1"
4112-CD1001	.1001"
4112-CD1002	.1002"
4112-CD1003	.1003"
4112-CD1004	.1004"
4112-CD1005	.1005"
4112-CD1006	.1006"
4112-CD1007	.1007"
4112-CD1008	.1008"
4112-CD1009	.1009"
4112-CD101	.101"
4112-CD102	.102"
4112-CD103	.103"
4112-CD104	.104"
4112-CD105	.105"
4112-CD106	.106"
4112-CD107	.107"
4112-CD108	.108"

Part No.	Size (L)
4112-CD109	.109"
4112-CD11	.11"
4112-CD111	.111"
4112-CD112	.112"
4112-CD113	.113"
4112-CD114	.114"
4112-CD115	.115"
4112-CD116	.116"
4112-CD117	.117"
4112-CD118	.118"
4112-CD119	.119"
4112-CD12	.12"
4112-CD121	.121"
4112-CD122	.122"
4112-CD123	.123"
4112-CD124	.124"
4112-CD125	.125"
4112-CD126	.126"

Part No.	Size (L)
4112-CD127	.127"
4112-CD128	.128"
4112-CD129	.129"
4112-CD13	.13"
4112-CD131	.131"
4112-CD132	.132"
4112-CD133	.133"
4112-CD134	.134"
4112-CD135	.135"
4112-CD136	.136"
4112-CD137	.137"
4112-CD138	.138"
4112-CD139	.139"
4112-CD14	.14"
4112-CD141	.141"
4112-CD142	.142"
4112-CD143	.143"
4112-CD144	.144"

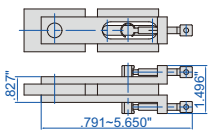
Part No.	Size (L)
4112-CD145	.145"
4112-CD146	.146"
4112-CD147	.147"
4112-CD148	.148"
4112-CD149	.149"
4112-CD15	.15"
4112-CD2	.2"
4112-CD25	.25"
4112-CD3	.3"
4112-CD35	.35"
4112-CD4	.4"
4112-CD45	.45"
4112-CD5	.5"
4112-CD55	.55"
4112-CD6	.6"
4112-CD65	.65"
4112-CD7	.7"
4112-CD75	.75"

Part No.	Size (L)
4112-CD8	.8"
4112-CD85	.85"
4112-CD9	.9"
4112-CD95	.95"
4112-C1	1"
4112-C2	2"
4112-C3	3"
4112-C4	4"
4112-C5	5"
4112-C6	6"
4112-C7	7"
4112-C8	8"
4112-C10	10"
4112-C12	12"
4112-C16	16"
4112-C20	20"

GAUGE BLOCK HOLDER

VIDEO

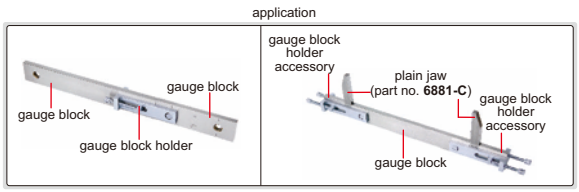
Part No.
6886-1



6886-1

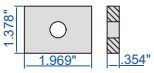
- For gauge blocks over 5" with clamping holes
- Optional accessory: gauge block holder accessory, gauge block accessory (part no. **6881**)

application



GAUGE BLOCK HOLDER ACCESSORY

Part No.
6886-A



6886-A

PIN GAUGE SETS

4162-2161

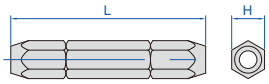
- Class ZZ
- Made of stainless steel
- Hardness HRC60-62
- Handle is optional (handle part no. **7341** series, **7342** series)

Diameter (d)	Step	Pin gauges per set	Part No.	
			Accuracy + .0002"	Accuracy - .0002"
.011~.060"	.001"	50	**4162-111**	**4162-211**
.061~.250"	.001"	190	**4162-1161**	**4162-2161**
.251~.500"	.001"	250	**4162-1251**	**4162-2251**
.501~.625"	.001"	125	**4162-1501**	**4162-2501**
.626~.750"	.001"	125	**4162-1626**	**4162-2626**
.751~.832"	.001"	82	**4162-1751**	**4162-2751**
.833~.916"	.001"	84	**4162-1833**	**4162-2833**
.917~1.000"	.001"	84	**4162-1917**	**4162-2917**

PIN GAUGE HANDLES (OPERATED WITHOUT WRENCH)

application

7342-M1



- Operated without wrench
- Made of aluminum
- Pin gauges can be installed

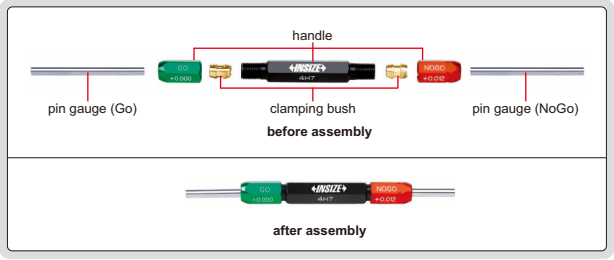
Part No.	Applicable pin gauge diameter	H	L
7342-M0	.011-.049"/0.3-1.25mm	.393"	4.409"
7342-M1	.050-.250"/1.26-6.35mm	.945"	5.157"
7342-M2	.251-.500"/6.36-12.70mm	1.260"	5.984"
7342-M3	.501-.625"/12.71-15.88mm	1.457"	5.984"
7342-M4	.626-.750"/15.89-19.00mm	1.457"	5.984"
7342-M5	.751-.832"/19.01-21.13mm	1.575"	6.220"
7342-M6	.833-.916"/21.14-23.27mm	1.575"	6.220"
7342-M7	.917-1.000"/23.28-25.4mm	1.575"	6.220"

PIN GAUGE HANDLES (OPERATED WITH WRENCH)

handle

brass clamping bush (.008~.281")

aluminum clamping bush (.281~.976")



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

Part No.	Applicable pin gauge diameter	Including		H	L
		Handle	Clamping bush		
7341-0S	.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	.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	.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	.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	.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	.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	.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"

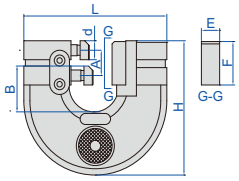
Part No.	Applicable pin gauge diameter	Including		H	L
		Handle	Clamping bush		
7341-7S	.341-.406"	1 pc	6 pairs (the clamping range are .341-.351", .351-.361", .361-.371", .371-.382", .382-.394", .394-.406")	.748"	3.583"
7341-8S	.406-.465"	1 pc	4 pairs (the clamping range are .406-.420", .420-.435", .435-.450", .450-.465")	.866"	4.173"
7341-9S	.465-.510"	1 pc	3 pairs (the clamping range are .465-.480", .480-.495", .495-.510")	.866"	4.173"
7341-10S	.510-.579"	1 pc	4 pairs (the clamping range are .510-.532", .532-.547", .547-.563", .563-.579")	.945"	4.528"
7341-11S	.579-.635"	1 pc	4 pairs (the clamping range are .579-.594", .594-.610", .610-.625", .625-.635")	.945"	4.528"
7341-12S	.635-.704"	1 pc	4 pairs (the clamping range are .635-.656", .656-.672", .672-.688", .688-.704")	1.063"	4.646"
7341-13S	.704-.760"	1 pc	4 pairs (the clamping range are .704-.719", .719-.735", .735-.750", .750-.760")	1.063"	4.646"
7341-15S	.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"

ADJUSTABLE SNAP GAUGES

FAST AND ACCURATE MEASUREMENT OF CYLINDERS

- Used as Go/No-Go gauge by setting upper and lower limits
- Flatness of anvil: 59µin
- Parallelism of measuring faces: 118µin

2187-19



VIDEO

Part No.	Range	L	A	B	E	F	H	d (DIA)
2187-6	0-.24"	2.913"	.591"	.689"	.480"	1.071"	2.815"	.276"
2187-13	.24-.51"	3.346"	.591"	1.024"	.480"	1.071"	3.130"	.484"
2187-19	.51-.75"	3.661"	.591"	1.063"	.480"	1.071"	3.268"	.484"
2187-25	.75-.98"	3.937"	.591"	1.319"	.480"	1.071"	3.524"	.484"
2187-32	.98-1.26"	4.370"	.709"	1.516"	.598"	1.386"	4.094"	.602"
2187-38	1.26-1.50"	4.606"	.709"	1.634"	.598"	1.386"	4.134"	.602"
2187-57	2.01-2.24"	5.354"	.709"	1.772"	.598"	1.386"	4.685"	.602"
2187-63	2.24-2.48"	5.630"	.709"	1.969"	.598"	1.386"	4.803"	.602"
2187-70	2.48-2.76"	6.142"	.787"	2.283"	.598"	1.386"	5.197"	.602"
2187-76	2.76-2.99"	6.417"	.787"	2.382"	.598"	1.386"	5.394"	.602"

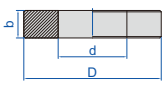
SETTING RINGS

INSPECTION CERTIFICATE

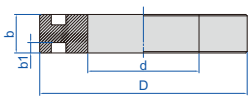
CAN SUPPLY CUSTOM SETTING RINGS FROM 1/16" TO 16", FOR EXAMPLE, .6726"

- For zero setting of inside micrometers, three points internal micrometers and bore gauges
- 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



1.588-3.937" DIA



3.937-16" DIA

Diameter d*	b	D (DIA)	Size difference	Roundness and cylindricity
.059-.098"	.157"	.866"	±.00039"	.000012"
.098-.118"	.197"	.866"	±.00039"	.000012"
.118-.197"	.197"	.866"	±.00039"	.000016"
.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"

*For example .709-.787" means .709" DIA<diameter≤.787"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"
5.118-5.906"	1.339"	.394"	8.661"	±.00039"	.000047"
5.906-6.693"	1.417"	.394"	9.764"	±.00039"	.000059"
6.693-7.480"	1.417"	.394"	10.866"	±.00039"	.000059"
7.480-8.268"	1.496"	.394"	11.811"	±.00039"	.000059"
8.268-9.055"	1.496"	.394"	12.756"	±.00039"	.000098"
9.055-9.843"	1.575"	.472"	13.780"	±.00039"	.000098"
9.843-10.630"	1.575"	.472"	14.764"	±.00039"	.000118"
10.630-11.417"	1.654"	.472"	15.748"	±.00039"	.000118"
11.417-11.811"	1.654"	.472"	16.732"	±.00039"	.000118"
11.811-12.598"	1.654"	.472"	16.929"	±.00039"	.000157"
12.598-12.992"	1.654"	.472"	17.323"	±.00039"	.000157"
12.992-13.386"	1.654"	.472"	17.717"	±.00039"	.000157"
13.386-13.780"	1.654"	.472"	18.110"	±.00039"	.000157"
13.780-14.173"	1.654"	.472"	18.504"	±.00039"	.000157"
14.173-14.567"	1.654"	.472"	18.898"	±.00039"	.000157"
14.567-14.961"	1.654"	.472"	19.291"	±.00039"	.000157"
14.961-15.354"	1.654"	.472"	19.685"	±.00039"	.000157"
15.354-16"	1.654"	.472"	20.079"	±.00039"	.000157"

Part No.	Diameter
6313-1H16	1/16" DIA
6313-3H32	3/32" DIA
6313-1H8	1/8" DIA
6313-5H32	5/32" DIA
6313-3H16	3/16" DIA
6313-7H32	7/32" DIA
6313-1H4	1/4" DIA
6313-9H32	9/32" DIA
6313-5H16	5/16" DIA
6313-11H32	11/32" DIA
6313-3H8	3/8" DIA
6313-13H32	13/32" DIA
6313-7H16	7/16" DIA
6313-15H32	15/32" DIA
6313-1H2	1/2" DIA

Part No.	Diameter
6313-17H32	17/32" DIA
6313-9H16	9/16" DIA
6313-19H32	19/32" DIA
6313-5H8	5/8" DIA
6313-21H32	21/32" DIA
6313-11H16	11/16" DIA
6313-23H32	23/32" DIA
6313-3H4	3/4" DIA
6313-25H32	25/32" DIA
6313-13H16	13/16" DIA
6313-27H32	27/32" DIA
6313-7H8	7/8" DIA
6313-29H32	29/32" DIA
6313-15H16	15/16" DIA
6313-31H32	31/32" DIA

Part No.	Diameter
6313-0D1	.1" DIA
6313-0D16	.16" DIA
6313-0D24	.24" DIA
6313-0D275	.275" DIA
6313-0D35	.35" DIA
6313-0D425	.425" DIA
6313-0D6	.6" DIA
6313-0D65	.65" DIA
6313-0D7	.7" DIA
6313-0D8	.8" DIA
6313-1	1.0" DIA
6313-1D2	1.2" DIA
6313-1D4	1.4" DIA
6313-1D6	1.6" DIA
6313-1D8	1.8" DIA

Part No.	Diameter
6313-2	2.0" DIA
6313-2D4	2.4" DIA
6313-2D5	2.5" DIA
6313-2D8	2.8" DIA
6313-3	3.0" DIA
6313-3D2	3.2" DIA
6313-3D5	3.5" DIA
6313-3D6	3.6" DIA
6313-4	4.0" DIA
6313-4D5	4.5" DIA
6313-5	5.0" DIA
6313-5D5	5.5" DIA
6313-6	6.0" DIA
6313-6D5	6.5" DIA
6313-7	7.0" DIA

Part No.	Diameter
6313-7D5	7.5" DIA
6313-8	8.0" DIA
6313-8D5	8.5" DIA
6313-9	9.0" DIA
6313-9D5	9.5" DIA
6313-10	10.0" DIA
6313-10D5	10.5" DIA
6313-11	11.0" DIA
6313-11D5	11.5" DIA
6313-12	12.0" DIA
6313-14	14.0" DIA
6313-16	16.0" DIA

CERAMIC MEASURING BALLS

INSPECTION CERTIFICATE

4190-15H16

- Zirconia material, high strength and hardness, extremely wear resistance and corrosion resistance, good insulation, antistatic and magnetic resistance
- Mirror surface without holes
- Supplied with manufacturer inspection certificate

Set (31 pairs)

Part No.	Ceramic balls included (one pair per size)
4190-S25E	1/16", 3/32", 7/64", 1/8", 5/32", 3/16", 7/32", 15/64", 1/4", 17/64", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 29/64", 15/32", 31/64", 1/2", 17/32", 9/16", 19/32", 5/8", 21/32", 11/16", 23/32", 3/4", 25/32", 7/8", 15/16"

Individual

Part No.	Diameter	Accuracy	Roundness
4190-1H16	1/16"	±.00008"	.00002"
4190-3H32	3/32"	±.00008"	.00002"
4190-7H64	7/64"	±.00008"	.00002"
4190-1H8	1/8"	±.00008"	.00002"
4190-5H32	5/32"	±.00008"	.00002"
4190-3H16	3/16"	±.00008"	.00002"
4190-7H32	7/32"	±.00008"	.00002"
4190-15H64	15/64"	±.00008"	.00002"
4190-1H4	1/4"	±.00008"	.00002"
4190-17H64	17/64"	±.00008"	.00002"
4190-9H32	9/32"	±.00008"	.00002"
4190-5H16	5/16"	±.00008"	.00002"
4190-11H32	11/32"	±.00008"	.00002"
4190-3H8	3/8"	±.00008"	.00002"
4190-13H32	13/32"	±.00008"	.00002"
4190-7H16	7/16"	±.00008"	.00002"

Individual

Part No.	Diameter	Accuracy	Roundness
4190-29H64	29/64"	±.00008"	.00002"
4190-15H32	15/32"	±.00008"	.00002"
4190-31H64	31/64"	±.00008"	.00002"
4190-1H2	1/2"	±.00008"	.00002"
4190-17H32	17/32"	±.00008"	.00003"
4190-9H16	9/16"	±.00008"	.00003"
4190-19H32	19/32"	±.00010"	.00003"
4190-5H8	5/8"	±.00010"	.00003"
4190-21H32	21/32"	±.00010"	.00003"
4190-11H16	11/16"	±.00010"	.00003"
4190-23H32	23/32"	±.00010"	.00003"
4190-3H4	3/4"	±.00010"	.00003"
4190-25H32	25/32"	±.00010"	.00003"
4190-7H8	7/8"	±.00010"	.00004"
4190-15H16	15/16"	±.00010"	.00004"

METRIC THREAD PLUG GAUGES

INSPECTION CERTIFICATE

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

- Supplied with Go and No-Go gauges together
- Standard ISO1502
- Supplied with manufacturer inspection certificate

4130-10

Individual

Size (mm)		Part No.		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M0.8	0.2	4130-D8	4130-D8G	–
M0.9	0.225	4130-D9	–	–
M1	0.25	4130-1	–	4130-1H
M1.2	0.25	4130-1D2	4130-1D2G	4130-1D2H
M1.4	0.3	4130-1D4	–	4130-1D4H
M1.6	0.35	4130-1D6	4130-1D6G	4130-1D6H
M1.7	0.35	4130-1D7	–	–
M1.8	0.35	4130-1D8	4130-1D8G	4130-1D8H
M2	0.4	4130-2	4130-2G	4130-2H
M2.2	0.45	4130-2D2	4130-2D2G	4130-2D2H
M2.3	0.4	4130-2D3	4130-2D3G	–
M2.5	0.45	4130-2D5	4130-2D5G	4130-2D5H
M2.6	0.45	4130-2D6	4130-2D6G	–
M3	0.5	4130-3	4130-3G	4130-3H
M3.5	0.6	4130-3D5	4130-3D5G	4130-3D5H
M4	0.7	4130-4	4130-4G	4130-4H
M4.5	0.75	4130-4D5	4130-4D5G	4130-4D5H
M5	0.8	4130-5	4130-5G	4130-5H
M6	1	4130-6	4130-6G	4130-6H
M7	1	4130-7	4130-7G	4130-7H
M8	1.25	4130-8	4130-8G	4130-8H

Individual

Size (mm)		Part No.		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M9	1.25	4130-9	4130-9G	4130-9H
M10	1.5	4130-10	4130-10G	4130-10H
M11	1.5	4130-11	4130-11G	4130-11H
M12	1.75	4130-12	4130-12G	4130-12H
M14	2	4130-14	4130-14G	4130-14H
M16	2	4130-16	4130-16G	4130-16H
M18	2.5	4130-18	4130-18G	4130-18H
M20	2.5	4130-20	4130-20G	4130-20H
M22	2.5	4130-22	4130-22G	–
M24	3	4130-24	4130-24G	–
M27	3	4130-27	4130-27G	–
M30	3.5	4130-30	4130-30G	–
M33	3.5	4130-33	4130-33G	–
M36	4	4130-36	4130-36G	4130-36H
M39	4	4130-39	4130-39G	–
M42	4.5	4130-42	–	–
M45	4.5	4130-45	–	–
M48	5	4130-48	–	–
M52	5	4130-52	4130-52G	–
M56	5.5	4130-56	–	–
M60	5.5	4130-60	–	–

Set (class 6H)

Part No.	Thread plug gauges included (mm)
4130-S7	M3x0.5 (**4130-3**), M4x0.7 (**4130-4**), M5x0.8 (**4130-5**), M6x1 (**4130-6**), M8x1.25 (**4130-8**), M10x1.5 (**4130-10**), M12x1.75 (**4130-12**)

METRIC THREAD RING GAUGES

INSPECTION CERTIFICATE

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

- Standard ISO1502
- Supplied with manufacturer inspection certificate

4120-16

4120-16N

Individual

Size (mm)		Part No.					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M2	0.4	4120-2	4120-2N	4120-2E	4120-2EN	4120-2H	4120-2HN
M2.2	0.45	4120-2D2	4120-2D2N	4120-2D2E	4120-2D2EN	4120-2D2H	4120-2D2HN
M2.3	0.4	4120-2D3	4120-2D3N	–	–	–	–
M2.5	0.45	4120-2D5	4120-2D5N	4120-2D5E	4120-2D5EN	4120-2D5H	4120-2D5HN
M2.6	0.45	4120-2D6	4120-2D6N	–	–	–	–
M3	0.5	4120-3	4120-3N	4120-3E	4120-3EN	4120-3H	4120-3HN
M3.5	0.6	4120-3D5	4120-3D5N	4120-3D5E	4120-3D5EN	4120-3D5H	4120-3D5HN
M4	0.7	4120-4	4120-4N	4120-4E	4120-4EN	4120-4H	4120-4HN
M4.5	0.75	4120-4D5	4120-4D5N	4120-4D5E	4120-4D5EN	4120-4D5H	4120-4D5HN
M5	0.8	4120-5	4120-5N	4120-5E	4120-5EN	4120-5H	4120-5HN
M6	1	4120-6	4120-6N	4120-6E	4120-6EN	4120-6H	4120-6HN
M7	1	4120-7	4120-7N	4120-7E	4120-7EN	4120-7H	4120-7HN
M8	1.25	4120-8	4120-8N	4120-8E	4120-8EN	4120-8H	4120-8HN
M9	1.25	4120-9	4120-9N	4120-9E	4120-9EN	4120-9H	4120-9HN
M10	1.5	4120-10	4120-10N	4120-10E	4120-10EN	4120-10H	4120-10HN
M11	1.5	4120-11	4120-11N	4120-11E	4120-11EN	4120-11H	4120-11HN
M12	1.75	4120-12	4120-12N	4120-12E	4120-12EN	4120-12H	4120-12HN
M14	2	4120-14	4120-14N	4120-14E	4120-14EN	4120-14H	4120-14HN
M16	2	4120-16	4120-16N	4120-16E	4120-16EN	4120-16H	4120-16HN
M18	2.5	4120-18	4120-18N	4120-18E	4120-18EN	4120-18H	4120-18HN
M20	2.5	4120-20	4120-20N	4120-20E	4120-20EN	4120-20H	4120-20HN
M22	2.5	4120-22	4120-22N	4120-22E	4120-22EN	4120-22H	4120-22HN
M24	3	4120-24	4120-24N	4120-24E	4120-24EN	4120-24H	4120-24HN
M27	3	4120-27	4120-27N	4120-27E	4120-27EN	4120-27H	4120-27HN
M30	3.5	4120-30	4120-30N	4120-30E	4120-30EN	4120-30H	4120-30HN
M33	3.5	4120-33	4120-33N	4120-33E	4120-33EN	4120-33H	4120-33HN
M36	4	4120-36	4120-36N	4120-36E	4120-36EN	4120-36H	4120-36HN
M39	4	4120-39	4120-39N	4120-39E	4120-39EN	4120-39H	4120-39HN
M42	4.5	4120-42	4120-42N	–	–	4120-42H	4120-42HN
M45	4.5	4120-45	4120-45N	–	–	4120-45H	4120-45HN
M48	5	4120-48	4120-48N	–	–	4120-48H	4120-48HN
M52	5	4120-52	4120-52N	–	–	4120-52H	4120-52HN
M56	5.5	4120-56	4120-56N	–	–	–	–
M60	5.5	4120-60	4120-60N	–	–	–	–

Go ring gauge set (class 6g)

Part No.	Thread ring gauges included (mm)
4120-S7	M3x0.5 (**4120-3**), M4x0.7 (**4120-4**), M5x0.8 (**4120-5**), M6x1 (**4120-6**), M8x1.25 (**4120-8**), M10x1.5 (**4120-10**), M12x1.75 (**4120-12**)

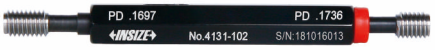
No Go ring gauge set (class 6g)

Part No.	Thread ring gauges included (mm)
4120-S7N	M3x0.5 (**4120-3N**), M4x0.7 (**4120-4N**), M5x0.8 (**4120-5N**), M6x1 (**4120-6N**), M8x1.25 (**4120-8N**), M10x1.5 (**4120-10N**), M12x1.75 (**4120-12N**)

AMERICAN STANDARD THREAD PLUG GAUGES

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

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



4131-102

Part No. example:
"**-9D1**" stands for "**4131-9D1**"

INSPECTION CERTIFICATE

Size	Part No. (4131)		Size	Part No. (4131)		Size	Part No. (4131)		Size	Part No. (4131)	
	Class 2B	Class 3B		Class 2B	Class 3B		Class 2B	Class 3B		Class 2B	Class 3B
No. 0-80UNF	-02	-02B	No. 12-28UNF	-122	122B	9/16-12UNC	-9D1	-9D1B	1-8UNC	-2A1	-2A1B
No. 1-64UNC	-11	-11B	No. 12-32UNEF	-123	-	9/16-18UNF	-9D2	-9D2B	1-12UNF	-2A2	-2A2B
No. 1-72UNF	-12	-12B	1/4-20UNC	-1B1	-1B1B	9/16-24UNEF	-9D3	-9D3B	1-14UNS	-2A514	-
No. 2-56UNC	-21	-21B	1/4-28UNF	-1B2	-1B2B	5/8-11UNC	-5C1	-5C1B	1-20UNEF	-2A3	-
No. 2-64UNF	-22	-22B	1/4-32UNEF	-1B3	-	5/8-18UNF	-5C2	-5C2B	1-32UN	-2A532	-2A532B
No. 3-48UNC	-31	-31B	1/4-36UNS	-1B4	-	5/8-24UNEF	-5C3	-5C3B	1 1/16-12UN	-1E512	-
No. 3-56UNF	-32	-32B	5/16-18UNC	-5D1	-5D1B	11/16-16UN	-11D516	-	1 1/16-18UNEF	-1E3	-
No. 4-40UNC	-41	-41B	5/16-24UNF	-5D2	-5D2B	11/16-24UNEF	-11D3	-	1 1/8-7UNC	-1F1	-1F1B
No. 4-48UNF	-42	-42B	5/16-32UNEF	-5D3	-5D3B	3/4-10UNC	-3B1	-3B1B	1 1/8-8UN	-1F58	-1F58B
No. 5-40UNC	-51	-51B	3/8-16UNC	-3C1	-3C1B	3/4-16UNF	-3B2	-3B2B	1 1/8-12UNF	-1F2	-1F2B
No. 5-44UNF	-52	-52B	3/8-24UNF	-3C2	-3C2B	3/4-20UNEF	-3B3	-3B3B	1 1/8-18UNEF	-1F3	-
No. 6-32UNC	-61	-61B	3/8-32UNEF	-3C3	-	13/16-16UN	-13D516	-	1 3/16-12UN	-3E512	-
No. 6-40UNF	-62	-62B	7/16-14UNC	-7D1	-7D1B	13/16-20UNEF	-13D3	-	1 3/16-18UNEF	-3E3	-
No. 8-32UNC	-81	-81B	7/16-20UNF	-7D2	-7D2B	7/8-9UNC	-7C1	-7C1B	1 1/4-7UNC	-1G1	-
No. 8-36UNF	-82	-82B	7/16-28UNEF	-7D3	-	7/8-14UNF	-7C2	-7C2B	1 1/4-8UN	-1G58	-1G58B
No. 10-24UNC	-101	-101B	1/2-13UNC	-1A1	-1A1B	7/8-16UN	-7C516	-	1 1/4-12UNF	-1G2	-1G2B
No. 10-32UNF	-102	-102B	1/2-20UNF	-1A2	-1A2B	7/8-20UNEF	-7C3	-7C3B	1 1/4-18UNEF	-1G3	-
No. 12-24UNC	-121	-121B	1/2-28UNEF	-1A3	-	15/16-20UNEF	-15D3	-	1 5/16-12UN	-5E512	-

AMERICAN STANDARD THREAD RING GAUGES

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

INSPECTION CERTIFICATE

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

front back

4121-1B1

front back

4121-1B1N

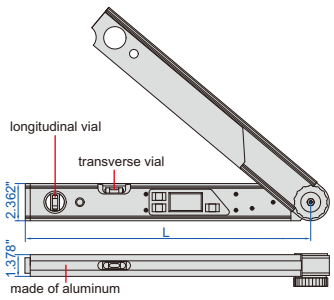
Size	Part No.		Size	Part No.		Size	Part No.	
	GO	NOGO		GO	NOGO		GO	NOGO
No. 4-40UNC	4121-41	4121-41N	3/8-32UNEF	4121-3C3	4121-3C3N	7/8-16UN	4121-7C516	4121-7C516N
No. 4-48UNF	4121-42	4121-42N	7/16-14UNC	4121-7D1	4121-7D1N	7/8-20UNEF	4121-7C3	4121-7C3N
No. 5-40UNC	4121-51	4121-51N	7/16-20UNF	4121-7D2	4121-7D2N	15/16-20UNEF	4121-15D3	4121-15D3N
No. 5-44UNF	4121-52	4121-52N	7/16-28UNEF	4121-7D3	4121-7D3N	1-8UNC	4121-2A1	4121-2A1N
No. 6-32UNC	4121-61	4121-61N	1/2-13UNC	4121-1A1	4121-1A1N	1-12UNF	4121-2A2	4121-2A2N
No. 6-40UNF	4121-62	4121-62N	1/2-20UNF	4121-1A2	4121-1A2N	1-14UNS	4121-2A514	4121-2A514N
No. 8-32UNC	4121-81	4121-81N	1/2-28UNEF	4121-1A3	4121-1A3N	1-20UNEF	4121-2A3	4121-2A3N
No. 8-36UNF	4121-82	4121-82N	9/16-12UNC	4121-9D1	4121-9D1N	1-32UN	4121-2A532	4121-2A532N
No. 10-24UNC	4121-101	4121-101N	9/16-18UNF	4121-9D2	4121-9D2N	1 1/16-12UN	4121-1E512	4121-1E512N
No. 10-32UNF	4121-102	4121-102N	9/16-24UNEF	4121-9D3	4121-9D3N	1 1/16-18UNEF	4121-1E3	4121-1E3N
No. 12-24UNC	4121-121	4121-121N	5/8-11UNC	4121-5C1	4121-5C1N	1 1/8-7UNC	4121-1F1	4121-1F1N
No. 12-28UNF	4121-122	4121-122N	5/8-18UNF	4121-5C2	4121-5C2N	1 1/8-8UN	4121-1F58	4121-1F58N
No. 12-32UNEF	4121-123	4121-123N	5/8-24UNEF	4121-5C3	4121-5C3N	1 1/8-12UNF	4121-1F2	4121-1F2N
1/4-20UNC	4121-1B1	4121-1B1N	11/16-16UN	4121-11D516	4121-11D516N	1 1/8-18UNEF	4121-1F3	4121-1F3N
1/4-28UNF	4121-1B2	4121-1B2N	11/16-24UNEF	4121-11D3	4121-11D3N	1 3/16-12UN	4121-3E512	4121-3E512N
1/4-32UNEF	4121-1B3	4121-1B3N	3/4-10UNC	4121-3B1	4121-3B1N	1 3/16-18UNEF	4121-3E3	4121-3E3N
1/4-36UNS	4121-1B4	4121-1B4N	3/4-16UNF	4121-3B2	4121-3B2N	1 1/4-7UNC	4121-1G1	4121-1G1N
5/16-18UNC	4121-5D1	4121-5D1N	3/4-20UNEF	4121-3B3	4121-3B3N	1 1/4-8UN	4121-1G58	4121-1G58N
5/16-24UNF	4121-5D2	4121-5D2N	13/16-16UN	4121-13D516	4121-13D516N	1 1/4-12UNF	4121-1G2	4121-1G2N
5/16-32UNEF	4121-5D3	4121-5D3N	13/16-20UNEF	4121-13D3	4121-13D3N	1 1/4-18UNEF	4121-1G3	4121-1G3N
3/8-16UNC	4121-3C1	4121-3C1N	7/8-9UNC	4121-7C1	4121-7C1N	1 5/16-12UN	4121-5E512	4121-5E512N
3/8-24UNF	4121-3C2	4121-3C2N	7/8-14UNF	4121-7C2	4121-7C2N			

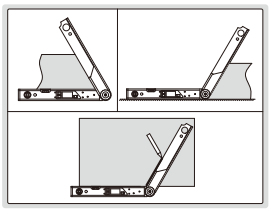
WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

AUTOMATIC BACKLIGHT | ABSOLUTE LEVEL

IP54 WATERPROOF

2174-225

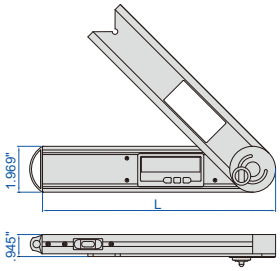




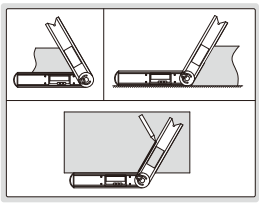
- Suitable for setting horizontal and vertical mitre angles of cutting machine
- Buttons: ON/OFF, HOLD/SUP, SPR/CNR/MTR/BVL
- IP54 dust/waterproof
- With transverse and longitudinal vials
- 2xAAA batteries
- Absolute level, zero setting is not needed when batteries are replaced
- Backlight turns off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

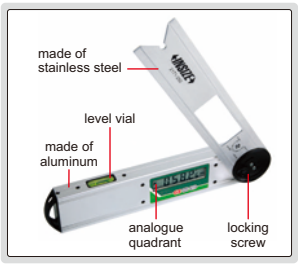
Part No.	Size (L)	Range	Resolution	Accuracy
2174-225	18.11"	0-225°	0.05°	±0.10°

DIGITAL PROTRACTOR



2171-250





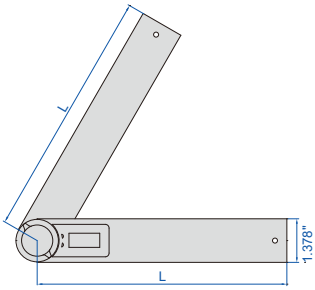
- Buttons: on/off, hold (keep the reading), zero, ABS (absolute and incremental measurement)
- Fix the locking screw at 4 positions for different measuring ranges: 0°~225°, -225°~0°, -45°~180°, -180°~45°
- Remove the locking screw for 360° range
- With level vial
- Battery CR2032, automatic power off

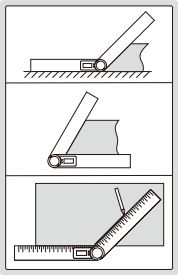
Part No.	Size (L)	Range	Resolution	Accuracy
2171-250	10"	0-360°	0.05°	±0.15°

DIGITAL PROTRACTORS

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

2176-200

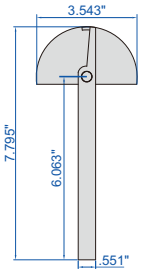




Part No.	Size (L)	Range	Accuracy
2176-200	8"	0-360°	±0.3°
2176-300	12"	0-360°	±0.3°

PROTRACTOR (ECONOMIC TYPE)

4780-85A

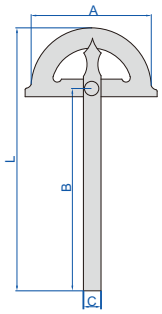


- Made of stainless steel
- With clamping screw

Part No.	Size	Range	Graduation	Accuracy
4780-85A	3.543x6.063"	0-180°	1°	±0.5°

PROTRACTORS

4799-180



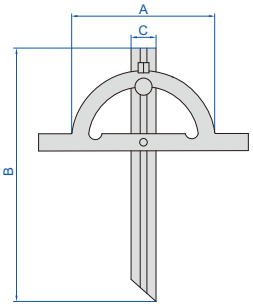
- Graduation 1°
- Made of stainless steel
- Satin chrome plated scale
- With clamping screw

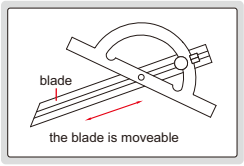
Part No.	Size (AxB)	Range	Accuracy	L	C
4799-180	3.1x4.7"	0-180°	±0.3°	6.614"	.433"
4799-1120	4.7x5.9"	0-180°	±0.3°	8.661"	.551"
4799-1150	5.9x7.9"	0-180°	±0.3°	11.220"	.630"
4799-1200	7.9x11.8"	0-180°	±0.3°	16.260"	.787"

PROTRACTOR

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

4797-100



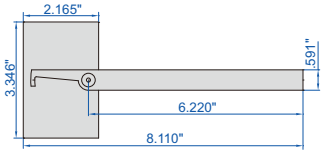


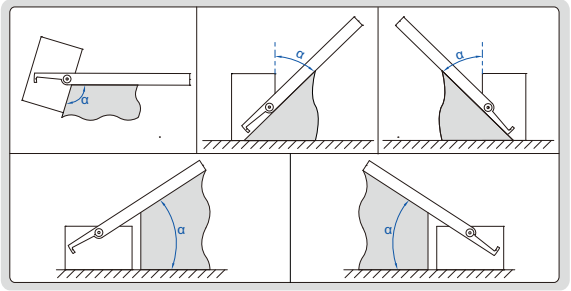
Part No.	Size (AxB)	Range	Accuracy	C
4797-100	3.9x5.9"	10-170°	±0.3°	.709"

PROTRACTOR

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

4781-85A



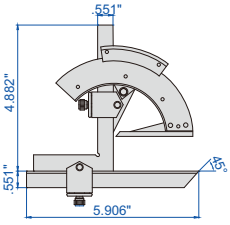


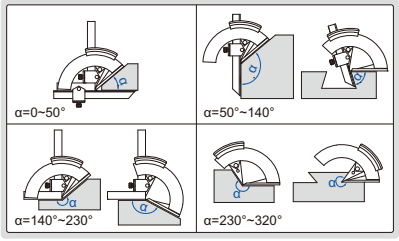
Part No.	Size	Range	Graduation	Accuracy
4781-85A	3.346x6.220"	0-180°	1°	±0.3°

PROTRACTOR

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

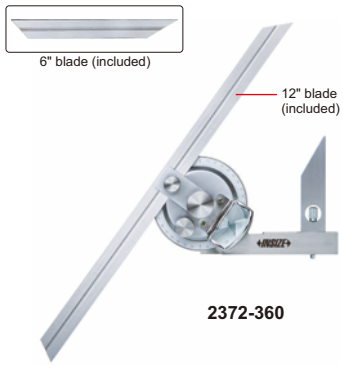
2374-320



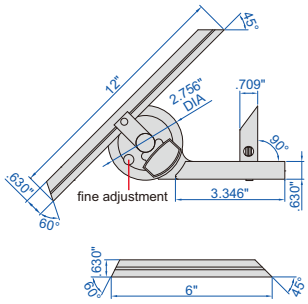


Part No.	Range	Accuracy
2374-320	0-320°	±2'

UNIVERSAL PROTRACTOR

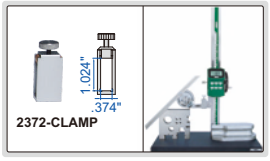


2372-360



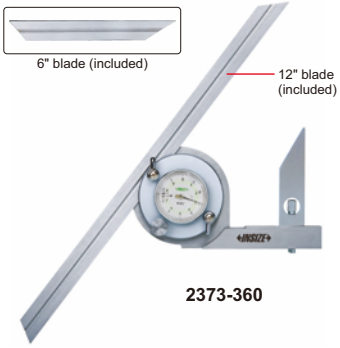
- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (part no. **2372-CLAMP**), suitable for height gauges **1156**, **1150-300**, **1351**, **1250** and **1151**

clamp for height gauges (**optional**)

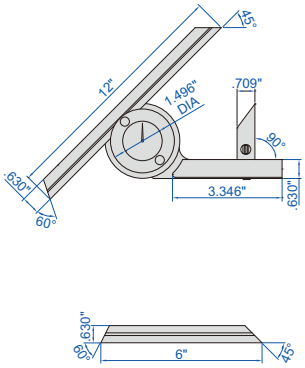


Part No.	Range	Graduation	Accuracy
2372-360	0-360°	5'	±5'

DIAL PROTRACTOR

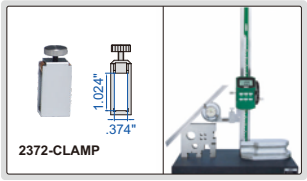


2373-360



- Made of stainless steel
- Optional accessory: clamp (part no. **2372-CLAMP**), suitable for height gauges **1156**, **1150-300**, **1351**, **1250** and **1151**

clamp for height gauges (**optional**)



Part No.	Range	Graduation	Accuracy
2373-360	0-360°	5'	±5'

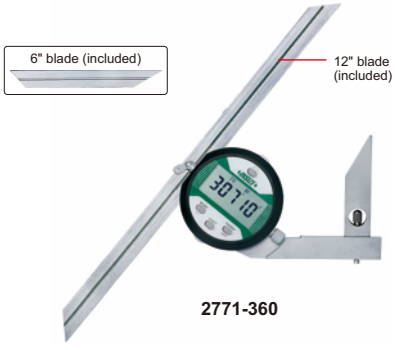
DIGITAL PROTRACTOR

POPULAR MODEL

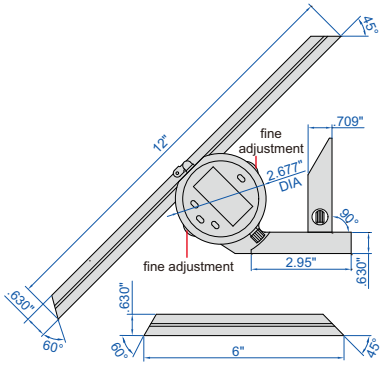
ABSOLUTE ZERO

DATA OUTPUT

- Absolute zero, zero setting is not needed when batteries are replaced
- Button function: choose 0~90°, 0-180° or 0-360° display, change resolution, display flips over, data hold, zero, on/off, supplementary angle measurement
- Battery CR2032, automatic power off, data output
- Made of stainless steel
- Optional square for zero setting
- Optional accessory: clamp (part no. **2372-CLAMP**), suitable for height gauges **1156**, **1150-300**, **1351**, **1250** and **1151**, data output cable (part no. **7315-2771** recriver is needed, **7302-50M**)



2771-360

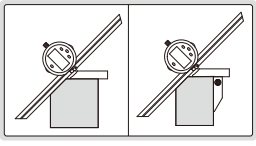


Part No.	Range	Resolution	Accuracy
2771-360	0-360°	1'/0.01°	±5'

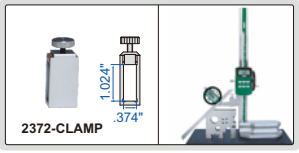
Square (for zero setting, optional)

Part No.
2771-S90

square (**optional**)

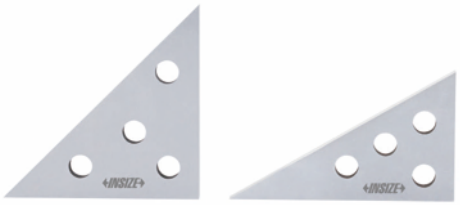


clamp for height gauges (**optional**)

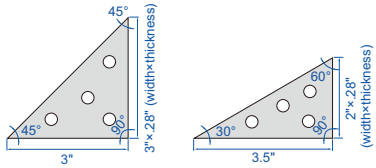


ANGLE BLOCK SET

- For angle set-up in tooling, production and inspection
- Accuracy of angle: ±9 seconds
- Made of alloy steel
- Hardness HRC60±2



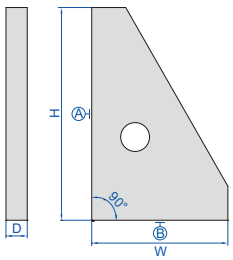
6540-1



Part No.	Angle plates included	Angle
6540-1	2	45°, 45°, 90°
		30°, 60°, 90°

GRANITE SQUARES

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



4141-250

Part No.	Size (HxW)	Flatness of A	Flatness of B	Squareness of A to B	D
4141-250	9.8x6.3"	39µin	39µin	79µin	.984"
4141-400	15.7x9.8"	59µin	39µin	118µin	1.575"
4141-630	24.8x15.7"	79µin	59µin	157µin	2.480"

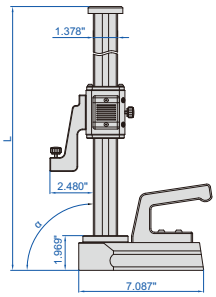
PERPENDICULARITY TESTERS

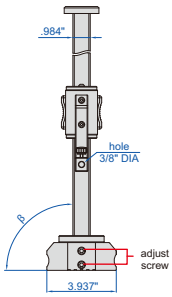
VIDEO

- Optional accessory: dial test indicators (graduation .0001")

dial test indicator is optional

4770-300E



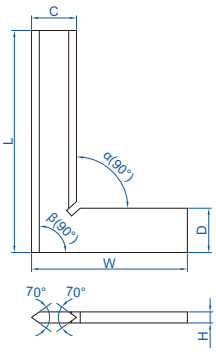


Part No.	Range (H)	Perpendicularity (α)	Side perpendicularity (β)	L
4770-300E	0-12"	.00012"	.00040"	18.110"
4770-600E	0-24"	.00020"	.00080"	29.921"

90° BEVELED EDGE SQUARES

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

4790-0100



DIN875 grade 00

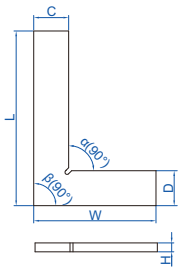
Part No.	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-050	2.0x1.6"	.00009"	.00010"	.512"	.512"	.157"
4790-075	3.0x2.0"	.00010"	.00011"	.591"	.591"	.157"
4790-0100	3.9x2.8"	.00011"	.00012"	.787"	.787"	.197"
4790-0150	5.9x3.9"	.00013"	.00014"	1.181"	1.181"	.236"
4790-0200	7.9x5.1"	.00015"	.00016"	1.339"	1.339"	.276"
4790-0250	9.8x6.5"	.00017"	.00018"	1.378"	1.378"	.276"
4790-0300	11.8x7.9"	.00018"	.00020"	1.575"	1.575"	.315"

DIN875 grade 0

Part No.	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-1000	3.9x2.8"	.00028"	.00028"	.787"	.787"	.197"
4790-1500	5.9x3.9"	.00028"	.00032"	1.181"	1.181"	.236"
4790-2000	7.9x5.1"	.00032"	.00036"	1.339"	1.339"	.276"
4790-2500	9.8x6.5"	.00036"	.00040"	1.378"	1.378"	.276"

90° FLAT EDGE SQUARES

4791-100



- Made of hardened stainless steel

DIN875 grade 1

Part No.	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-501	2.0x1.6"	.00047"	.00051"	.591"	.591"	.157"
4791-751	3.0x2.0"	.00051"	.00056"	.591"	.591"	.157"
4791-1001	3.9x2.8"	.00056"	.00060"	.787"	.787"	.197"
4791-1501	5.9x3.9"	.00063"	.00071"	1.181"	1.181"	.236"
4791-2001	7.9x5.1"	.00075"	.00079"	1.181"	1.181"	.236"
4791-2501	9.8x6.5"	.00083"	.00091"	1.378"	1.378"	.276"
4791-3001	11.8x7.9"	.00091"	.00099"	1.575"	1.575"	.315"

DIN875 grade 0

Part No.	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-50	2.0x1.6"	.00024"	.00024"	.591"	.591"	.157"
4791-75	3.0x2.0"	.00024"	.00028"	.591"	.591"	.157"
4791-100	3.9x2.8"	.00028"	.00028"	.787"	.787"	.197"
4791-150	5.9x3.9"	.00028"	.00032"	1.181"	1.181"	.236"
4791-200	7.9x5.1"	.00032"	.00035"	1.181"	1.181"	.276"
4791-250	9.8x6.5"	.00035"	.00040"	1.378"	1.378"	.276"
4791-300	11.8x7.9"	.00040"	.00043"	1.575"	1.575"	.315"

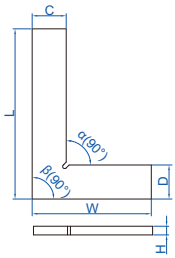
DIN875 grade 2

Part No.	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-502	2.0x1.6"	.00095"	.00098"	.591"	.591"	.157"
4791-752	3.0x2.0"	.00102"	.00110"	.591"	.591"	.157"
4791-1002	3.9x2.8"	.00110"	.00118"	.787"	.787"	.197"
4791-1502	5.9x3.9"	.00130"	.00138"	1.181"	1.181"	.236"
4791-2002	7.9x5.1"	.00150"	.00157"	1.181"	1.181"	.236"
4791-2502	9.8x6.5"	.00170"	.00177"	1.378"	1.378"	.276"
4791-3002	11.8x7.9"	.00185"	.00197"	1.575"	1.575"	.315"

MACHINIST SQUARES (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND

4796-150



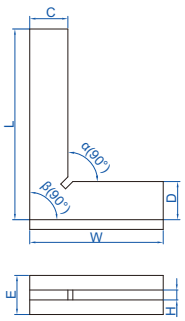
- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend

Part No.	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4796-50	2x1.2"	. 00095"	. 00098"	. 472"	. 472"	. 118"
4796-75	3x2"	.00102"	.00110"	.630"	.630"	.118"
4796-100	4x2.8"	.00110"	.00118"	.748"	.748"	.197"
4796-125	5x3.2"	.00118"	.00130"	.866"	.866"	.197"
4796-150	6x4"	.00130"	.00138"	.984"	.984"	.236"
4796-200	8x5.2"	.00150"	.00157"	.984"	.984"	.236"
4796-250	10x6.6"	.00170"	.00177"	.984"	.984"	.236"
4796-300	12x8"	.00185"	.00197"	1.181"	1.181"	.236"
4796-350	14x8"	.00200"	.00217"	1.496"	1.496"	.236"
4796-400	16x8"	.00220"	.00236"	1.496"	1.496"	.354"
4796-450	18x10"	.00228"	.00256"	1.496"	1.496"	.354"
4796-500	20x12"	.00272"	.00276"	1.496"	1.496"	.354"

90° FLAT EDGE SQUARES WITH WIDE BASE

- Made of hardened stainless steel

4793-100



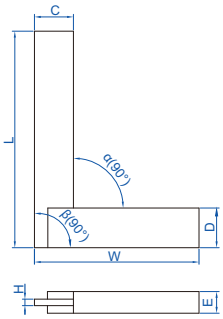
DIN875 grade 0

Part No.	Size (L×W)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4793-50	2.0×1.6"	.00024"	.00024"	.591"	.591"	.157"	.512"
4793-75	3.0×2.0"	.00024"	.00028"	.591"	.591"	.157"	.591"
4793-100	3.9×2.8"	.00028"	.00028"	.787"	.787"	.197"	.787"

90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

4792-100



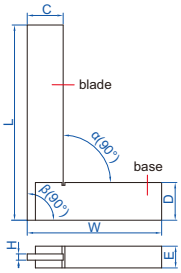
Part No.	Size (L×W)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4792-100	3.9×2.8"	.00024"	00024"	.709"	.709"	.118"	.394"
4792-150	5.9×3.9"	.00032"	.00032"	.866"	.866"	.157"	.472"
4792-200	7.9×5.1"	.00032"	.00032"	.984"	.984"	.157"	.472"

MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDENED

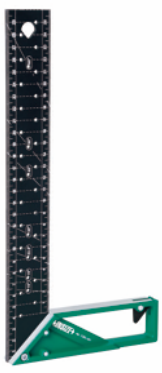
- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardened

4707-100

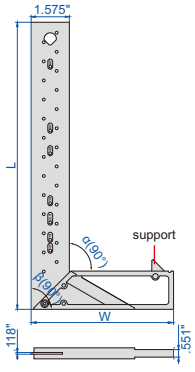


Part No.	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4707-50	2.0×1.6"	.00094"	.00098"	.630"	.472"	.118"	.354"
4707-75	3.0x2.0"	.00102"	.00110"	.630"	.630"	.118"	.354"
4707-100	3.9x2.8"	.00110"	.00118"	.748"	.748"	.118"	.472"
4707-150	6x4"	.00130"	.00138"	.984"	.984"	.118"	.630"
4707-200	8x5"	.00146"	.00158"	1.181"	1.260"	.157"	.630"
4707-250	10x6"	.00165"	.00177"	1.181"	1.260"	.157"	.748"
4707-300	12x8"	.00185"	.00197"	1.260"	1.260"	.157"	.748"
4707-400	16x10"	.00221"	.00236"	1.496"	1.496"	.197"	.866"
4707-500	20x12"	.00256"	.00276"	1.772"	1.969"	.236"	.984"
4707-600	24x14"	.00295"	.00315"	1.969"	1.969"	.236"	1.181"

TRY SQUARE



2280-300



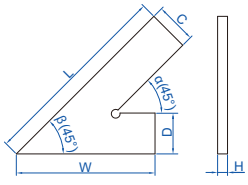
- Graduation: 1mm
- Aluminum blade and base
- 4 milled surfaces
- Retractable metal ledge support
- Etchings and holes for beveling and framing: 10°, 15°, 22.5°, 30°, 45°, 50° and 60°
- Etchings and holes every cm for fluid pencil marking

Part No.	Size (LxW)	Squareness	
		Inside (α)	Outside (β)
2280-300	11.8x5.9"	.020"	.020"

45° SQUARE

- Made of hardened stainless steel

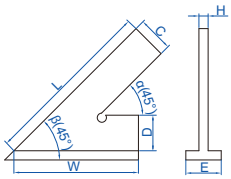
4745-1120



Part No.	Size (L×W)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4745-1120	4.7×3.1"	.00114"	.00126"	.787"	.787"	.197"

45° SQUARES WITH WIDE BASE

4747-150



- Made of hardened stainless steel

Part No.	Size (L×W)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4747-120	4.7×3.1"	.00114"	.00130"	.787"	.787"	.197"	.787"
4747-150	5.9×3.9"	.00126"	.00142"	.787"	.787"	.197"	.787"
4747-200	7.9×5.1"	.00148"	.00161"	.984"	.984"	.197"	.984"

STRAIGHT EDGES

4700-100

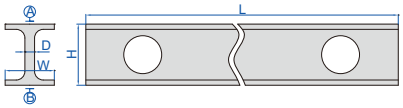
- DIN874
- Satin chrome plating
- Beveled edge
- Made of hardened stainless steel

Part No.	Size (L)	Straightness	W	H
4700-75	3.0"	.00009"	.197"	.984"
4700-100	3.9"	.00009"	.197"	.984"
4700-125	4.9"	.00010"	.236"	1.181"
4700-150	5.9"	.00010"	.236"	1.181"
4700-200	7.9"	.00011"	.236"	1.181"
4700-250	9.8"	.00012"	.315"	1.575"
4700-300	11.8"	.00013"	.315"	1.575"

MAGNALIUM STRAIGHT EDGES

LIGHT WEIGHT

4180-1500



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

Part No.	Length (L)	Flatness of A and B	Parallelism between A and B	H	W	D	Weight (lb)
4180-500	20"	.00012"	.00016"	2.362"	1.181"	.197"	2.20
4180-1000	40"	.00020"	.00032"	2.362"	1.181"	.197"	3.31
4180-1500	60"	.00060"	.00087"	3.937"	1.575"	.276"	9.92
4180-2000	80"	.00071"	.00106"	3.937"	1.575"	.276"	13.23
4180-2500	100"	.00087"	.00130"	3.937"	1.575"	.276"	16.53
4180-3000	120"	.00189"	.00284"	5.906"	1.150"	.315"	46.30

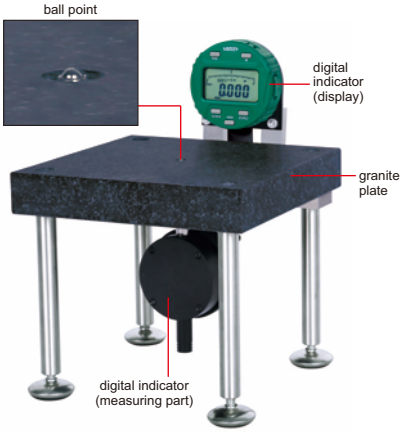
FLATNESS MEASUREMENT STAND

GRANITE PLATE CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

DATA OUTPUT

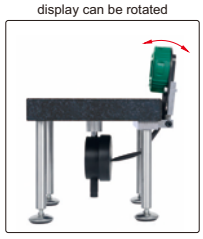
VIDEO

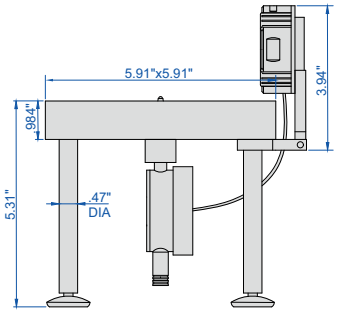
application



6852-150

display can be rotated

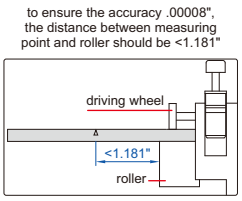


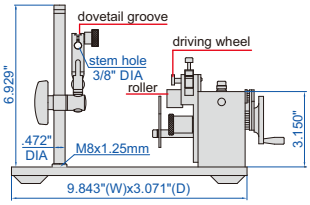


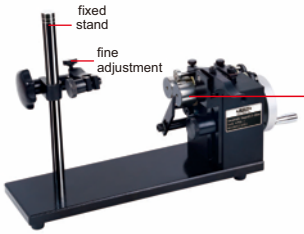
- Optional accessory: data output cable
  (part no. **7315-50M** receiver is needed, **7302-40M**, **7305-40M**)

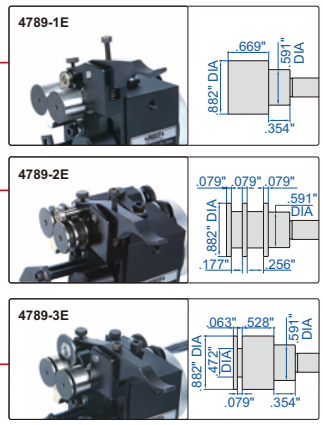
Part No.	Digital indicator resolution	Flatness measurement accuracy	Flatness of granite plate
6852-150	.00005"/0.001mm	79μin	79μin

CONCENTRICITY GAUGES









- Optional accessory: dial test indicator

Part No.	Applicable diameter	Remark
4789-1E	.138" DIA~.984" DIA	fixed stand, high accuracy, inconvenient operation
4789-2E	.039" DIA~.984" DIA	fixed stand, high accuracy, inconvenient operation
4789-3E	.039" DIA~.984" DIA	fixed stand, high accuracy, inconvenient operation

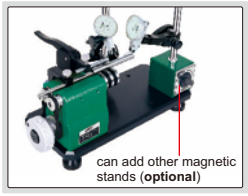
VIDEO

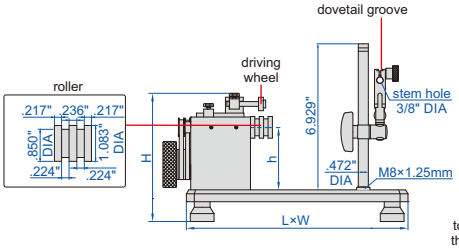
CONCENTRICITY GAUGE

HIGH STABILITY, LONG WORKING LIFE

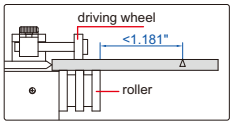
dial test indicator is optional

4725-45E





VIDEO



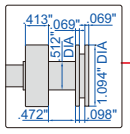
- With ball bearing, high stability, long working life
- Diameter range .118~1.772"
- Accuracy .00008"
- Optional accessory: dial test indicator

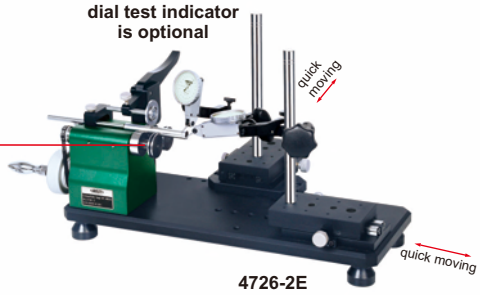
Part No.	Center height (h)	LxWxH	Weight
4725-45E	3.150"	11.024x5.906x6.693"	13.23lb

CONCENTRICITY GAUGE

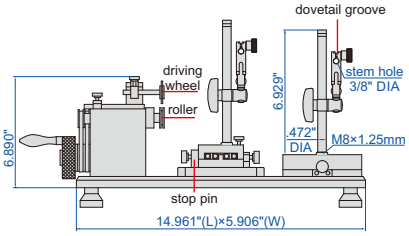
QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT

dial test indicator is optional



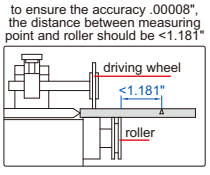


4726-2E



VIDEO

- With ball bearing, high stability, long working life
- Accuracy .00008"
- Optional accessory: dial test indicator



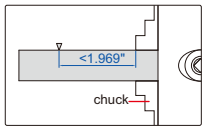
Part No.	Applicable diameter
4726-2E	.079" DIA~1.575" DIA

CONCENTRICITY GAUGE

VIDEO

for cylinder

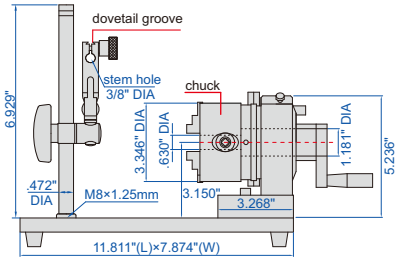
for tube



- Accuracy .00012"
- 1.969" DIA setting ring and
  2.165" DIA calibration cylinder are included
- Optional accessory: dial test indicator

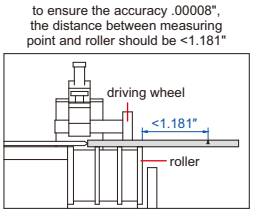
Part No.	Applicable inside diameter	Applicable outside diameter
4786-1E	.945" DIA~2.520" DIA	.079" DIA~2.756" DIA

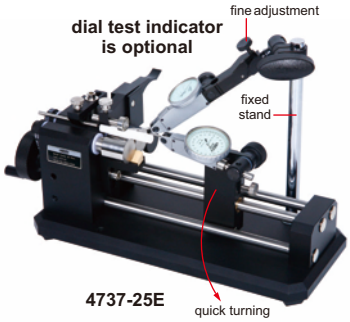
4786-1E



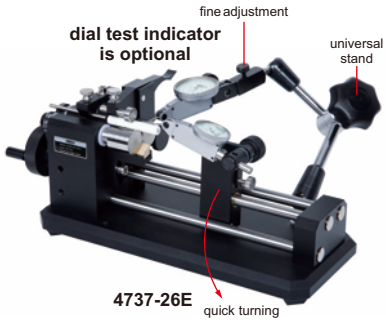
QUICK POSITIONING CONCENTRICITY GAUGES

QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT





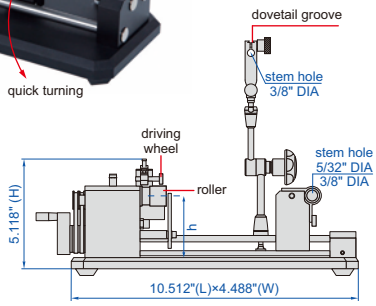
4737-25E



4737-26E

- Accuracy .00008"
- Quick positioning, suitable for mass measurement
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators

Part No.	Diameter range	Workpiece length	Center height (h)	L×W×H	Weight	Remark
4737-25E	.118"-.981"	.591"-3.937"	2.756"	10.512"×4.488"×5.118"	6lb	fixed stand, high accuracy, inconvenient operation
4737-26E	.118"-.981"	.591"-3.937"	2.756"	10.512"×4.488"×5.118"	6lb	universal stand, low accuracy, convenient operation



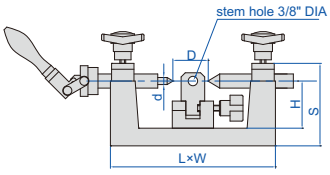
4737-26E

MINI BENCH CENTER

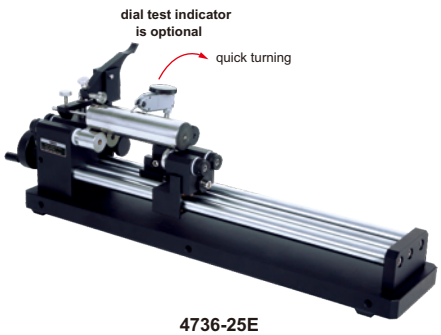
- Distance between two centers (D): 1.378"~3.937"
- Diameter of center (d) .236" DIA
- Taper of center: MT1

Part No.	Runout accuracy	Center height (H)	Size (LxWxS)	Weight	Load
4721-75AE	.00008"	1.575"	6.890x4.685x2.756"	9.93lb	8.8lb

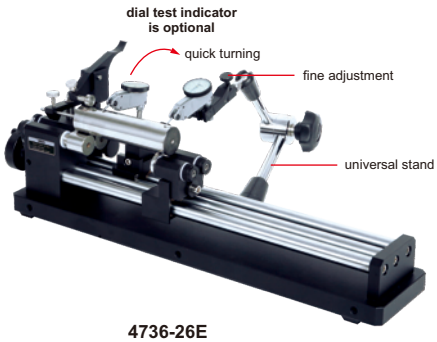
4721-75AE



CONCENTRICITY GAUGES

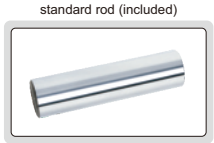


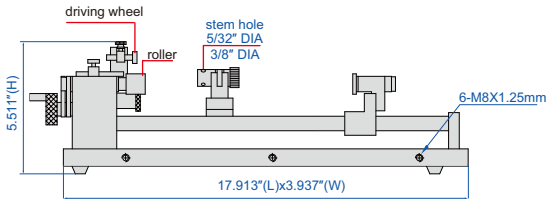
4736-25E



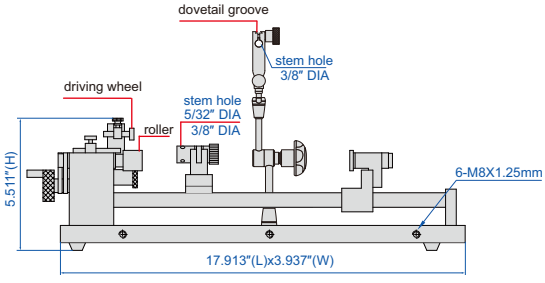
4736-26E

- Quick positioning, suitable for mass measurement
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators





4736-25E

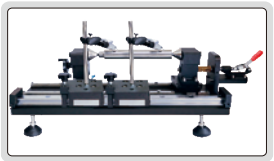


4736-26E

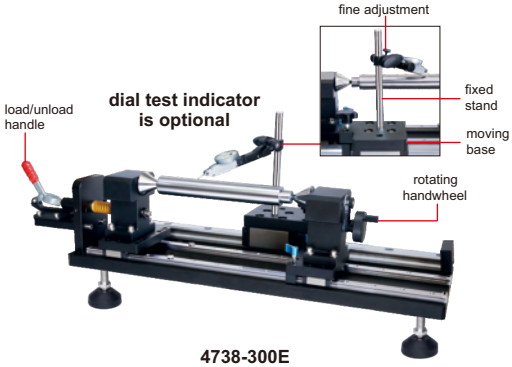
Part No.	Diameter range	Workpiece length	Accuracy	L×W×H	Weight	Remark
4736-25E	.118"- .981"	.591"-12.007"	.00008"	17.913"×3.937"×5.511"	13lb	without universal stand
4736-26E	.118"- .981"	.591"-12.007"	.00008"	17.913"×3.937"×5.511"	14lb	with universal stand

BENCH CENTERS

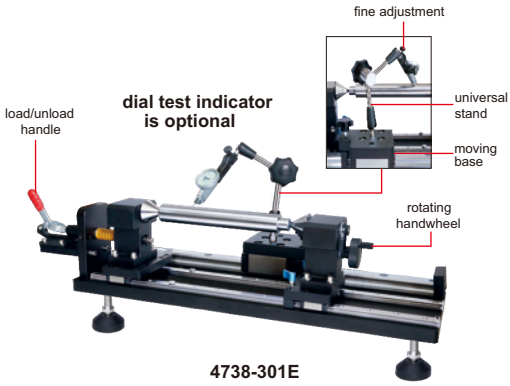
dual base (**optional**)



standard rod (included)



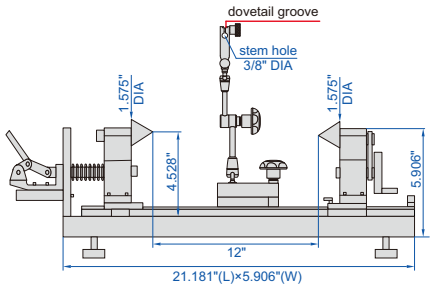
4738-300E



4738-301E

- Quick positioning, suitable for mass measurement
- Suitable for cylinders with outside diameter .118"~7.087" or inside diameter .039"~1.575"
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators

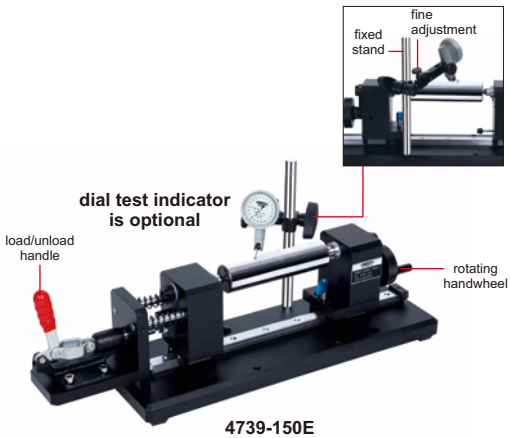
Part No.	Center height	Distance between two centers	Runout accuracy	Weight	Load	Remark
4738-300E	3.543"	12"	.00008"	33lb	44lb	fixed stand, high accuracy, inconvenient operation
4738-301E	3.543"	12"	.00008"	33lb	44lb	universal stand, low accuracy, convenient operation



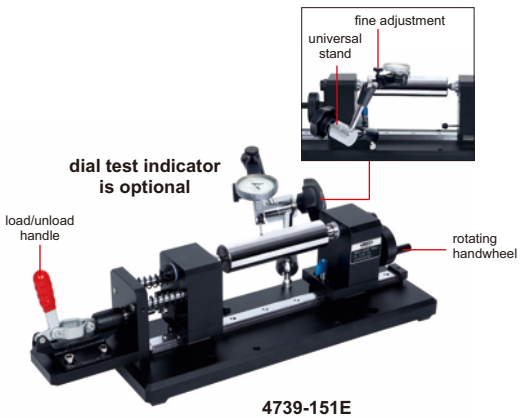
4738-301E

BENCH CENTERS

POPULAR MODEL



4739-150E

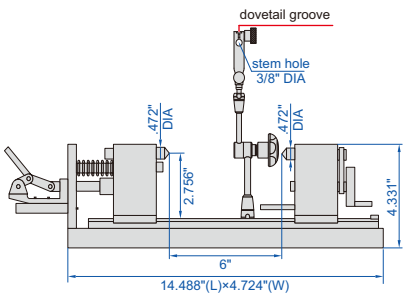


4739-151E

standard rod (included)

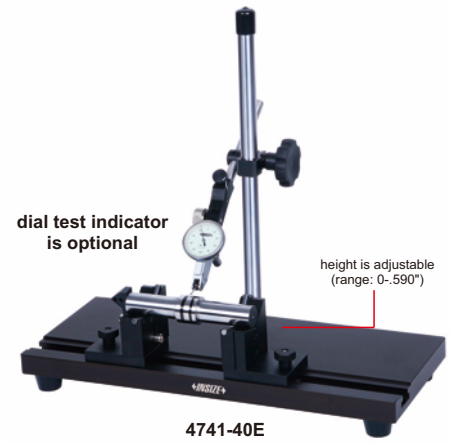
- Quick positioning, suitable for mass measurement
- Suitable for cylinders with outside diameter .118"~5.512" or inside diameter .039"~.472"
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators

Part No.	Center height	Distance between two centers	Runout accuracy	Weight	Load	Remark
4739-150E	2.756"	6"	.00008"	14lb	33lb	fixed stand, high accuracy, inconvenient operation
4739-151E	2.756"	6"	.00008"	14lb	33lb	universal stand, low accuracy, convenient operation

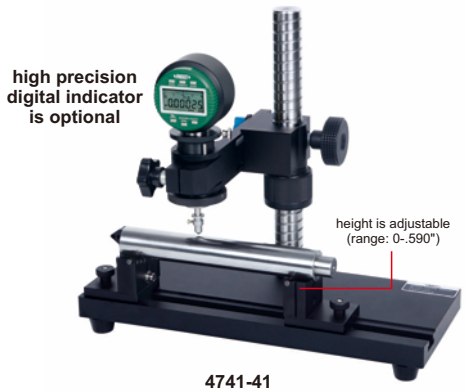


4739-151E

BENCH CENTERS

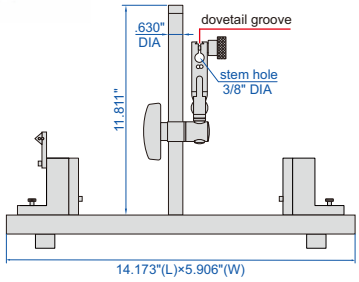


4741-40E

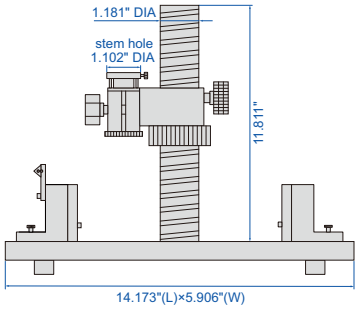


4741-41

- Quick positioning, suitable for mass measurement
- **4741-40** Optional accessory: dial test indicators (part no. **2880-02**, **2880-02R**)
- **4741-41** Optional accessory: high precision digital indicators (part no. **2140-6**, **2140-6WL**)



4741-40E



4741-41

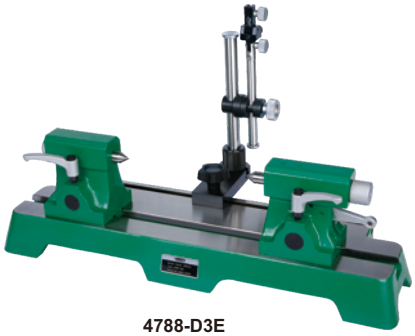
Part No.	Stem hole	Diameter range	Workpiece length	Accuracy
4741-40E	3/8" DIA	.39"~1.575" DIA	.6"~12" DIA	.00008"
4741-41	1.102" DIA	.118"~1.575" DIA	.6"~12" DIA	.00008"

BENCH CENTERS

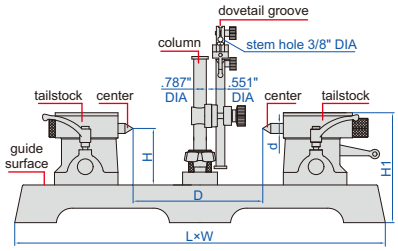
umbrella center (**optional**)

rotary center (**optional**)

- Movable column
- Optional accessory: umbrella center, rotary center



4788-D3E



Part No.	Parallelism*	Runout accuracy	Center height (H)	Distance between two centers (D)	L	W	H1	Diameter of center (d)	Taper of center	Weight	Load
4788-D3E	.0004"	.00012"	3.543"	11.811"	23.228"	7.677"	6.890"	.787" DIA	MT2	79.4lb	55lb
4788-D4E	.0005"	.00012"	5.118"	15.748"	28.740"	8.071"	9.488"	1.102" DIA	MT3	150lb	132lb
4788-D6E	.0006"	.00012"	5.118"	23.622"	36.614"	8.661"	9.843"	1.102" DIA	MT3	200.8lb	132lb

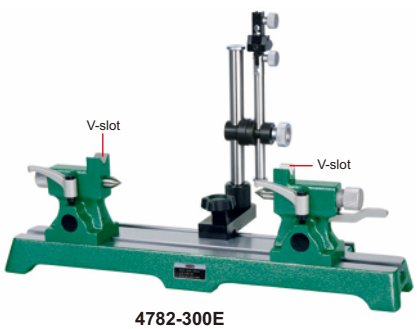
*Parallelism of two centers to the guide surface

BENCH CENTER (BASIC TYPE)

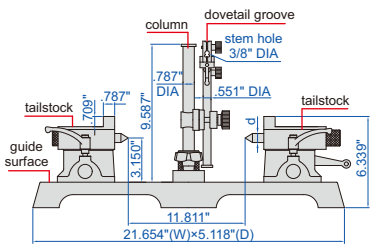
- Runout accuracy .00008"
- Center height: 3.150"
- Distance between two centers: 11.811"
- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder .157" DIA-.866" DIA

Part No.	Parallelism*	Diameter of center (d)	Load
4782-300E	.0004"	.630" DIA	55lb

*Parallelism of two centers to the guide surface

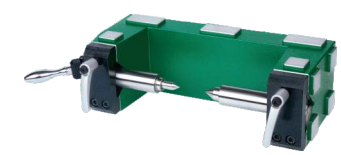


4782-300E



VERTICAL AND HORIZONTAL BENCH CENTER

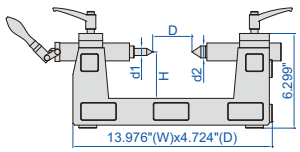
horizontal use



side use

vertical use

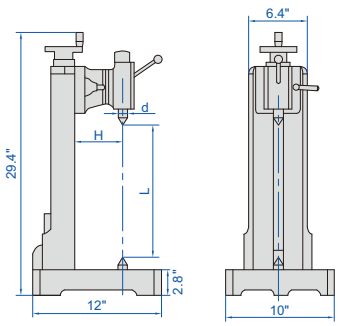
- For vertical, side and horizontal use
- Distance between two centers (D): 7.874"
- Diameter of center (d1/d2) .630" DIA/.795"DIA

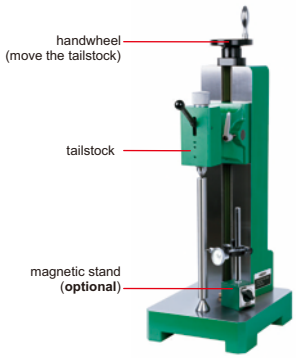


Part No.	Runout accuracy	Center height (H)	Weight	Load
4722-200	.00008"	3.150"	48.4lb	55lb

VERTICAL BENCH CENTER

- Runout accuracy .00008"
- Center height (H): 5.2"
- Distance between two centers (L): 14.2"
- Diameter of center (d) .948" DIA
- Hardened cast-iron guide surface
- Use handwheel to move the tailstock
- Optional accessory: magnetic stands, dial test indicator





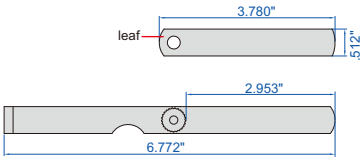
4728-360

Part No.	Parallelism*	Taper of center	Weight	Load
4728-360	.0004"	MT3	187lb	176lb

*Parallelism of two centers to the guide surface

FEELER GAUGE

4608-31



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

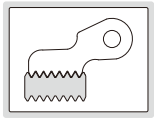
Part No.	Range	Quantity of leaves
4608-31	.0015"~.035"	32

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

PITCH GAUGES

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

4820-124



Unified 60° screw

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

Metric 60° screw

Part No.	Range	Pitch of leaves included	Quantity of leaves
4820-122	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	22
4820-124	0.25-7.0mm	0.25, 0.3, 0.35, 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	24

Whitworth 55° screw

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

Metric 60° and Whitworth 55° screw

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

Metric 60° and Unified 60° screw

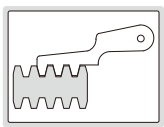
Part No.	Range	Pitch of leaves included	Quantity of leaves
4820-552	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	52
	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36,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

PITCH GAUGES

- Check the pitch of screw thread
- Accuracy: ±.0028"
- Made of medium carbon steel

4824-12

Part No.	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-16	1-12TPI	ACME 29°	1, 1~1/3, 1~1/2, 1~3/4, 2, 2~1/2, 3, 3~1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI	16
4824-12	2-20mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12

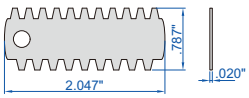


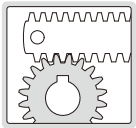
GEAR TOOTH PITCH GAUGES

- Check the diametrical pitch of gear tooth
- Accuracy: ±.0028"
- Made of hardened stainless steel

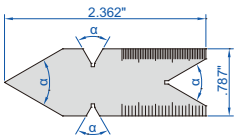
4860-180

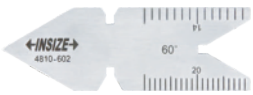
Part No.	Range (DP)	Pressure angle	Quantity of leaves
4860-15	2-5	14.5°	7
4860-25	2-5	20°	7
4860-180	6-80	14.5°	14
4860-280	6-80	20°	14



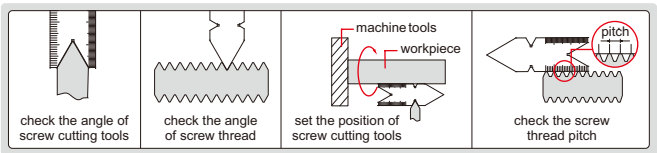


CENTER GAUGES





4810-602

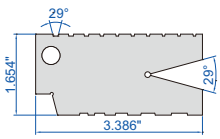


- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: ±30min.
- Made of stainless steel

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

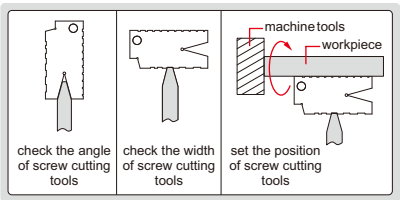
THREAD GAUGE

- Thread type: ACME 29°
- To check and set screw cutting tools
- Made of medium carbon steel



4812-E

Part No.	Range	Pitch
4812-E	1-10TPI	1, 1~1/3, 1~1/2, 1~3/4, 2, 2~1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI

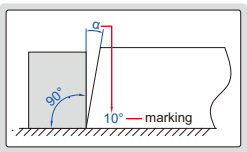


ANGLE GAUGE

- Accuracy: ±30'
- Quantity of leaves: 20
- To check complementary angles
- Made of stainless steel

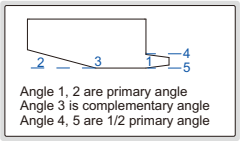
4806-20

Part No.	Range	Angle of leaves included
4806-20	1°~45°	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°

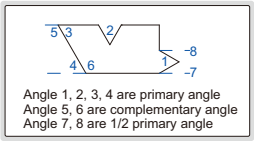


ANGLE GAUGE SET

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



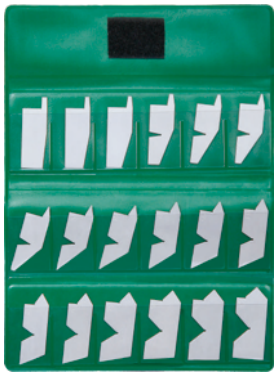
type A



type B

Primary angle	½ 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

Primary angle	½ primary angle	Complementary angle	Type
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



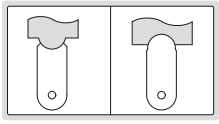
4807

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

RADIUS GAUGES

- Made of medium carbon steel

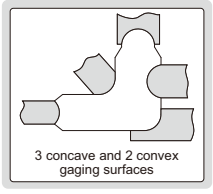
4801-15E



Part No.	Range	Radius of leaves included	Quantity of leaves (internal+external)
4801-15E	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	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	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

RADIUS GAUGE SETS

- Each piece has 3 concave and 2 convex gaging surfaces
- Made of medium carbon steel
- Supply with handle



3 concave and 2 convex gaging surfaces

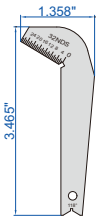
use of handle

Part No.	Range	Radius of leaves included	Quantity of leaves	Handle
4804-25E	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	.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	9/16"~1"	9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1"	8	without
4804-8E1	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
4804-26	0.5~13mm	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13mm	26	with

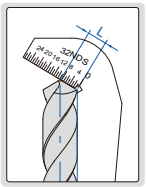
4804-26

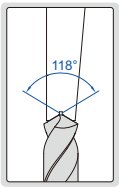
DRILL POINT GAUGE

4843-1E



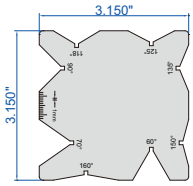
- For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
- Made of stainless steel

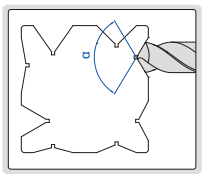




Part No.	Accuracy	
	Angle	Length
4843-1E	±0.5°	±.02"

DRILL ANGLE GAUGE





4842-1

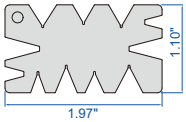
Part No.	Accuracy
4842-1	±0.5°

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

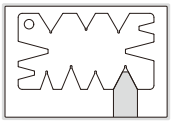
ANGLE GAUGE

- Made of stainless steel

Part No.	Range	Accuracy
4854-1	29°, 30°, 40°, 45°, 50°, 55°, 60°	±10'



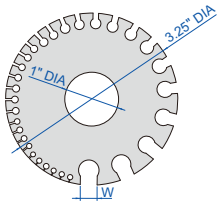
4854-1



check the angle of screw cutting tools

AMERICAN STANDARD WIRE GAUGE

4808



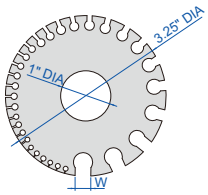
- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC50-57

Part No.	Range
4808	0~36 (.3249~.0050")

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

U.S. STANDARD SHEET METAL GAUGE

4809



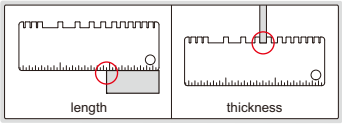
- For gaging sheet metal, plate iron and steel
- Hardened to HRC50-57

Part No.	Range
4809	0~36 (.3125~.0070")

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

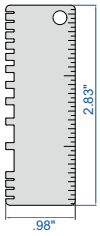
THICKNESS GAUGE

- Made of stainless steel



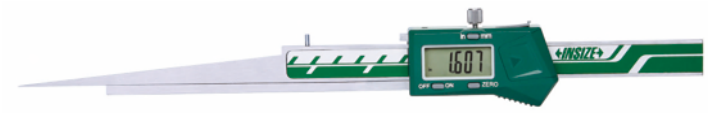
Part No.	Measurement	Range	Graduation	Accuracy
4853-1	length	0-2 3/4"	1/16"	1/32"
	thickness	24GA. (.0239"), 22GA. (.0299"), 20GA. (.0359")	—	±.002"
		18GA. (.0478"), 16GA. (.0598"), 14GA. (.0747"), 1/8" (.125"), 10GA. (.1345"), 3/16" (.1875"), 1/4" (.250"), 5/16" (.3125")		±.004"
		.024", .030", .035"		±.002"

4853-1



DIGITAL TAPER SLOT GAUGES

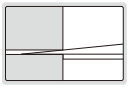
DATA OUTPUT



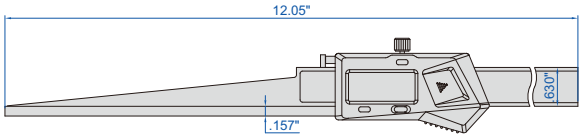
1160-10

- 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** receiver is needed, **7302-21**)

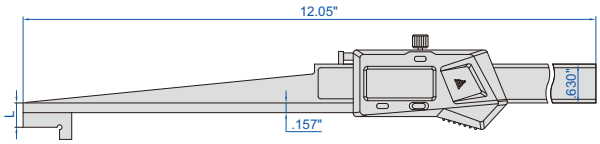
measure slot width



Part No.	Range	Accuracy	h
1160-10	.01-.39"/0.2-10mm	±.001"	—
1160-20	.39-.79"/10-20mm	±.002"	.39"
1160-30	.79-1.18"/20-30mm	±.002"	.79"
1160-40	1.18-1.58"/30-40mm	±.002"	1.18"



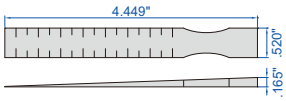
1160-10

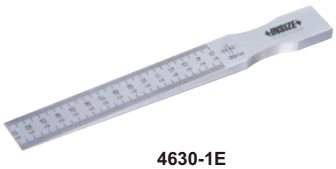


1160-20, 1160-30 1160-40

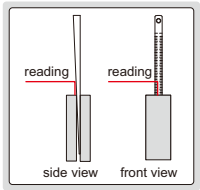
TAPER SLOT GAUGE

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



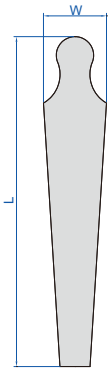


4630-1E



Part No.	Range	Graduation	Accuracy
4630-1E	.01~.15"	.001"	±.003"

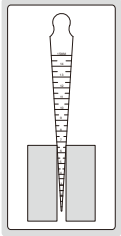
TAPER GAUGES



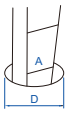
front back

4833-2E

measure slot width



measure diameter of hole



when measuring diameter of holes, correction on reading is needed due to the thickness of taper gauge. For example, when reading A is 5/8", diameter D is 5/8" + .001".

- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (exept **4833-4E**)
- Made of stainless steel

Part No.	Range	Graduation	Accuracy	L	W
4833-1E	1/32~5/8"	1/64"	±.004"	5.748"	.669"
4833-2E	5/8~1-3/16"	1/64"	±.004"	6.260"	1.197"
4833-3E	1-3/16~1-3/4"	1/64"	±.004"	6.535"	1.787"
4833-4E	1-3/4~2-3/8"	1/64"	±.004"	6.693"	2.382"

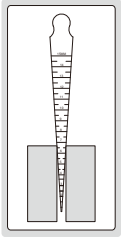
TAPER GAUGE SET

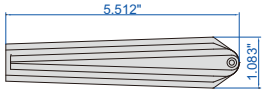
front

back

4837-1E

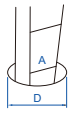
measure slot width





- 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

measure diameter of hole



when measuring diameter of holes, correction on reading is needed due to the thickness of taper gauge. For example, when reading A is 1/16", diameter D is 1/16" + .014".

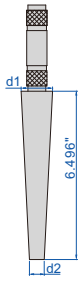
Part No.	Range	Graduation	Accuracy
4837-1E	1/16~1-1/16"	1/64"	±.004"

TAPER BORE GAUGES

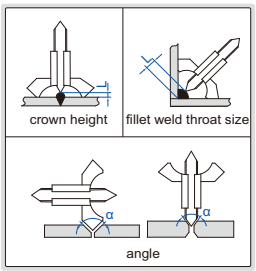
- Graduation .005"
- Quick measurement of bore diameter
- Hardened steel, HRC50-58
- Satin chrome plated surface
- Aluminium oxided handle

Part No.	Range	Accuracy	d1 (DIA)	d2 (DIA)
4852-E15	.6-1.2"	±.0025"	1.220"	.579"
4852-E30	1.2-1.8"	±.0025"	1.811"	1.165"

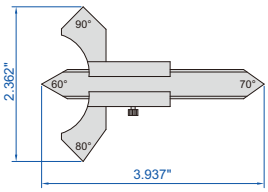
4852-E15



WELDING GAUGE



4830-E

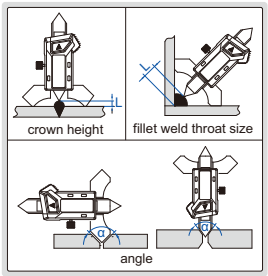


- Made of stainless steel
- Satin chrome plated reading surface

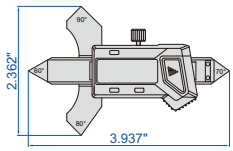
Part No.	Measurement	Range	Graduation	Accuracy
4830-E	crown height	0-5/16"	1/128"	±.0039"
	fillet weld throat size	0-9/16"	1/128"	±.0118"
	angle	60°, 70°, 80°, 90°	—	±1°

DIGITAL WELDING GAUGE

ATTENTION: NO DATA OUTPUT



4831-20A

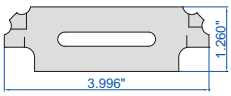


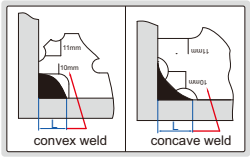
- Non waterproof
- Buttons: zero, inch/mm, on/off
- Battery LR44
- Made of stainless steel

Part No.	Measurement	Range	Resolution	Accuracy
4831-20A	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 GAUGES

4836-2



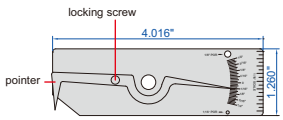


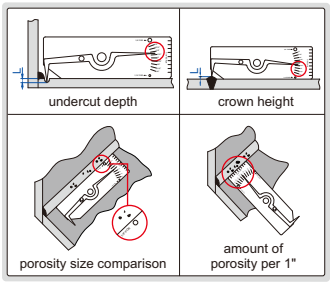
- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel

Part No.	Size	Accuracy
4836-2	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	3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 19, 22, 25mm	±0.5mm

WELDING GAUGE

4834-1E



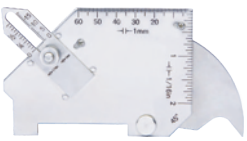


- Pointer can be locked for later reference
- Made of stainless steel

Part No.	Measurement	Range	Graduation	Accuracy
4834-1E	undercut depth	0-1/4"	1/64"	±1/64"
	crown height	0-1/4"	1/64"	±1/64"
	porosity size comparison	1/16", 1/8"	—	±.008"
	amount of porosity per 1"	1"	1/16"	—

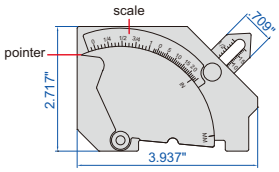
WELDING GAUGE

front



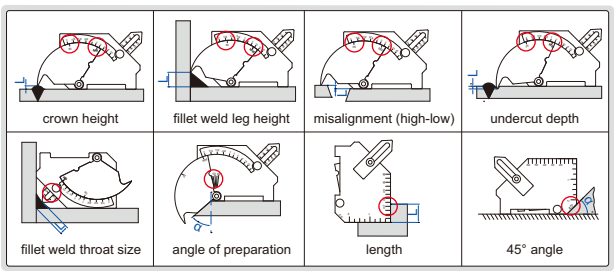
back

4835-1

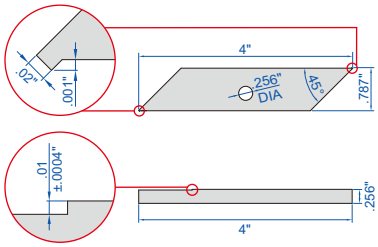


- Adjustable scale to compensate pointer wear
- Made of stainless steel

Part No.	Measurement	Range	Graduation	Accuracy
4835-1	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°

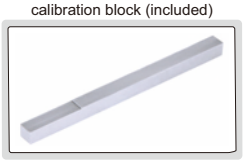


WELDING UNDERCUT GAUGE

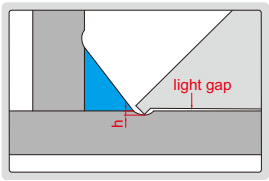


4849-1

calibration block (included)



application



when there is a light gap, h<.01";
when there is no light gap, h≥.01"

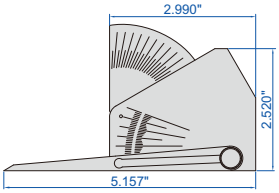
Part No.
4849-1

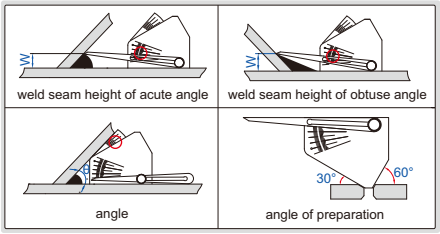
- Measure undercut
- Calibration block is included
- Made of stainless steel

FILLET WELDING GAUGE

- Calculating card is included
- Made of stainless steel

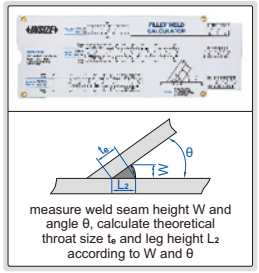
4846-1





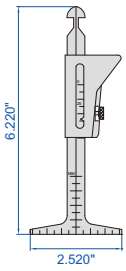
Part No.	Measurement	Range	Graduation	Accuracy
4846-1	weld seam height W	0-2"/0-50mm	.050"/2mm	±.025"
	angle θ	30°~90°	2.5°	±1°
	60° angle	—	—	±0.5°

calculating card (included)



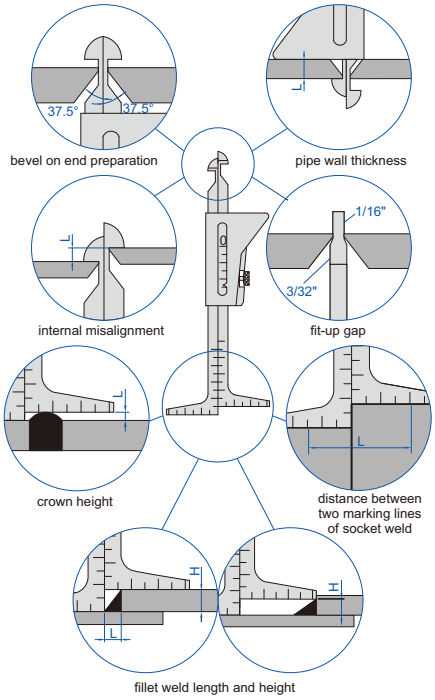
PIPE WELDING GAUGE

- Made of stainless steel



front back

4839-1

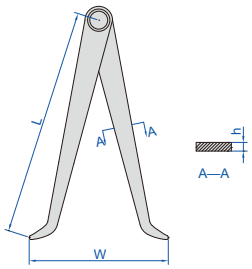


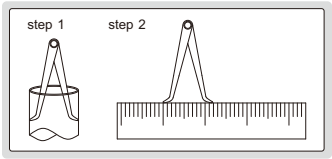
Part No.	Measurement	Range	Graduation	Accuracy
4839-1	bevel on end preparation	37.5°	—	±1°
	pipe wall thickness	0~1-3/4" (0-45mm)	1/16" (1mm)	±.02"
	internal misalignment	0~1-3/8" (0-35mm)	1/32" (1mm)	±.02"
	fit-up gap	1/16", 3/32"	—	±.004"
	crown height	0~1-3/8" (0-35mm)	1/32" (1mm)	±.02"
	distance 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"

INSIDE CALIPERS

- Made of carbon steel

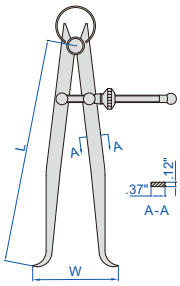
7240-150





Part No.	Size (L)	Range (W)	h
7240-150	6"	.669-5.905"	.079"
7240-200	8"	.669-7.874"	.118"
7240-300	12"	.709-11.811"	.118"

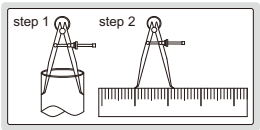
INSIDE SPRING CALIPERS



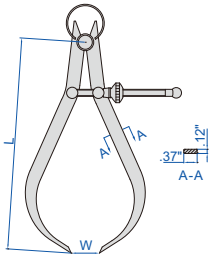
7261-150

- Made of carbon steel

Part No.	Size (L)	Range (W)
7261-150	6"	.79-5.90"
7261-200	8"	.87-7.87"
7261-250	10"	1.18-9.84"
7261-300	12"	1.18-11.81"



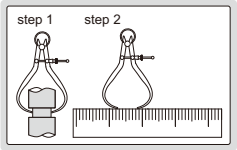
OUTSIDE SPRING CALIPERS



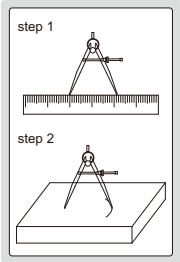
7262-150

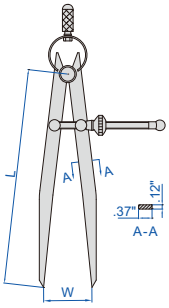
- Made of carbon steel

Part No.	Size (L)	Range (W)
7262-150	6"	0-5.90"
7262-200	8"	0-7.87"
7262-250	10"	0-9.84"
7262-300	12"	0-11.81"



SPRING DIVIDERS





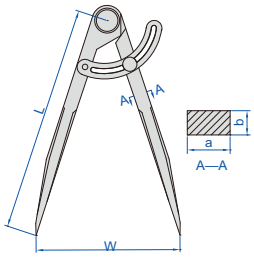
7260-150

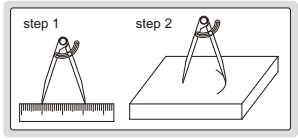
Part No.	Size (L)	Range (W)
7260-150	6"	0-5.91"
7260-200	8"	0-8.27"
7260-250	10"	0-10.24"
7260-300	12"	0-12.60"

- Made of carbon steel
- Hardened points

DIVIDERS

7247-150





- Made of carbon steel
- Hardened points

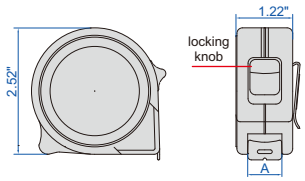
Part No.	Size (L)	Range (W)	a	b
7247-150	6"	0-5.51"	.33"	.28"
7247-200	8"	0-7.48"	.39"	.28"
7247-300	12"	0-11.42"	.47"	.28"

MEASURING TAPE

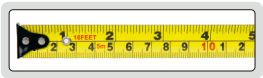
EG II

- Non-glare nylon coating tape, wear resistance
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU

7142-5



graduation

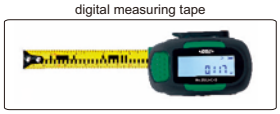


Part No.	Range	Graduation	Width of tape A
7142-5	0-16ft/0-5m	1/16", 1mm	.75"

WIRELESS DIGITAL MEASURING TAPES+LASER DISTANCE METERS

- Built-in bluetooth transmission
- Display with backlight
- Automatic power off: laser 30s, main unit 180s
- Can work continuously for 5 hours
- Can store 50 groups of measurement data

digital measuring tape



9563-C40

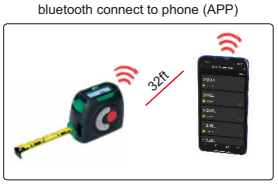
SPECIFICATION

Part No.		9563-C40	9563-C60
Output		bluetooth (data can be transmitted to APP)	
Digital measuring tape	range	16ft	
	resolution	.001ft, 1/16"	
	accuracy	±1/16"	
	blade width	3/4"	
	horizontal stand-out	5.9ft	
Laser distance meter	range	131ft	196ft
	resolution	.001ft, 1/16"	
	accuracy	±(.12+D/1666)", D: measured distance, unit: ft	
	units	ft, in, ft+in, m	
	laser type	630~670nm, <1mW, class 2	
	measurement function	single, continuous, area, volume, pythagoras measurement	
Operation temperature		32~104°F	
Storage temperature		14~140°F	
Power supply		built-in rechargeable lithium battery	
Dimension (L×W×H)		3.7×2.9×2.2"	
Weight		.69lb	

VIDEO

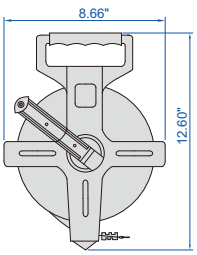
laser distance meter

bluetooth connect to phone (APP)



LONG MEASURING TAPE

EG II



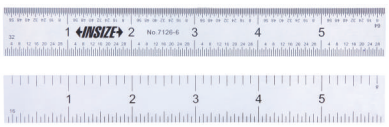
graduation

7143-50

- High tensile strength fibreglass tape
- Nylon coating tape, wear resistance
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU

Part No.	Range	Graduation	Width of tape
7143-50	0-165ft/0-50m	1/8", 1mm	.51"

RIGID RULERS

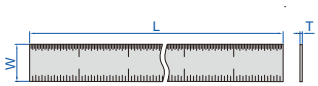


front

back

7126-6

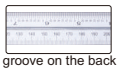
- Graduation: 1/64" and 1/32" on front face, 1/16" and 1/8" on back face
- 4R graduation
- Made of stainless steel
- Non-glare surface



Part No.	Range (L)	Accuracy	W	T
7126-6	6"	±.007"	.748"	.039"
7126-12	12"	±.010"	.984"	.039"
7126-24	24"	±.017"	1.102"	.047"

RIGID RULER

7113-300A



groove on the back

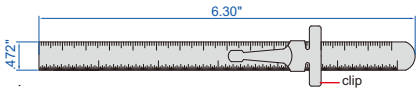
- Rigid ruler
- With groove on the back, suitable for combination square set (**2278** series)
- Satin chrome plated

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

POCKET RULER WITH SLIDING CLIP

7119-150

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

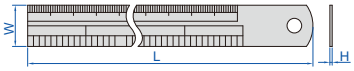


Part No.	Range	Graduation	Accuracy
7119-150	6"/150mm	1/64", 1mm	±.012"

STEEL RULERS

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

7110-300



POPULAR MODEL

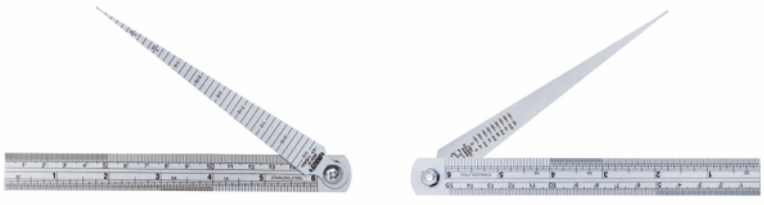
Individual (1 pc per package)

Part No.	Range	Accuracy	L	W	H	Remark
7110-150	6"/150mm	±.007"	6.693"	.709"	.039"	metric graduation on front and inch graduation on back
7110-200	8"/200mm	±.007"	8.661"	.709"	.039"	metric graduation on front and inch graduation on back
7110-300	12"/300mm	±.010"	12.992"	.984"	.039"	metric graduation on front and inch graduation on back
7110-3001	12"/300mm	±.010"	12.795"	1.181"	.039"	metric graduation on front and inch graduation on back
7110-500	20"/500mm	±.015"	20.866"	1.181"	.047"	metric graduation on front and inch graduation on back
7110-600	24"/600mm	±.020"	24.803"	1.181"	.047"	metric graduation on front and inch graduation on back
7110-1000	40"/1000mm	±.020"	40.945"	1.260"	.059"	metric graduation on front and inch graduation on back
7110-1200	48"/1200mm	±.030"	48.819"	1.378"	.071"	metric and inch graduation on front
7110-1500	60"/1500mm	±.040"	61.024"	1.496"	.071"	metric and inch graduation on front
7110-2000	80"/2000mm	±.040"	81.299"	1. 575"	.079"	metric and inch graduation on front

Set

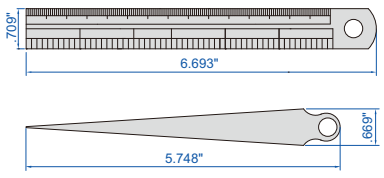
Part No.	Range	Accuracy	L	W	H	Remark	Quantity per package
7110-150A	6"/150mm	±.007"	6.693"	.709"	.039"	metric graduation on front and inch graduation on back	10 pcs
7110-200A	8"/200mm	±.007"	8.661"	.709"	.039"	metric graduation on front and inch graduation on back	10 pcs
7110-300A	12"/300mm	±.010"	12.992"	.984"	.039"	metric graduation on front and inch graduation on back	5 pcs
7110-3001A	12"/300mm	±.010"	12.795"	1.181"	.039"	metric graduation on front and inch graduation on back	5 pcs
7110-500A	20"/500mm	±.015"	20.866"	1.181"	.047"	metric graduation on front and inch graduation on back	5 pcs
7110-600A	24"/600mm	±.020"	24.803"	1.181"	.047"	metric graduation on front and inch graduation on back	5 pcs
7110-1000A	40"/1000mm	±.020"	40.945"	1.260"	.059"	metric graduation on front and inch graduation on back	5 pcs
7110-1200A	48"/1200mm	±.030"	48.819"	1.378"	.071"	metric and inch graduation on front	5 pcs
7110-1500A	60"/1500mm	±.040"	61.024"	1.496"	.071"	metric and inch graduation on front	5 pcs
7110-2000A	80"/2000mm	±.040"	81.299"	1. 575"	.079"	metric and inch graduation on front	5 pcs

TAPER GAUGE AND STEEL RULER SET

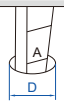


front back

4829-1E

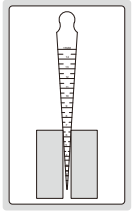


use the taper gauge to measure diameter of hole



When measuring diameter of holes, correction on reading is needed due to the thickness of taper gauge. For example, when reading A is 5/8", diameter D is 5/8"+.001".

use the taper gauge to measure slot width



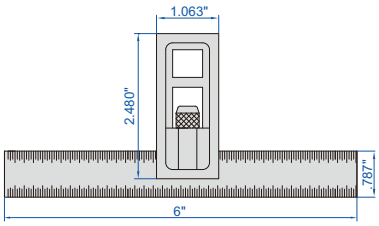
- Diameter correction table on the taper gauge back
- Made of stainless steel

Part No.	Tool	Range	Accuracy	Graduation
4829-1E	taper gauge	1/32-5/8"	±.004"	1/64"
	steel ruler	6"/150mm	±.006"	1/64", 1/32", 1/16", 0.5mm, 1mm

DOUBLE SQUARE

- Accuracy: ±2min for 90° square
- Hardened and chrome plated blade

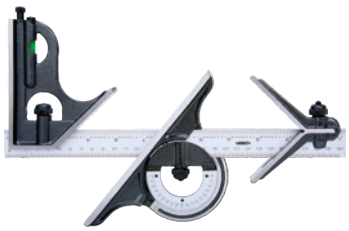
2277-2



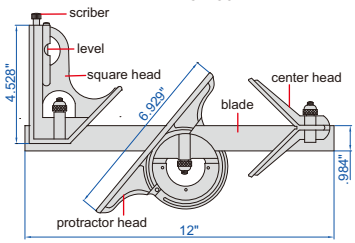
Part No.	Blade Length	Graduation
2277-2	6"	1/8", 1/16",1/32",1/64"

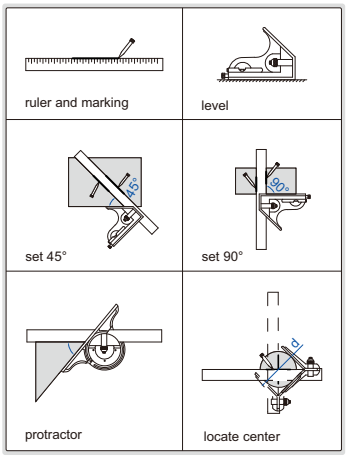
COMBINATION SQUARE SETS (CLOSE TYPE PROTRACTOR)

- 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
- Optional accessory: rigid ruler (part no. **7113**)



2278-180

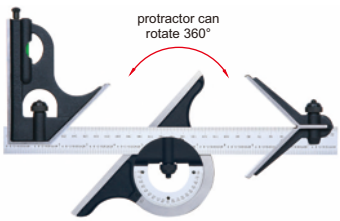




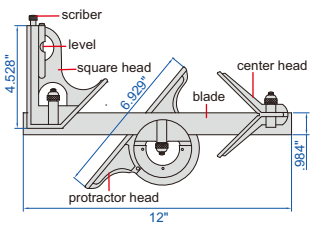
Part No.	Remark	Blade range	Blade graduation
2278-2E	2-piece set	12"	1/8" and 1/16" on front face, 1/32" and 1/64" on back face
2278-3E	3-piece set	12"	1/8" and 1/16" on front face, 1/32" and 1/64" on back face
2278-180	4-piece set	12"/300mm	1/32" and 0.5mm on front face, 1/64" and 1mm on back face
2278-180E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

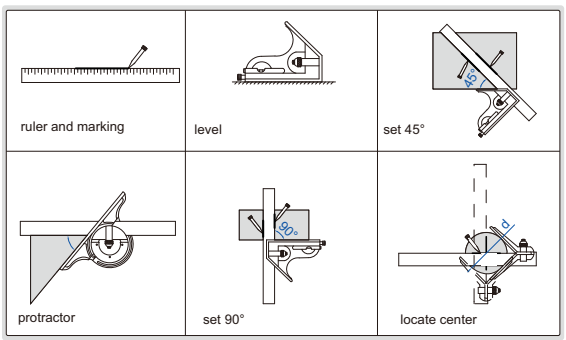
COMBINATION SQUARE SET (OPEN TYPE PROTRACTOR)

- Center head (made of cast iron): to locate center of cylinders 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): range: 12"/300mm, graduation: 1/32" and 0.5mm on front face, 1/64" and 1mm on back face
- Optional accessory: rigid ruler (part no. **7113**)



2274-4

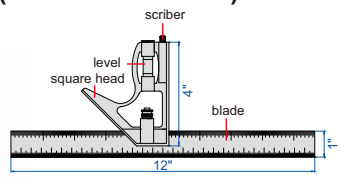


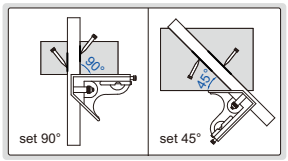


Part No.	Remark
2274-4	4-piece set

COMBINATION SQUARE (ECONOMIC TYPE)

2276-300

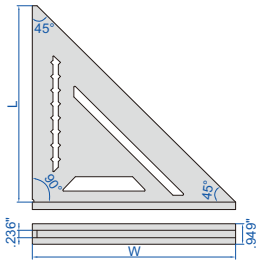




- Square head (made of zinc): to set the blade at 90° or 45° to an edge of a workpiece accuracy: ±0.5°
- Blade (made of stainless steel): range: 12"/300mm, graduation: 1/32" and 1mm on front face, 1/16" and 1mm on back face

Part No.
2276-300

PLASTIC ANGLE SQUARE

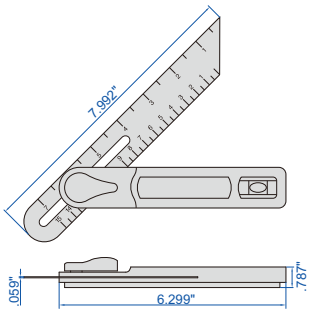


2282-180

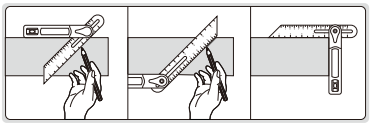
- Length range: 0-7", graduation: 1/8"
- Angel range: 0-90°, graduation: 1°

Part No.	Size (L×W)	Accuracy of angle
2282-180	7×7.3"	±0.3°

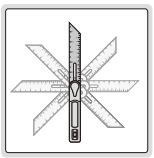
T-BEVEL



2281-360



blade can rotate 360°

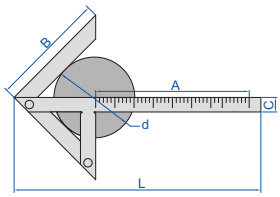


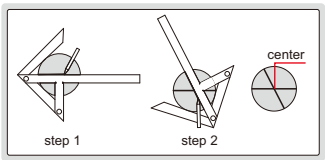
- Easy-to-read vial
- The blade can move and can be locked by the clamping screw
- Stainless steel blade
- Tough rubber handle
- Centimeter/inch graduations

Part No.	Angle mark	Accuracy of angle
2281-360	15°, 30°, 45°, 60°, 90°	±1°

CENTER MARKING GAUGES

7205-100





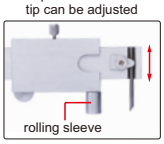
- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

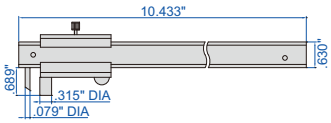
Part No.	Size (AxB)	Accuracy	Diameter of shafts (d)	C	L
7205-100	100x70mm	±0.15mm	.16-3.54" DIA	.472"	6.024"
7205-150	150x130mm	±0.15mm	.16-7.48" DIA	.591"	9.646"
7205-200	200x150mm	±0.15mm	.24"-8.66" DIA	.591"	12.205"
7205-300	300×180mm	±0.15mm	.24"-10.63" DIA	.787"	17.126"

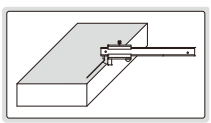
SCRIBING CALIPER

7202-200A

the position of scriber tip can be adjusted







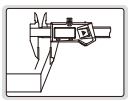
- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip
- Optional accessory: carbide scriber tip (part no. **SP-SCRIBER-7202**)

Part No.	Range	Graduation	Accuracy
7202-200A	0-8"/0-200mm	1/128", 0.1mm	±.004"

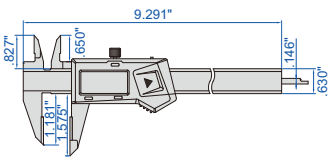
DIGITAL SCRIBING CALIPER

carbide measuring faces

1166-150A

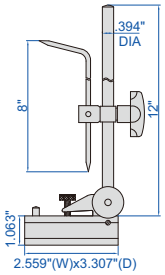


- Non waterproof
- The carbide-tipped jaws facilitate scribing on workpieces
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel



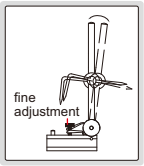
Part No.	Range	Resolution	Accuracy
1166-150A	0-6"/0-150mm	.0005"/0.01mm	±.0015"

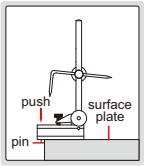
HEIGHT SCRIBER



6990-300A

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

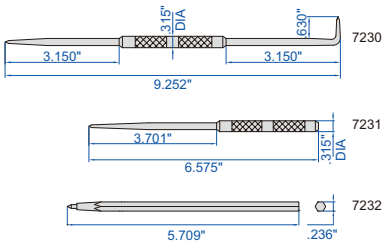




Part No.
6990-300A

SCRIBERS

- **7230** and **7231** are nickel plated, **7232** is zinc-plated



Part No.	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip

PRECISION SCREWDRIVER SET

ISGF-0901

packaging

- Includes:
  4 pcs "–": .055"/1.4mm, .079"/2.0mm, .094"/2.4mm, .118"/3.0mm
  2 pcs "+": 0#, 1#
- Rotating cap
- Material: CRV, hardness: HRC52~56

Part No.
ISGF-0901

2-PIECE MEASURING TOOL SET

- Includes:
  1) Dial indicator, range 1", graduation .001" (part no. **2307-1**)
  2) Magnetic stand (part no. **6201-60**)

5002-4E

Part No.
5002-4E

2-PIECE MEASURING TOOL SET

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

5022-E

Part No.
5022-E

2-PIECE MEASURING TOOL SET

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

5023-E

Part No.
5023-E

3-PIECE MEASURING TOOL SET

- Includes:
  1) Dial caliper, range 0-6", graduation .001" (part no. **1311-6**)
  2) Outside micrometer, range 0-1", graduation .0001" (part no. **3202-1**)
  3) Steel ruler, 6"/150mm (part no. **7110-150**)

5003-1

Part No.
5003-1

3-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-6"/0-150mm, resolution .0005"/0.01mm (part no. **1108-150**)
  2) Outside micrometer, range 0-1", graduation .0001" (part no. **3202-1**)
  3) Steel ruler, 6"/150mm (part no. **7110-150**)

5003-1E

Part No.
5003-1E

5-PIECE MEASURING TOOL SET

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

5051-E

Part No.
5051-E

5-PIECE MEASURING TOOL SET

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

5052-E

Part No.
5052-E

6-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-6"/0-150mm resolution .0005"/0.01mm (part no. **1108-150**)
  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**)
  4) Straight edge, 3.937" (part no. **4700-100**)
  5) Spring divider, 6"/150mm (part no. **7260-150**)
  6) Steel ruler, 8"/200mm (part no. **7110-200**)

5062-E

Part No.
5062-E

9-PIECE MEASURING TOOL SET

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

5091-E

Part No.
5091-E

13-PIECE MEASURING TOOL SET

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

5013-E

Part No.
5013-E

GRANITE SURFACE PLATES

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

INSPECTION CERTIFICATE

- Made of granite, free from deterioration or dimensional change over time, minimal changes in dimension due to temperature changes
- Optional accessory: stand for granite surface plate (part no. **6902**), jack for granite surface plate (part no. **6903**)

6900-A11

Meet GGG-P-463C grade A

Part No.	Size (L×W×H)	Flatness	Weight (lb)	Max. load (lb)
6900-A11 *	18×12×3"	.00012"	32	110
6900-A12 *	24×18×3"	.00013"	64	143
6900-A23 *	36×24×4"	.00015"	170	440
6900-A34 *	48×36×6"	.00018"	510	1102

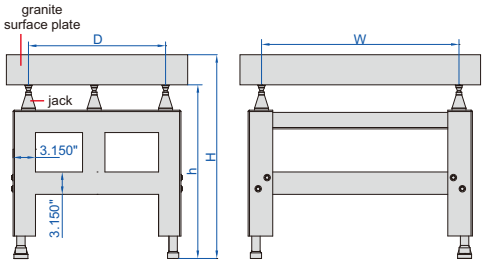
*Supplied with manufacturer inspection certificate

Physical characteristics of granite

Shore hardness	94HS
Flexural strength	28MPa
Compressive strength	236MPa
Elastic modulus	9.88×10^4MPa
Poisson's ratio	0.33
Volume density	187lb/ft³
Water absorption rate	0.05%
Linear expansion coefficient	177.5×10^{-9}/ºF

STANDS FOR GRANITE SURFACE PLATE

- For medium size granite surface plates
- 5 jacks are included
- Adjusting range of jacks: 1"
- One foot on the bottom is adjustable



6902-64A

Low stands

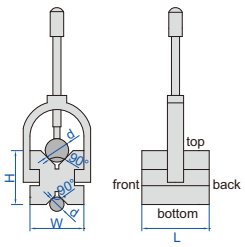
Part No.	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)
6902-64A	12x18x3" (part no. **6900-A11**)	13.858"	8.819"	30.512"-31.496"	27.362"-28.346"
6902-85A	18x24x3" (part no. **6900-A12**)	17.638"	11.024"	30.512"-31.496"	26.575"-27.559"
6902-106A	24x36x4" (part no. **6900-A23**)	22.047"	13.858"	29.724"-30.709"	24.213"-25.197"

High stands

Part No.	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)
6902-64H	12x18x3" (part no. **6900-A11**)	13.858"	8.819"	39.370-40.354"	36.220-37.205"
6902-85H	18x24x3" (part no. **6900-A12**)	17.638"	11.024"	39.370-40.354"	35.433-36.417"
6902-106H	24x36x4" (part no. **6900-A23**)	22.047"	13.858"	39.370-40.354"	33.858-34.843"

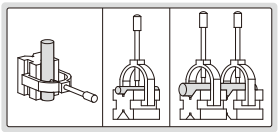
V-BLOCK SETS

- Squareness of both V grooves to front and back sides .0002"
- 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



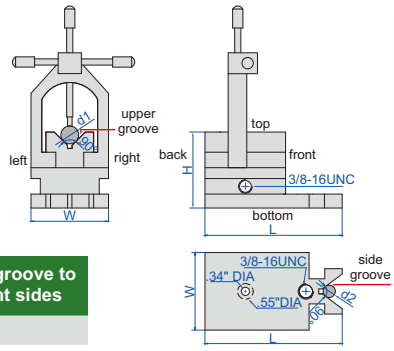
6896-11

Part No.	Size (LxWxH)	Range of shafts (d)	Parallelism of both V grooves to top and bottom sides	Height difference of a matched pair
6896-11	2.0x1.6x1.6"	.20-1.18" DIA	.0002"	.0002"
6896-12	3.1x2.5x2.5"	.28-2.48" DIA	.0002"	.0002"
6896-13	3.9x3.1x3.1"	.28-3.15" DIA	.0002"	.0002"

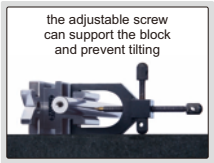


V-BLOCK

- Hold cylindrical workpieces for inspection and machining
- Made of alloy steel
- Hardened to HRC60±2
- Range of shafts (d1 and d2) .20"-1.30" DIA
- Squareness of upper groove to back side .0002"
- Parallelism of side groove to back side .0002"



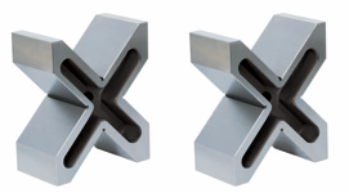
6804-1



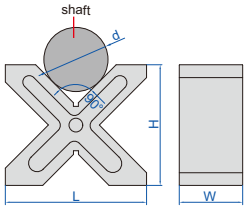
Part No.	Size (LxWxH)	Parallelism of upper groove to bottom, left and right sides
6804-1	3.5"x1.9"x1.9"	.0002"

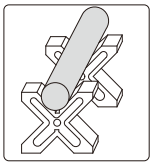
V-BLOCK SETS

- For positioning cylindrical workpieces
- Two V-blocks per set
- Each V-block has four 90° V-grooves
- Cast iron, hardness HB170-241



6805-2

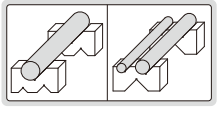




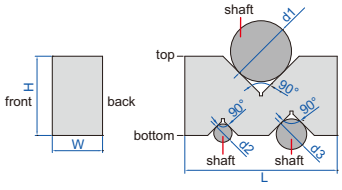
Part No.	Size (L×H×W)	Range of shafts (d)	Parallelism of four V grooves to all sides	Height difference of a matched pair
6805-1	5.906×5.118×2.953"	.315-4.724" DIA	.0006"	.0008"
6805-2	7.874×6.693×3.543"	.472-7.087" DIA	.0006"	.0008"

V-BLOCK SETS

- Two V-blocks per set
- Made of hardened tool steel



6887-3

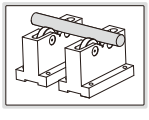


Part No.	Size (LxWxH)	Range of shafts (d1)	Range of shafts (d2)	Range of shafts (d3)
6887-1	2.0x.7x.9"	.12-1.26" DIA	.12-.63" DIA	.12-.87" DIA
6887-2	3.0x.9x1.4"	.12-1.97" DIA	.12-.79" DIA	.12-1.26" DIA
6887-3	3.9x1.3x2.0"	.12-2.68" DIA	.12-1.02" DIA	.12-1.57" DIA
6887-4	4.9x1.7x2.7"	.12-3.43" DIA	.12-1.34" DIA	.12-1.97" DIA

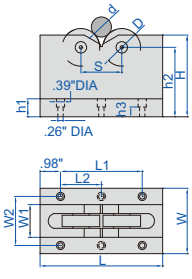
Part No.	Parallelism of three V grooves to top and bottom sides	Height difference of a matched pair
6887-1	.0002"	.0002"
6887-2	.0002"	.0002"
6887-3	.0002"	.0002"
6887-4	.0002"	.0002"

ROLLER BEARING V-BLOCK SETS

- Runout accuracy .0002"
- Parallelism of bearings to bottom .00047"
- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces



6888-1

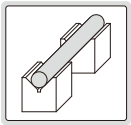


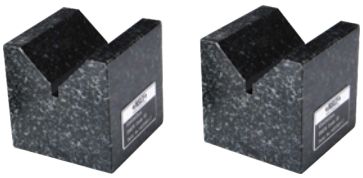
Part No.	Size (LxWxH)	Part no. of bearings	Diameter of bearings (D)	Range of shafts (d)	Load capacity
6888-1	5.9x2.4x3.9"	6303 ZZ	1.65"DIA	.98-2.76" DIA	1100lb
6888-2	5.9x3.1x3.9"	16004 ZZ	1.85"DIA	.20-2.17" DIA	2200lb
6888-3	9.1x3.9x5.9"	6306 ZZ	2.83"DIA	2.76-7.87" DIA	2200lb

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"

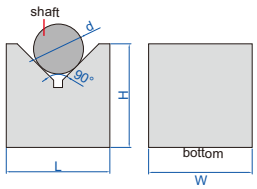
GRANITE V-BLOCK SETS

- Two V-blocks per set





6897-1

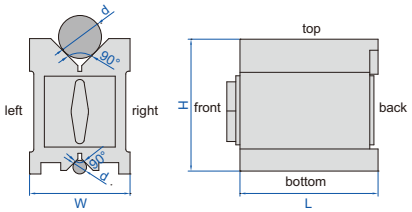


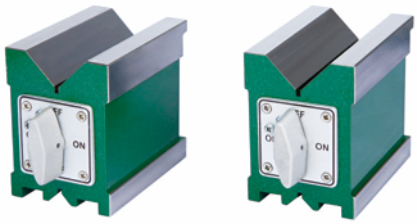
Part No.	Size (LxWxH)	Range of shafts (d)	Parallelism of V groove to bottom	Height difference of a matchet pair
6897-1	2.8x2.0x2.8"	.24-2.95" DIA	.00016"	.00020"
6897-2	3.9x2.0x2.8"	.24-3.31" DIA	.00016"	.00020"

MAGNETIC V-BLOCKS (ADVANCED TYPE)

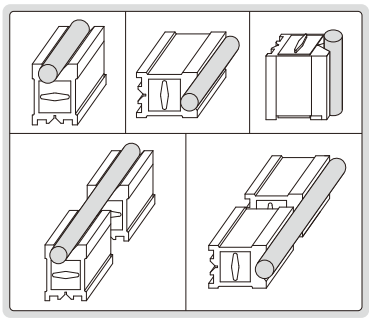
HARDENED SURFACES | HIGH PRECISION | STRONG MAGNETIC FORCE

6889-11





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

Individual

Part No.	Size (L×W×H)	Range of shafts (d)	Magnetic force	Parallelism of V groove to top, bottom, left, right sides	Squareness of V groove to back side
6889-11	3.0×2.2×3.0"	.20-1.57" DIA	187lbf	.00020"	.00020"
6889-22	3.9×2.8×3.7"	.20-2.56" DIA	330lbf	.00020"	.00020"
6889-33	5.9×3.0×3.9"	.20-2.76" DIA	419lbf	.00024"	.00024"

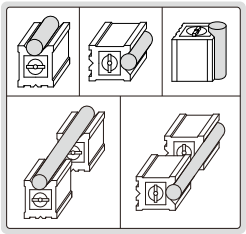
Matched pair

Part No.	Size (L×W×H)	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	3.0×2.2×3.0"	.20-1.57" DIA	187lbf	.00020"	.00020"	.00020"
6889-2	3.9×2.8×3.7"	.20-2.56" DIA	330lbf	.00020"	.00020"	.00020"
6889-3	5.9×3.0×3.9"	.20-2.76" DIA	419lbf	.00024"	.00024"	.00024"

MAGNETIC V-BLOCKS (ECONOMIC TYPE)

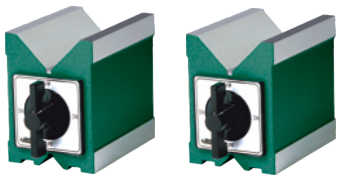
ATTENTION: NOT HARDENED

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

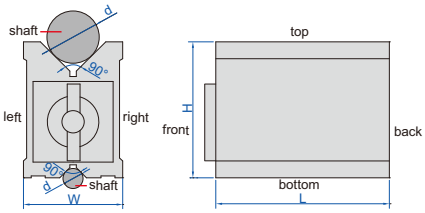


- Hold cylindrical workpieces for inspection and machining
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surface, otherwise the magnetic force will be reduced

6801-1201



6801-1



Individual

Part 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	3.1x2.8x3.7"	.24-2.64" DIA	141lbf	.00040"	.00040"
6801-1202	3.9x2.8x3.7"	.24-2.64" DIA	176lbf	.00040"	.00040"
6801-1203	4.7x2.8x3.7"	.24-2.64" DIA	211lbf	.00040"	.00040"

Matched pair

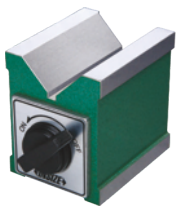
Part No.	Size (LxWxH)	Range of shafts (d)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side	Height difference of a matched pair
6801-1	3.1x2.8x3.7"	.24-2.64" DIA	141lbf	.00040"	.00040"	.00040"
6801-2	3.9x2.8x3.7"	.24-2.64" DIA	176lbf	.00040"	.00040"	.00040"
6801-3	4.7x2.8x3.7"	.24-2.64" DIA	211lbf	.00040"	.00040"	.00040"

MAGNETIC V-BLOCK (ECONOMIC TYPE)

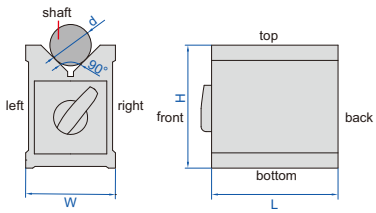
ATTENTION: NOT HARDENED

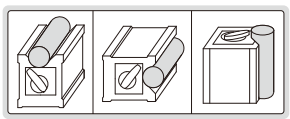
ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES, OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED

- Squareness of V groove to back side .0004"
- Parallelism of V groove to top, bottom, left and right sides .0004"
- 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



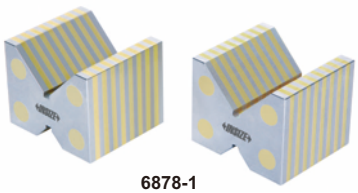


Part No.	Size (LxWxH)	Range of shafts (d)	Magnetic force
6890-702	2.8x2.4x2.9"	.24-1.73" DIA	123lbf

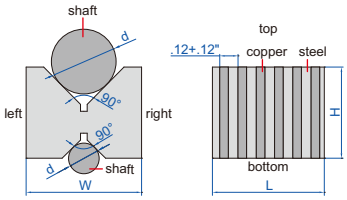
MAGNETIC INDUCTION V-BLOCK SET

ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

- Hold cylindrical workpieces for inspection and machining
- To be used on magnetic chucks
- Two V-blocks per set
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Hardness HRB70
- Copper magnetic strips



6878-1



Part No.	Size (LxWxH)	Range of shafts (d)	Pole pitch	Parallelism of both V grooves to top and bottom sides	Height difference of a matched pair
6878-1	2.0x2.3x1.8"	.24-2.20" DIA	.12+.12"	.0004"	.0004"

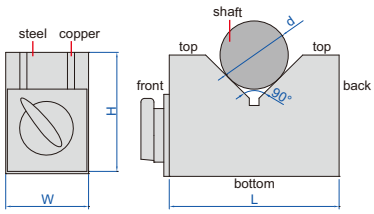
MAGNETIC V-BLOCK SETS

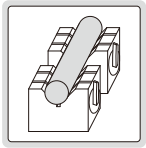
ATTENTION: LOW MAGNETIC FORCE

ATTENTION: NO HARDENED SURFACE, DO NOT ROTATE WORKPIECES ON V-BLOCKS

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

6891-1





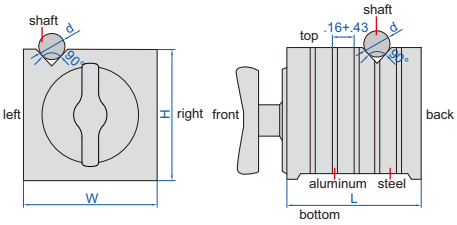
Part No.	Size (LxWxH)	Range of shafts (d)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
6891-1	2.8x1.6x2.0"	.24-1.81" DIA	33lbf	.0004"	.0004"
6891-3	5.9x2.0x3.9"	.24-4.92" DIA	46lbf	.0004"	.0004"

MAGNETIC SQUARE WITH V GROOVE

ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

- Hold flat and cylindrical workpieces for inspection and machining
- Magnetic force on top, left, right and V grooves
- Parallelism and squareness of top, bottom, left, right and back .0008"
- Parallelism and squareness of V grooves to top, bottom, left, right and back .0008"

6539-100



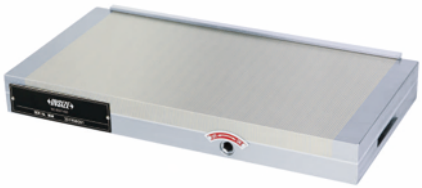
Part No.	Size (L×W×H)	Magnetic force of V grooves		Magnetic force of top, left and right sides		Range of shafts (d)
		On granite surface plate	On cast iron plate	On granite surface plate	On cast iron plate	
6539-100	3.9×3.9×3.9"	66lbf	55lbf	110lbf	66lbf	.2-1.2"

PERMANENT MAGNETIC CHUCKS

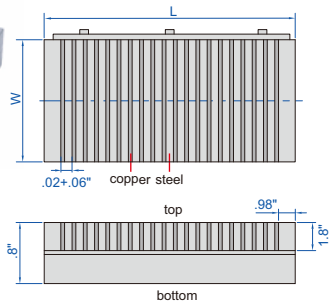
ATTENTION: NOT HARDENED

- The magnetic pole arrangement is dense and can hold thin and small workpieces
- Parallelism of top to bottom: .0008"/12"

Part No.	Table size (L×W)	Magnetic force	Pole pitch
6537-175	6.9×3.9"	113lbf/sq.in	.02+.06"
6537-250	9.8×4.9"	113lbf/sq.in	.02+.06"
6537-150	5.9×5.9"	113lbf/sq.in	.02+.06"
6537-300	11.8×5.9"	113lbf/sq.in	.02+.06"
6537-350	13.8×5.9"	113lbf/sq.in	.02+.06"
6537-401	15.7×5.9"	113lbf/sq.in	.02+.06"
6537-451	17.7×5.9"	113lbf/sq.in	.02+.06"
6537-400	15.7×7.9"	113lbf/sq.in	.02+.06"
6537-450	17.7×7.9"	113lbf/sq.in	.02+.06"
6537-500	19.7×7.9"	113lbf/sq.in	.02+.06"

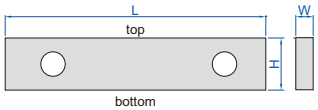


6537-400

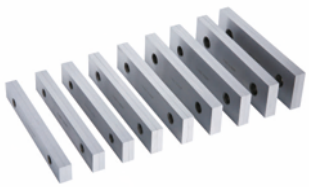


PARALLEL SETS

- Parallelism between top and bottom .0003"
- Height difference of a matched pair .0003"
- Hardened HRC55-62
- With two holes in each parallel



Part No.	Quantity	Length (L)	Thickness (W)	Height (H)
6532-10	10 pairs	6"	1/8"	1/2, 5/8, 3/4, 7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2, 1-5/8"
6532-9	9 pairs	6"	1/4"	3/4, 7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2, 1-5/8, 1-3/4"



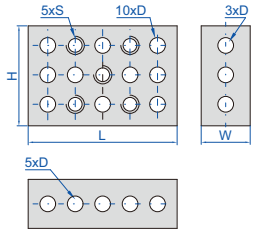
6532-9

1-2-3/2-4-6 BLOCKS

- Pairs of matched blocks for positioning and set-up
- Screws and wrench are included
- Hardness HRC60±2

screws and wrench are included

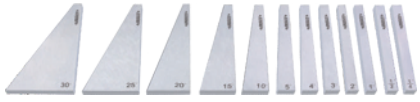
6531-5



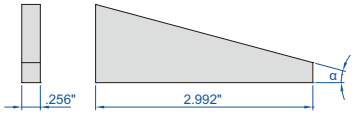
Part No.	Size (LxHxW)	Size accuracy	Squareness	Height difference of a matched pair	Parallelism	S	D
6531-5	3x2x1"	±.0002"	. 0002"/1"	. 0002"	. 0002"	3/8-16UNC	.35" DIA
6531-8	6x4x2"	±.0003"	. 0003"/1"	. 0004"	. 0003"	5/8-11UNC	.63" DIA

ANGLE PLATE SETS

- Accuracy: ±20 seconds
- For angle set-up in tooling, production and inspection
- Hardness HRC52

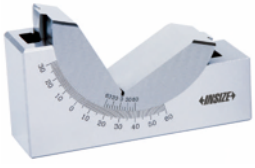


4006-12

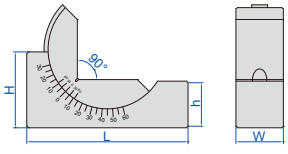


Part No.	Angle plates included	Angle α
4006-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°
4006-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°

ADJUSTABLE ANGLE BLOCKS



6535-30

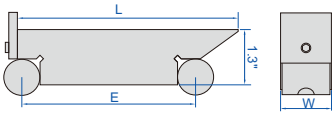


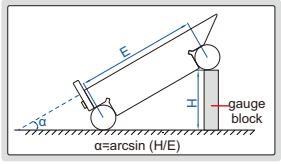
- Made of hardened tool steel
- With locking screw
- Accuracy of angle: 15 minutes
- Graduation of angle: 10 minutes

Part No.	Size (LxWxH)	h	Adjustable angle
6535-25	3.0x1.0x1.3"	.98"	15°~0°~60°
6535-30	4.0x1.2x1.9"	1.18"	15°~0°~60°

SINE BAR

4158-5



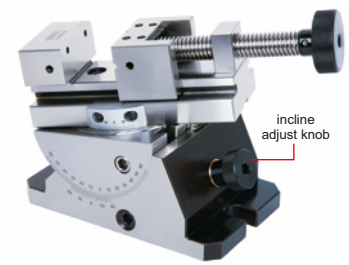


- Made of alloy tool steel

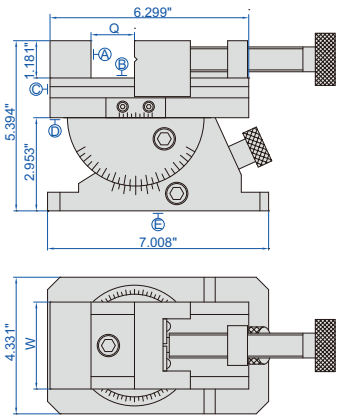
Part No.	Roller distance (E)	Table size (LxW)	Accuracy of α at 30°
4158-5	5"	6.2x1.2"	±5"

PRECISION UNIVERSAL VISE

- Horizontal rotary: range 360°, graduation 0.05°
- Vertical incline: range 45°, graduation 0.05°
- With incline adjust knob
- Parallelism and squareness between A, B, C and D: 50μin/per inch, parallelism between D and E at 0°: 100μin/per inch
- Made of tool steel
- Hardness HRC56-58



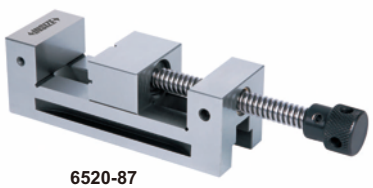
6521-80



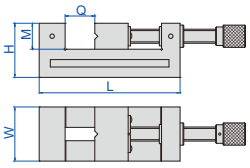
Part No.	Jaw opening (Q)	Jaw width (W)
6521-80	0-3.1"	2.756"

PRECISION VISES

- Parallelism .0002"/4"
- Squareness .0002"/4"
- Made of alloy steel
- Hardness HRC58-60



6520-87

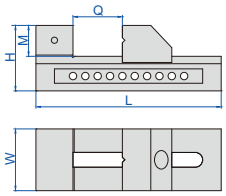


Part No.	Jaw opening (Q)	Jaw width (W)	L	H	M
6520-36	0-1.4"	1.496"	4.528"	1.890"	. 984"
6520-67	0-2.6"	1.969"	5.906"	1.969"	.984"
6520-87	0-3.4"	2.480"	7.283"	2.480"	1.260"
6520-102	0-4.0"	2.874"	8.071"	2.756"	1.378"
6520-1021	0-4.0"	3.150"	8.465"	3.150"	1.575"
6520-127	0-5.0"	3.465"	9.646"	3.150"	1.575"
6520-1271	0-5.0"	3.937"	10.039"	3.543"	1.772"
6520-162	0-6.4"	4.921"	11.614"	3.937"	1.969"
6520-175	0-6.9"	5.906"	12.402"	3.937"	1.969"
6520-200	0-7.9"	7.874"	13.780"	4.331"	2.165"

QUICK MOVING PRECISION VISES

- Parallelism .0002"/4"
- Squareness .0002"/4"
- Made of alloy steel
- Hardness HRC58-60

6526-85



Part No.	Jaw opening (Q)	Jaw width (W)	L	H	M
6526-20	0-.8"	.984"	2.559"	1.142"	.366"
6526-40	0-1.6"	1.496"	3.937"	1.890"	.906"
6526-65	0-2.6"	1.969"	5.315"	1.969"	.984"
6526-85	0-3.3"	2.480"	6.693"	2.480"	1.260"
6526-100	0-3.9"	2.874"	7.283"	2.756"	1.378"
6526-1001	0-3.9"	3.150"	7.677"	3.150"	1.575"
6526-125	0-4.9"	3.465"	9.055"	3.150"	1.575"
6526-1251	0-4.9"	3.937"	9.449"	3.543"	1.772"
6526-160	0-6.3"	4.921"	11.024"	3.937"	1.969"
6526-175	0-6.9"	5.906"	11.811"	3.937"	1.969"
6526-208	0-8.2"	7.784"	13.780"	4.331"	2.165"

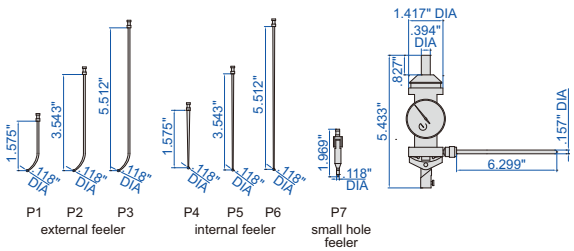
CENTERING INDICATOR

VIDEO

POPULAR MODEL

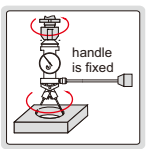
- Provides quick and accurate centering in boring and milling set-up
- Maximum speed is recommended not to exceed 800RPM

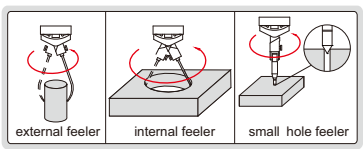
2385-3



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.
2385-3

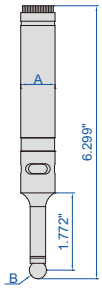


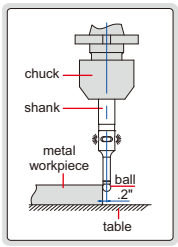


ELECTRONIC EDGE FINDERS

- Accuracy .0002"
- 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



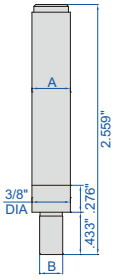


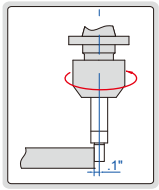
Part No.	Shank (A)	Contact ball (B)	Beeper	Battery
6566-2E	3/4" DIA	.4" DIA	without	23A, 12Vx1 pc
6566-3E	3/4" DIA	.4" DIA	with	23A, 12Vx1 pc

EDGE FINDER

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

6567-1E





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

METRIC 3D TESTER

INSIZE PLUS
MADE IN EUROPE

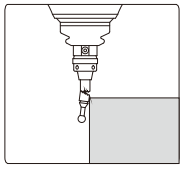
WHEN USING STANDARD PROBE, READING SHOWS MOVEMENT VALUE OF PROBE.
WHEN USING EXTENDED PROBE, READING DOES NOT SHOW MOVEMENT VALUE OF PROBE

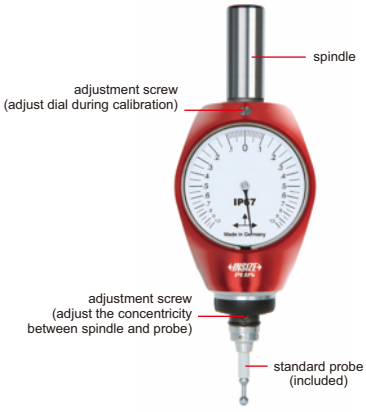
IP67 WATERPROOF

SHOCK PROOF

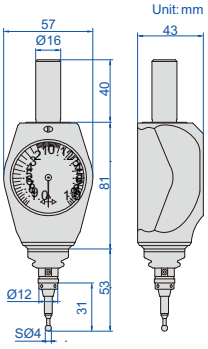
VIDEO

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



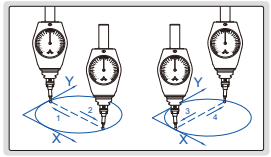


2840-3D

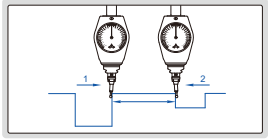


- Shockproof, IP67 dust/waterproof
- Mainly used for milling machines and CNC machine tools
  1. determine coordinate point on workpieces
  2. find center of holes
  3. adjust and position workpieces
- Can be used to measure length and depth
- When using standard probe, reading shows movement value of probe, for example, if probe moves 0.05mm, reading changes 0.05mm (5 graduations). When using extended probe, reading does not show movement value of probe
- Large working range on three axes (X, Y, Z), which avoids damage of probes due to collision by mistake

find center of holes

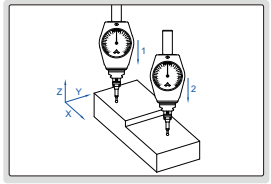


length measurement

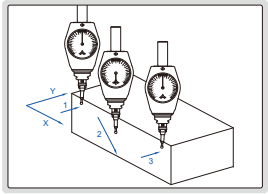


Part No.	Range	Graduation	Repeatability at zero (one direction)	X, Y, Z range
2840-3D	±1.0mm	0.01mm	±0.01mm	6mm

depth measurement

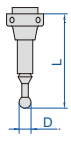


position workpieces



PROBE (optional)

Part No.	Description	L	D
2840-N1	standard probe	31mm	SØ4mm
2840-N2	extended probe	56.6mm	SØ6mm



standard probe

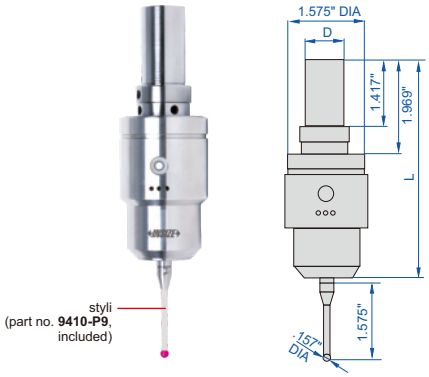
extended probe

TRIGGER-TYPE 3D PROBE (AUDIBLE AND VISUAL ALARM)
PART NO. 9410

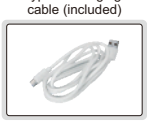
IP67 WATERPROOF

VIDEO

- Suitable for all kinds of machining centers, CNC boring machines, milling machines, drilling and tapping centers
- Suitable for workpiece detection of various solid materials
- Manually set the workpiece coordinates and machining reference points before CNC machining process
- In the process of CNC machining, manually detect and control key dimensions and position coordinates and their accuracy
- Detect the accuracy of the key size, shape and position of the workpiece after completion of CNC machining
- Standard .787" shank diameter, held by CNC
- LED indicator and buzzer indicate the trigger state of the probe
- Using lithium battery charging technology, no need to replace the battery
- The battery (5% utilization rate per shift) can be used continuously for 90 days
- Type-C interface
- Optional accessory: styli and extension bar

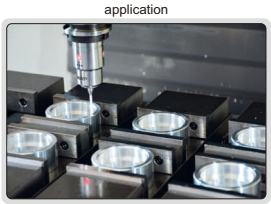


type-C charging cable (included)



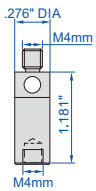
signal extension cord (included)

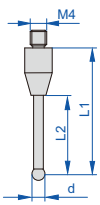
application



SPECIFICATION

Probe length (L)	4.547"
Shank diameter (D)	.787"
Trigger direction	±X, ±Y, +Z
Directional trigger protection stroke	X-Y: ±12°, Z: +.197"
Arbitrary one-way repeated trigger accuracy	≤.00004"
Trigger force in X-Y direction (with standard styli)	0.3-0.6N
Trigger force in Z direction	4N
Class of protection	IP67
Type-C charging cable	59"
Signal extension cord (provide signals to CNC)	39"





EXTENSION ROD (OPTIONAL)

Part No.	Material
9410-R1	ceramic

STYLI (OPTIONAL)

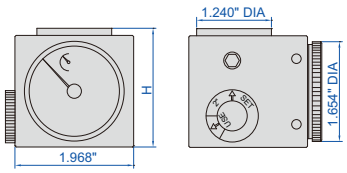
Part No.	L1	L2	d	Material of rod *	Material of ball
9410-P1	.709"	.512"	.157"	stainless steel	ruby
9410-P2	.709"	.531"	.197"	stainless steel	ruby
9410-P3	.728"	.512"	.118"	stainless steel	ruby
9410-P4	.748"	.315"	.079"	carbide	ruby
9410-P5	.768"	.157"	.039"	carbide	ruby
9410-P6	1.969"	1.575"	.079"	carbide	ruby
9410-P7	1.969"	1.339"	.197"	ceramic	ruby
9410-P8	3.937"	3.386"	.236"	ceramic	ruby
9410-P9	1.575"	1.181"	.157"	ceramic	ruby
9410-P10	1.969"	1.417"	.236"	ceramic	ruby

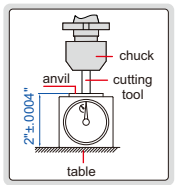
* For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break

ZERO SETTER

- Magnetic base

2397-25A

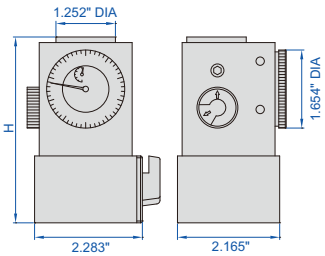




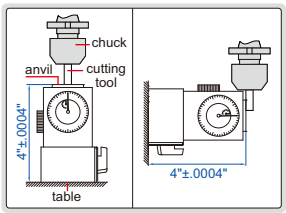
Part No.	Height (H)	Graduation	Accuracy	Test force
2397-25A	2"	.0005"	±.0004"	2lbf (at 2")

ZERO SETTER

- Magnetic base with on-off switch



2394-45A



Part No.	Height (H)	Graduation	Accuracy	Test force
2394-45A	4"	.0005"	±.0004"	2lbf (at 4")

TOOL PRESETTER (BASIC TYPE)
PART NO. TLP-300H

VIDEO

- Absolute linear scales, zero setting is not needed after power on and off

standard rod (included)

rotate tools

SPECIFICATION

Maximum tool diameter (X axis)	11.81" DIA
Height measuring range	2.36"~11.81"
Repeatability	.0002"
Measuring accuracy	.0008"
Linear scale resolution	.0002"
Dial indicator graduation	0.01mm
Spindle holder	BT50
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	23.62x14.37x27.17"
Weight	150lb

STANDARD DELIVERY

Main unit	1 pc
BT50 spindle holder	1 pc
Standard rod	1 pc
Dial indicator	2 pcs
Wrench	1 set
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

BT50/BT30 converter	TLP-300H-C1
BT50/BT40 converter	TLP-300H-C2
Printer	TLP-300H-PRINTER*
Digital readout	TLP-300H-DRO

*Printer must be used with digital readout **TLP-300H-DRO**

BT50/BT40 converter (**optional**)

BT50/BT30 converter (**optional**)

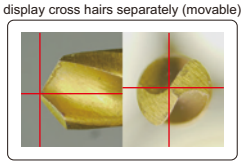
CUTTING TOOLS MICROSCOPE
PART NO. ISM-CT820

BUILT-IN SOFTWARE WITHOUT COMPUTER | SPLIT SCREEN DESIGN | TAKE PICTURES AND VIDEOS

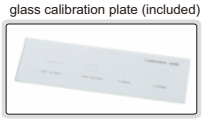
VIDEO

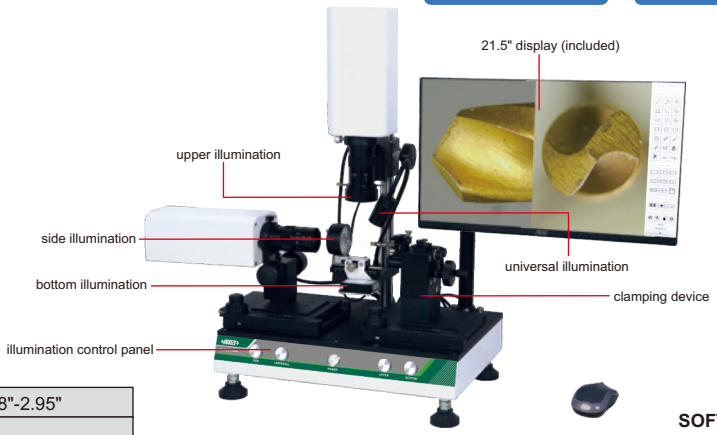
- Split screen design, zoom in and out independently
- One mouse can operate two cameras
- Display cross hairs
- Brightness, contrast ratio, white balance are adjustable
- Basic measuring tools including point to point, point to line, line to line, angle, three-point circle, etc

display cross hairs separately (movable)



glass calibration plate (included)





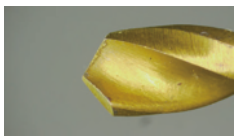
SPECIFICATION

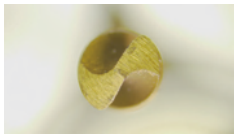
Cutting tools range	.16~.47" DIA, length 1.18"-2.95"
Lens	step-zoom lens
Output	HDMI
Resolution	1920×1080
Frame rate	60fps
Focus distance	3.35"
View field	.08×.13~.52×.94"
Magnification	20-132X
Power supply	AC 100-240V
Dimension (L×W×H)	17.72×11.81×27.56"
Weight	44.09lb

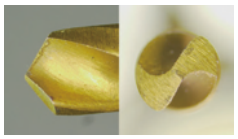
STANDARD DELIVERY

Main unit	1 pc
Display	1 pc
32G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Glass calibration plate	1 pc
Anti-dust cover	1 pc

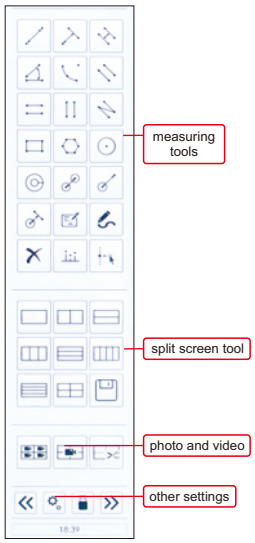
screen display


single screen display


single screen display


split screen display

SOFTWARE (INCLUDED)



DIGITAL LEVEL
PART NO. ISE-2DT

VIDEO

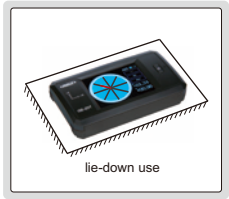
DATA OUTPUT

- Color LCD, touch panel
- X-Y axis measurement
- Set the tolerance and the display is shown in different colors

within the tolerance (green)

out of the tolerance (red)

- To show the incline with line or bubble



lie-down use

charging and
data output

the bottom has 4
thread mounting
holes

SPECIFICATION

Measuring range	±30°
Resolution	0.1°, 0.01°, 0.1mm/m (=.001in/ft)
Accuracy	±0.03° (range 0~3°) ±0.05° (range >3°)
Power supply	rechargeable battery
Dimension	4.53×2.60×.98"
Weight	.49lb

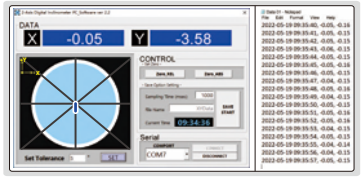
STANDARD DELIVERY

Main unit	1 pc
USB cable	1 pc

OPTIONAL ACCESSORY

Software	**ISE-2DT-SOFTWARE**

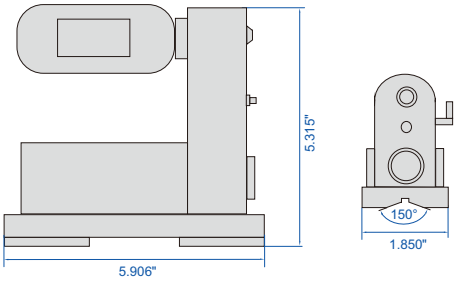
PC software (**optional**), send data to txt



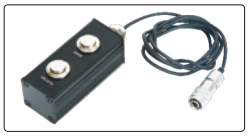
WIRELESS ELECTRONIC LEVELS

VIDEO

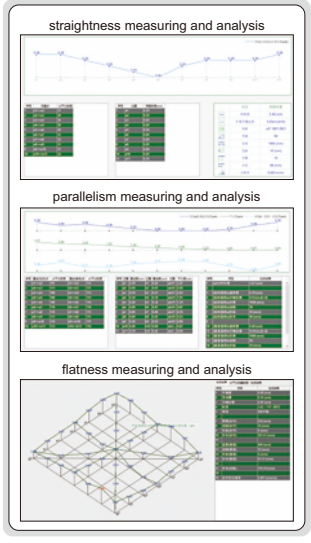
4952-150



control box (included)



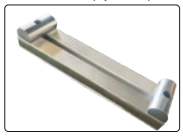
measuring and analysis software (included)



- Measures flatness, parallelism and straightness
- Built-in wireless transmission module, 433MHz signal, wireless connection to computer, transmission distance 164ft
- The LCD can be rotated for easy observation in different directions
- Designed with handle for easy access
- V-groove on bottom for shafts
- Supplied with measuring and analysis software
- Optional accessory: bridge plate (part no. **4952-01**)

wireless receiver (included)

12" bridge plate
4952-01 (**optional**)



SPECIFICATION

Part No.	**4952-150**		**4952-150L**	
Resolution (adjustable)	0.2 second (0.001mm/m)	2 second (0.01mm/m)	1 second (0.005mm/m)	2 second (0.01mm/m)
Range	±100 seconds	±1000 seconds	±500 seconds	±500 seconds
Repeatability	0.2 second	2 second	1 second	2 second
Response time	<10s	<3s	<5s	<3s
Accuracy	±(1+Ax2%) Δ*			
Power supply	1x21700 Li-ion battery, for 50h continuous working			
Weight	4 lb			

*A is the measured value, Δ is the resolution

STANDARD DELIVERY

Main unit	1 pc
Wireless receiver	1 pc
Control box	1 pc
Measuring and analysis software (with dongle)	1 set
Charger	1 pc
21700 Li-ion battery	4 pcs

DUAI AXIS DIGITAL LEVEL AND GYRO ANGLE METER

AUDIBLE ALARM WHEN OUT OF LIMIT | DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP | BACKLIGHT

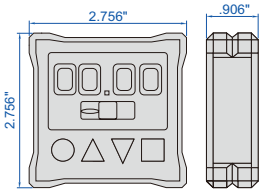
VIDEO

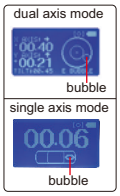
ATTENTION: HARD PLASTIC CASE

DATA OUTPUT

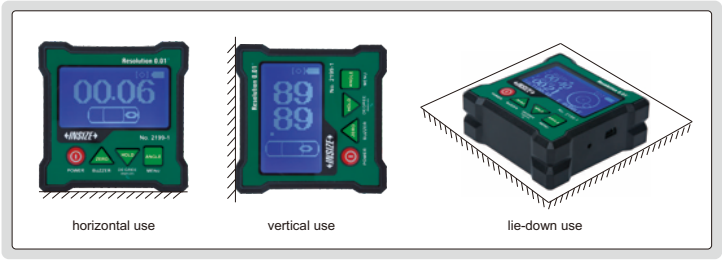
- Single axis/double axis level and slope meter, gyro technique can measure the angle between two planes in any direction
- Hard plastic case, with V-shaped grooves, four magnetic sides
- Display flips over when the bottom faces up
- Audible alarm when out of limit
- Buttons: POWER, ZERO, HOLD, display unit (°, mm/m, %), MENU
- Rechargeable Li-ion battery 3.7V, operation time is 40 hours
- Automatic power off in 30 minutes
- Data output
- Android and iPhone APP are included
- Optional accessory: wired data transmission (part no. **2199-A01**), bluetooth (part no. **2199-A02**), transmission distance is 32.8ft (under the condition of no obstruction and no electromagnetic iterference)

2199-1





M4 threaded holes on the back for fixing



horizontal use | vertical use | lie-down use

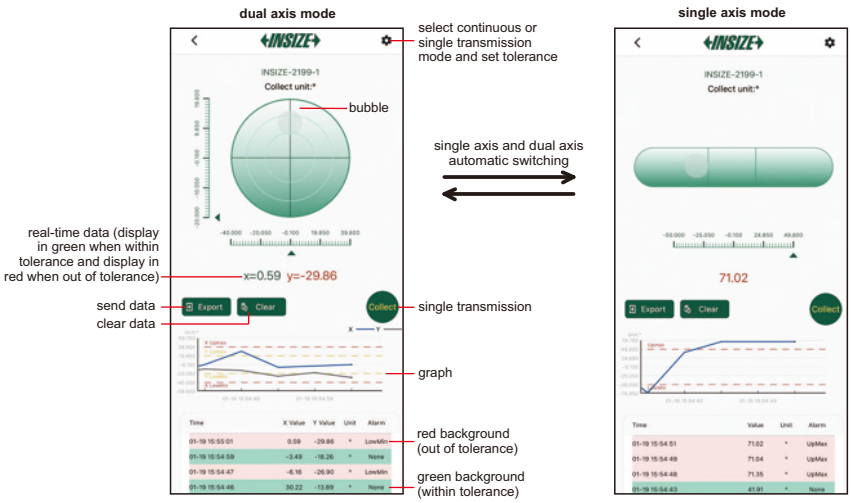
Part No.	Range	Resolution	Accuracy
2199-1	single axis level: 4x90° dual axis level: ±40°	0.01°	at 0° and 20°: ±0.05° at 20° and 70°: ±0.15° at 70° and 90°: ±0.05°
	gyro angle meter: 360°	0.1°	±0.5°

place the angle meter at the first position, press "angle" button, rotate to another position (rotation speed<90°/s), LCD shows the angle α

connect to mobile phone via bluetooth

connect to computer via wired data transmission

Android and iPhone APP (included), can choose real-time display (continuous transmission) or single transmission



bluetooth (**optional**)

wired data transmission (**optional**)

DIGITAL LEVEL AND SLOPE METER

VIDEO

BUZZER ALARM AT 0° AND 90°

WORKING TEMPERATURE 23°F~122°F

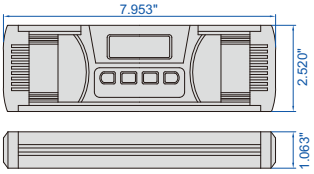
IP67 WATERPROOF

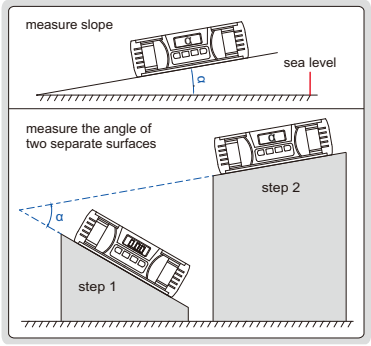
ABSOLUTE LEVEL

BACKLIGHT

- 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

2175-360



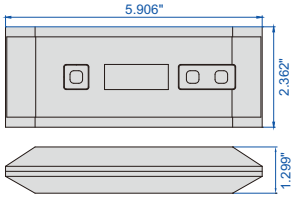


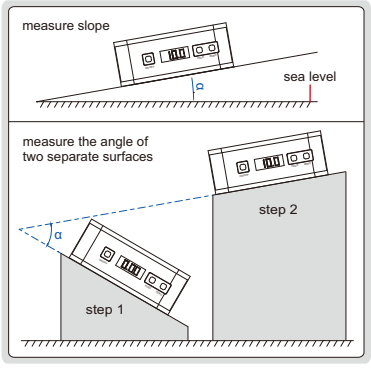
Part No.	Range	Resolution	Accuracy
2175-360	0-360° (90°x4)	0.05°; 1mm/m	at 0°: ±0.05°; at others: ±0.1°

DIGITAL 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

2173-360





Part No.	Range	Resolution	Accuracy
2173-360	0~360° (90°x4)	0.1° (=.021in/ ft)	at 0° and 90° : ±0.1°; at others : ±0.2°

DIGITAL LEVEL AND SLOPE METER

VIDEO

BUZZER ALARM AT 0° AND 90°

WORKING TEMPERATURE 23°F~122°F

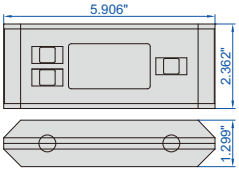
IP54 WATERPROOF

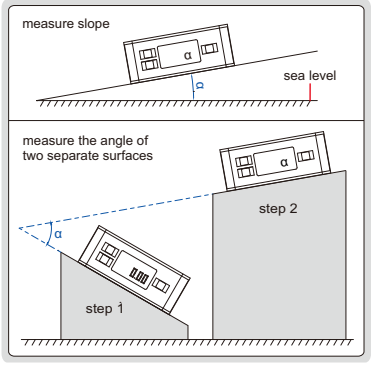
ABSOLUTE LEVEL

BACKLIGHT

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

2179-360





Part No.	Range	Resolution	Accuracy
2179-360	0-360° (90°×4)	0.05°; 1 mm/m; .125in/ft	at 0° and 90°: ±0.1°; at others: ±0.2°

DIGITAL LEVEL AND SLOPE METER

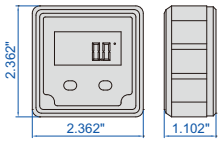
POPULAR MODEL

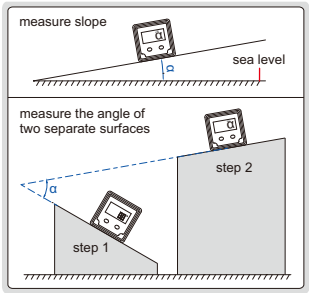
DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP | WORKING TEMPERATURE 23°F~122°F | BACKLIGHT | ABSOLUTE LEVEL | MAGNETIC BOTTOM

VIDEO

- Used as level and slope meter
- Aluminum frame
- Magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 minutes after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, absolute and incremental measurement
- One AAA battery
- Automatic power off in 5 minutes

2170-1





Part No.	Range	Resolution	Accuracy
2170-1	4x90°	0.1° (=.021in/ft)	at 0° and 90°: ±0.1°; at others: ±0.2°

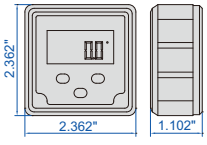
BLUETOOTH DIGITAL LEVEL AND SLOPE METER

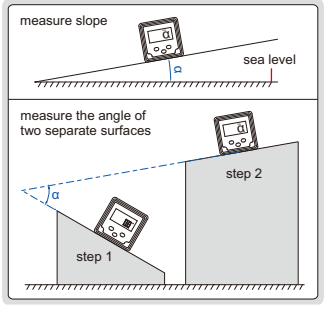
DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP | WORKING TEMPERATURE 23°F~122°F | BACKLIGHT | ABSOLUTE LEVEL | MAGNETIC BOTTOM

VIDEO

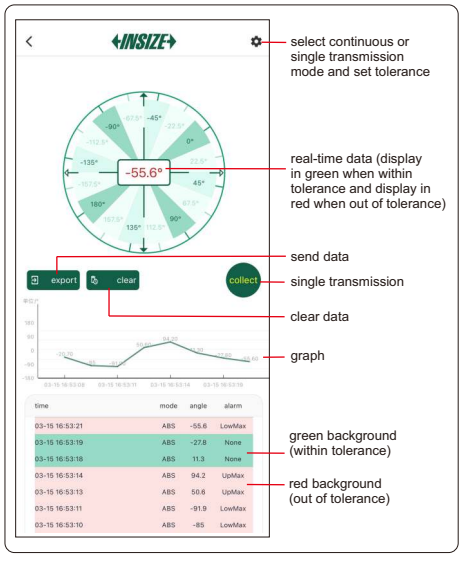
- Used as level and slope meter
- Aluminum frame
- Magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 seconds after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, HOLD, absolute and incremental measurement
- Built-in bluetooth, transmission distance is 49.2ft (under the condition of no obstruction and no electromagnetic interference). Android and iPhone APP are included
- One AAA battery, automatic power off in 5 minutes

2198-2





Android and iPhone APP (included), can choose real-time display (continuous transmission) or single transmission



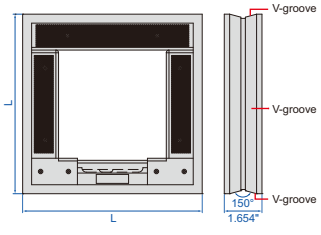
Part No.	Range	Resolution	Accuracy
2198-2	4x90°	0.1° (=.021in/ft)	at 0° and 90°: ±0.1°; at others: ±0.2°

FRAME LEVELS

INSIZE PLUS
MADE IN ERROPE

NO NEED TO SET ZERO BEFORE USE

4906-200

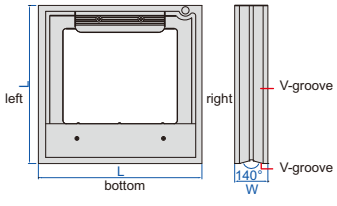


- No need to set zero before use
- Three V-grooves for shafts (shafts dia .760~4.563")
- With longitudinal vial

Part No.	Size (LxL)	Sensitivity
4906-150	6x6"	.00024in/ft (=0.001°)
4906-200	8x8"	.00024in/ft (=0.001°)

FRAME LEVELS

4902-8

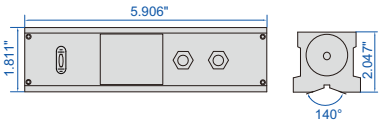


- V-groove on bottom and left for shafts (shafts diameter .59~2.68")
- With transverse vial

Part No.	Size (LxL)	W	Sensitivity
4902-6	6x6"	1.575"	.00024in/ft (=0.001°)
4902-8	8x8"	1.575"	.00024in/ft (=0.001°)
4902-12	12x12"	1.772"	.00024in/ft (=0.001°)

ELECTRONIC BLOCK LEVEL

- Button function: power switch, zero, data save, ABS/REF
- 8 sets of measuring data can be saved on the LCD
- V-groove on bottom for shafts (shafts diameter .55~2.95")
- With transverse vial
- Li-ion battery power supply, for 30h continuous working
- Supplied with li-ion battery charger



Part No.	Range	Resolution	Accuracy	Repeatability	Response time	Weight
4950-1	±5mm/m (±0.286°)	0.01mm/m (0.001°)	±(1+Ax2%) Δ*	0.01mm/m	<3s	2.4 lb

*A is the measured value, Δ is the resolution

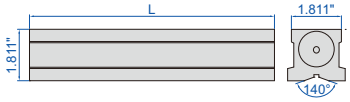
BLOCK LEVELS

POPULAR MODEL

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

4901-8

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

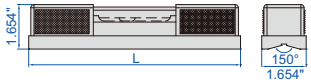


BLOCK LEVELS

INSIZE PLUS
MADE IN ERROPE

NO NEED TO SET ZERO BEFORE USE

4905-200



- No need to set zero before use
- V-groove on bottom for shafts (shafts diameter .76~4.56")
- With longitudinal vial

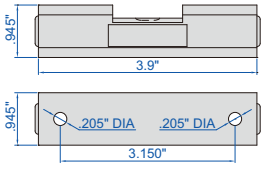
Part No.	Size (L)	Sensitivity
4905-160	6"	.00024in/ft (=0.001°)
4905-200	8"	.00024in/ft (=0.001°)
4905-300	12"	.00024in/ft (=0.001°)
4905-B160	6"	.00012in/ft (=0.0057°)

MINI LEVEL

INSIZE PLUS
MADE IN ERROPE

NO NEED TO SET ZERO BEFORE USE

4908-100



- No need to set zero before use
- With mounting holes (for M5 screws)

Part No.	Length	Sensitivity
4908-100	4"	.0012in/ft (=0.0057°)

DIGITAL LEVEL AND SLOPE METERS

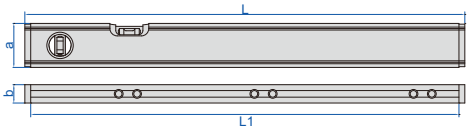
ABSOLUTE LEVEL | BACKLIGHT | WORKING TEMPERATURE 32°F ~ 122°F

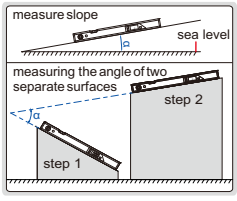
VIDEO

4910-400

4910-600

- With transverse and longitudinal vials
- Used as level and slope meter
- Aluminum frame, magnetic bottom
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm (not for **4910-400**), unit (mm/m, %, in/ft), conversion (not for **4910-400**), backlight
- The display flips over when the bottom faces up
- Two AAA batteries
- Automatic power off





Part No.	Range	Resolution	Accuracy	Remark*	L	L1	a	b
4910-400	0~360° (90°×4)	angle: 0.1°	±0.2°	both angle and slope are displayed (slope is calculated by angle)	16.378"	15.748"	1.969"	.827"
4910-600	0~360° (90°×4)	at 0° and 90°: 0.05°; at others: 0.1°	at 0° and 90°: ±0.1°; at others: ±0.2°	at 0°and 90° buzzer alarm	23.622"	23.031"	2.362"	.984"

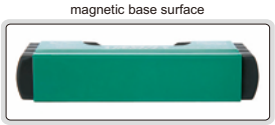
*mm/m=tan(°)×1000, for example: 0.3°=tan (0.3)×1000=5mm/m

HANDY LEVEL

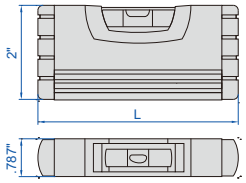
LIFETIME WARRANTY VIALS

MAGNETIC BASE

magnetic base surface



4912-100



packaging

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

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

HANDY LEVELS

LIFETIME WARRANTY VIALS

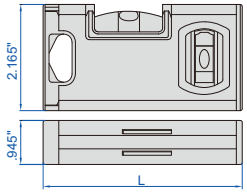
MAGNETIC BASE

4922-100

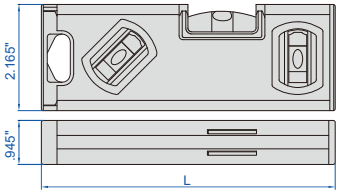
4922-150

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

Part No.	Size (L)	Accuracy	Number of vials
4922-100	4"	.006in/ft	2
4922-150	6"	.006in/ft	3
4922-200	8"	.006in/ft	3



2 vials



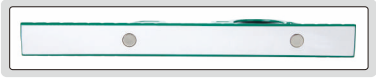
3 vials

CASTING ALUMINUM LEVEL

LIFETIME WARRANTY VIALS

MAGNETIC BASE

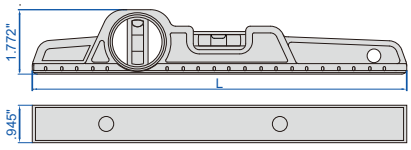
magnetic bottom surface (milled)



4913-250

packaging

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



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

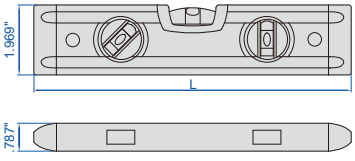
ALUMINUM LEVEL

LIFETIME WARRANTY VIALS

MAGNETIC BASE

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

4921-230

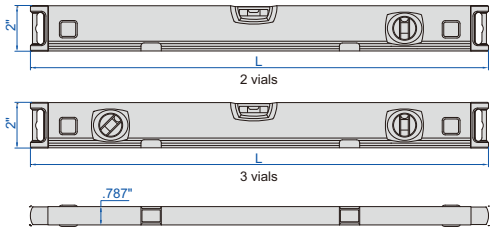


Part No.	Size (L)	Accuracy
4921-230	9"	.006in/ft

ALUMINUM LEVELS

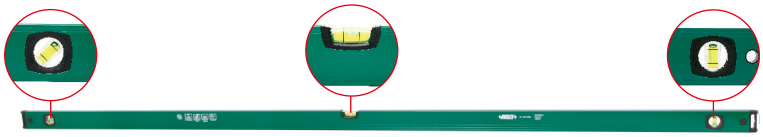
LIFETIME WARRANTY VIALS

MAGNETIC BASE



4914-600

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



4914-2000

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

magnetic bottom surface (milled)

ALUMINUM LEVELS

LIFETIME WARRANTY VIALS

- Accuracy .006in/ft
- Top and bottom working surfaces
- Shock-proof and UV-proof vials
- Die casting aluminum alloy frame
- Zero position of horizontal vial can be set
- One graduation of horizontal vial is 2% slope
- Working temperature: 5°F~131°F

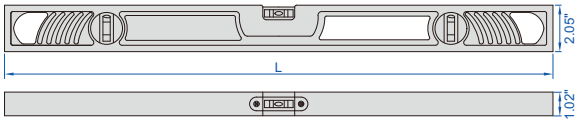
working surface (milled)

working surface (milled)

4911-600

Part No.	Length (L)
4911-600	24"
4911-800	32"

bottom surface (non-magnetic, milled)

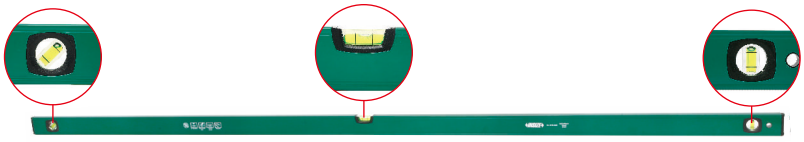


ALUMINUM LEVELS (BASIC TYPE)

LIFETIME WARRANTY VIALS

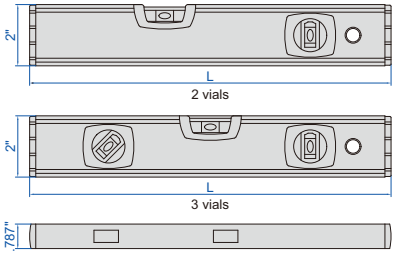
MAGNETIC BASE

4918-300



4918-2000

magnetic bottom surface



- Accuracy .012in/ft
- Shock-proof and UV-proof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: 5°F~131°F

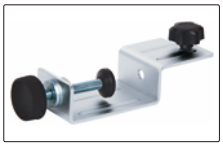
Part No.	Size (L)	Number of vials
4918-300	12"	2
4918-600	24"	2
4918-800	32"	2
4918-1000	40"	2
4918-1200	48"	2
4918-2000	80"	3

CROSS-LINE LASER LEVEL
PART NO. 4917-30

IP54 WATERPROOF

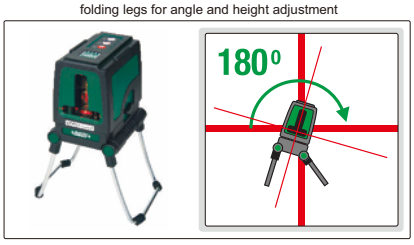
AUDIBLE AND VISUAL ALARM WHEN OUT OF ±3°

outdoor detector (**optional**)



stand (included with outdoor detector)

folding legs for angle and height adjustment



- Red horizontal and vertical cross laser lines
- Self-leveling within ±3°, self-leveling time within 4s, audible and visual alarm when out of ±3°
- Folding legs for angle and height adjustment
- Outdoor use with the detector (part no. **4917-DETECTOR**)

application examples

VIDEO

SPECIFICATION

Laser line width	.079±.02"/(within)16.4ft
Laser type	630~660nm, class II, <1mW
Beam angle	120±0.5°
Self-leveling range	±3°
Working distance	indoor: 98.4ft, outdoor: 164ft with detector (**optional**)
Accuracy	.0024"/ft
Operation temperature	14~104°F
Power supply	3×AA batteries, for 3 hours working
Dimension	3.94×3.23×4.09"
Weight	1.38lb

STANDARD DELIVERY

Main unit	1 pc
1/4" to 5/8" tripod adaptor	1 pc
Battery (AA)	3 pcs

OPTIONAL ACCESSORY

Outdoor detector	4917-DETECTOR

OUTDOOR DETECTOR (OPTIONAL)

Detecting distance	horizontal 3~164ft, vertical 3~98ft
Detecting accuracy*	high accuracy ±.06", low accuracy ±.1"
Power supply	9V battery
Dimension	6.61×2.28×1.18"
Weight	.31lb (battery included)

*Use high accuracy detection mode within 49ft, use low accuracy detection mode over 49ft

SELF-LEVELING ROTARY LASER
PART NO. GRL-L340

IP65 WATERPROOF

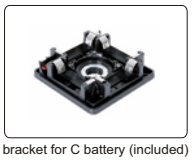
INDICATOR FLASHING WHEN OUT OF ±5°

application examples

horizontal leveling | vertical leveling | working with detector

detector (included)

remote controller (included)



bracket for C battery (included)

beam finder glasses (included)

tripod (included)

VIDEO

- Applicable fields: construction, decoration, pipeline and equipment installation
- Green laser beam rotates 360° horizontally or vertically
- Self-leveling range ±5° on both X and Y planes
- Alarm when inclination is out of ±5°
- ±5° leveling range for manual mode on both X and Y planes
- 5 variable speeds 0-600rpm
- 6 scan modes
- Plumb up and plumb down dots
- Remote control for long distance
- Power supply: AC or DC

SPECIFICATION

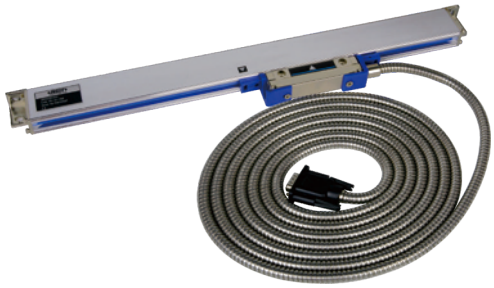
Working range		indoor 160ft, outdoor 980ft (with detector)
Self leveling range		±5°
Horizontal/vertical beam accuracy		±.0001"/1"
Main laser type		520~540nm, class 2, <1mW
Auxiliary laser type		645~655nm, class 2, <1mW
Rotating speed		0/60/120/300/600rpm
Scanning range		0/10/45/90/180/360°
Setting slope		X axis: ±5°, Y axis: ±5°
Operation temperature		-4~122°F
Maximum remote control distance		65ft
Power supply	remote controller	2×1.5V AAA batteries
	main unit	NI-MH batteries or 4×1.5V C batteries
	detector	1x9V battery
Dimension		8.27x8.27x8.39"
Weight		5.51lb

STANDARD DELIVERY

Main unit (including NI-MH batteries)	1 pc
C battery and bracket	1 set
Detector	1 pc
Remote controller	1 pc
Beam finder glasses	1 pc
Laser target	1 pc
Power adapter	1 pc
AAA battery	2 pcs
9V battery	1 pc
Tripod	1 pc

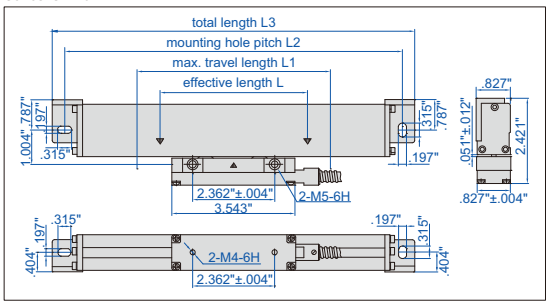
LINEAR SCALES (TTL SIGNAL)

IP54
WATERPROOF



ISL-A5-300

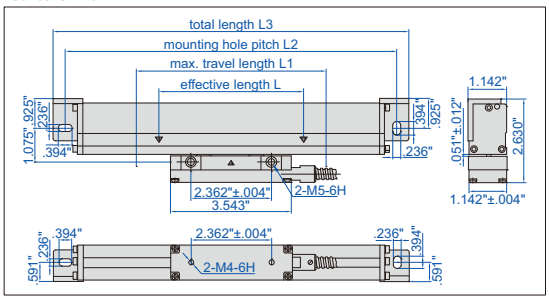
Series ISL-A5



Effective length (L)	Series ISL-A5 Thin type Part No.
8"/200mm	ISL-A5-200
10"/250mm	ISL-A5-250
12"/300mm	ISL-A5-300
14"/350mm	ISL-A5-350
16"/400mm	ISL-A5-400
18"/450mm	ISL-A5-450
20"/500mm	ISL-A5-500
24"/600mm	ISL-A5-600
30"/750mm	ISL-A5-750
32"/800mm	ISL-A5-800
40"/1000mm	ISL-A5-1000

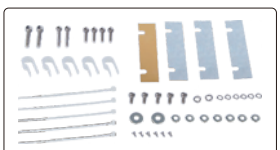
- Optical TTL (Through-The-Lens) detection. These optical TTL linear scales use an transistor logic to transmit and record high-resolution distance measurements. They are the most accurate type of encoder and are paired with **ISL-DR2/DR3** and **ISL-LCD7** (digital readout).

Series ISL-B5



Effective length (L)	Series ISL-B5 Thick type Part No.
20"/500mm	ISL-B5-500
24"/600mm	ISL-B5-600
28"/700mm	ISL-B5-700
32"/800mm	ISL-B5-800
36"/900mm	ISL-B5-900
40"/1000mm	ISL-B5-1000
44"/1100mm	ISL-B5-1100
48"/1200mm	ISL-B5-1200
52"/1300mm	ISL-B5-1300
60"/1500mm	ISL-B5-1500
64"/1600mm	ISL-B5-1600
68"/1700mm	ISL-B5-1700
80"/2000mm	ISL-B5-2000
84"/2100mm	ISL-B5-2100

'L' shape support (included)



mounting accessories (included)

anti-dust cover (included)

plain base (included, for L ≥60")

SPECIFICATION

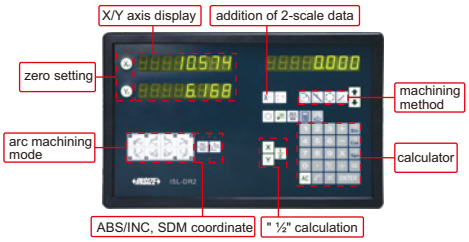
Part No.	Series ISL-A5		Series ISL-B5	
L1 (inch)	L+1.18" (L<38")	L+1.97" (L≥38")	L+1.18" (L<38")	L+1.97" (L≥38")
L2 (inch)	L+5.20" (L<38")	L+5.98" (L≥38")	L+5.35" (L<38")	L+6.14" (L≥38")
L3 (inch)	L+5.87" (L<38")	L+6.65" (L≥38")	L+6.06" (L<38")	L+6.85" (L≥38")
Resolution	.0002"		.0002"	
Max. response speed	295ft/min		196ft/min	
Scale grating pitch	787µin			
Scale reference point pitch	1.97"			
Accuracy	±(197+5L)µin L is the effective length in inch			
Cable length	140" (L: 2-38"), 200" (L: 40-60"), 400" (L: 64-128")			
Output signal	TTL			
Socket	9PD			
Power supply	5±0.5V			

STANDARD DELIVERY

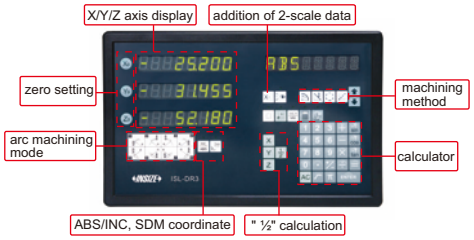
Main unit	1 pc
'L' shape support	1 pc
Anti-dust cover	1 pc
Plain base	1 pc (for L≥60")
Mounting accessories	1 package

DIGITAL READOUTS

VIDEO



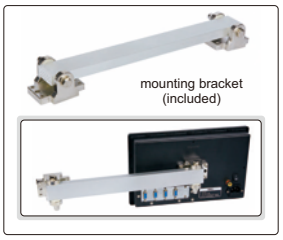
ISL-DR2



ISL-DR3

software flash disk (included)

- For **ISL-A5**, **ISL-B5** series linear scales



mounting bracket (included)

SPECIFICATION

Part No.	ISL-DR2	ISL-DR3
Application	two-axis	three-axis
Scale input ports	2	3
Resolution	.000002", .000005", .00001", .00002", .00005", .0001", .0002", .0005", .001", .002"	
Functions	addition of 2-scale data, linearity error compensation, smoothing, RS232C interface unit, BCD code out, zero setting, preset, resolution setting, counting direction setting, inch/mm conversion, ABS/INC conversion, expansion/contraction coefficient setting, "½" calculation, detecting RI, bolt-hole circle machining, ramp circle machining	
Power supply	110/220V, 50/60Hz	
Dimension	11.61×7.28×1.77"	
Weight	3.20lb	

STANDARD DELIVERY

Main unit	1 pc
Mounting bracket	1 pc
Ground cable	1 pc
RS232C cable	1 pc
Software flash disk for RS232C	1 pc

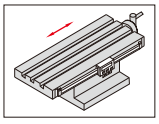
DIGITAL HORIZONTAL SCALES

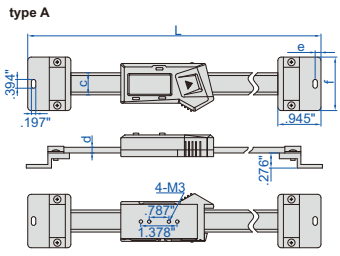
DATA OUTPUT

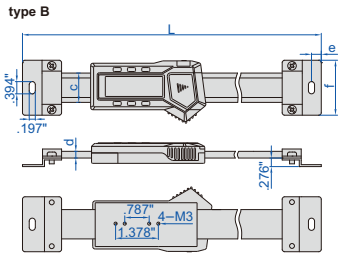
7101-300A

7101-400A

example of application



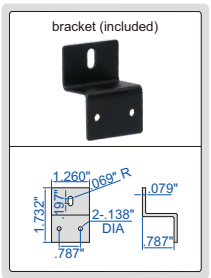




- Non waterproof
- Resolution .0005"/0.01mm
- Button type A: on/off, zero, inch/mm,
  type B: on/off, zero, inch/mm, ABS, data preset
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back

Part No.	Range	Type	Accuracy	L	c	d	e	f	Data output cable (optional)
7101-100A	4"/100mm	A	±.0010"	8.465"	.630"	.157"	.236"	1.417"	**7315-21** receiver is needed, **7302-21, 7305-21**
7101-150A	6"/150mm	A	±.0015"	10.433"	.630"	.157"	.236"	1.417"	
7101-200A	8"/200mm	A	±.0015"	12.402"	.630"	.157"	.236"	1.417"	
7101-300A	12"/300mm	A	±.0015"	17.520"	.630"	.157"	.236"	1.417"	
7101-400A	16"/400mm	B	±.0020"	23.228"	.945"	.217"	.315"	1.772"	**7315-22** receiver is needed, **7302-22, 7305-22**
7101-500A	20"/500mm	B	±.0020"	27.165"	.945"	.217"	.315"	1.772"	
7101-600A	24"/600mm	B	±.0030"	31.102"	.945"	.217"	.315"	1.772"	
7101-800A	32"/800mm	B	±.0040"	38.976"	.945"	.217"	.315"	1.772"	
7101-1000A	40"/1000mm	B	±.0040"	46.819"	1.220"	.413"	.394"	2.362"	

bracket (included)

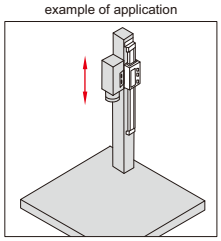


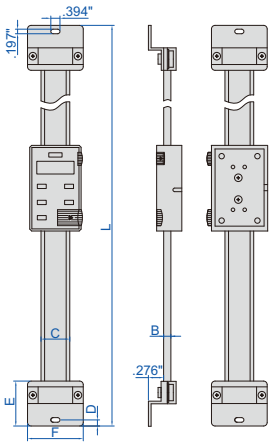
DIGITAL VERTICAL SCALES

DATA OUTPUT

- Non waterproof
- 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** receiver is needed),
  data output cable (part no. **7302-SPC7**, keyboard format),
  data output cable (part no. **7305-1150**, serial port format)

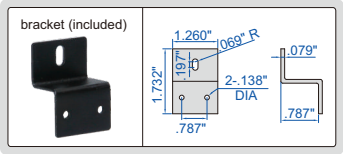
example of application





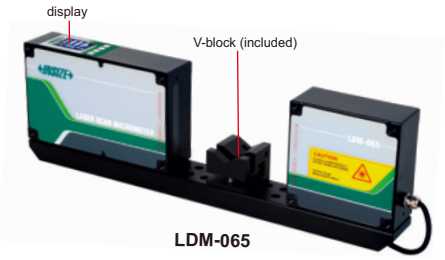
7102-300

Part No.	Range	Accuracy	B	C	D	E	F	L
7102-150	6"/150mm	±.0015"	.157"	.787"	.236"	.945"	1.575"	11.654"
7102-200	8"/200mm	±.0015"	.157"	.787"	.236"	.945"	1.575"	13.583"
7102-300	12"/300mm	±.0015"	.157"	.787"	.236"	.945"	1.575"	17.520"
7102-400	16"/400mm	±.0020"	.157"	.787"	.236"	.945"	1.575"	21.457"
7102-500	20"/500mm	±.0020"	.217"	.945"	.315"	1.260"	1.772"	26.969"
7102-600	24"/600mm	±.0030"	.217"	.945"	.315"	1.260"	1.772"	30.906"
7102-800	32"/800mm	±.0040"	.217"	.945"	.315"	1.260"	1.772"	38.780"

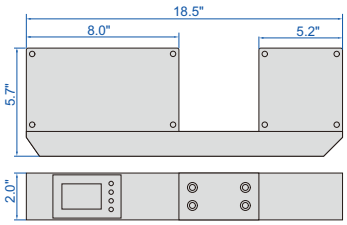


LASER SCAN MICROMETER

VIDEO



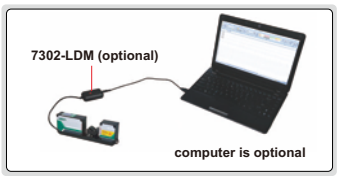
LDM-065



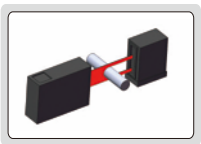
- Measure external diameter, ellipticity, run-out, maximum diameter of tools, etc.
- Can be used for transparent or non transparent workpieces
- Tolerance measurement
- Online or offline measurement
- Connected with computer and PLC

calibration gauge (**optional**)

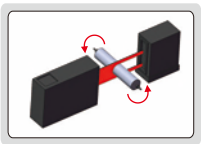
connect to control box (**optional**)



keyboard signal, can be transmitted to Excel

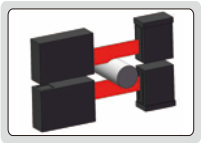


measure external diameter



measure ellipticity and run-out

two-axis measurement



large size measurement

SPECIFICATION

Part No.	LDM-065
Measuring range	.02~2.5"
Resolution	.00001"/.0001"/.001"/.01" selectable
Accuracy (25°C in laboratory)	±(.00002"+.01%D)", D is measuring diameter in inch
Repeatability (25°C in laboratory)	(.00001"+.005%D)", D is measuring diameter in inch
Laser wave length	650nm
Measuring speed	800~3200times/s (adjustable)
Operation temperature	32~122°F
Operation humidity	35~85RH without condensation
Output	dual channel RS485
Alarm output	24V, 1A
Power supply	DC24V, 2A
Dimension (L×W×H)	18.5×2.0×5.7"
Weight	17.6lb

STANDARD DELIVERY

Main unit	1 pc
V-block	1 pc
AC/DC adapter	1 pc
RS485 cable	1 pc

OPTIONAL ACCESSORY

Data output cable	7302-LDM
Calibration gauge	custom made
Control box	custom made

AUTOMATIC LASER SCAN MICROMETER
PART NO. LDM-AT01-U

CUSTOMISED ACCORDING TO WORKPIECES

center-type bench center (included)

V-type bench center (included)

VIDEO

- Motorised rotation with adjustable speed
- Auto-moving laser scan micrometer
- Measure the outer diameter, roundness and runout of workpieces at multiple sections

clamping workpieces by center-type bench center

SPECIFICATION

Workpiece clamping mode		center-type bench center (with centre holes at the end)	V-type bench center (without centre holes at the end)
Measuring range of workpieces	length	.20~11.81"	.39~9.06"
	diameter	.12~2.36"	.39~2.36"
	max. weight	44.09lb	3.31lb
Accuracy at 25°C		±(.00002"+.01%D)", D is measuring diameter in inch	
Repeatability at 25°C		(.00001+.005%D)", D is measuring diameter in inch	
Runout accuracy at 25°C		≤.0002"	
Size of working table		15.75×7.87"	
Driving method		motor drive	
Power supply		110V, 50/60Hz	
Dimension		29.53×23.62×35.43"	
Weight		110.23lb	

V-type bench center

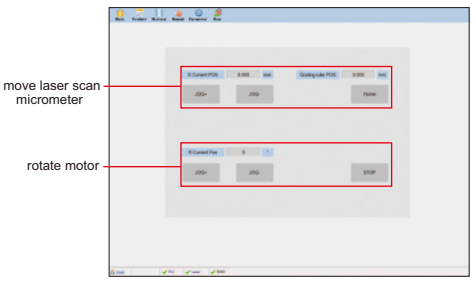
STANDARD DELIVERY

Main unit	1 pc
Center-type bench center	1 pc
V-type bench center	1 pc

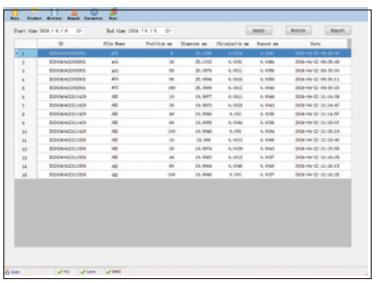
MEASURING SOFTWARE (INCLUDED)

- Language: English and Chinese
- Operation system: Windows 7
- Measure the outer diameter, roundness and runout of workpieces automatically, then the data, trend graphs and judgement results can be displayed in real time
- Auto-saving measurement data, query and export to EXCEL at any time
- Switch to manual test to move the laser scan micrometer and rotate the motor by hand

main interface



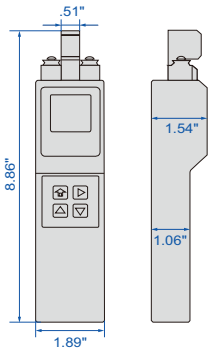
manual test



history data

HANDHOLD LASER SCAN MICROMETER
PART NO. LDM-H02

- Measure the outside diameter of cables, pipes and wires
- For transparent or non transparent workpieces
- Unit: inch, mm, mil, µm
- Compact and portable, the reading can be displayed horizontally



inspection gauge
(included)

application

SPECIFICATION

Measuring range	.0008~.0787"
Resolution	.001"/.0001"/.00001" selectable
Accuracy (25°C in laboratory)	±. 00002"
Repeatability (25°C in laboratory)	.00001"
Laser wave length	25.59µin
Measuring speed	800times/s
Operation temperature	32~122°F
Operation humidity	35~85%RH without condensation
Power	built-in 7.4V rechargeable battery
Weight	1.09lb

STANDARD DELIVERY

Main unit	1 pc
Inspection gauge	3 pcs (0.10±0.001mm, 0.30±0.001mm, 0.80±0.001mm)
AC/DC adapter	1 pc

VIDEO

MEASURING ARMS

- In accordance with ISO 10360-12
- Internal balance
- Dual high performance batteries
- Equivalent-arm design
- High-speed WiFi performance
- Aerospace grade carbon-fiber material
- Automatic power off
- U-shaped anti-collision design of the base

VIDEO

CMM-CM30

HIGH PRECISION, CM SERIES, 6-AXIS

Part No.	Measuring range	Maximum permissible error				
		SPAT	E_{UNI}	P_{SIZE}	P_{FORM}	L_{DIA}
CMM-CM15	59.0"	.00071"	.00098"	.00035"	.00063"	.00102"
CMM-CM20	78.7"	.00079"	.00110"	.00039"	.00071"	.00126"
CMM-CM25	98.4"	.00091"	.00118"	.00047"	.00087"	.00150"
CMM-CM30	118.1"	.00133"	.00165"	.00063"	.00126"	.00205"
CMM-CM35	137.8"	.00169"	.00220"	.00079"	.00150"	.00260"
CMM-CM40	157.5"	.00204"	.00260"	.00094"	.00173"	.00327"
CMM-CM45	177.2"	.00240"	.00350"	.00150"	.00307"	.00425"

HIGH PRECISION, CM SERIES, 7-AXIS

Part No.	Measuring range	Maximum permissible error				
		SPAT	E_{UNI}	P_{SIZE}	P_{FORM}	L_{DIA}
CMM-CM20S	78.7"	.00087"	.00118"	.00047"	.00087"	.00157"
CMM-CM25S	98.4"	.00106"	.00126"	.00051"	.00098"	.00189"
CMM-CM30S	118.1"	.00165"	.00209"	.00079"	.00138"	.00307"
CMM-CM35S	137.8"	.00217"	.00260"	.00094"	.00169"	.00362"
CMM-CM40S	157.5"	.00256"	.00323"	.00114"	.00189"	.00402"
CMM-CM45S	177.2"	.00287"	.00390"	.00169"	.00323"	.00520"

STANDARD PRECISION, BE SERIES, 6-AXIS

Part No.	Measuring range	Maximum permissible error				
		SPAT	E_{UNI}	P_{SIZE}	P_{FORM}	L_{DIA}
CMM-BE15	59.0"	.00110"	.00142"	.00059"	.00114"	.00150"
CMM-BE20	78.7"	.00118"	.00157"	.00071"	.00138"	.00161"
CMM-BE25	98.4"	.00138"	.00177"	.00079"	.00150"	.00197"
CMM-BE30	118.1"	.00217"	.00256"	.00110"	.00177"	.00315"
CMM-BE35	137.8"	.00295"	.00315"	.00138"	.00228"	.00386"
CMM-BE40	157.5"	.00354"	.00394"	.00173"	.00268"	.00457"
CMM-BE45	177.2"	.00441"	.00472"	.00189"	.00339"	.00504"

To be continued

Continued from previous page

- SPAT — Single-point articulation test
- EUNI — Distance measurement error between two points
- PSIZE — Sphere size measurement error
- PFORM — Sphere form measurement error
- LDIA — Sphere diameter obtained from performing the articulated location test (diameter of the spherical zone containing the centers of a sphere measured from multiple orientations)

SPECIFICATION

Temperature rate	5.4°F/5min
Battery life	5h for one battery; 10h for two batteries
Output	USB, WIFI
Operation temperature	41°F-113°F
Operation humidity	0~95%, non-condensing
Power	100~240V, 50/60HZ
Weight	19.4lb~23.4lb

.118" zircon ball probe (included)

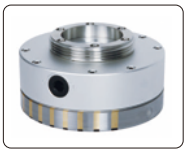
.236" zircon ball probe (included)

calibration cone (included)

LASER LINE PROBE SPECIFICATION

Part No.	CMM-CEM-SD	CMM-CEM-HD
Accuracy	±28μm (2σ)	±15μm (2σ)
Working distance	115mm	
Effective scan width	near field 80 mm, far field 150 mm	
Points per line	maximum 4000 points per line	
Scan rate	1200000 points per second	
Laser	class 2	
Weight	1.18lb	

laser line probe (**optional**)



magnetic base (**optional**)

electric vacuum base (**optional**)

DELL laptop (**optional**)

SYSTEM ACCURACY WITH LASER LINE PROBE

Part No.	CMM-CEM-SD	CMM-CEM-HD
CMM-CM20S	0.050mm	0.040mm
CMM-CM25S	0.055mm	0.045mm
CMM-CM30S	0.062mm	0.052mm
CMM-CM35S	0.076mm	0.065mm
CMM-CM40S	0.090mm	0.081mm
CMM-CM45S	0.139mm	0.131mm

STANDARD DELIVERY

Main unit	1 pc
.118" zircon ball probe	1 pc
.236" zircon ball probe	1 pc
Calibration cone	1 pc
Lithium batteries	2 pcs
USB cable	1 pc
Power adapter	1 pc
Dust cover	1 pc

OPTIONAL ACCESSORY

DELL laptop	CMM-CEM-PCE
Polyworks software	CMM-CEM-PW
Adjustable tripod	CMM-CEM-FAT
Electric vacuum base	CMM-CEM-EVCP
Magnetic base	CMM-CEM-IMM
Magnetic cones	CMM-CEM-MC
Magnetic spheres	CMM-CEM-MS
Point probe	CMM-CEM-PP
.079" ruby ball probe	CMM-CEM-RP2
.197" zircon ball probe	CMM-CEM-ZP5
.394" zircon ball probe	CMM-CEM-ZP10
3" straight probe extension	CMM-CEM-SPE3
4" straight probe extension	CMM-CEM-SPE4
60° probe adapter	CMM-CEM-DP60
90° probe adapter	CMM-CEM-DP90
.118" extended ball probe	CMM-CEM-EPB3
.236" extended ball probe	CMM-CEM-EPB6
Probe adapter	CMM-CEM-PA
High accuracy laser line probe	CMM-CEM-HD*
Standard accuracy laser line probe	CMM-CEM-SD*

*Laser line probes are suitable for 7-axis measuring arms only

adjustable tripod (**optional**)

COORDINATE MEASURING MACHINES

VIDEO

FEATURES

- Classic bridge structure, integrated workbench
- High precision air bearing
- Unique Z-axis anti torque design to reduce rotation error

RENISHAW SYSTEMS

- Precision grating system, including grating and data acquisition device
- UCC control system, including control box and manual operator
- Probe system, including probe head, probe body and styli

VISUSAL DMIS CNC CAD+SOFTWARE

- The software is designed and developed based on the DMIS standard, with excellent compatibility and versatility
- Geometric element measurement, evaluation of shape and position
- Bidirectional data transfer with mainstream CAD systems, complete graphical display
- Optional specialized modules, such as gear module, worm module, pipeline module, blade module, SPC data analysis module, etc.

CMM-LM564A-U

SPECIFICATION

Part No.	Range (X×Y×Z)	Probe system		Accuracy		Max. weight of workpiece	Overall dimension	Weight
		head	body	MPEE (μm)	MPEP			
CMM-LM564A-U	19.68×23.62×15.74" (500×600×400mm)	MH20i	TP20	±(2.3+L/250)	2.4μm	1102lb (500kg)	55.90×44.68×92.52" (1420×1135×2350mm)	1984lb (900kg)
CMM-LM564B-U		PH10T						
CMM-LM686A-U	23.62×31.50×23.62" (600×800×600mm)	MH20i	TP20	±(2.6+L/250)	2.7μm	1763lb (800kg)	68.50×55.90×108.66" (1740×1420×2760mm)	2866lb (1300kg)
CMM-LM686B-U		PH10T						
CMM-LM686C-U		PH10M	SP25M	±(2.1+L/250)	2.1μm			
CMM-LM8106A-U	31.50×39.37×23.62" (800×1000×600mm)	MH20i	TP20	±(2.7+L/250)	2.8μm	2204lb (1000kg)	76.37×63.77×108.66" (1940×1620×2760mm)	3747lb (1700kg)
CMM-LM8106B-U		PH10T						
CMM-LM8106C-U		PH10M	SP25M	±(2.2+L/250)	2.2μm			
CMM-LM8126A-U	31.50×47.24×23.62" (800×1200×600mm)	MH20i	TP20	±(2.7+L/250)	2.8μm	2204lb (1000kg)	84.25×63.77×108.66" (2140×1620×2760mm)	4188lb (1900kg)
CMM-LM8126B-U		PH10T						
CMM-LM8126C-U		PH10M	SP25M	±(2.2+L/250)	2.2μm			
CMM-LM8156A-U	31.50×59.06×23.62" (800×1500×600mm)	MH20i	TP20	±(2.7+L/250)	2.8μm	2204lb (1000kg)	96.06×63.77×108.66" (2440×1620×2760mm)	4850lb (2200kg)
CMM-LM8156B-U		PH10T						
CMM-LM8156C-U		PH10M	SP25M	±(2.2+L/250)	2.2μm			

OPERATION ENVIRONMENT

Air pressure	87~116psi (0.6~0.8MPa)
Air supply	7.06CFM (200L/min)
Temperature	64.4~74.6°F (18~22°C), <0.5°C/h, <1°C/24h
Humidity	30%~70%
Max. power	1000W
Power supply	110V±5%, 50HZ

STANDARD DELIVERY

Main unit		1 pc
Probe system	probe head	1 pc
	probe body	1 pc
	styli	1 set
Control system		1 set
Calibration sphere		1 pc
Universal sphere seat		1 pc
Computer		1 pc
Printer		1 pc
Software		1 set
Table and chair		1 set

PH10T AND PH10M SPECIFICATION

Angular movement with horizontal axis	0°~105° in 7.5 steps
Angular movement with vertical axis	±180° in 7.5 steps
Number of positions	720
Steering mode	motorized
Max. output torque	0.45N.m
Max. extension length	300mm
Weight	1.43lb (649g)

MH20i SPECIFICATION

Angular movement with horizontal axis	0°~105° in 15 steps
Angular movement with vertical axis	±180° in 15 steps
Number of positions	168
Steering mode	manual
Max. extension length	75mm
Weight	0.46lb (210g)

To be continued

Continued from previous page

STYLI SET INCLUDED IN TP20

Name	Material	Ball diameter	Length	Stem diameter	Effective working length	Quantity
Styli	ruby ball/ stainless steel stem	SØ2.5mm	20mm	SØ1.4mm	14mm	4 pcs
		SØ4mm		SØ1.5mm	20mm	1 pc
		SØ3mm	10mm		7.5mm	

Name	Material	Diameter	Length	Quantity
Extension	stainless steel	Ø3mm	20mm	1 pc
			30mm	
Center base		Ø7mm	7.5mm	

STYLI SET INCLUDED IN SP25M

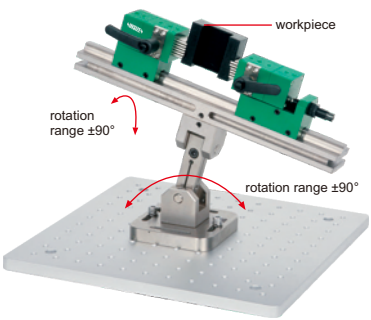
Name	Material	Ball diameter	Length	Stem diameter	Effective working length	Quantity
Styli	ruby ball/ stainless steel stem	SØ1.5mm	21mm	Ø1mm	14mm	1 pc
		SØ2mm		Ø1.4mm	8mm	1 pc
		SØ3mm		Ø1.5mm	12mm	4 pcs
		SØ4mm	31mm	Ø2.5mm	27mm	1 pc
	ruby ball/ carbon fiber stem	SØ5mm	50mm	Ø3mm	42.5mm	1 pc
		SØ6mm	75mm	Ø4mm	75mm	1 pc

Name	Material	Diameter	Length	Quantity
Extension	stainless steel	Ø5mm	10mm	1 pc
		Ø4mm	20mm	
Center base		Ø10mm	13mm	

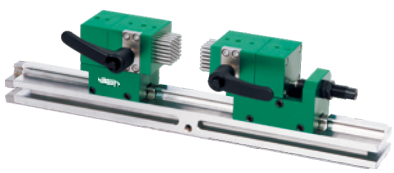
JIGS FOR CMM (ANVIL .10" DIA)

CAN BE CUSTOMIZED

VIDEO



ISY-200



ISY-200-A

ISY-200-5

ISY-200-3

Part No.	Product	Remark
ISY-200	3-piece jig set	including 1 pc **ISY-200-A** , 1 pc **ISY-200-3**, 1 pc **ISY-200-5**

Part No.	Product	Clamping range	Anvil area	Anvil stroke
ISY-200-A	jigs for cmm	0~6.69"	.81×.92"	.47"

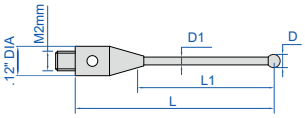
Part No.	Product	Size
ISY-200-5	two-way adjustable stand	3.74x3.74x 5.30"

Part No.	Product	Size	Hole size
ISY-200-3	base plate	11.81×11.81×.47"	M6

STYLI FOR CMM

■ Roundness .00001"

ISQ-20-071

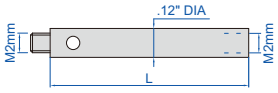


M2 styli

Part No.	D	D1	L	L1*	Material of rod	Material of tip
ISQ-20-002	.04" DIA	.03" DIA	.39"	.18"	stainless steel	ruby
ISQ-20-006	.08" DIA	.04" DIA	.39"	.24"		
ISQ-20-010	.12" DIA	.06" DIA	.39"	.39"		
ISQ-20-021	.08" DIA	.06" DIA	.79"	.55"		
ISQ-20-025	.12" DIA	.06" DIA	.79"	.69"		
ISQ-20-027	.16" DIA	.08" DIA	.79"	.79"		
ISQ-20-052	.02" DIA	.01" DIA	.39"	.12"	carbide	
ISQ-20-071	.04" DIA	.03" DIA	.79"	.49"		
ISQ-20-105	.08" DIA	.06" DIA	1.18"	.89"		
ISQ-20-120	.12" DIA	.08" DIA	1.18"	1.08"	ceramic	
ISQ-20-201	.16" DIA	.12" DIA	1.97"	1.97"	carbon fibre	

* L1 is the effective working length, which is the distance from the center of the tip to the section of the stem with the same diameter as the tip

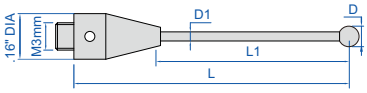
ISQ-25-125



M2 extension rods of styli

Part No.	L	Material
ISQ-25-105	.39"	stainless steel
ISQ-25-110	.79"	
ISQ-25-125	1.18"	ceramic

ISQ-30-066

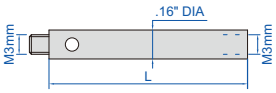


M3 styli

Part No.	D	D1	L	L1*	Material of rod	Material of tip
ISQ-30-001	.04" DIA	.03" DIA	.83"	.16"	carbide	ruby
ISQ-30-003	.08" DIA	.06" DIA	.83"	.31"		
ISQ-30-005	.12" DIA	.06" DIA	.83"	.47"		
ISQ-30-031	.08" DIA	.06" DIA	1.18"	.89"		
ISQ-30-066	.12" DIA	.08" DIA	1.97"	1.67"	ceramic	
ISQ-30-080	.24" DIA	.16" DIA	2.95"	2.95"	carbon fibre	

* L1 is the effective working length, which is the distance from the center of the tip to the section of the stem with the same diameter as the tip

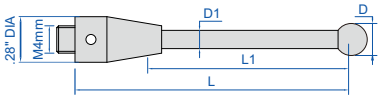
ISQ-35-110



M3 extension rods of styli

Part No.	L	Material
ISQ-35-101	.39"	stainless steel
ISQ-35-105	.79"	
ISQ-35-110	1.38"	
ISQ-35-115	1.97"	ceramic

ISQ-40-195

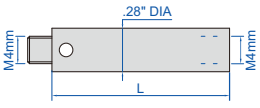


M4 styli

Part No.	D	D1	L	L1*	Material of rod	Material of tip
ISQ-40-113	.12" DIA	.08" DIA	.73"	.51"	stainless steel	ruby
ISQ-40-208	.24" DIA	.16" DIA	1.97"	1.42"		
ISQ-40-106	.04" DIA	.03" DIA	.77"	.16"	carbide	
ISQ-40-109	.08" DIA	.06" DIA	.75"	.31"		
ISQ-40-141	.04" DIA	.03" DIA	.79"	.39"		
ISQ-40-195	.08" DIA	.06" DIA	1.97"	1.57"		
ISQ-40-202	.16" DIA	.08" DIA	1.97"	1.50"		
ISQ-40-173	.20" DIA	.16" DIA	1.97"	1.34"	ceramic	
ISQ-40-179	.24" DIA	.16" DIA	1.97"	1.42"		
ISQ-40-222	.24" DIA	.16" DIA	2.95"	2.48"		
ISQ-40-240	.20 DIA	.16" DIA	3.94"	3.31"		
ISQ-40-245	.24" DIA	.16" DIA	3.94"	3.39"		

* L1 is the effective working length, which is the distance from the center of the tip to the section of the stem with the same diameter as the tip

ISQ-45-025



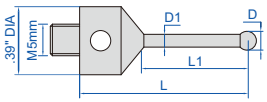
M4 extension rods of styli

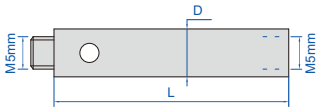
Part No.	L	Material
ISQ-45-025	1.18"	ceramic
ISQ-45-028	1.97"	

To be continued

Continued from previous page

ISQ-50-059





M5 styli

Part No.	D	D1	L	L1*	Material of rod	Material of tip
ISQ-50-051	.04" DIA	.03" DIA	.79"	.20"	carbide	ruby
ISQ-50-059	.08" DIA	.06" DIA	.79"	.43"		
ISQ-50-067	.12" DIA	.08" DIA	.79"	.43"		
ISQ-50-071	.16" DIA	.08" DIA	.79"	.43"		
ISQ-50-075	.20" DIA	.12" DIA	.79"	.43"		

* L1 is the effective working length, which is the distance from the center of the tip to the section of the stem with the same diameter as the tip

M5 extension rods of styli

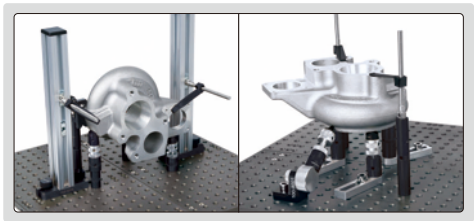
Part No.	L	D	Material
ISQ-55-012	.79"	.39"	stainless steel
ISQ-55-014	1.18"	.39"	
ISQ-55-016	1.97"	.39"	
ISQ-55-018	3.94"	.39"	
ISQ-55-031	1.97"	.79"	aluminum
ISQ-55-035	3.94"	.79"	
ISQ-55-039	7.87"	.79"	

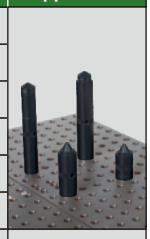
158-PIECE JIG SET FOR CMM
PART NO. ISY-100

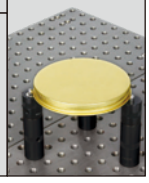
VIDEO

ISY-100

application examples



Product	Part No.	Size	Quantity	Application
stand	ISY-100-1001	.63" DIA×1.18"	5	
	ISY-100-1002	.63" DIA×1.97"	5	
	ISY-100-1003	.63" DIA×3.94"	3	
stand	ISY-100-1004	.79" DIA×1.18"	5	
	ISY-100-1005	.79" DIA×1.97"	5	
	ISY-100-1006	.79" DIA×3.94"	3	
stand with fine adjustment	ISY-100-2001	.63" DIA× 1.77~2.36"	2	height adjustment: 1.81~2.36"
stand with fine adjustment	ISY-100-2003	.79" DIA× 1.77~2.36"	2	
horizontal spring stand	ISY-100-4001	—	2	

Product	Part No.	Size	Quantity	Application
horizontal screw stand	ISY-100-5001	—	2	
magnetic stand (magnetic top surface)	ISY-100-7001	.79" DIA ×.98"	3	
stand for slice parts	ISY-100-8001	.79" DIA ×.98"	2	ISY-100-8001 and ISY-100-8002 use cooperatively 
clamping stand for slice parts	ISY-100-8002		1	

To be continued

Continued from previous page

Product	Part No.	Size	Quantity	Application
clip	ISY-100-1201	—	2	
clip	ISY-100-1301	—	2	
clip stand	ISY-100-1401	.24" DIA×2.36"	2	
	ISY-100-1402	.24" DIA×3.94"	2	
vertical square column	ISY-100-3003	1.18×1.18× 9.84"	2	
sliding support plate	ISY-100-1801	3.07×.79×.39"	3	
clamping screw	ISY-100-2301	.31" DIA×.79"	6	
screw	ISY-100-2302	.31" DIA×.79"	6	
base plate	ISY-600-400200	15.75×15.75 ×.47" hole size: M8×1.25mm Hole center distance .787"	2 pieces	—
wrench	ISY-100-3701	.15" DIA×2.76"	1	—
wrench	ISY-100-3801	M2.5mm	1	—
	ISY-100-3802	M5mm	1	—
	ISY-100-3803	M6mm	1	—
45° stand	ISY-100-9001	—	2	
V shaped support	ISY-100-1901	—	2	

Product	Part No.	Quantity	Application
V shaped support	ISY-100-1902	2	
marker	ISY-6100-1501	52*	
dust cleaner	ISY-100-3501	1	—
lubricating oil	ISY-100-3601	1	—

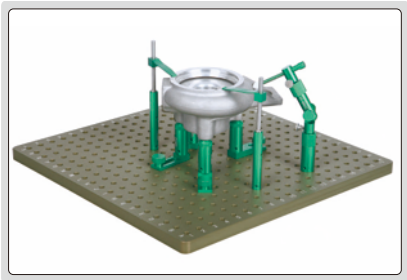
*Letter A~Z, number 0~25

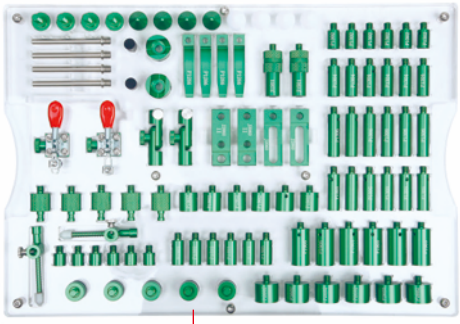
Product	Part No.	Quantity	Material	Application
support head	ISY-100-27016	2	aluminum	
	ISY-100-27018	2	nylon	
support head	ISY-100-27026	2	aluminum	
	ISY-100-27028	2	nylon	
support head	ISY-100-27036	2	aluminum	
	ISY-100-27038	2	nylon	
support head	ISY-100-27046	2	aluminum	
	ISY-100-27048	2	nylon	
support head	ISY-100-27056	2	aluminum	
	ISY-100-27058	2	nylon	
support head	ISY-100-27066	2	aluminum	
	ISY-100-27068	2	nylon	
support head	ISY-100-27076	2	aluminum	
	ISY-100-27078	2	nylon	

99-PIECE JIG SET FOR CMM
PART NO. ISY-600

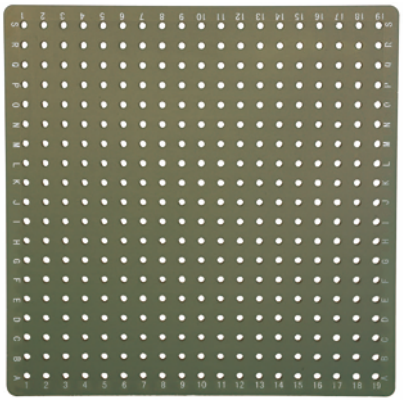
VIDEO

application example

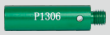


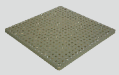


acrylic tray (included)



ISY-600

Product	Part No.	Size	Quantity
stand	ISY-600-P1301	.512" DIA×.512"	6
	ISY-600-P1302	.512" DIA×.787"	6
	ISY-600-P1303	.512" DIA×1.024"	6
stand 	ISY-600-P1304	.512" DIA×1.260"	6
	ISY-600-P1305	.512" DIA×1.575"	6
	ISY-600-P1306	.512" DIA×1.772"	6
stand	ISY-600-P1902	.787" DIA×.787"	6
	ISY-600-P1905	.787" DIA×1.496"	6
	ISY-600-P2602	1.024" DIA×.787"	6
spring stand	ISY-600-P1522	—	2
universal support	ISY-600-J1560	—	2
stand with fine adjustment	ISY-600-J1501	1.890"~2.362"	2
magnetic stand (magnetic top surface)	ISY-600-J2020	.787" DIA×.787"	5
adaptor	ISY-600-J2021	.787" DIA×.748"	5
V shaped support	ISY-600-J2520	.984" DIA×.787"	2

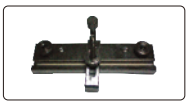
Product	Part No.	Size	Quantity
clamping screw	ISY-600-P2003	M8×1.25mm	4
sliding support plate	ISY-600-J2060	2.362×.787×.394"	2
sliding support plate	ISY-600-J2060-2	2.362×.787×.394"	2
clip	ISY-600-P1266	.472×2.598"	4
chuck support	ISY-600-JS201	—	2
clip stand	ISY-600-P0684	.236" DIA×2.913"	4
aluminum support head	ISY-600-P2002	—	4
nylon support head	ISY-600-P2001	—	4
base plate 	ISY-600-400	15.748×15.748×.709" hole size: M8X1.25mm	1

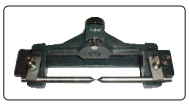
PROFILE PROJECTOR
PART NO. ISP-Z3015

INSPECTION CERTIFICATE

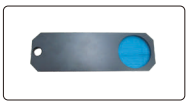
OPTIONAL ACCESSORY

lens

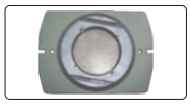

holder with clamp

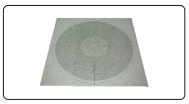

swivel center support

V-block with clamp


blue filter

demo sample


rotary table
(glass plate diameter 3.94")


overlay chart (protractor with 1° graduation, radius with 1mm/.039" increment)

50mm/1.97" reading scale
(check magnification accuracy)

300mm/11.81" calibration scale
(check magnification accuracy together with 50mm/1.97" reading scale or calibrate measuring accuracy)

SPECIFICATION

Part No.		ISP-Z3015			
Lens	magnification	10X (included)	20X (**optional**)	50X (**optional**)	100X (**optional**)
	view field	1.18" DIA	.59" DIA	.24" DIA	.12" DIA
	working distance	3.06"	1.74"	1.51"	1.00"
Max. workpiece height		3.54"	3.54"	3.54"	3.54"
Magnification accuracy		±0.08%			
Image		erect image			
Projector screen		diameter: 12" DIA			
		rotation range: 0°~360°, resolution: 1" or 0.01°			
		reference lines: cross-hairs			
Stage	metal stage size	13.39×5.98"			
	glass stage size	7.72×3.78"			
	X-Y stage travel	range: 6×2"			
		resolution .00002"			
		accuracy: (157.5+40L)μin L is the measuring length in inch			
	Z (focus) travel range	3.54"			
	max. load capacity	8.82lb			
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable			
		surface illumination: 24V/150W halogen lam			
Data processing unit	display	X-Y stage travel, screen rotation			
	output	RS232C			
	function	measure coordinate of point			
		measure coordinate of line			
		measure center coordinate, radius of circle with three points			
		measure distance between two objects			
		measure angle with four points or two lines			
		set origin of coordinate			
		coordinate transform			
		set midpoint of coordinate			
Power supply		110/220V, 50/60Hz			
Dimension (L×W×H)		21.65×30.31×43.31"			
Weight		297lb			

VIDEO

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

20X lens with half-reflection mirror and oblique illuminator mirror	ISP-Z3015-LENS20X
50X lens with half-reflection mirror	ISP-Z3015-LENS50X
100X lens with half-reflection mirror	ISP-Z3015-LENS100X
Rotary table	ISP-Z3015-TABLE
Overlay chart	ISP-Z3015-CHART
Holder with clamp	ISP-Z3015-HOLDER
Swivel center support	ISP-Z3015-SUPPORT
V-block with clamp	ISP-Z3015-VBLOCK
1.97"/50mm reading scale	ISP-Z3015-SCALE50
11.81"/300mm calibration scale	ISP-Z3015-RULE
Blue filter	ISP-Z3015-FILTER
Demo sample	ISP-Z3015-DEMO

QUICK MEASUREMENT SYSTEM (WITHOUT STITCHING)

NOTE: NOT SUITABLE FOR SMALL SIZES SUCH AS THREADS, CHAMFERS, ETC

VIDEO

QMS-A110-U

11.6" LCD (**optional**)

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically
- Measurement of 999+dimensions and 200+workpieces
- Suitable for measuring small flat parts

SPECIFICATION

Part No.		**QMS-A110-U**
Optical lens		low-distortion lens, single-field telecentric 3.94" DIA
View field range		3.94×3.15"
Measurement range (X×Y)		3.86×3.07"
Measurement accuracy*		±.00012"
Repeatability		±.00004"
Max. weight of workpiece		11lb
Measurement time		<2s
Measurement data		2D measurement
Power supply		110V, 50Hz, 600W
Illumination system	**back light**	telecentric illuminator, green light
	ring light	4-zone circular white high light circular (directional) low-angle green light (eletric)
	coaxial light (optional)	vertical illuminator, white light
Environmental requirement		temperature: 68°F±3.6°F, relative humidity: 30%~80%, vibration: <.00007oz, less than 15Hz
Dimension (L×W×H)		22.83×9.25×31.10"
Weight		88lb

*The optimum temperature is 68°F±1.8°F
Within 3.15×2.52", on focal position and environment temperature at 68°F±1.8°F

STANDARD DELIVERY

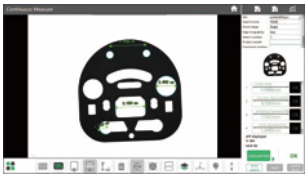
Main unit	1 pc
Computer	1 pc
Software	1 pc

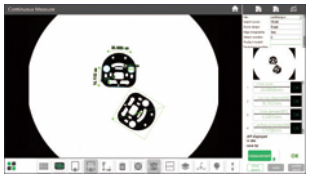
OPTIONAL ACCESSORY

Coaxial light illumination	**QMS-23-A3**
Data transmission function of software	**QMS-23-D1**
CAD import function of software	**QMS-23-C1**
Foot-switch	**QMS-43-FS1**
11.6" LCD	**QMS-23-B1** (must be installed in factory)

Software (included)

- Automatically measure widths, holes, rings, angles at the same time, simple and efficient.



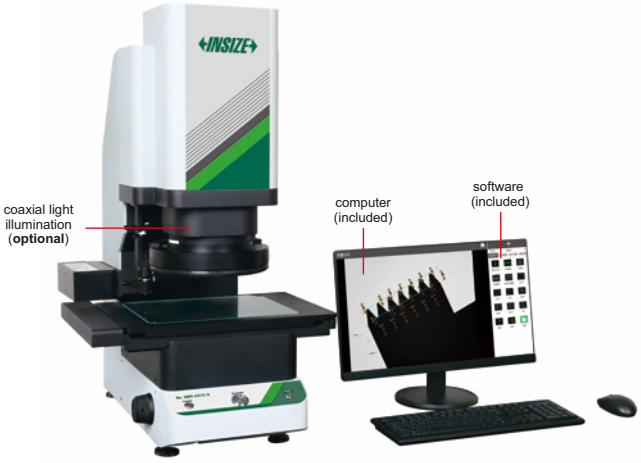


- Measuring result can be stored automatically. OK items and NG items can be counted automatically.

QUICK MEASUREMENT SYSTEM (WITH STITCHING)

SUITABLE FOR SMALL SIZES SUCH AS THREADS, CHAMFERS, ETC

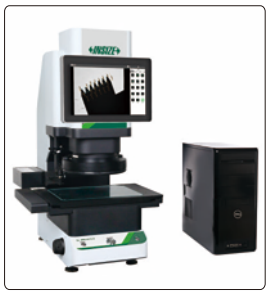
VIDEO



QMS-A315-U

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically
- Measurement of 999+dimensions and 200+workpieces
- Suitable for small and medium-size parts with high precision requirements

rotary table (**optional**)



11.6" LCD (**optional**)

SPECIFICATION

Part No.		QMS-A315-U	
Optical lens		dual-field dual-telecentric low-distortion lens	
		wide view field: 3.94" DIA small view field: .98" DIA	
View field range		wide view field	small view field
		3.94×3.15"	.98×.79"
Measurement range		11.81×7.87"	9.06×5.12"
Measurement accuracy*	without stitching	±.00012" ①	±.00004" ②
	with stitching	±(200+20L)μin ③	±(120+20L)μin ④
Repeatability	without stitching	±.00004"	±.00002"
	with stitching	±.00008"	±.00006"
Max. weight of workpiece		11lb	
Measurement time		<2s	
Measurement data		2D measurement	
Power supply		110V, 50Hz, 600W	
Illumination system	back light	telecentric illuminator, green light	
	ring light	4-zone circular white high light circular (directional) low-angle green light (eletric)	
	coaxial light (optional)	vertical illuminator, white light	
Environmental requirement		temperature: 68°F±3.6°F, relative humidity: 30%~80%, vibration: <.00007oz, less than 15Hz	
Dimension (L×W×H)		20.94×19.57×30.16"	
Weight		132lb	

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Software	1 pc

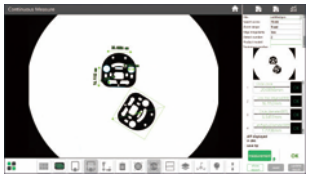
OPTIONAL ACCESSORY

Coaxial light illumination	QMS-23-A3
Data transmission function of software	QMS-23-D1
CAD import function of software	QMS-23-C1
Laser sensor	QMS-43-SJ1
Foot-switch	QMS-43-FS1
11.6" LCD	QMS-23-B1 (must be installed in factory)
Rotary table	QMS-43-RT1 (must be installed in factory)

* The optimum temperature is 68°F±1.8°F
① Within 3.15×2.52", on focal position and environment temperature at 68°F±1.8°F
② Within .79×.63", on focal position and environment temperature at 68°F±1.8°F
③ Within 10.63×7.09", on focal position, environment temperature at 68°F±1.8°F, and workpiece is less than 4lb, L is the travel of stage in inch
④ Within 8.15×4.61", on focal position, environment temperature at 68°F±1.8°F, and workpiece is less than 4lb, L is the travel of stage in inch

Software (included)

- Automatically measure widths, holes, rings, angles at the same time, simple and efficient.



- Measuring result can be stored automatically. OK items and NG items can be counted automatically.

VISION MEASURING SYSTEMS (MANUAL TYPE)

INSPECTION CERTIFICATE

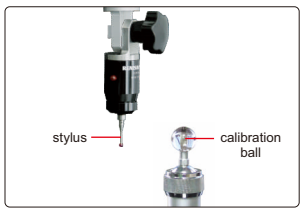
VIDEO

ISD-V250A

SPECIFICATION

Part No.	ISD-V150A	ISD-V250A	ISD-V300A
Measuring range (X×Y×Z)	6×4×6"	10×6×6"	12×8×6"
Stage size	13.94×8.98"	17.72×11.02"	19.69×12.99"
Glass stage size	8.27×6.30"	12.05×7.72"	13.78×9.84"
Resolution of X/Y/Z axis	.00002"		
Accuracy of X/Y axis	≤(98.4+10L)μin (L is the measuring length in inch)		
Repeatability of X/Y axis	.00008"		
Objective	0.7X~4.5X (zoom)		
Working distance	3.62"		
Magnification	29X~184X (on 21.5" monitor)		
Camera	1/3" color CCD, 0.3M pixel		
Illumination	surface and contour with adjustable LED		
Max. height of workpiece	6"		
Max. weight of workpiece	44lb		
Operation system	Windows 7/8/10		
Drive method	manual		
Power supply	110/220V, 50/60Hz		
Dimension (L×W×H)	22.05×21.26×33.46"	29.92×23.62×35.43"	29.92×23.62×35.43"
Weight	220lb	264lb	308lb

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



probe (**optional**), includes Ø2mm/.079" DIA and Ø3mm/.118" DIA styli, Ø25mm/.984" calibration ball, measuring accuracy is .0004"

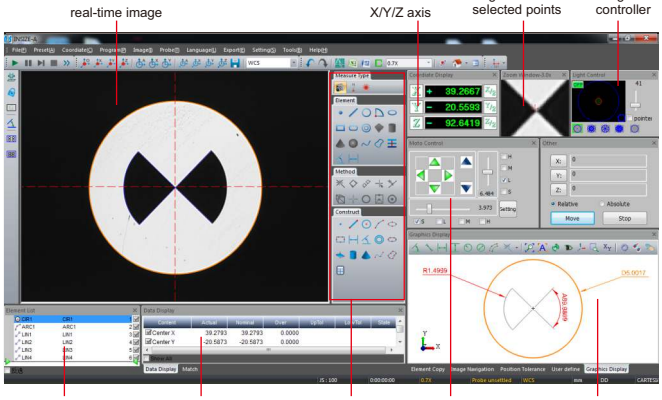
STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Clay	1 pc
Foot switch	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

0.5X auxiliary objective	Part No. **ISD-V-OB05X** Working distance: 6.89" Magnification: 14.5~92X (on 21.5" monitor)
2X auxiliary objective	Part No. **ISD-V-OB2X** Working distance: 1.42" Magnification: 58~368X (on 21.5" monitor)
Probe	Part No. **ISD-V-PROBE** includes Ø2mm/.079" DIA and Ø3mm/.118" DIA styli, Ø25mm/.984" calibration ball
Vision measuring system with coxial light lens (with computer)	Part No. **ISD-V150ACL,** **ISD-V250ACL,** **ISD-V300ACL**
Office software	Part No. **7313-OFFICE**

SOFTWARE (INCLUDED)



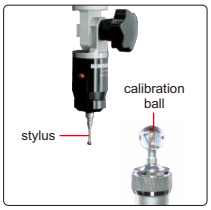
CNC VISION MEASURING SYSTEMS

INSPECTION CERTIFICATE

VIDEO

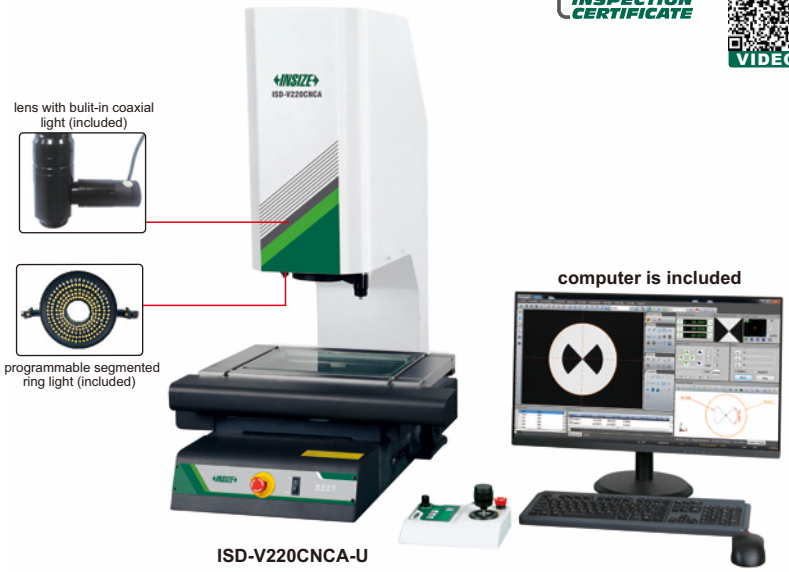
- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement

software flash disk (included)



probe (**optional**), includes Ø2mm/.079" DIA and Ø3mm/.118" DIA styli, Ø25mm/.984" calibration ball, measuring accuracy is .0004"

laser probe (**optional**) measuring accuracy is .0002"



ISD-V220CNCA-U

SPECIFICATION

Part No. (manual zoom lens)		ISD-V220CNCA-U	ISD-V270CNCA-U	ISD-V370CNCA-U
Measuring range (X×Y×Z)		8.66×4.72×5.90"	10.63×6.69×5.90"	14.57×10.63×5.90"
Stage size		17.72×11.02"	19.69×12.99"	23.86×18.35"
Glass stage size		12.05×7.72"	13.78×9.84"	17.72×13.78"
Resolution of X/Y/Z axis		.00002"		
Accuracy of X/Y axis		≤(98.4+10L)μin (L is the measuring length in inch)		≤(137.8+10L)μin (L is the measuring length in inch)
Repeatability of X/Y axis		.00008"		
Objective		0.7X~4.5X (zoom)		
Working distance		3.62"		
Magnification		33.0X~208.6X (with manual zoom lens, on 24" monitor)		
		31.9X~188.7X (with motorized zoom lens, on 24" monitor)		
Camera		giga-bit network camera		
Illumination	surface	coaxial light, programmable segmented ring light		
	contour	adjustable LED		
View field (diagonal length)		.06~.43"		
Max. height of workpiece		5.90"		
Max. weight of workpiece		66lb		
Operation system		windows 7/8/10		
Drive method		automatic		
Power supply		110V, 50/60Hz		
Dimension (L×W×H)		29.92×23.62×35.43"	29.92×23.62×35.43"	38.19×26.38×37.01"
Weight		322lb	370lb	586lb

STANDARD DELIVERY

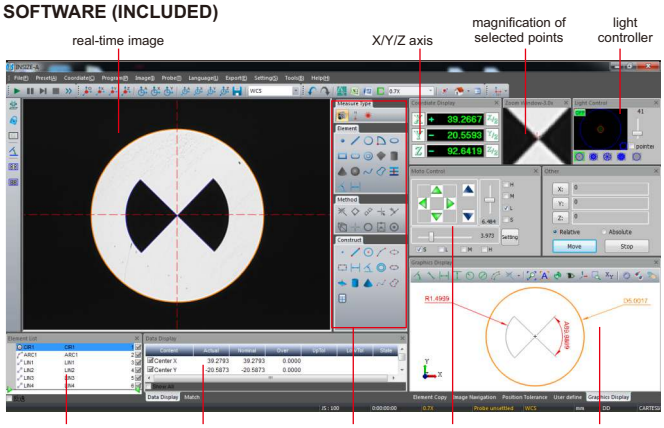
Main unit	1 pc
Software	1 pc
Computer	1 pc
24" display	1 pc
Len with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc

desk (**optional**)

OPTIONAL ACCESSORY

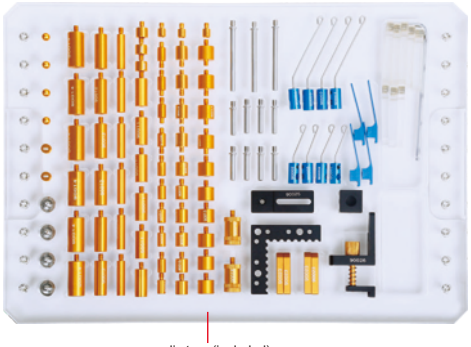
0.5X auxiliary objective	Part No. **ISD-V-OB05X** Working distance: 6.89" Magnification: 16.5~104.3X (with manual zoom lens, on 24" monitor) 16.0~94.4X (with motorized zoom lens, on 24" monitor)
2X auxiliary objective	Part No. **ISD-V-OB2X** Working distance: 1.42" Magnification: 66~417.2X (with manual zoom lens, on 24" monitor) 63.8~377.4X (with motorized zoom lens, on 24" monitor)
Probe	Part No. **ISD-V-PROBE** includes Ø2mm/.079" DIA and Ø3mm/.118" DIA styli, Ø25mm/.984" calibration ball
Laser probe	Part No. **ISD-V-LASER**
Office software	Part No. **7313-OFFICE**
Desk	Part No. **ISD-V-DESK**

SOFTWARE (INCLUDED)

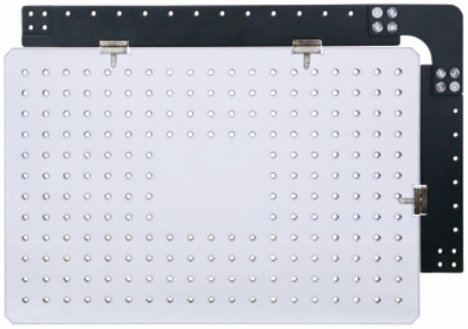


113-PIECE JIG SET FOR VISION MEASURING SYSTEMS
PART NO. ISY-700

VIDEO

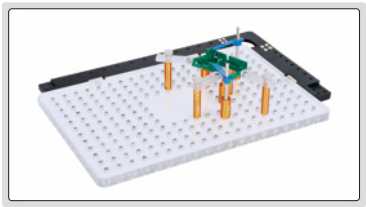


acrylic tray (included)



ISY-700

application example



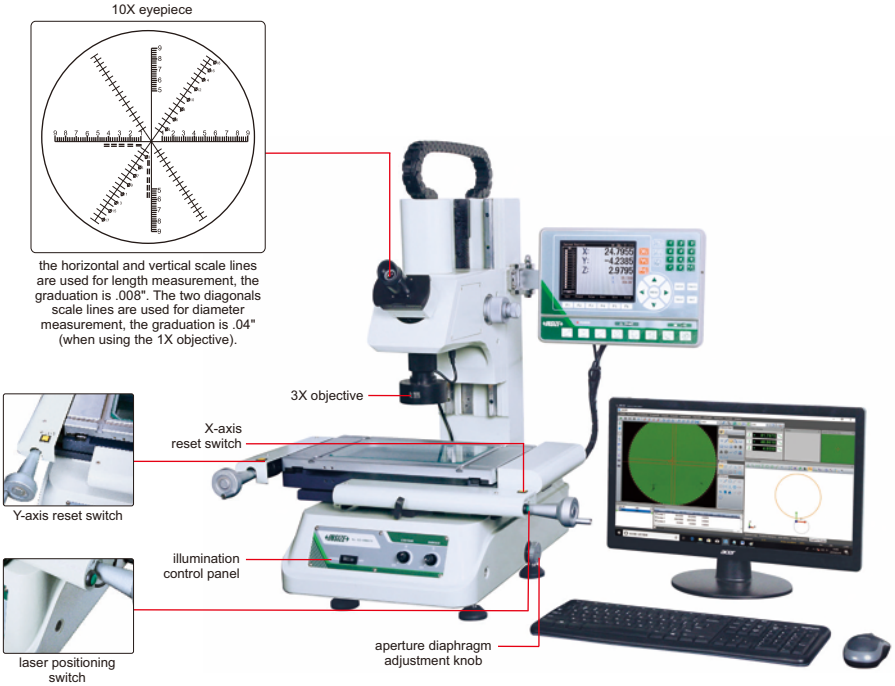
Product	Part No.	Size	Quantity
clip	ISY-700-90001	.278×1.339"	4
clip	ISY-700-90002	.059×.945"	4
	ISY-700-90003	.059" DIA×1.969"	4
clip stand	ISY-700-90004	.157" DIA×.787"	8
	ISY-700-90005	.157" DIA×1.811"	3
spherical support head	ISY-700-90006	—	4
stand	ISY-700-90007	.236" DIA×.394"	6
	ISY-700-90008	.236" DIA×.984"	6
	ISY-700-90019	.236" DIA×.196"	3
stand	ISY-700-90009	.354" DIA×.278"	3
	ISY-700-90010	.354" DIA×.394"	6
	ISY-700-90011	.354" DIA×.787"	6
	ISY-700-90012	.354" DIA×.984"	6
stand	ISY-700-90013	.472" DIA×.394"	6
	ISY-700-90014	.472" DIA×.984"	6
stand for slice parts	ISY-700-90015	.236" DIA×.394"	4
	ISY-700-90016	.354" DIA×.394"	4
	ISY-700-90017	.472" DIA×.394"	4
stand with fine adjustment	ISY-700-90018	.472" DIA×.787~.984"	2
adaptor for square support	ISY-700-90020	—	2

Product	Part No.	Size	Quantity
clamping screw	ISY-700-90021	—	4
L-shaped positioning plate	ISY-700-90022	1.969×1.969×.236"	1
sliding support plate	ISY-700-90023	1.181×.472×.197"	4
square support	ISY-700-90024	.787×.63×.63"	1
base for square support	ISY-700-90025	1.772×.63×.236"	1
spring stand	ISY-700-90026	—	1
acrylic sliding support plate	ISY-700-90028	1.772×.472×.197"	8
wrench	ISY-700-90029	M3mm	1
acrylic base plate	ISY-700-90030	11.811×7.874×.472" hole size: M4X0.7mm	1

TOOLMAKER MICROSCOPE
PART NO. ISD-VMM205D

INSPECTION CERTIFICATE

VIDEO



ISD-VMM205D **computer is optional**

SPECIFICATION

Part No.	**ISD-VMM205D**
X/Y axis travel	5.91×3.94"
Z axis travel	5.91"
Metal stage size	13.94×8.98"
Glass stage size	8.27×6.30"
Resolution of X/Y/Z axis	.00002"
Accuracy of X/Y axis	≤(137.8+10L)μin (L is the measuring length in inch)
Repeatability	.00008"
Camera	1/3" color CCD, 0.3M pixel
Optical magnification	30X (with 3X objective)
Image magnification	114X (on 19" monitor)
Illumination	surface and contour with adjustable LED
Max. weight of workpiece	55lb
Power supply	100V~240V, 50/60Hz
Operation system	Windows 7/8/10
Drive method	manual
Dimension (L×W×H)	21.30×26.30×33.46"
Weight	220lb

DATA PROCESSING UNIT

Output	RS232
Function	simple measuring tools measure coordinate of points measure lines measure center coordinate, radius of circle with three points measure distances betwen two objects measure angles set origin of coordinate skew and calibrate the workpiece measure rectangle (including length, width, perimeter and center coordinate) measure thread (including thread diameter, screw pitch, screw angle) measure slot (including center coordinate, length, width)

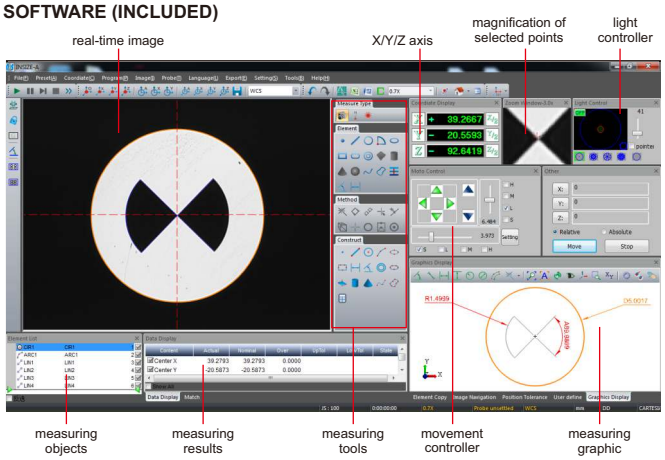
STANDARD DELIVERY

Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Calibration glass chart	1 pc
Demo sample	1 pc
Foot switch	1 pc
3X objective	1 pc

OPTIONAL ACCESSORY

1X objective	**ISD-VMM-LENS1X**
5X objective	**ISD-VMM-LENS5X**
10X objective	**ISD-VMM-LENS10X**
Toolmaker microscopes (with computer)	Part No. **ISD-VMM205D** (monocular)

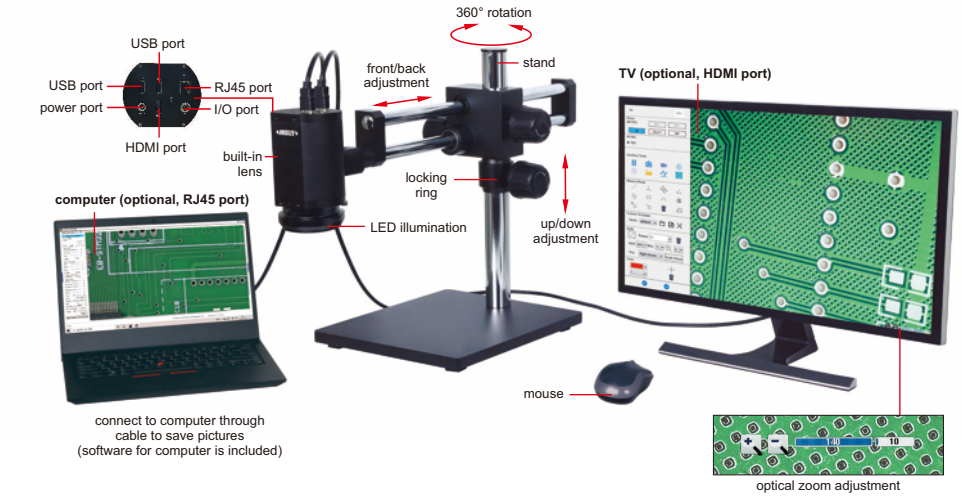
SOFTWARE (INCLUDED)



AUTO FOCUS DIGITAL MICROSCOPE (LARGE VIEW FIELD)

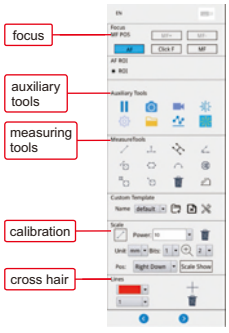
CAN BE CONNECTED TO PC AND TV AT THE SAME TIME | TAKE PICTURES AND VIDEOS | MEASUREMENT | AUTO FOCUS

VIDEO



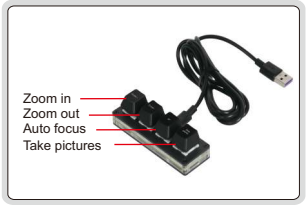
- Auto focus camera
- Take pictures and videos
- Can be connected to TV (HDMI port) and computer (RJ45 port) at the same time
- Built-in measuring software for TV
- Measuring software for computers is included
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)

TV SOFTWARE (INCLUDED)



SPECIFICATION

Part No.	5302-AF105 (standard type)
Pixel	2M
Resolution	1920×1080
Magnification	1.4X~25.8X (on 28" TV)
Sensor	1/2.8" CMOS
Auto focus distance	4"~∞
Output	HDMI, RJ45
Frame rate	HDMI: 60fps, RJ45: 50fps
Power supply	power adapter
Dimension (L×W×H)	19.69×11.02×16.14"
Weight	37.48lb



controller (**optional**, for TV)

STANDARD DELIVERY

Main unit (with stand)	1 pc
LED illumination	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable (for TV)	1 pc
Network cable (for computer)	1 pc
Switch	1 pc
Software for computer	1 pc
Power adapter	2 pcs

VIEW FIELD

Focus distance	Adjustable magnification (on 28" TV)	View field
3.94"	3.9~25.8X	.94×.55~6.61×3.58"
5.91"	2.6~20X	1.18×.66~9.49×5.04"
7.87"	2.1~17X	1.47×.79~12.40×6.69"
9.84"	1.7~14.7X	1.65×.94~15.18×8.27"
10.63"	1.4~14X	1.69×.98~16.34×8.86"

OPTIONAL ACCESSORY

28" 4K TV	5302-AF-TV28
32" 4K TV	5302-AF-TV32
Computer	5302-AF-COMPUTER
Controller	5302-AF-CONTROLLER

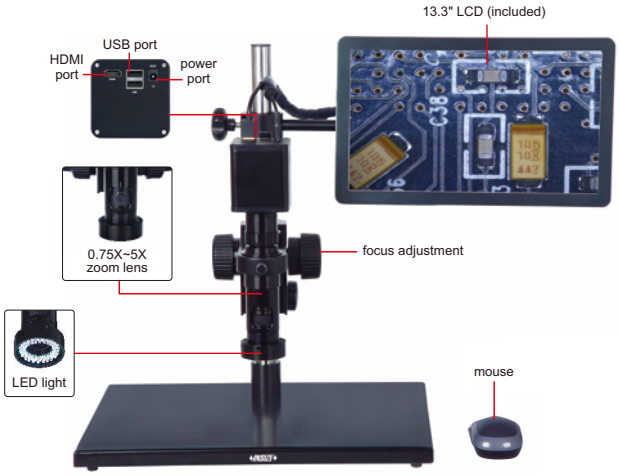
MEASURING ACCURACY

Optical magnification	Measuring accuracy
2X	±.004"
4X	±.004"
6X	±.002"
8X	±.001"
14X	±.001"

AUTO FOCUS DIGITAL MICROSCOPE
PART NO. 5303-AF103

AUTO FOCUS | TAKE PICTURES AND VIDEOS | MEASUREMENT

VIDEO



16G USB flash disk (included)

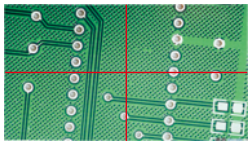
0.5X camera adapter (included)

1X auxiliary objective (included)

2X auxiliary objective (**optional**)

1X camera adapter (**optional**)

- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to USB flash disk
- Picture review, picture compare
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)
- Built-in software without computer, operation by mouse


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

X-Y glass stage (**optional**) (X-Y travel: 3.94×3.38")

SPECIFICATION

Magnification	20X~123X
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	22.44×11.81×16.93"
Weight	14.33lb

STANDARD DELIVERY

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

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	20~123X	40~246X
	focus distance	1.89~3.31"	1.89~3.31"
	view field	.51×.28~.09×.04"	.25×.14~.04×.02"
	measuring accuracy	±0.0008"	±0.0008"
2X (optional)	magnification	40~246X	80~492X
	focus distance	.94~1.65"	.94~1.65"
	view field	.26×.14~.04×.02"	.13×.07~.02×.01"
	measuring accuracy	±0.0008"	±0.0008"

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

AUTO FOCUS DISTANCE

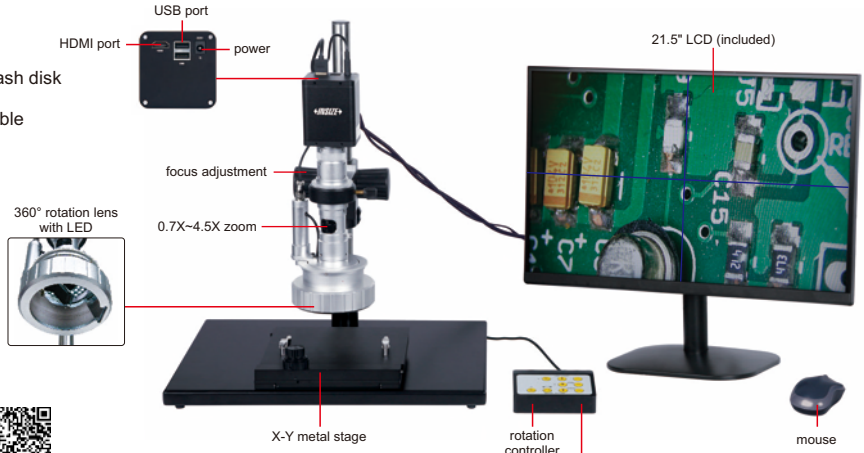
Zoom objective scale	0.75X	1X	1.5X	2X	2.5X	3X	3.5X	4X	4.5X	5X
Auto focus distance	1.89~3.31"	1.97~3.07"	2.17~2.87"	2.44~2.80"	2.56~2.76"	2.60~2.76"	2.64~2.76"	2.68~2.76"	2.68~2.76"	2.68~2.76"

MOTORIZED 3D ROTATION MICROSCOPE
PART NO. 5301-D400

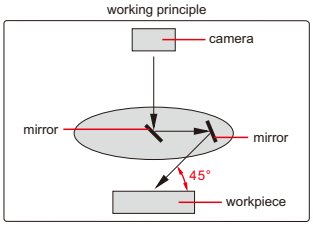
SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLE

TAKE PICTURES AND VIDEOS

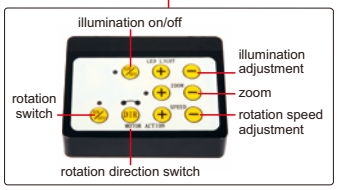
- 1080P high-definition 3D image
- Take pictures and videos, saved to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable



working principle



VIDEO

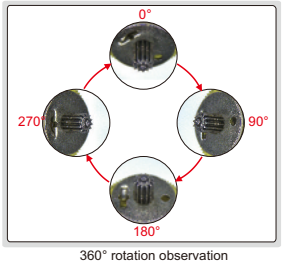


SPECIFICATION

Magnification	15X~100X
View field	.16x.10~1.10x.70"
Focus distance	1.54"
View angle	45°
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Rotation speed	2~4RPM
Power supply	power adapter
Dimension (L×W×H)	22.44x11.81x16.93"
Weight	14.44lb

STANDARD DELIVERY

Main unit	1 pc
Rotation controller	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs



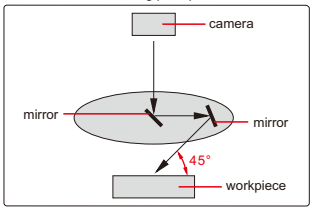
360° rotation observation

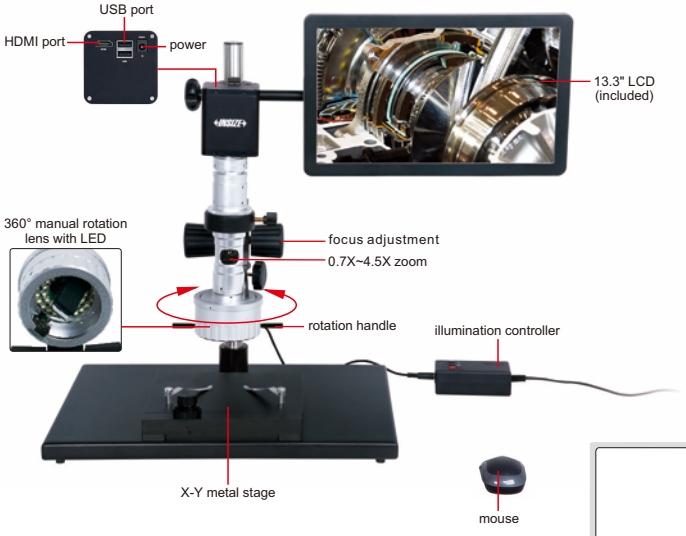
MANUAL 3D ROTATION MICROSCOPE
PART NO. 5313-S407

SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLES

TAKE PICTURES AND VIDEOS

working principle





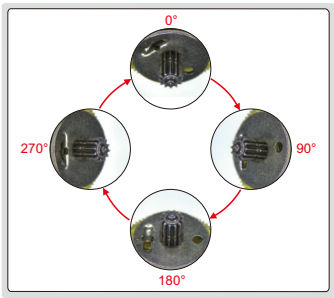
VIDEO

SPECIFICATION

Magnification	18X~120X
View field	.09×.06~.63×.35"
Focus distance	.79"
View angle	45°
Sensor	1/2.8" 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

STANDARD DELIVERY

Main unit	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs



360° rotation observation

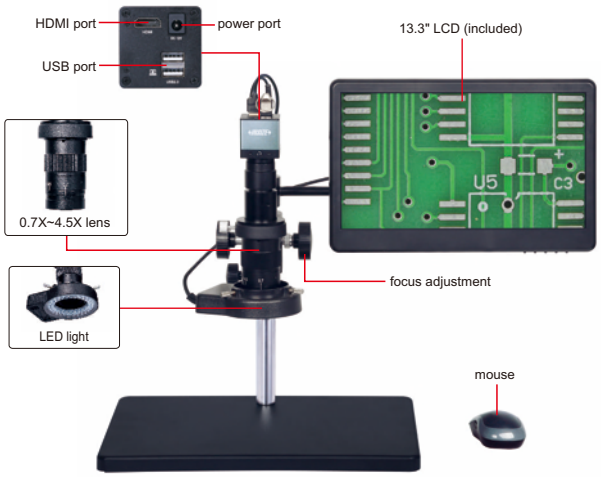
DIGITAL MEASURING MICROSCOPE (BASIC TYPE)
PART NO. 5318-MD60

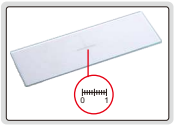
BUILT-IN SOFTWARE WITHOUT COMPUTER | MEASUREMENT | TAKE PICTURES

VIDEO

POPULAR MODEL

- 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
- Brightness, contrast ratio, gain are adjustable





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

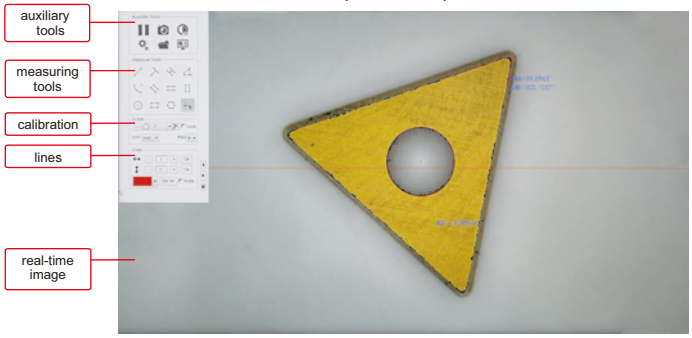
white/black plate (included)

16G USB flash disk (included)

SPECIFICATION

Magnification	12.5X~80X
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Measuring accuracy	±.001"
Lines	cross lines, scale lines (number, color and position of lines are adjustable)
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	14.96×10.24×13.78"
Weight	9.92lb

MEASURING SOFTWARE (INCLUDED)



STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
White/black plate	1 pc
Glass calibration rule	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

MAGNIFICATION AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter 0.5X (included)
0.5X (optional)	magnification	6.2~40X
	view field	1.85×1.02~.29×.16"
1X (included)	magnification	12.5~80X
	view field	.92×.51~.14×.0.08"
2X (optional)	magnification	25~160X
	view field	.46×.25~.07×.04"

OPTIONAL ACCESSORY

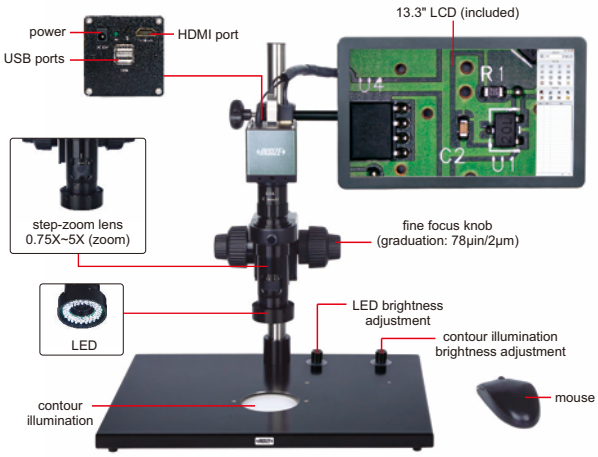
0.5X auxiliary objective	5318-OB05X
2X auxiliary objective	5318-OB2X

DIGITAL MEASURING MICROSCOPE

TAKE PICTURES | MEASUREMENT | BUILT-IN SOFTWARE WITHOUT COMPUTER

VIDEO

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



ISM-DL301 (with contour illumination)

X-Y glass stage
(**optional**)
(X-Y travel: 3.94×3.38")

0.5X camera adapter
(included)

1X camera adapter
(**optional**)

1X auxiliary objective
(included)

16G USB flash disk
(included)

calibration plate
(included)

2X auxiliary objective
(**optional**)

SPECIFICATION

Part No.	**ISM-DL301 (with contour illumination)**
Magnification	15X~100X
Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	22.44×11.81×16.93"
Weight	14.44lb

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"

STANDARD DELIVERY

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

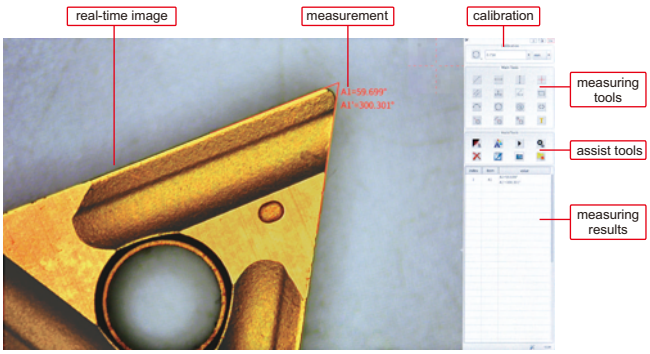
OPTIONAL ACCESSORY

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, 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 field	.31×.21~.05×.03"	.15×.11"~.024×.016"

SOFTWARE (INCLUDED)

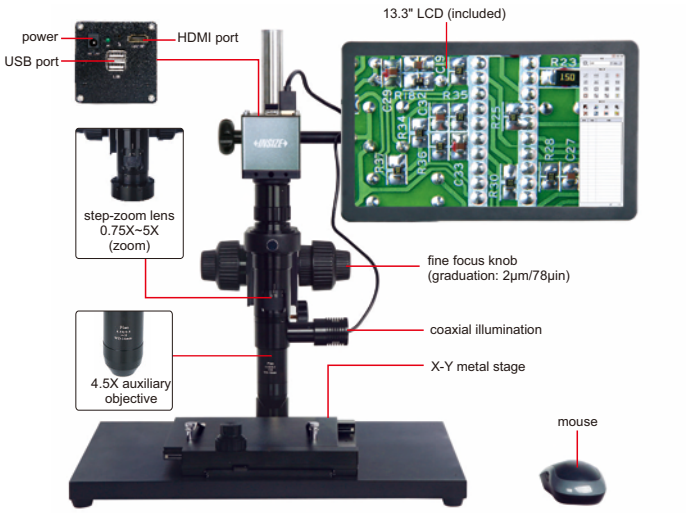


HIGH MAGNIFICATION MEASURING MICROSCOPE
PART NO. ISM-DL302

SOFTWARE IS INCLUDED, REFER TO ISM-DL301 FOR DETAILS

OBSERVATION AND MEASUREMENT AT HIGH MAGNIFICATION

VIDEO



- 1080P high-definition image
- Maximum 1000X optical magnification (using camera adapter 1X, optional)
- Built-in software without computer, operation by mouse
- Solid base and column to avoid lens shaking during focusing
- Software is included, refer to **ISM-DL301** for details

calibration plate
(included)

0.5X camera adapter
(included)

16G USB flash disk
(included)

1X camera adapter
(**optional**)

SPECIFICATION

Magnification	75X~504X
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	30.07lb

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Camera adapter	0.5X (included)	1X (**optional**)
Magnification	78~504X	156~1008X
Focus distance	.55±.08"	.55±.08"
View field	.11×.07~.02×.01"	.06×.04~.01×.01"

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
4.5X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
X-Y metal stage	1 pc

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy
0.75X	78X	±.00020"
1X	102X	±.00016"
1.5X	153X	±.00016"
2X	204X	±.00016"
2.5X	255X	±.00016"
3X	305X	±.00016"
3.5X	356X	±.00016"
4X	408X	±.00016"
4.5X	458X	±.00016"
5X	504X	±.00016"

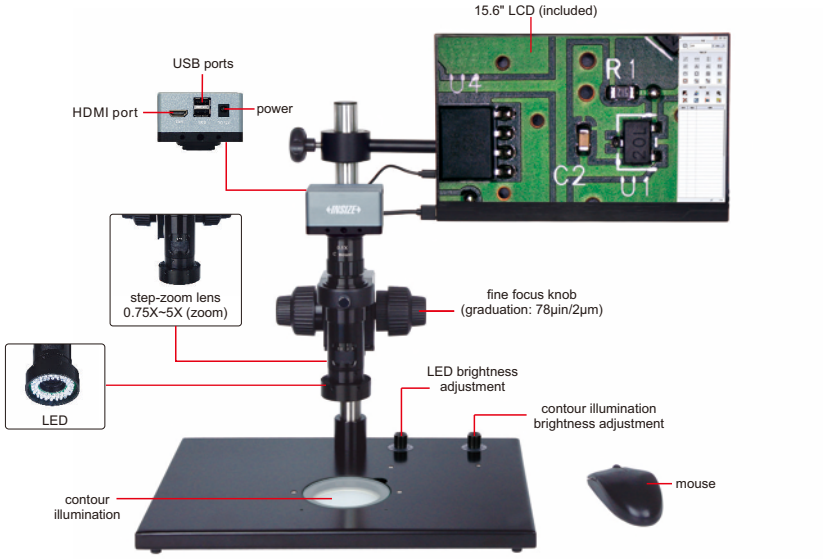
OPTIONAL ACCESSORY

1X camera adapter	**ISM-DL-CA1X**
LED light	refer to details

4K DIGITAL MEASURING MICROSCOPE
PART NO. 5310-DL401-U

MEASUREMENT | BUILT-IN SOFTWARE WITHOUT COMPUTER | TAKE PICTURES

VIDEO



16G USB flash disk
(included)

calibration plate
(included)

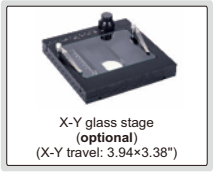
0.5X camera adapter
(included)

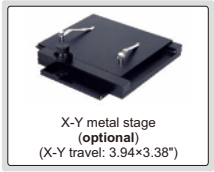
1X auxiliary objective
(included)

1X camera adapter
(**optional**)

2X auxiliary objective
(**optional**)

- 4K 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


X-Y glass stage
(**optional**)
(X-Y travel: 3.94×3.38")


X-Y metal stage
(**optional**)
(X-Y travel: 3.94×3.38")

SPECIFICATION

Magnification	17.6X~120X
Sensor	1/2.3" CMOS
Pixel	8M
Resolution	3840×2160
Frame rate	4K: 30fps, 1080P: 60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	22.44×11.81×16.93"
Weight	14.33lb

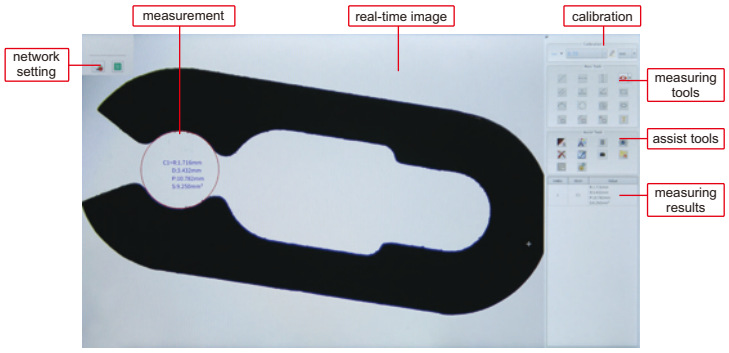
MAGNIFICATION, VIEW FIELD AND MEASURING ACCURACY

Objective magnification	Image magnification	View field	Measuring accuracy
0.75X	17.6X	.76×.45"	±.00020"
1X	23.7X	.55×.31"	±.00020"
1.5X	36.6X	.35×.19"	±.00020"
2X	49X	.27×.15"	±.00020"
2.5X	62X	.21×.11"	±.00016"
3X	73X	.17×.09"	±.00016"
3.5X	85X	.15×.08"	±.00016"
4X	97X	.13×.07"	±.00012"
4.5X	109X	.11×.07"	±.00012"
5X	120X	.10×.05"	±.00012"

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

SOFTWARE (INCLUDED)

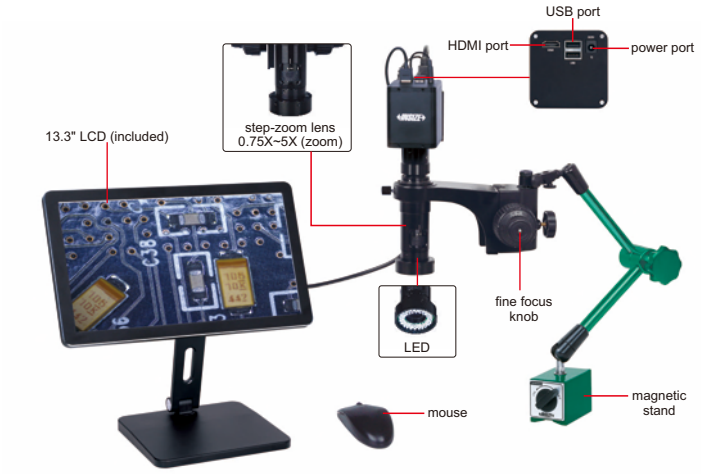


OPTIONAL ACCESSORY

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 (travel: 3.94×3.38")	**ISM-DL-STAGE1**
LED light	refer to details
Auxiliary objective	refer to details

FLEXIBLE ARM AUTO FOCUS DIGITAL MICROSCOPES

MEASUREMENT | AUTO FOCUS | TAKE PICTURES AND VIDEOS



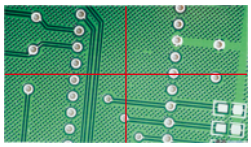
5317-AF109

16G USB flash disk
(included)

calibration plate
(included)

0.5X camera adapter
(included)

1X auxiliary objective
(included)



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

5317-AF110

SPECIFICATION

Part No.	5317-AF109 (with magnetic stand)	5317-AF110 (with desktop clamp)
Magnification	20X~123X	
Sensor	1/2.8" CMOS	
Pixel	2M	
Resolution	1920×1080	
Frame rate	60fps	
Power supply	power adapter	
Dimension (height)	19.90"	23.62"
Weight	12.34lb	18.74lb

- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to USB flash disk
- Picture review, picture compare
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)
- Built-in software without computer, operation by mouse
- Flexible arm

STANDARD DELIVERY

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

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	20~123X	40~246X
	focus distance	1.89~3.31"	1.89~3.31"
	view field	.51×.28~.09×.04"	.25×.14~.04×.02"
	measuring accuracy	±.0008"	±.0008"
2X (optional)	magnification	40~246X	80~492X
	focus distance	.94~1.65"	.94~1.65"
	view field	.26×.14~.04×.02"	.13×.07~.02×.01"
	measuring accuracy	±.0008"	±.0008"

To be continued

Continued from previous page

OPTIONAL ACCESSORY

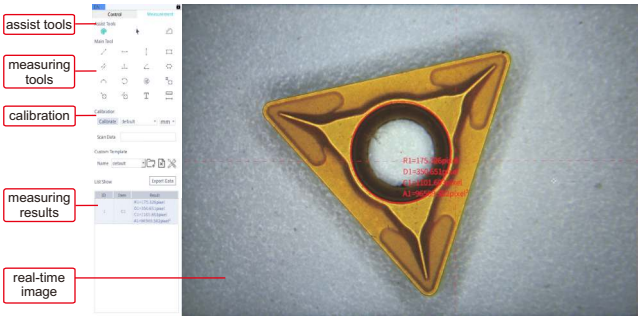
1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
Auxiliary objective	refer to details

AUTO FOCUS DISTANCE

Zoom objective scale	0.75X	1X	1.5X	2X	2.5X
Auto focus distance	1.89~3.31"	1.97~3.07"	2.17~2.87"	2.44~2.80"	2.56~2.76"

Zoom objective scale	3X	3.5X	4X	4.5X	5X
Auto focus distance	2.60~2.76"	2.64~2.76"	2.68~2.76"	2.68~2.76"	2.68~2.76"

MEASURING SOFTWARE (INCLUDED)



DIGITAL MEASURING MICROSCOPE (BASIC TYPE)
PART NO. 5307-ID100A

BUILT-IN SOFTWARE WITHOUT COMPUTER

ELECTRONIC MAGNIFICATION FEEDBACK LENS

VIDEO

- Electronic magnification feedback lens: when the objective lens magnification is changed manually, the software automatically selects the corresponding pre-calibration data and calibration is not needed
- Two methods of LED brightness adjustment, knob adjustment and software adjustment
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measuring results can be sent to Excel

adjustable display angle

SPECIFICATION

Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Magnification	12~77X
Focus distance	2.56"
View field	.12×.07~.82×.46"
Max workpiece height	2.36"
Frame rate	60fps
Output	USB/HDMI
Power supply	power adapter
Dimension (L×W×H)	10.24×12.60×19.68"
Weight	11.46lb

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Magnification	Measuring accuracy
0.7X	12X	±.00035"
1X	17X	±.00035"
1.5X	26X	±.00031"
2X	35X	±.00027"
2.5X	43X	±.00027"
3X	51X	±.00027"
3.5X	60X	±.00024"
4X	68X	±.00024"
4.5X	77X	±.00020"

STANDARD DELIVERY

Main unit	1 pc
Calibration plate	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc

OPTIONAL ACCESSORY

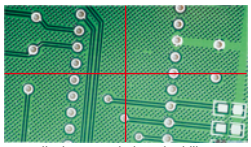
0.5X auxiliary objective	5307-ID100A-OB05X
0.75X auxiliary objective	5307-ID100A-OB075X
2X auxiliary objective	5307-ID100A-OB2X

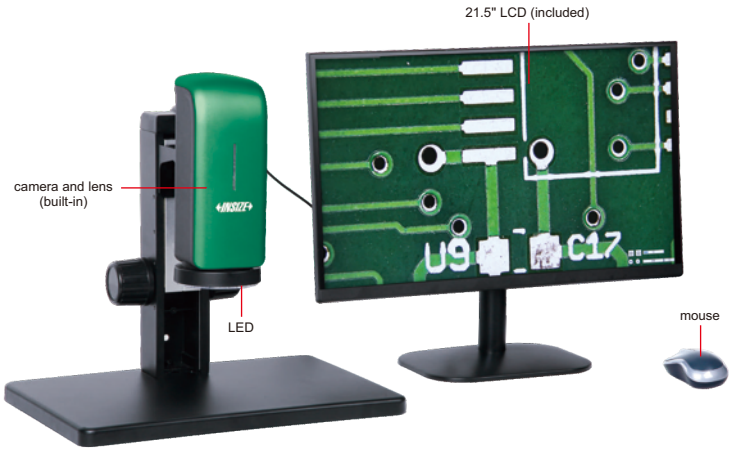
AUTO FOCUS DIGITAL MICROSCOPE (ADVANCED TYPE)
PART NO. 5319-AF290

MOTORIZED LIGHT CONTROL | AUTO FOCUS | TAKE PICTURES AND VIDEOS | MEASUREMENT | MOTORIZED ZOOM | NO CALIBRATION AFTER ZOOM

16G USB flash disk
(included)

calibration plate
(included)


display cross hair and gridline
(blue/green/red/yellow/black/white colors)



VIDEO

- Auto focus camera
- Take pictures and videos
- Built-in measuring software
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display actual magnification
- Digital magnification
- Shortcut keyboard operation
- Display cross hair and gridline
  (blue/green/red/yellow/black/white colors)

shortcut keyboard
(inclued)

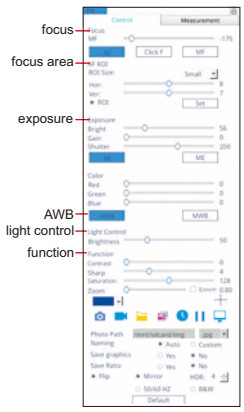
Shortcut keyboard fuction

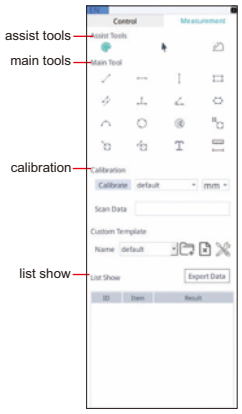
- Take picture: take a picture and save it
- Video: record a video
- Freeze: the image can be frozen
- Manual focus-: reduce the manual focus value
- Manual focus+: increase the manual focus value
- Zoom+: increase the magnification
- Zoom-: reduce the magnification
- AF/MF: switch to auto focus or manual focus
- FBL: center the camera motor
- Mirror: image horizontal flipover
- Flip: image vertical flipover
- Focus: achieve one-key focus
- Zoom 1, 2, 3, 4: save the current magnification
- Brightness+: increase the brightness of the light
- Brightness-: reduce the brightness of the light

SPECIFICATION

Magnification	27.4X~163X
Sensor	1/2.8" CMOS
Pixel	2M
Measuring accuracy	±.0008"
Resolution	1920×1080
Frame rate	50/60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	23.62x11.02x15.35"
Weight	14.33lb

SOFTWARE (INCLUDED)





STANDARD DELIVERY

Main unit (with stand)	1 pc
21.5" LCD	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Calibration plate	1 pc
White/black plate	1 pc
Shortcut keyboard	1 pc
Power adapter	2 pcs

FOCUS DISTANCE AND VIEW FIELD

Optical magnification*	0.8X	1X	2X	3X	4X	4.76X
Focus distance	3.46~5.24"	3.46~5.24"	3.86~4.84"	4.05~4.52"	4.25~4.37"	4.25~4.37"
View field	.76×.43~.62×.34"	.59×.32~.50×.28"	.28×.15~.26×.15"	.19×.10~.17×.09"	.14×.08~.13×.07"	.12×.06~.11×06"

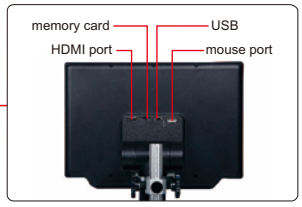
*The optical zoom lens can be arbitrarily zoomed between 0.8X and 4.76X

MINI DIGITAL MICROSCOPE (ECONOMIC TYPE)
PART NO. 5311-M710

BUILT-IN LITHIUM BATTERY

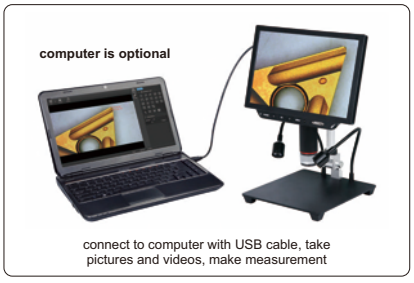
TAKE PICTURES AND VIDEOS

VIDEO



32G memory card and holder (included)

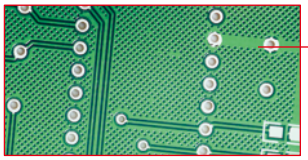
Infrared ray remote controller (included)



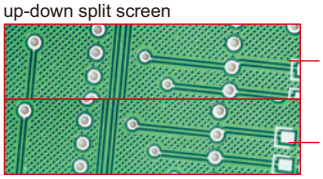
connect to computer with USB cable, take pictures and videos, make measurement

■ **Screen freezing:**

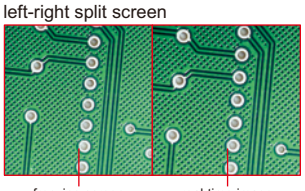
full screen



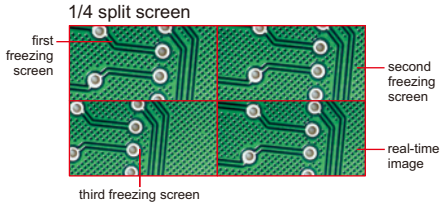
up-down split screen



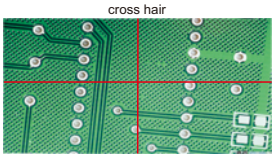
left-right split screen



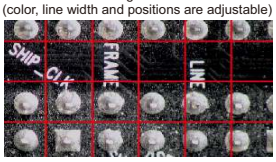
1/4 split screen



cross hair



grid
(color, line width and positions are adjustable)



SOFTWARE FOR COMPUTER (INCLUDED)

- **Language**: Chinese (Simplified), English
- **Operation system**: Windows 7/8/8.1/10 (64bit)
- **Port**: USB2.0 or above
- **Measuring accuracy** .0008"

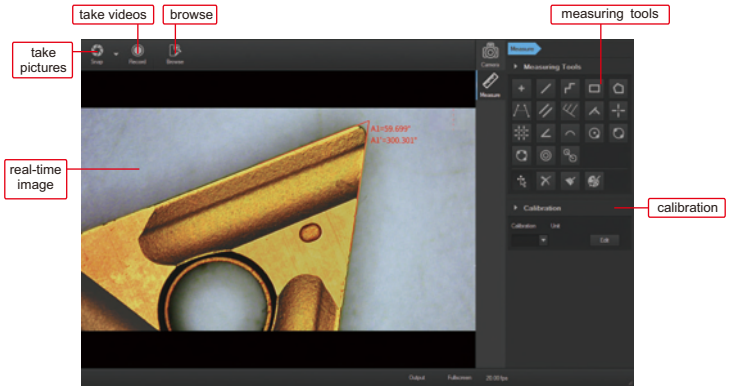
- point counting
- distance between 2 lines
- double cross line
- radius of a 3-point circle
- straight line length
- distance between parallel lines
- angle
- center distance of 2 circles
- continuous line length
- distance between line and first parallel line
- arc
- center distance of concentric circle
- area of a rectangle
- point-line distance
- radius of a circle
- area of a polygon
- cross line
- radius of a 2-point circle

SPECIFICATION

Display resolution	1280×800
Sensor	1/3" CMOS
Pixel	13M
Single pixel size	44.09μin×44.09μin
Frame rate	60fps/30fps
Magnification	6.5X~60X
View field	.1417×.0787~1.2992×.7283"
White balance	auto/manual (10 levels RGB)/calibration
Exposure control	AE lock/exposure compensation (10 levels)
Image control	contrast/saturation/sharpness (10 levels)
Record media	memory card (128G Max)
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	7.09×7.87×14.17"
Weight	2.87lb

STANDARD DELIVERY

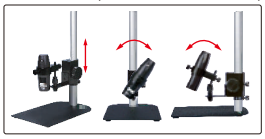
Main unit	1 pc
USB cable	1 pc
HDMI cable	1 pc
IR remote controller	1 pc
32G memory card and holder	1 pc
Plastic calibration rule	1 pc
Power adapter	1 pc

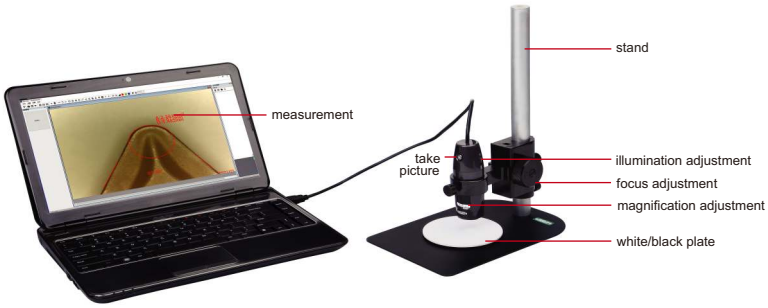


DIGITAL MEASURING MICROSCOPES (ECONOMIC TYPE)

VIDEO

universal stand (included in **ISM-PM200SB**)

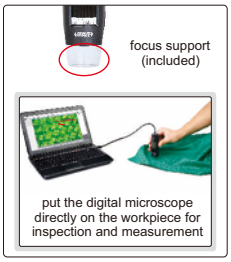




ISM-PM200SA computer is optional

software flash disk (included)

- 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
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)	

MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
50X	.87"	. 38×.28"	1181.1μin
100X	.55"	.19×.14"	590.6μin
150X	.55"	.13×.10"	393.7μin
200X	.75"	.09×.07"	315.0μin

STANDAER DELIVERY

Main unit	1 pc
USB flash disk	1 pc

OPTIONAL ACCESSORY

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

filter (**optional**)

SOFTWARE

- **Language**: English, Japanese, Ukrainian, German, French, Italian, Spanish, Chinese
- **Operation system**: Windows 7/8/XP/Vista
- **Measuring tools:**

measure radius, diameter, girth and area of circle with two points

measure area of polygon

measure distance between two circles

measure distance between two parallel lines

measure angle with two lines

measure distance between point and line

measure radius of arc

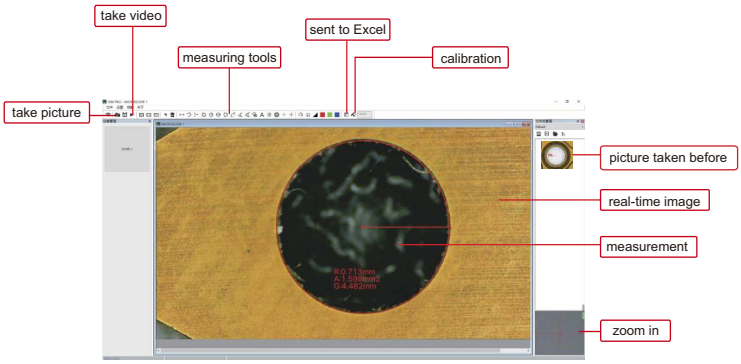
measure radius of circle

measure length of continuous line

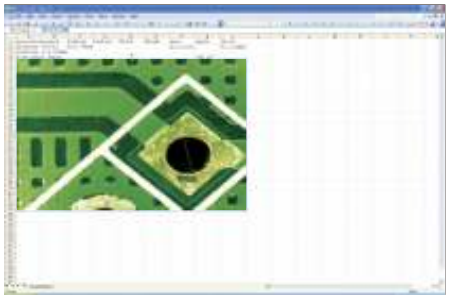
measure angle with three points

measure radius, girth and area of circle

add text



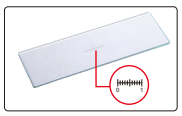
- **Data is sent to Excel:**



WIFI DIGITAL MEASURING MICROSCOPE (ECONOMIC TYPE)
PART NO. ISM-WF200

VIDEO

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


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

software flash disk (included)

- Maximum working distance is 200" under WIFI mode
- Can be connected to multiple iPads, Android devices or computers at the same time under WIFI mode
- Take pictures and videos
- Supplied with software

connected to iPad by WIFI

connected to Android device by WIFI

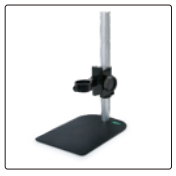
connected to computer by WIFI

connected to computer by USB cable

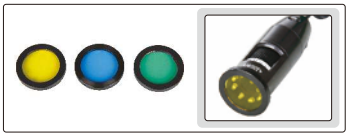
SPECIFICATION

Magnification	10X~200X
Pixel	1.3M (resolution: 1280x1024)
Illumination	built-in adjustable LED
Power supply	built-in rechargeable battery

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



filter (**optional**)



STANDARD DELIVERY

Microscope	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

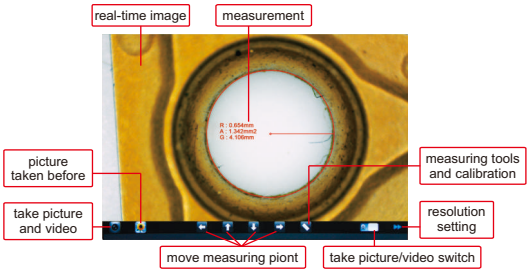
OPTIONAL ACCESSORY

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

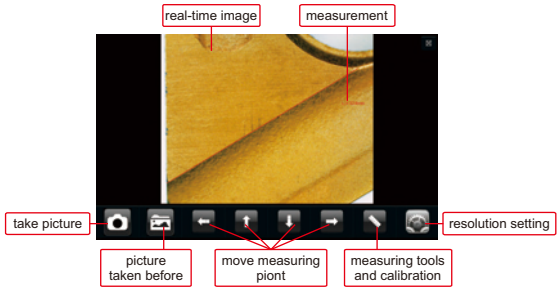
MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
50X	.83"	.32×.25"	1.2mil
100X	.51"	.15×.12"	.6mil
150X	.63"	.10×.08"	.4mil
200X	.75"	.07×.06"	.3mil

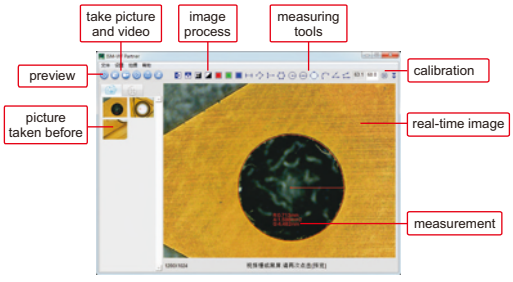
❶ **Software ISM-PAD** (for iPad by WIFI)



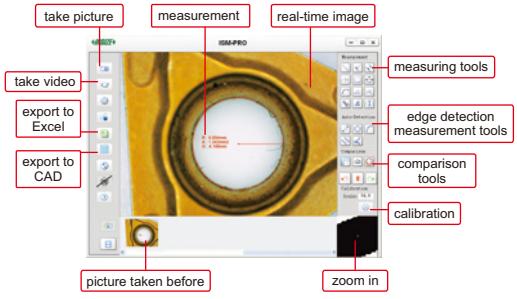
❷ **Software ISM-APK** (for Android devices by WIFI)



❸ **Software ISM-WF Partner** (for computer by WIFI)



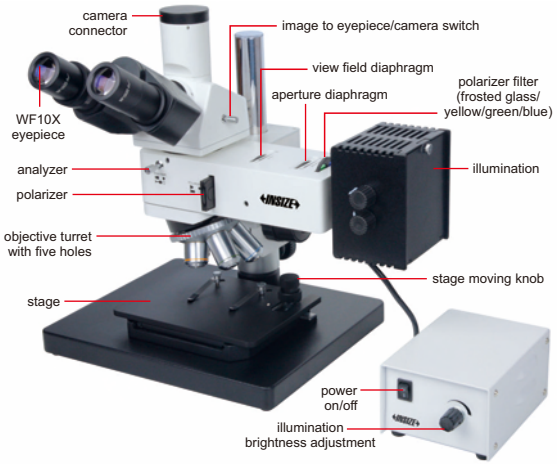
❹ **Software ISM-PRO** (for computer by USB cable)



INDUSTRIAL MICROSCOPE

- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objective 50X is spring type

VIDEO



SPECIFICATION

Part No.	5101-M500-U (bright field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives			
	5X	10X	20X	50X
Working distance	1.03"	.80"	.35"	.14"
Numerical aperture	0.12	0.25	0.40	0.70
Magnification	50X~500X			
Eyepiece (wide field)	10X (view field .87" DIA)			
Stage	double layer			
	size: 6.30×5.51"			
	travel: 1.38x1.18"			
Pupil distance	2.09~2.95"			
Diopter adjustment	±5 diopter (one eyepiece)			
Power supply	110V, 50/60Hz			
Dimension (L×W×H)	16.34×13.58×14.96"			
Weight	30.86lb			

STANDARD DELIVERY

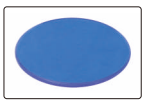
Main unit	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Bright field objective	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
10X dividing eyepiece (0.1mm/.004")		5101-M-EPD10X
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter*		5101-M-ADAPTER

*Digital camera must be used with camera adapter

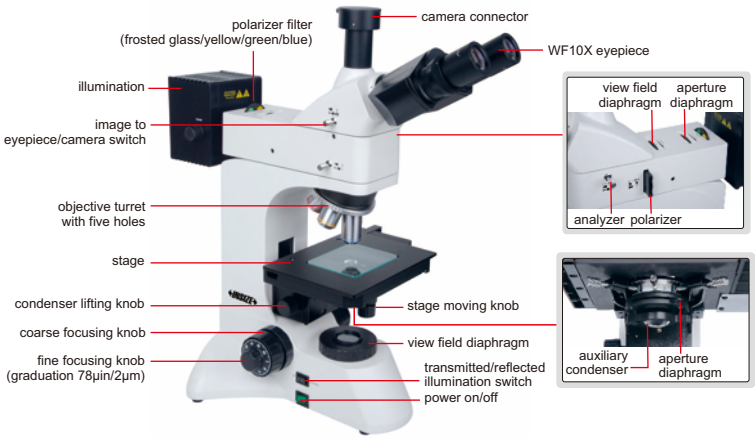
METALLURGICAL MICROSCOPE


blue filter (included)

frosted glass filter (included)

- Infinite optical system, observation in reflected or transmitted illumination, polarizing observation
- Kohler illumination system provides uniform illumination field
- Objectives 40X, 60X are spring type

VIDEO



SPECIFICATION

Part No.	5102-M600-U (bright field objectives)			
Illumination	6V/30W (transmitted), 6V/30W (reflected)			
Objective (infinite plan achromatic)	bright field objectives			
	5X	10X	40X	60X
Working distance	1.03"	.80"	.16"	.13"
Numerical aperture	0.12	0.25	0.60	0.70
Magnification	50X~600X			
Eyepiece (wide field)	10X (view field .87" DIA)			
Stage	double layer			
	size: 8.27×5.51"			
	travel: 2.95x1.97"			
Pupil distance	2.09~2.95"			
Diopter adjustment	±5 diopter (one eyepiece)			
Power supply	110V, 50/60Hz			
Dimension (L×W×H)	17.95×10.24×19.61"			
Weight	24.25lb			

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc
Filter (blue/frosted glass)	1 pc of each

OPTIONAL ACCESSORY

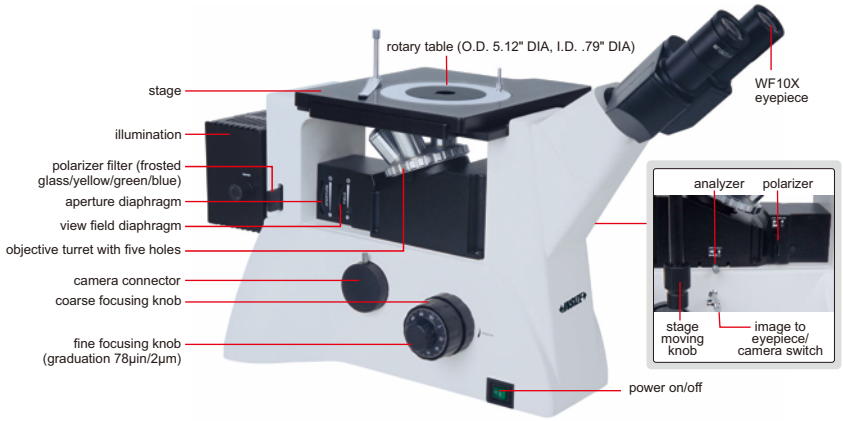
Bright field objective	PL20X	5101-M-OB20X
	PL50X	5101-M-OB50X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
10X dividing eyepiece (.004"/0.1mm)		5101-M-EPD10X
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter*		5101-M-ADAPTER

*Digital camera must be used with camera adapter

METALLURGICAL MICROSCOPE

VIDEO

- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objectives 50X, 100X are spring type



SPECIFICATION

Part No.	5103-M1000-U (bright field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives			
	10X	20X	50X	100X
Working distance	.80"	.35"	.14"	.02"
Numerical aperture	0.25	0.40	0.70	0.85
Magnification	100X~1000X			
Eyepiece (wide field)	10X (view field .87" DIA)			
Stage	double layer			
	size: 9.53×7.87"			
	travel: 1.18x1.18"			
Pupil distance	2.09~2.95"			
Diopter adjustment	±5 diopter (one eyepiece)			
Power supply	110V, 50/60Hz			
Dimension (L×W×H)	24.17×9.84×15.51"			
Weight	28.66lb			

STANDARD DELIVERY

Main unit	1 pc
Polarizer and analyzer	1 pc of each
Anti-dust cover	1 pc

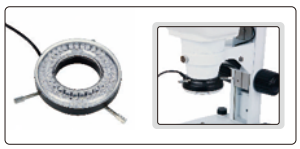
OPTIONAL ACCESSORY

Bright field objective	PL5X	5101-M-OB5X
	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
10X dividing eyepiece (0.1mm/.004")		5103-M-EPD10X
Digital camera		ISM-CM63
Camera adapter*		5101-M-ADAPTER

*Digital camera must be used with camera adapter

ZOOM STEREO MICROSCOPES (STANDARD TYPE)

VIDEO



LED ring light (**optional**)

ISM-ZS50

SPECIFICATION

Part No.	ISM-ZS50	ISM-ZS50T
Optical tube	binocular	trinocular
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	

STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
3.94" DIA glass plate	1 pc
3.94" 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 0.1mm/.004")	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
Digital camera for ISM-ZS50T		ISM-CM20, ISM-CM63, ISM-ZS70-S, ISM-KM60

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

ZOOM STEREO MICROSCOPE (BASIC TYPE)
PART NO. ISM-ZS30

VIDEO

LED ring light (**optional**)

SPECIFICATION

Optical tube	binocular
Eyepiece (wide field)	10X (view field .8" DIA)
Objective	1X~4.5X (zoom)
Zoom ratio	1:4.5
Pupil distance	2.17~2.95" (adjustable)
Diopter adjustment	±5 diopter (two eyepieces)
Working distance of objective	3.82"
Max. workpiece height	2.36"
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	10.24×7.48×15.75"
Weight	9.48lb

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS30-OB05X *
	0.63X	ISM-ZS30-OB06X *
	0.75X	ISM-ZS30-OB07X *
	2X	ISM-ZS30-OB2X
Eyepiece	10X dividing eyepiece (graduation 0.1mm/.004")	ISM-ZS30-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-ZS30-ADAPTER
Digital camera		ISM-CM63
Camera adapter 0.75X **		ISM-AD-0D75

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

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

LONG WORKING DISTANCE STEREO MICROSCOPE (LOW MAGNIFICATION)

5305-ZS90

LED ring light (**optional**)

SPECIFICATION

Part No.	**5305-ZS90** (with magnetic base)
Magnification	8X
Eyepiece (wide field)	10X (view field .79" DIA)
Objective	0.8X
Pupil distance	2.17~2.97"
Diopter adjustment	±5 diopter (one eyepiece)
Working distance of objective	4.53"
Max. workpiece height	5.51"
Dimension (L×W×H)	11.02x7.09x16.1"
Weight	4.63lb

STANDARD DELIVERY

Main unit	1 pc
10X eyepieces	1 pair
0.8X objective	1 pc
Anti-dust cover	1 pc

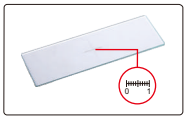
OPTIONAL ACCESSORY

Eyepiece	WF5X (view field .79" DIA)	5305-ZS80-EP5X
	WF15X (view field .59" DIA)	5305-ZS80-EP15X
	WF20X (view field .39" DIA)	5305-ZS80-EP20X
LED ring light		ISM-ZS-RL

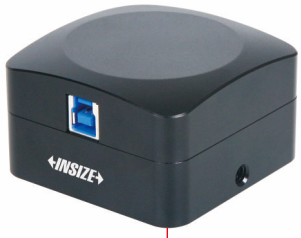
DIGITAL CAMERA FOR MICROSCOPES
PART NO. ISM-CM63

ATTENTION: ADAPTERS ARE NEEDED ACCORDING TO MICROSCOPES

- To be used with computers
- Sony Exmor back-illuminated CMOS sensor
- USB3.0 transmission
- Automatic exposure, gain adjustment, white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment, contrast adjustment



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



C-mount port

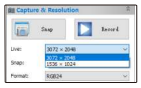
VIDEO

software (included)

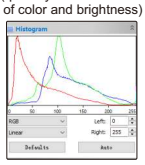
measurement items

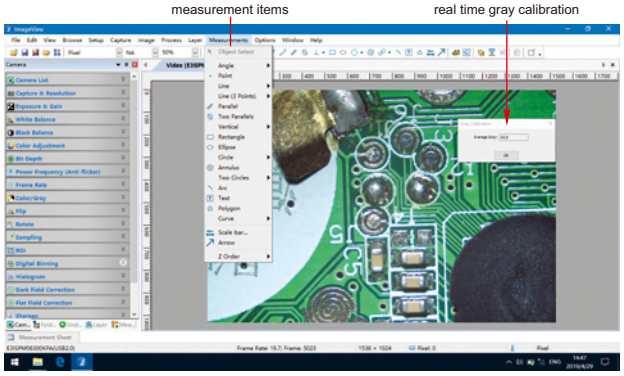
real time gray calibration

selectable resolution

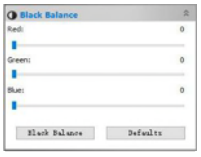


histogram (quantify the distribution of color and brightness)

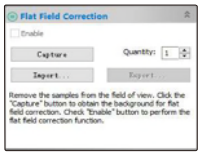




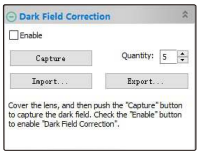
black balance (reduce color difference)



flat field correction (reduce brightness difference)



dark field correction (reduce thermal noise)



The software can control image completely, including measurement, image stitch, extend focus depth, image gray processing, RGB histogram observation, image color sampling, 3D plot(3D representation of image intensity), image exposure, white balance, black balance, image bit depth, flat field correction and dark field correction, etc.

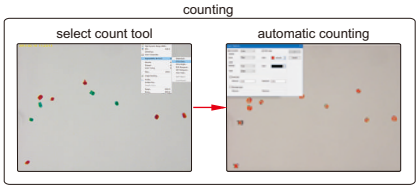
application

adapter 0.75X (**optional**)

counting

select count tool

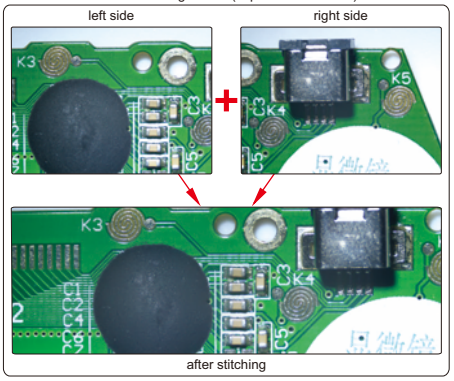
automatic counting



automatic image stitch (expand field of view)

left side

right side



after stitching

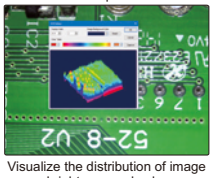
Measurement tools:

- measure length of line or distance between two points
- measure rectangle
- measure angle
- measure radius, girth and area of circle
- measure axis lengths, girth and area of ellipse
- calibration
- measure distance between two parallel lines
- measure width and diameter of ring
- measure diameter, length, perimeter angle of arc
- measure area of polygon
- measure center distance between two circles
- measure length of open curve

focus stacking

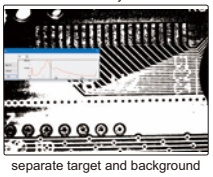
focus on the top | focus on the bottom | clear image of both top and bottom

3D plot



Visualize the distribution of image brightness and color

Binary



separate target and background

SPECIFICATION

Sensor (back-up)	1/1.8" CMOS
Resolution	3072×2048
Pixel	6.3M
Single pixel size	.00009×.00009"
Spectral range	380-650nm (with infrared cut filter)
Frame rate	30fps
Sampling average	1×1
Exposure time	0.1ms~15s
Power supply	USB port
Weight	.88lb

STANDAER DELIVERY

Camera (USB cable included)	1 pc
Glass calibration rule (graduation .004"/0.1mm)	1 pc
Software	1 pc

OPTIONAL ACCESSORY

Adapter 0.75X	**ISM-AD-0D75**

COMPUTER REQUIREMENT

Operation system	Windows/7/8/10
CPU	Intel Core 2 2.8Hz or above
Memery	2GB or above
USB port	USB3.0 (recommand) or USB2.0
Display	17" or above

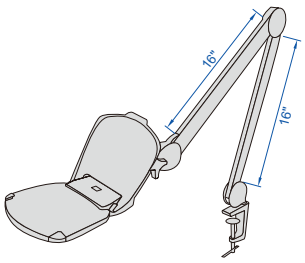
TABLE MAGNIFIER WITH ILLUMINATION
PART NO. 7517-3D

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

SPECIFICATION

Magnification	1.75X
Diopter	3D
Lens diameter	4.921" DIA
Illumination	power: 3W, illuminance: 260lm
Power supply	power adapter 12V, 1A

TABLE MAGNIFIERS WITH ILLUMINATION



- LED illumination, working life 20000h
- Resin lens

7520-320D

7521-3D

SPECIFICATION

Part No.	**7520-320D**	**7521-3D**
Magnification	two magnification 1.75X/6X	1.75X
Diopter	3D/20D	3D
Lens diameter	6.4×5"	5" DIA
Illumination	power: 6W, illumination: 550lm	
Power supply	power adapter 12V, 1A	

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

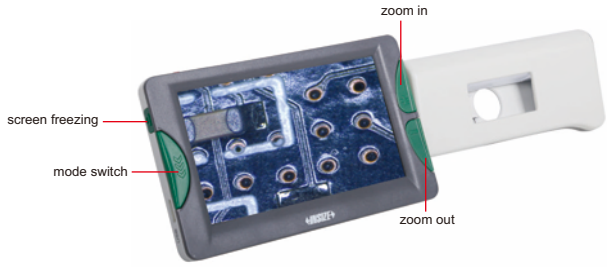
- LED illumination, working life 20000h

SPECIFICATION

Magnification	2.25X
Diopter	5D
Lens diameter	4.803" DIA
Illumination	power: 7W, illuminance: 420lm
Power supply	100~240V, 50~60Hz

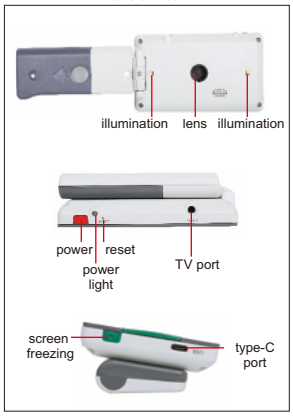
DIGITAL MAGNIFIER
PART NO. 7525-D4

- 720P60 camera
- Auto focus
- With screen freezing function
- 26 color modes can be switched to meet the needs of different people
- Port to TV
- Automatic shutdown after 3 minutes



after the handle is folded, the magnifier can be directly placed on the object for observation

side and back



VIDEO

SPECIFICATION

Screen size	4.3"
Screen resolution	480x272
Magnification	2X-32X
Pixel	8M
Focus	manual/automatic
Color mode (26 modes)	color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on yellow, yellow on blue, blue on yellow, green on white, white on green, orange on white, white on orange, red on black, black on red, orange on black, black on orange, yellow on green, green on yellow, red on white, white on red, yellow on white, white on yellow
Output	TV
Charging port	type-C
Lithium battery	1600mAH (for 4 hours working)
Dimension (LxWxH)	4.84x1.54x2.99" (when the handle is folded)
Weight	.46lb

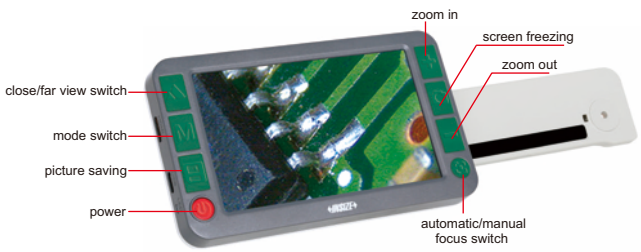
STANDARD DELIVERY

Main unit	1 pc
Video output cable	1 pc
USB charging cable	1 pc
Power adapter	1 pc

DIGITAL MAGNIFIER
PART NO. 7526-D5

VIDEO

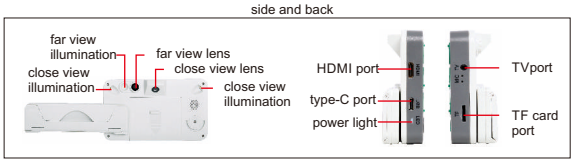
- 720P60 (close view) and 1080P30 (far view) cameras
- Double autofocus
- 26 color modes can be switched to meet the needs of different people
- Adopt folding bracket
- Detachable handle design, suitable for left-handed or right-handed use
- TV and HDMI ports to TV and display
- Automatic shutdown after 3 minutes



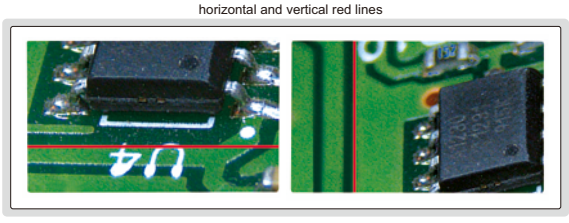
SPECIFICATION

Screen size	5"
Screen resolution	800x480
Magnification	2X~32X
Close view pixel	8M
Far view pixel	8M
Focus	manual/automatic
Color mode (26 modes)	color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on yellow, yellow on blue, blue on yellow, green on white, white on green, orange on white, white on orange, red on black, black on red, orange on black, black on orange, yellow on green, green on yellow, red on white, white on red, yellow on white, white on yellow
Line	horizontal and vertical red lines
Function	screen freezing, image moving, photo playback, and high definition storage
Output	TV and HDMI
Storage	supports up to 32G TF card
Charging port	type-C
Lithium battery	2500mAH (for 4 hours working)
Dimension (LxWxH)	5.71x1.18x3.35" (when the handle is folded)
Weight	.61lb

side and back



horizontal and vertical red lines

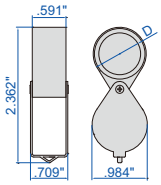


STANDARD DELIVERY

Main unit	1 pc
HDMI cable	1 pc
Video output cable	1 pc
USB charging cable	1 pc
Power adapter	1 pc

after the handle is folded, the magnifier can be directly placed on the object for observation

FOLDING MAGNIFIER



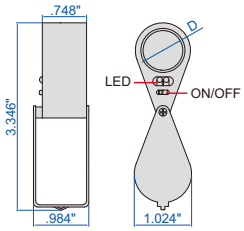
7511-8

closed

- Glass lens

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

FOLDING MAGNIFIER WITH ILLUMINATION



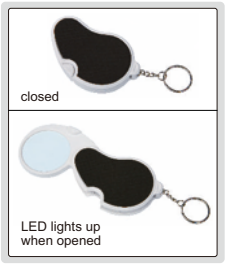
7515-10

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

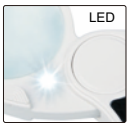
closed

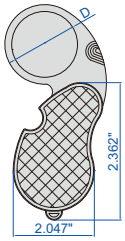
Part No.	Magnification	Lens diameter (D)
7515-10	10X	.867" DIA

FOLDING MAGNIFIER WITH ILLUMINATION



7514-1



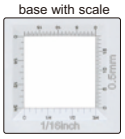


- Resin lens
- Powered by 2xCR1620 batteries (included)
- LED lights up automatically when opened

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

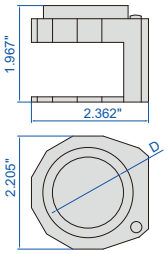
MAGNIFIER WITH ILLUMINATION

base with scale



rotate lens to adjust focus

7524-10



- Glass lens
- Powered by 3xAG7 batteries
- 3 pcs LED and 3 pcs UV
- Base with scale, graduation: 1/16", 0.5mm

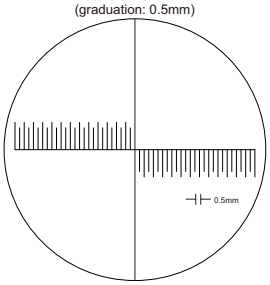
Part No.	Magnification	Lens diameter (D)
7524-10	10X	1.181 DIA

MEASURING MAGNIFIERS (WITH ILLUMINATION)

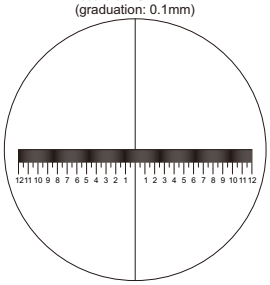
- Base with scale
- With 5 white LED and 5 UV LED
- Charging port: Type-C
- Work for 1.5h after fully charged

7527-D1

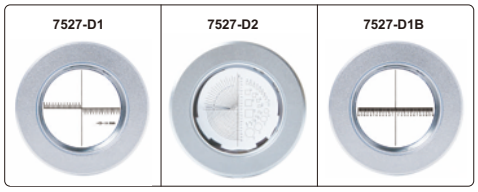
scale of **7527-D1**
(graduation: 0.5mm)

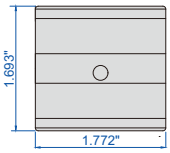


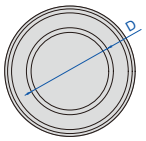
scale of **7527-D1B**
(graduation: 0.1mm)



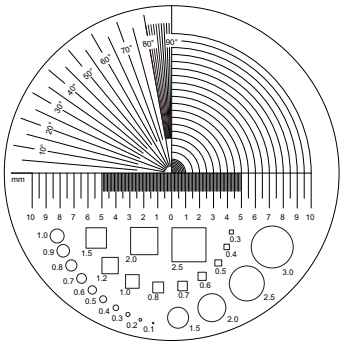
base with scale







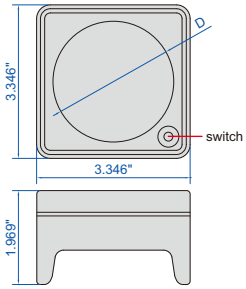
scale of **7527-D2**
(0-5mm graduation: 0.1mm, 5-10mm graduation: 0.5mm)



Part No.	Magnification	Lens diameter (D)
7527-D1	10X	1.181" DIA
7527-D2	10X	1.181" DIA
7527-D1B	10X	1.181" DIA

MAGNIFIER WITH ILLUMINATION

7528-3



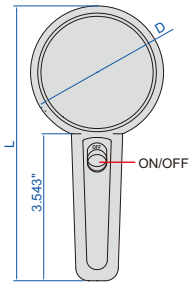
- Glass lens
- With 4 white LED, three levels brightness adjustment
- Charging port: Type-C

Part No.	Magnification	Lens diameter (D)
7528-3	3X	2.756" DIA

MAGNIFIERS WITH ILLUMINATION

7513-2

7513-4

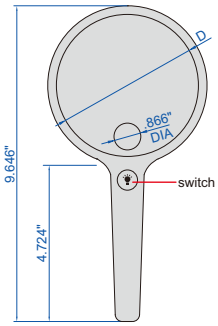


- Glass lens
- Powered by 3xAAA batteries (included)

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

MAGNIFIER WITH ILLUMINATION

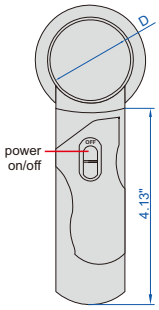
7529-24



- Resin lens
- With 20 white LED, three levels brightness adjustment
- Charging port: Type-C

Part No.	Magnification	Lens diameter (D)
7529-24	2X/4X	4.134" DIA

MAGNIFIER WITH TWO LENSES



7522-610

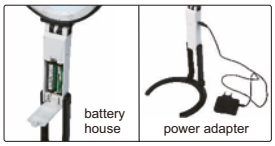
2 pcs LED

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

Part No.	Magnifition	Lens number	Magnification	Lens diameter (D)
7522-610	6X	2 pcs	6X	1.97" DIA
			10X	1.46" DIA

THREE WAYS MAGNIFIER WITH ILLUMINATION

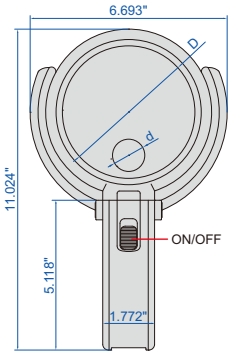
three ways use



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

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

7512-1



MAGNIFICATION GLASSES

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

7523-3D5

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

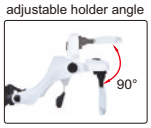
interchangeable lenses

head band (included)

2 pcs LED

adjustable lens and LED angle

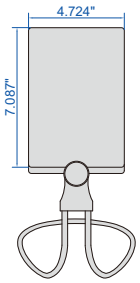
adjustable holder angle



moveable lens for focus

MAGNIFIER

7530-1D8



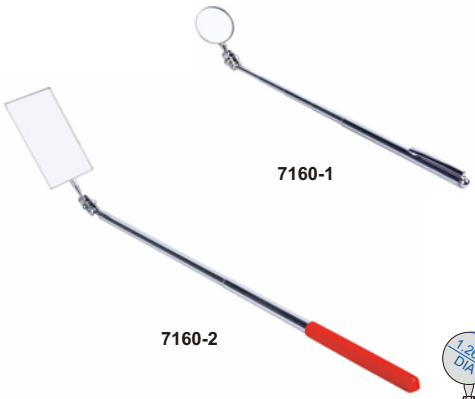
using on table

- Resin lens
- Silicone hose can be shaped according to needs
- Can be used on table or hanging around neck

hanging around neck

Part No.	Magnification	Lens size
7530-1D8	1.8X	7.087x4.724"

TELESCOPING INSPECTION MIRRORS

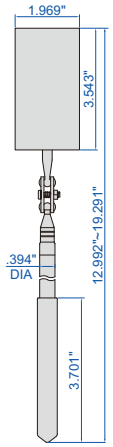


7160-1

7160-2

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

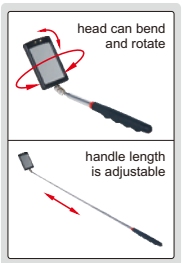
7160-1



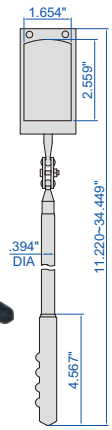
7160-2

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

TELESCOPING INSPECTION MIRROR (WITH ILLUMINATION)



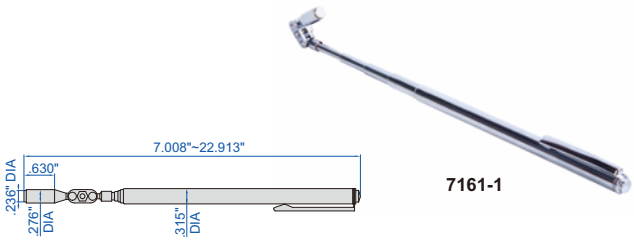
7162-1



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

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

TELESCOPING MAGNETIC PICK-UP

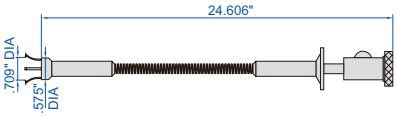


7161-1

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

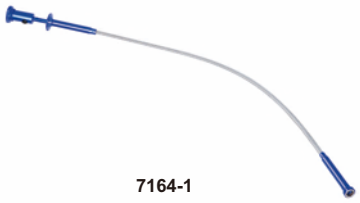
Part No.	Size of magnetic tip	Magnetic force	Length
7161-1	.236" DIA	0.99lbf	7.008~22.913"

FLEXIBLE PICK-UP AND FLASHLIGHT

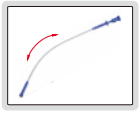


- For illumination and pick up steel parts in hidden areas
- Flexible spring rod, made of stainless steel
- Three LR44 batteries

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



7164-1



flexible spring rod

magnetic head

flashlight head

4 retractable claws

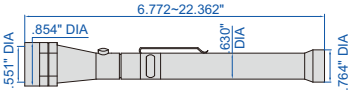
TELESCOPING MAGNETIC PICK-UP AND FLASHLIGHT

- Flashlight range: 118"
- For illumination and pick up metal parts in hidden areas
- Head can bend
- Telescoping handle, made of stainless steel
- Magnetic head and end
- With four LR44 batteries

magnetic head

magnetic end to attach on steel surfaces

7163-1



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

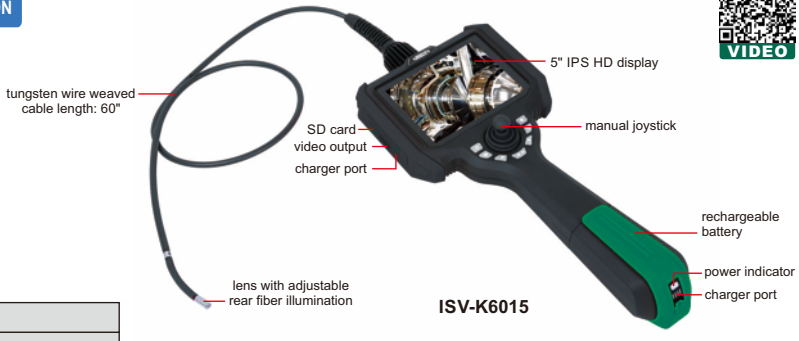
VIDEOSCOPES (WITH CABLE)

REAR FIBER ILLUMINATION

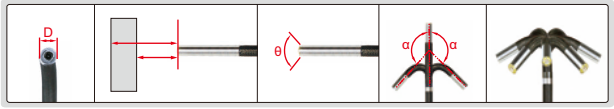
VIDEO

ISV-K-CLAMP (optional)

WIFI real-time image transmission



ISV-K6015



diameter (D) | depth of field (DOF) | angle of view (θ) | bend range (α) | bend

changeable lens cable

ISV-K-MAGNET (optional)

ISV-K-HOOK (optional)

SPECIFICATION

Part No.		ISV-K3915	ISV-K6015
Lens	diameter (D)	.154" DIA	.236" DIA
	pixel	0.92M	
	resolution	1280×720	
	depth of field	.315~5.906"	.472~7.874"
	bending direction	four directions	four directions
	bending range (α)	±160°	
	angle of view (θ)	120°	
	illumination	rear fiber	
	lens	sapphire glass lens	
	dust/waterproof	IP67	
	bend control	manual joystick	
Cable	length	60"	
	type	tungsten wire weaved cable	
Main unit	display	5" high definition LCD	
	function	take pictures, take videos	
	file format	picture: JPG, video: MP4	
	image process	image zoom (1X, 2X, 3X, 4X)	
	image control	freeze, flip over, playback and analog ruler	
	memory	memory card	
	output	WIFI (only for Android OS), USB, HDMI	
	power supply	rechargeable lithium battery (working time ≥ 4hours), AC/DC adapter (for continuous working)	
Weight		2.205lb	

STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
Tripod	1 pc
AC/DC adapter	1 pc

OPERATION ENVIRONMENT

Main unit	14~122°F, no preheat
Operation temperature	-4~158°F
Storage temperature	-4~140°F
Relative humidity	maximum 90%, no condensation

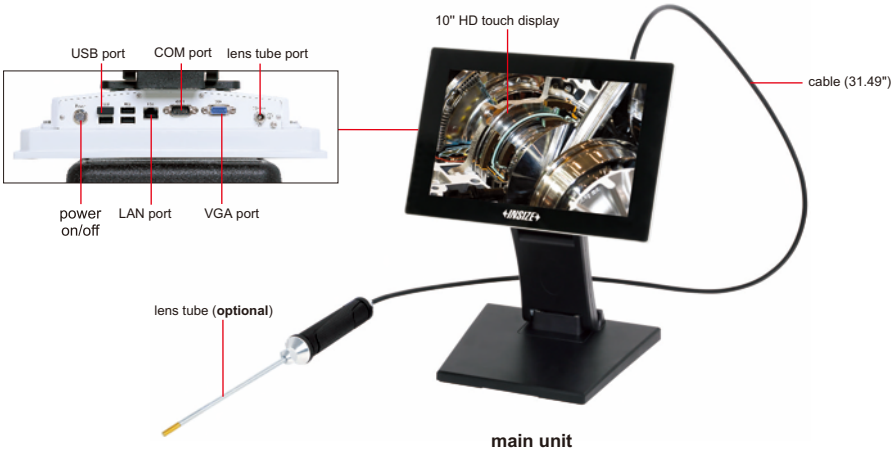
OPTIONAL ACCESSORY

Temperature alarm	ISV-K-HTALARM (must be installed in factory)
Hook	ISV-K-HOOK (must be installed in factory)
Magnet	ISV-K-MAGNET (must be installed in factory)
Clamp	ISV-K-CLAMP

VIDEOSCOPE (DESK TYPE)

REAR FIBER ILLUMINATION

VIDEO



MAIN UNIT (WITHOUT LENS TUBE)

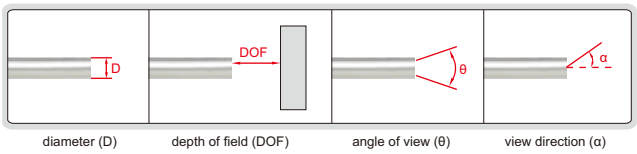
Part No.	**ISV-Y**
Display	10" HD touch display
Function	take picture, take video
File format	picture: JPG, video: MP4
Memory	built-in hard disk or USB flash disk
Image process	image zoom (1X, 2X, 3X)
Image control	noise reduction, negative film, flip over, freeze, on-line edit
Illumination	stepless adjustment
Additional function	real-time dynamic annotation, real-time watermark, rapid defect mark
Output	USB
Power supply	AC/DC adapter (for continuous working)
Weight	2.205lb

STANDARD DELIEVERY

Main unit	1 pc
USB disk	1 pc
Mouse	1 pc
AC/DC adapter	1 pc

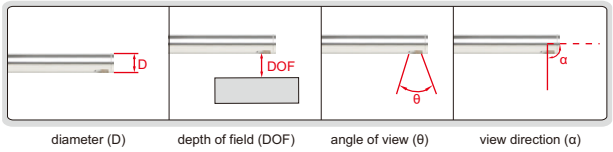
OPTIONAL ACCESSORY

Lens tube	refer to below details
Software for automatic defect identification	can be customized



RIGID STRAIGHT LENS TUBE, FRONT VIEW

Part No.	Lens tube		Lens					
	diameter (D)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	dust/ waterproof
ISV-Y6010	.236" DIA	7.874" (**optional** 3.543-39.370")	1M	rear optical fiber	120°	.472~7.874"	0° (**optional** 30°, 70°)	IP67



RIGID STRAIGHT LENS TUBE, FRONT VIEW

Part No.	Lens tube		Lens					
	diameter (D)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	dust/ waterproof
ISV-Y3910C	.154" DIA	7.874" (**optional** 3.543-19.685")	1M	rear optical fiber	120°	.315~5.906"	90°	IP67

MOBILE PHONE VIDEOSCOPE
PART NO. ISV-P6

- For Android and IOS mobile phones

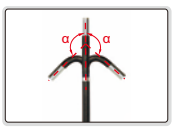
SPECIFICATION

Diameter of lens (D)	.24"±.008" DIA
Length of cable	40"
Resolution	960×720, 1280×720 (switchable)
Depth of field	.79"~∞
Angle of view (θ)	100°
Bending range (α)	0~180°
Illumination	LED with 3 levels control
Cable type	wear resistant
Interface	USB, type-C
Mobile phone system	Android, IOS
Power supply	rechargeable battery (for 2 hours working)
Dimension (L×W×H)	7.68×2.24×4.13"
Weight	1lb

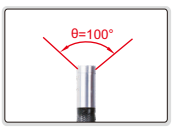
STANDARD DELIVERY

Main unit (with cable)	1 pc
Type-C cable	1 pc
Micro USB cable	1 pc
Iphone cable	1 pc
Charging cable	1 pc

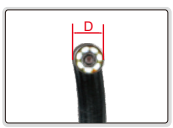
VIDEO



bending of lens up to 180°



angle of view



lens with LED

bend in any direction

VIDEOSCOPES (BASIC TYPE)

IP67 WATERPROOF

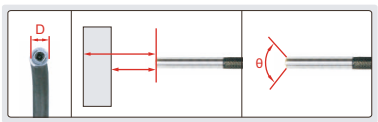
TUNGSTEN WIRE WEAVED CABLE BREAK AND WEAR RESISTANCE

VIDEO

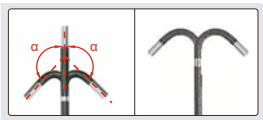
replaceable lens cable

WIFI real-time image transmission

ISV-J6010



diameter (D) | depth of field (DOF) | angle of view (θ)



bend range (α) | bend

SPECIFICATION

Part No.		ISV-J2810	ISV-J2815	ISV-J4010	ISV-J4030	ISV-J6010	ISV-J6030
Lens	diameter (D)	.110" DIA	.110" DIA	.157"	.157" DIA	.236" DIA	.236" DIA
	pixel	0.16M		1M			
	resolution	400×400					
	depth of field	. 394~∞"	. 394~∞"	. 394~∞"	. 394~∞"	. 394~∞"	. 394~∞"
	bending direction	four directions	four directions	four directions	four directions	four directions	four directions
	bending range (α)	±160°					
	angle of view (θ)	120°					
	illumination	front LED					
	lens	sapphire glass lens					
	dust/waterproof	IP67					
	bend control	manual joystick					
Cable	length	40"	60"	40"	120"	40"	120"
	type	wire weaved cable					
Main unit	display	5" HD screen (resolution: 1920x1080)					
	function	take pictures, take videos					
	file format	picture: JPG, video: MOV					
	image process	image zoom (1X, 2X, 3X, 4X, 5X)					
	image control	freeze, flip over, playback, analog ruler					
	memory	32G memory card					
	output	WIFI (only for Android OS), USB, HDMI					
	power supply	rechargeable lithium battery (working time ≥ 4 hours), AC/DC adapter (for continuous working)					
Weight		2.205lb					

STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
AC/DC adapter	1 pc

OPERATION ENVIRONMENT

Main unit	14~122°F no preheat
Operation temperature	-4~158°F
Storage temperature	-4~140°F
Relative humidity	maximum 90%, no condensation

VIDEOSCOPE (BASIC TYPE)
PART NO. ISV-E40

VIDEO

IP67 WATERPROOF

MEMORY CABLE CAN BE FIXED AT ANY SHAPE

45° mirror (included)

hook (included)

magnet pick up (included)

SPECIFICATION

Lens	diameter (D)	.32" DIA
	pixel	0.92M
	resolution	1280x720
	depth of field	1.18~3.15"
	angle of view	77°
	illumination	3 levels
	dust/waterproof	IP67
Cable	length	47"
	type	memory (can be set at any shape)
Main unit	display	5" IPS LCD
	function	take picture, take video
	file format	picture: JPG, video: MOV
	image process	image zoom (1.5X, 2X, 3X, 4X)
	memory	memory card (**optional**)
	output	Type-C
	power supply	rechargeable lithium battery (for 5 hours working)
	dimension	8.54×6.10×5.16"
Weight		1.12lb

STANDARD DELIVERY

Main unit	1 pc
45° mirror	1 pc
Hook	1 pc
Magnet pick up	1 pc

OPTIONAL ACCESSORY

32G memory card	ISV-E40-CARD
Card reader	ISV-E40-READER

OPERATION ENVIRONMENT

Operation temperature	14~122°F
Storage temperature	-4~140°F
Operation humidity	15%~85%

VIDEOSCOPE (ECONOMIC TYPE)
PART NO. ISV-E30

MEMORY CABLE CAN BE FIXED AT ANY SHAPE

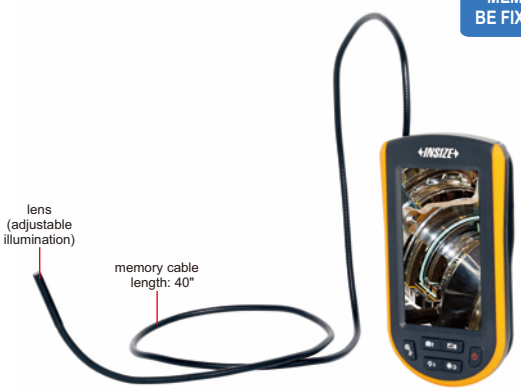
IP67 WATERPROOF

VIDEO

cable can be wrapped around the main unit

hook (included)

magnet pick up (included)



SPECIFICATION

Lens	diameter	.21" DIA
	pixel	0.4M
	depth of field	1.18~3.15"
	angle of view	72°
	Illumination	8 levels
	dust/waterproof	IP67
Cable	length	40"
	type	memory (can be set at any shape)
Main unit	display	4.3" LCD
	function	take picture, take video
	file format	picture: JPG, video: AVI
	image zoom	2X
	memory card	memory card (**optional**)
	output	micro USB
	power supply	AA battery
	dimension	6.06×1.28×3.45"
Weight		.62lb

STANDARD DELIVERY

Main unit	1 pc
Hook	1 pc
Magnet pick up	1 pc
AA battery	4 pcs

OPTIONAL ACCESSORY

32G memory card	ISV-E40-CARD
Card reader	ISV-E40-READER

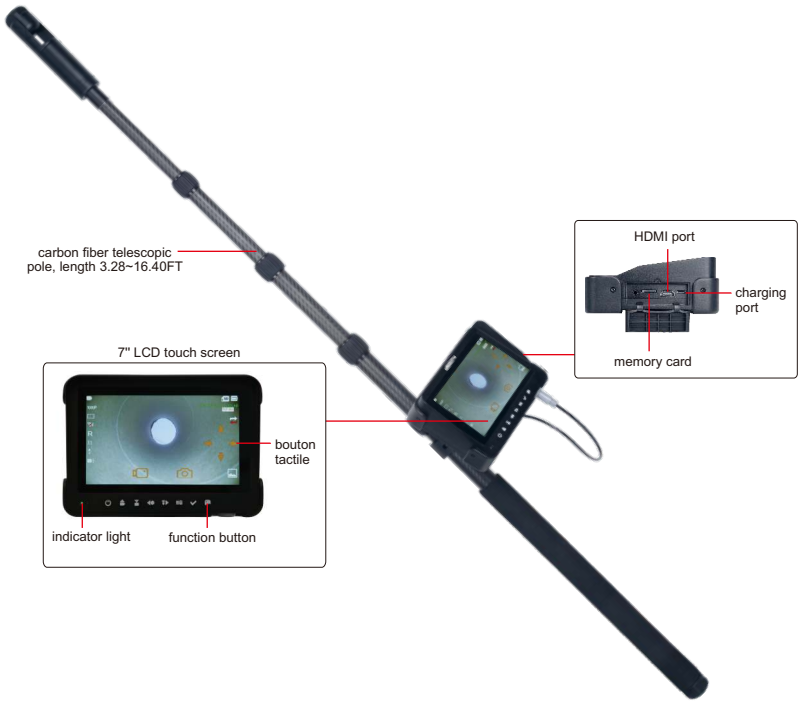
OPERATION ENVIRONMENT

Operation temperature	14~122°F
Storage temperature	-4~140°F
Operation humidity	15%~85%

4K CARBON FIBER TELESCOPIC POLE VIDEOSCOPE
PART NO. ISV-CF5

IP65 WATERPROOF

VIDEO



- Dual motorized control of lens view, 300° horizontal and vertical 360° rotation
- 4K HD true color camera
- Built-in infrared and white light for night and day use
- Insert SD card and export photos, videos

built-in infrared and white light for night and day use

dual motorized control of lens view, 300° horizontal and vertical 360° rotation

WIFI real-time image transmission

SPECIFICATION

Display	7"color touch LCD
Function	take photos and videos
Resolution	3840×2160
Image process	image mirror or flipping, real-time image magnification (1X, 2X, 3X, 4X)
Lens diameter (D)	1.575" DIA
Display image ratio	16:9, 4:3, 1:1
Memory	SD card (128G Max)
Illumination	infrared and white light LED, manual 5-level brightness adjustment
Output	HDMI
Wireless transmission	WIFI real-time image transmission
Pole	carbon fiber, can be fixed between 3.28~16.40FT
Environmental requirement	temperature: -4~140°F, relative humidity: 10%~85%
Power supply	rechargeable battery (18650 lithium battery), power adapter (for continuous working)
Dust/waterproof	IP65
Weight	4.41lb

STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
Carbon fiber telescopic pole	1 pc
HDMI cable	1 pc
Power adapter	1 pc

Application

car roof inspection

underbody inspection

ceiling duct inspection

constructure inspection
(WIFI real-time image transmission)

roof inspection

COATING THICKNESS GAUGE (HIGH PRECISION)
PART NO. ISO-8000FN

VIDEO

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES

SUITABLE FOR THIN COATING BELOW .4mils

calibration foils (included)

zero calibration plate (included)

stand **(optional)**

eddy current probe **N2000 (optional)**

eddy current probe **N1500 (optional)**

magnetic induction probe F500 (included)

- Can measure thickness of thin coating below .4mils
- High repeatability
- Magnetic induction probe 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, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Eddy current probe 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)
- Maximum, minimum, average and variance values can be calculated automatically

SPECIFICATION

Probe		**F500** (included) magnetic induction probe	**N1500 (optional)** eddy current probe	**N2000 (optional)** eddy current probe
Measuring range		0~19. 68mils	0~59. 05mils	0~78. 74mils
Resolution		.01mils		
Accuracy *		±(.02+2%L)mils		
Repeatability *		≤(.008+.8%L)mils		≤(.008+1%L)mils
Measuring mode		single and continuous		
Measuring interval	single mode	1.5s	.8s	
	continuous mode	.4s	.4s	
Calibration mode		zero calibration and multi-points calibration (1~5 points)		
Minimum substrate thickness		.004"	.002"	
Minimum measuring area		.27" DIA		.98" DIA
Minimum radius of curvature workpieces	convex surface	.06"		
	concave surface	.39"		
Unit		μm/mil		
Power supply		4×1.5V AAA batteries		
Dimension		5.83"×2.99"×1.02"		
Weight		.33lb		

STANDARD DELIVERY

Main unit	1 pc
Magnetic induction probe	1 pc
Zero calibration plate	1 pc
Calibration foils (.22mils, .46mils, .97mils, 1.97mils, 3.94mils, 9.92mils, 15.35mils)	1 set
1.5V AAA battery	4 pcs

OPTIONAL ACCESSORY

Eddy current probe	ISO-8000FN-N1500**
Eddy current probe (with zero calibration plate and standard foil)	ISO-8000FN-N2000
Stand	ISO-8000FN-STAND

*L is measuring thickness in mils
**For precision measurement of thin coating below .39mils, please use the stand for eddy current probe

COATING THICKNESS GAUGE
PART NO. 9501-1200

DATA OUTPUT | BLUETOOTH | FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES | POPULAR MODEL | INSPECTION CERTIFICATE

VIDEO

- 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

Probe type	FE (included) magnetic induction probe	NFE (optional) eddy current probe	FE90 (optional) magnetic induction probe for bores and grooves	FE10 (optional) magnetic induction probe 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	.6" 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	5.31×3.03×1.26"			
Weight	.38lb			

zero calibration block for FE (included)

magnetic induction probe FE10 for large range (**optional**)

calibration foils (included)

receiver (**optional**)

eddy current probe NFE (**optional**) with zero calibration block

magnetic induction probe FE90 for bores and grooves (**optional**)

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

COATING THICKNESS GAUGE (BASIC TYPE)
PART NO. ISO-1200FN

VIDEO

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES

Fe zero calibration plate (included)

NFe zero calibration plate (included)

standard foil (included)

ruby contact point

- Probe is suitable for both magnetic and non-magnetic metal substrates
- Can measure 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, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Can measure 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)
- 3 measuring modes: Fe, NFe, Fe/NFe
- Store 9 measuring records
- Small and portable, easy for operation

SPECIFICATION

Measuring range		0~196mil
Resolution		.01mils (range<10mils) .1mils(10mils≤range<100mils) 1mil (100mils≤range<196mils)
Accuracy		±(.08mil+3%L) L is measuring thickness in mil
Measure interval		.5s
Calibration mode		zero calibration
Measuring mode		Fe, NFe, Fe/NFe
Minimum substrate thickness	Fe	.008"
	NFe	.002"
Minimum measuring area		.98" DIA
Minimum radius of curvature workpieces	convex surface	.2"
	concave surface	.98"
Unit		μm/mil
Power supply		2×1.5V AAA batteries
Main unit dimension		4.0×2.4×1.1"
Probe dimension		2.8×1.0×0.9"
Weight		.25lb

STANDARD DELIVERY

Main unit	1 pc
Fe zero calibration plate	1 pc
NFe zero calibration plate	1 pc
Standard foil (3.94mil)	1 pc
1.5V AAA battery	2 pcs

COATING THICKNESS GAUGE (BASIC TYPE)
PART NO. ISO-1000FN

VIDEO

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES

ruby contact point

Fe zero calibration plate (included)

NFe zero calibration plate (included)

standard foil (included)

- Probe is suitable for both magnetic and non-magnetic metal substrates
- Can measure 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, aluminum, copper, chrome, tin, plastic, powder, paint
  (not for nickel)
- Can measure 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)
- 3 measuring modes: Fe, NFe, Fe/NFe
- Store 9 measuring records
- Small and portable, easy for operation

SPECIFICATION

Measuring range		0~196mil
Resolution		.01mils (range<10mils) .1mils(10mils≤range<100mils) 1mil (100mils≤range<196mils)
Accuracy		±(.08mil+3%L) L is measuring thickness in mil
Measure interval		.5s
Calibration mode		zero calibration
Measuring mode		Fe, NFe, Fe/NFe
Minimum substrate thickness	Fe	.008"
	NFe	.002"
Minimum measuring area		.98" DIA
Minimum radius of curvature workpieces	convex surface	.2"
	concave surface	.98"
Unit		μm/mil
Power supply		2×1.5V AAA batteries
Dimension		4.0×2.4×1.1"
Weight		.17lb

STANDARD DELIVERY

Main unit	1 pc
Fe zero calibration plate	1 pc
NFe zero calibration plate	1 pc
Standard foil (3.94mil)	1 pc
1.5V AAA battery	2 pcs

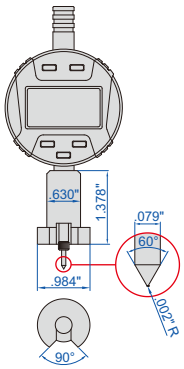
DIGITAL SURFACE PROFILE GAUGE

DISPLAY MAXIMUM, MINIMUM, DIFFERENCE VALUE BETWEEN MAXIMUM AND MINIMUM

DATA OUTPUT

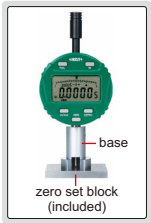
- Measure peak-to-valley height of blast cleaned surface. If the profile is too low, the adhesion of the coating to the surface will be reduced. If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Optional accessory: data output cable (part no. **7315-50M** receiver is needed, **7302-40M**)

2844-10

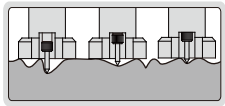


VIDEO

set zero



measure peak-to-valley height of blast cleaned surfaces



Part No.	Range	Digital indicator stroke	Digital indicator resolution	Accuracy
2844-10	0-.5"/0-12.7mm	.5"/12.7mm	.00005"/0.001mm	±.0002"

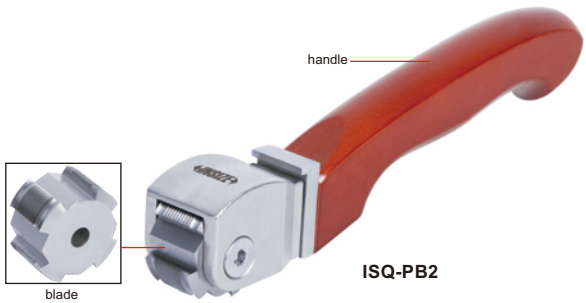
CROSS CUT ADHESION TESTERS

- To test the adhesion of paint coating on metal. wood, plastic. etc.
- According to ASTM D3359, BS 3900E6, BS/EN ISO 2409

test tape (included)

2X magnifier (included)

brush (included)

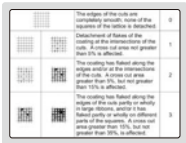


ISQ-PB2

VIDEO

step 1: make grid cutting on surface

step 2: paste and remove the tape



step 3: according to the shedding status, judge the adhesion grade

SPECIFICATION

Part No.		ISQ-PB1	ISQ-PB2	ISQ-PB3	ISQ-PB4	ISQ-PB5
Type		octahedral blade				
Number of blade teeth		6	11	6	11	6
Blade pitch		1mm		2mm		3mm
Applied paint thickness	on hard substrate (like metal)	0~2mils		2~5mils		>5mils
	on soft substrate (like wood, plaster)	-		0~4.72mils		4.73~9.84mils
Minimum substrate thickness	hard substrate (like metal)	9.84mils				
	soft substrate (like wood, plaster)	-		.39"		.39"
Minimum size of test sample		5.91×3.94"				
Dimension	handle	7.09×1.10×1.57"			7.09×1.18×1.57"	7.09×1.10×1.57"
	blade	.71×1.18" DIA			.83×1.18" DIA	.71×1.18" DIA
Weight		0.61lb				

STANDARD DELIVERY

Handle	1 pc
Blade	1 pc
Test tape	1 pc
2X magnifier	1 pc
Brush	1 pc

OPTIONAL ACCESSORY

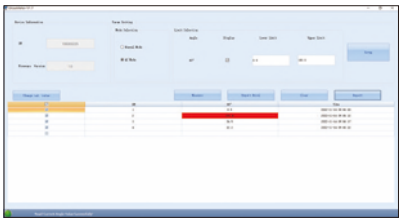
Part No.	Description	Applicable part numbers
ISQ-PBV	1" wide test tape, consumable	all part numbers
ISQ-PB1-A	a octahedral blade with 6 teeth and 1mm pitch	ISQ-PB1, ISQ-PB2 ISQ-PB3, ISQ-PB5
ISQ-PB2-A	a octahedral blade with 11 teeth and 1mm pitch	
ISQ-PB3-A	a octahedral blade with 6 teeth and 2mm pitch	
ISQ-PB4-A	a octahedral blade with 11 teeth and 2mm pitch	ISQ-PB4
ISQ-PB5-A	a octahedral blade with 6 teeth and 3mm pitch	ISQ-PB1, ISQ-PB2 ISQ-PB3, ISQ-PB5

60° GLOSS METER (BASIC TYPE)
PART NO. 5702-DG6

- To test the gloss of coating, such as painting, varnish, printing ink, etc.
- To test the material surfaces, such as metal, granite, ceramic, plastic, paper, etc.
- According to ISO 2813, ISO 7668, ASTM D523, ASTM D2457, DIN 67530
- Automatic judgement after setting high and low limits
- Automatic power off

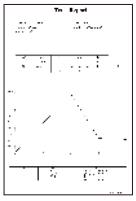
base with calibration block (included)

software (included) , test can be controlled from the software, display test data and report



software

measurement data is export to EXCEL



report

SPECIFICATION

Incidence angle	60°
Measuring range	0~200GU
Resolution	0.1GU
Accuracy	±1.5GU (range<120GU) ±1.5% (range≥120GU)
Repeatability	0.2GU (range<120GU) 0.2% (range≥120GU)
Zero error	0.1GU
Measuring area	.79×.39"
Power supply	rechargeable battery
Data port	USB
Dimension	5.31×1.77×2.95"
Weight	.52lb

STANDARD DELIVERY

Main unit	1 pc
Base with calibration block	1 pc
U disk	1 pc
AC/DC adapter	1 pc
USB data cable	1 pc
Cleaning cloth	1 pc

60° GLOSS METER
PART NO. ISQ-DG6

VIDEO

- To test the gloss of coating, such as painting, varnish, printing ink, etc.
- To test the material surfaces, such as metal, granite, ceramic, plastic, paper, etc.
- According to ISO 2813, ASTM D2457, ASTM D523
- Automatic power off

base with calibration block (included)

SPECIFICATION

Incidence angle	60°
Measuring range	0~150GU
Resolution	0.1GU
Accuracy	±1.2GU
Repeatability	0.4GU
Zero set error	0.2GU
Measuring area	.79×.39"
Output	bluetooth
Power supply	1×1.5V AA battery
Dimension	4.84×1.50×2.56"
Weight	.66lb

STANDARD DELIVERY

Main unit	1 pc
Base with calibration block	1 pc
Spare calibration block	1 pc

connect mobile phone via bluetooth (only Android system)

operate and output data by mobile phone

SPECTROPHOTOMETER
PART NO. 5701-D40

DATA OUTPUT

GRATING SPECTROPHOTOMETRIC

MATCHING COLOR CARD QUICKLY

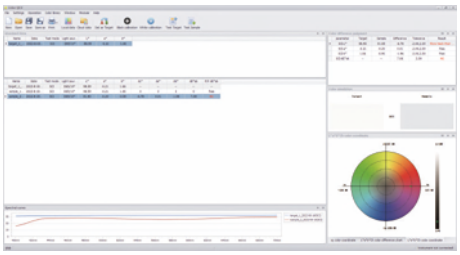
FOUR KINDS OF APERTURE

measurement

VIDEO

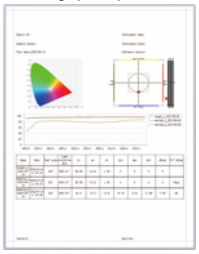
- Conforms with CIE No.15, ISO7724-1, ASTM E1164 and DIN5033 Teil7 standards
- 3.5" IPS full color screen
- Use long life and low power consumption combined LED light source, include UV and exclude UV measurement
- Camera locating function, switchable four kinds of aperture
- Large capacity storage space, over 20,000 measurement data
- Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colorimetric data
- Measure sample spectra, accurate Lab data, can be used in color matching and accurate color transmission

software



text report

graphic report



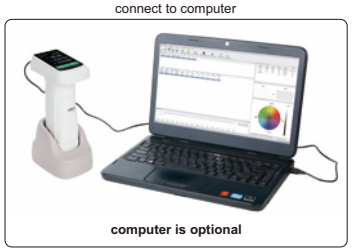
software (included) , test can be controlled from the software, display test data, report

white calibration cavity (included)

SPECIFICATION

Optical geometry		D/8 (diffused illumination/8° direction reception) SCI+SCE (specular component included+specular component excluded)
Integrating sphere size		1.57" DIA
Light source		LED (full band balanced LED) +UV
Spectrophotometric mode		grating
Sensor		dual optical path high precise CMOS array sensor
Wavelength range		15.75~27.56μin
Wavelength interval		.39μin
Reflectance measurement range		0~200%
Reflectance resolution		0.01%
Display resolution		0.01
Illumination area/Aperture		MAV .43" DIA; SAV .24" DIA, .12" DIA; MINI .04×.12"
Color space		CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB
Color difference formula		ΔE*ab, ΔE*cmc, ΔE*94, ΔE*00
Other colorimetric index		whiteness (ASTM E313-00, ASTM E313-73, CIE/ISO, AATCC, Hunter, taube Berger Stensby), yellowness (ASTM D1925, ASTM 313-00, ASTM E313-73), blackness (My, dM), color fastness, tint (ASTM E313-73), color density CMYK (A, T, E, M), milm, munsell, opacity, color strength
Observer angle		2°/10°
Illuminant		A, B, C, D50, D55, D65, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, U30, U35, DLF, NBF, TI83, TI84, Id50, Id65, LED-B1, LED-B2, LED-B3, LED-B4, LED-B5, LED-BH1, LED-RGB1, LED-V1, LED-V2
Measuring time		about 1.5s
Repeatability	spectral reflectance	within 0.08% of standard deviation
	colorimetric values	ΔE*ab≤0.025 (after whiteboard correction, measuring the whiteboard 30 times at 5s interval)
Inter-instrument error		ΔE*ab≤0.25 (BCRA series II, average value of 12 color plates)
Output		USB, Bluetooth
Light source lifetime		10 years, more than 1 million times measurements
Battery		3.7V/3000mAh, rechargeable 8000 times continuous tests
Dimension		3.74×5.08×9.09"
Weight		1.65lb

connect to computer



computer is optional

STANDARD DELIVERY

Main unit	1 pc
White calibration cavity	1 pc
Measuring aperture	9 pcs
USB cable	1 pc
USB disk	1 pc
AC/DC adapter	1 pc
Black light trap	1 pc

COLORIMETER (BASIC TYPE)
PART NO. 5700-LS35

VIDEO

- Conforms with CIE 15, CIE S 005, ISO 7724-1 and ISO 13655 standards
- 3.5-inch IPS display and capacity touch panel
- Contains multiple color cards and can match the closest color code quickly
- QC testing function, can set color difference threshold
- Able to store 1000 colors and 1000 color comparison
- 3.7V/4000mAh battery, 10000 continuous measurements

SPECIFICATION

Illumination geometry	D/8, specular component include (SCI)
Illumination light source	full spectrum LED light source
Measurement conditions	light source D65, field of view 10°
Measuring time	about 1s
Color space	CIE Lab, Luv, LCh, Yxy, CMYK, RGB, Hex
Color difference formula	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc (2:1) , ΔE*cmc (1:1) , ΔE*00
Repeatability	sandard deviation ΔE*ab is within 0.03 (measurement condition: the average value of 30 measurements on the whiteboard at an interval of 3s after calibration)
Charging interface	USB (Type-C)
Dimension	3.39×2.48×6.22"
Weight	.54lb

STANDARD DELIVERY

Main unit	1 pc
White calibration cavity	1 pc
USB cable	1 pc
AC/DC adapter	1 pc
Cleaning cloth	1 pc
Locating plate	1 pc

white calibration cavity (included)

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

INSPECTION CERTIFICATE

VIDEO

ATTENTION: NOT SUITABLE FOR CASTINGS AND ALUMINUM WORKPIECES

POPULAR MODEL

- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: steel, stainless steel, glass, copper, brass, polystyrene, titanium, etc.

SPECIFICATION (ON STEEL)

Measuring range		.031~11.811"
Resolution		.01/.001"
Accuracy		±.002" (H<.394") ±(.002+H/1000)" (.394"≤H<3.937") ±H/333" (H≥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~.3937"/μs
Operation temperature		main unit: -4~122°F transducer: -4~140°F
Measuring unit		inch/mm
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

ULTRASONIC THICKNESS GAUGE
PART NO. ISU-250C

INSPECTION CERTIFICATE

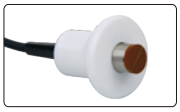
DATA OUTPUT

VIDEO

- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice
- Tolerance measurement
- Average calculation of 9 readings
- Data can be input to Excel and Word as keyboard signal

SPECIFICATION (ON STEEL)

Measuring range	refer to specification of transducers
Resolution	.01/.001"
Accuracy	±.002" (H<.394") ±(.002+H/1000)" (.394"≤H<3.937") ±H/333" (H≥3.937") H is the thickness to be measured in inch
Velocity	.0394~.3937"/μs
Operation temperature of main unit	-4~122°F
Output	USB
Measuring unit	inch/mm
Power supply	2×1.5V AAA batteries
Dimension	4.57×2.52x1.06"
Weight	.49lb



transducer **ISU-T13** (**optional**)

transducer **ISU-T12** (**optional**)

transducer **ISU-T04** (**optional**)

transducer **ISU-T06** (**optional**)

STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-T08	1 pc
Battery (AAA)	2 pcs
Couplant (for ISU-T04, ISU-T06, ISU-T08, ISU-T12)	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

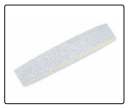
Transducer	ISU-T04, ISU-T06, ISU-T12, ISU-T13
Couplant (for ISU-T13)	ISU-HT5-COUPLANT

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Part No.	Frequency	Diameter (d)	Measuring range	Minimum size of pipe for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T08 (included)	5.0MHz	.43" DIA	.031-11.811"	.98×.05"	-4~140°F	general use
ISU-T04 (optional)	10.0MHz	.24" DIA	.028-.787"	.59×.04"	-4~140°F	for small tubes
ISU-T06 (optional)	7.5MHz	.35" DIA	.028-1.969"	.59×.05"	-4~140°F	for thin workpieces
ISU-T12 (optional)	2.0MHz	.67" DIA	.079-15.748"	1.57×.12"	-4~140°F	for casting iron
ISU-T13 (optional)	5.0MHz	.59" DIA	.118-3.937"	.98×.08"	32~662°F	for high temperature

CONTACT/NON-CONTACT TACHOMETER
PART NO. 9225-405

- 2 measuring methods, contact and non-contact
- Can measure rotary speed and line speed
- Automatically save the maximum value, minimum value and the last value, 500 data can be stored during continuous measurement
- With backlight display
- Automatic power off


reflection sticker (included)

cone cavity head (included)

wheel with 0.1mm/3.937" perimeter (included)

cone head (included)

clamping sleeve (included)

small cone head (included)

SPECIFICATION

Measuring method		Non-contact	Contact
Measuring range	rotary speed	2.5~99999RPM	0.5~19999RPM
	line speed	—	0.05~500m/min
Resolution	rotary speed	0.1RPM (range 2.5~999.9RPM) 1RPM (range 1000~99999RPM)	0.1RPM (range 0.5~999.9RPM) 1RPM (range 1000~19999RPM)
	line speed	—	0.01m/min (range 0.05~99.99m/min) 0.1m/min (range 100~500m/min)
Accuracy	rotary speed	±(0.05%n+1d)RPM n is rotary speed, d is resolution	±(0.4%n+1d) RPM (n<300RPM) ±(0.05%n+1d) RPM (n≥300RPM) n is rotary speed, d is resolution
	line speed	—	±(1%+1d)m/min d is resolution
Laser power		class III, 3mW~4mW	—
Sampling time		0.6s (above 100RPM)	
Measuring distance		2.0~19.7"	—
Operation temperature		32~104°F	
Power supply		3×AA batteries	
Dimension		8.1×2.8×1.42"	
Weight		.37lb	

STANDARD DELIVERY

Main unit	1 pc
Reflection sticker	3 pcs
Wheel with 0.1mm/.004" perimeter	1 pc
Clamping sleeve	1 pc
Cone head	1 pc
Small cone head	1 pc
Cone cavity head	1 pc
Battery (AA)	3 pcs

CONTACT TACHOMETER
PART NO. 9224-213

- Can measure rotary speed, line speed and line length
- Automatically save the maximum value, minimum value and the last value, 96 data can be stored during continuous measurement
- With backlight display

cone head (included)

small cone head (included)

cone cavity head (included)

clamping sleeve (included)

wheel with 0.1mm/.004" perimeter (included)

SPECIFICATION

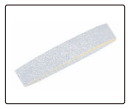
Measuring range	rotary speed	0.5~19999RPM
	line speed	0.05~500m/min
	line length	0.05~99999m
Resolution	rotary speed	0.1RPM (range 0.5~999.9RPM) 1RPM (range 1000~19999RPM)
	line speed	0.01m/min (range 0.05~99.99m/min) 0.1m/min (range 100~500m/min)
	line length	0.02m
Accuracy	rotary speed	±(0.4%n+1d)RPM (n<300RPM) ±(0.05%n+1d)RPM (n≥300RPM) n is rotary speed, d is resolution
	line speed	±(1%+1d)m/min d is resolution
	line length	±(1%+1d)m d is resolution
Sampling time		0.8s (above 60RPM)
Operation temperature		32~104°F
Power supply		3×AA batteries
Dimension		6.7×2.8×1.38"
Weight		.36lb

STANDARD DELIVERY

Main unit	1 pc
Wheel with 0.1mm/.004" perimeter	1 pc
Clamping sleeve	1 pc
Cone head	1 pc
Small cone head	1 pc
Cone cavity head	1 pc
Battery (AA)	3 pcs

NON-CONTACT TACHOMETER
PART NO. 9223-120

- Accurately measure the rotary speed without contact
- Automatically save the maximum value, minimum value and the last value, 500 data can be stored during continuous measurement
- With backlight display



reflection sticker (included)

SPECIFICATION

Measuring range	2.5~99999RPM
Resolution	0.1RPM (range 2.5~999.9RPM) 1RPM (range 1000~99999RPM)
Accuracy	±(0.05%n+1d)RPM n is rotary speed, d is resolution
Laser power	class III, 3mW~4mW
Sampling time	0.6 second (above 100RPM)
Measuring distance	2.0~19.7"
Operation temperature	32~104°F
Power supply	3×AA batteries
Dimension	7.1×2.8×1.18"
Weight	.32lb

STANDARD DELIVERY

Main unit	1 pc
Reflection sticker	3 pcs
Battery (AA)	3 pcs

VIBRATION PEN (THREE PARAMETERS)
PART NO. 0020-A199

- Acceleration, velocity and displacement can be tested
- Automatic power off

SPECIFICATION

Parameter	Acceleration	Velocity	Displacement
Measuring range	0.01~199.9m/s^2 (virtual value)	0.01~199.9mm/s (peak~peak value)	0.001~1.999mm (peak~peak value)
Frequency	10Hz~1KHz	10Hz~1KHz	10Hz~500Hz
Frequency response	±5% (≥20Hz) -20%~+10% (<20Hz)		
Linearity	±(5%+2unit)		
Indeterminacy of sensitivity	≤3%		
Operation temperature	32°F~104°F/0°C~40°C		
Operation humidity	<85%		
Power supply	2×LR44 battery (for 10 hours working)		
Dimension	5.91x.87x.71"		
Weight	.12lb		

STANDARD DELIVERY

Main unit	1 pc
LR44 battery	2 pcs

VIBRATION PEN
PART NO. 9720-199

- Measure vibration of motors, fans, pumps, compressors and machine tools to prevent mechanical failure
- Small size, light weight, low energy consumption, easy operation, easy to carry
- One key control
- Automatic power off

SPECIFICATION

Measured parameter	speed
Measuring range	0~78.74in/s
Frequency	10Hz~1KHz
Accuracy	±(5%+.79)in/s
Operation temperature	32°F~104°F
Operation humidity	<85%
Power supply	2×LR44 batteries (for 10 hours wroking)
Dimension	5.9x.87x.71"
Weight	.12lb

STANDARD DELIVERY

Main unit	1 pc
LR44 battery	2 pcs

VIBRATION METER
PART NO. 0022-VM20

VIDEO

- Can measure vibration frequency
- Can measure virtual value/peak value/peak-peak value of acceleration, velocity and displacement
- Suitable for factory inspection, status monitoring and fault diagnosis of mechanical equipments such as motors, pumps, fans, household appliances, compressors, smoke machines, generators, gearboxes, etc
- Software is included: on-line monitoring, data storage

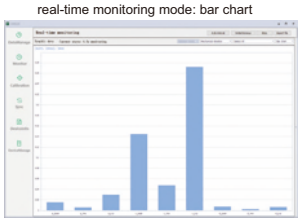
SPECIFICATION

Measuring parameter	acceleration (virtual/peak/peak-peak value) $a_{RMS,1}$, $a_{Peak,1}$, $a_{P-P,1}$, a_{Peak}', a_{P-P}'	velocity (virtual/peak/peak-peak value) $V_{RMS,1}$, $V_{Peak,1}$, $V_{P-P,1}$, V_{Peak}', V_{P-P}'	displacement (virtual/peak/peak-peak value) $d_{RMS,1}$, $d_{Peak,1}$, $d_{P-P,1}$, d_{Peak}', d_{P-P}'
Measuring range	0.01~200m/s^2 (peak value)	0.1~200mm/s (virtual value)	0.01~2mm (peak-peak value)
Frequency range	10Hz~5kHz	10Hz~1kHz	10Hz~500Hz
Amplitude frequency reponse	±5%		
Amplitude linearity	±5%		
Frequency accuracy	±0.5%		
Cut-off frequency (second-order high-pass filtering)	8kHz sampling frequency: 3.16Hz、10.00Hz、31.60Hz、N/A (adjustable) 32kHz sampling frequency: 12.64Hz、40.00Hz、126.4Hz、N/A (adjustable)		
Display	1.96" 128×64 dot matrix OLED screen		
Language	Chinese, English, Portuguese		
Power	<80mA/5V		
Power supply	4×AAA batteries: 6.0V/1000mAh; AC/DC adapter: 5V/2A		
Operation condition	temperature: 14°F~122°F; humidity: 25%RH~90%RH, non-condensing; pressure: 9.43psi~15.66psi		
Dimension	6.77×2.72×1.02"		
Weight	.53lb		

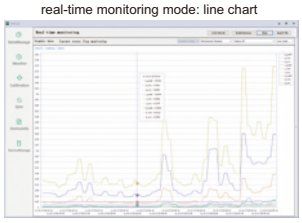
STANDARD DELIVERY

Main unit	1 pc
Software	1 pc
Accelerometer (including cable)	1 pc
Magnetic base	1 pc
M5 screw	1 pc
Battery (AAA)	4 pcs
AC/DC adapter	1 pc

real-time monitoring mode: bar chart



real-time monitoring mode: line chart

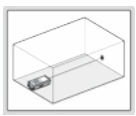


software (included), monitor and collect data to PC software via USB cable, data can sent to Excel

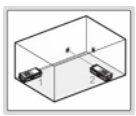
LASER DISTANCE METERS

- Large display with backlight
- Unit: m, ft, in, ft+in
- Distance, area, volume and height measurement
- Continuos measuring mode to track maximum and minimum value
- Memory of 30 measurement values
- Automatic power off: laser 30s, main unit 180s

9561-50B

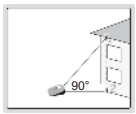


distance measurement



area measurement

volume measurement



height measurement

SPECIFICATION

Part No.	9561-50B	9561-70B
Measuring range	.2~164ft	.2~229ft
Resolution	0.001m, .001ft, 1/32"	
Accuracy	±(.08+D/916)" D: measured distance, unit: ft	
Laser type	red laser, 630~670nm, class II, <1mW	
Power supply	2×AAA batteries	
Dimension (L×W×H)	4.5×2.0×1.1"	
Weight	.21lb	

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

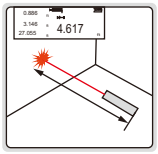
MINI LASER DISTANCE METER
PART NO. 9565-E40

BUILT-IN BLUETOOTH

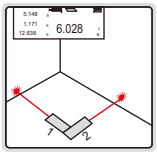
VIDEO

bluetooth connect to phone (APP)

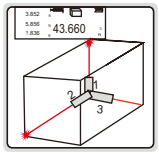
- Built-in bluetooth, transmission distance is 32ft (no obstacles, no electromagnetic interference)
- Display with backlight
- Unit: ft, in, ft+in, m
- Distance, area, volume and height measurement
- Automatic power off: laser 30s, main unit 180s



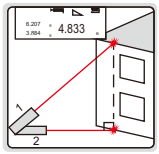
distance measurement



area measurement



volume measurement



height measurement

SPECIFICATION

Measuring range	.65~131ft
Resolution	.001ft, 1/16", .001m
Accuracy	±(.12+D/1666)", D: measured distance, unit: ft
Laser type	red laser, 24.80~26.38μin, class II, <1mW
Charging interface	USB (type-C)
Dimension	7.09×1.10×1.57"
Weight	.12lb

STANDARD DELIVERY

Main unit	1 pc
USB charging cable	1 pc

PEN-TYPE CONDUCTIVITY/TDS/SALINITY TESTER
PART NO. 0412-EB32

VIDEO

- Can measure the conductivity, TDS and salinity
- Suitable for water quality testing, aquaculture, food processing, scientific research, etc.
- The same series of electrodes can be replaced with each other
- Automatic temperature compensation
- With the stabilizing and locking functions of the reading
- Can be used normally in any environment with the background light
- Auto power off
- Probe protection level: IP67
- Lightweight, easy to carry and operate

"platinum black needle" electrode (included)

electrodes can be replaced

SPECIFICATION

Measuring range	conductivity 0~200.0 μS/cm, 0~2000 μS/cm, 0~20.00mS/cm
	TDS 0~100.0ppm, 0~1000ppm, 0~10.00ppt
	salinity 0~10.00ppt
	temperature 0~122°F
Resolution	conductivity 0.1μS/cm, 1μS/cm, 0.01mS/cm
	TDS 0.1ppm, 1ppm, 0.01ppt
	salinity 0.01ppt
	temperature .2°F
Accuracy	conductivity ±1%FS
	temperature ±.9°F
Calibration mode	1~3 points
Power supply	4×1.5V AAA batteries
Dimension	7.0×1.6×1.6"
Weight	.29lb

STANDARD DELIVERY

Main unit	1 pc
Standard solution	2 bottles
Test cup	2 pcs
1.5V AAA battery	4 pcs
Platinum black needle electrode	1 pc

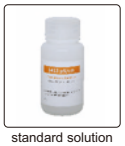
PORTABLE CONDUCTIVITY/TDS METER
PART NO. 0411-0200

VIDEO

IP65 WATERPROOF

- Reading mode: auto-read and continuous-read
- Automatic/manual temperature compensation
- Auto-hold feature senses and locks the measurement endpoint
- Cell constant is settable
- 1 point calibration with standard recognition
- Data capacity up to 200 sets for each parameter
- IP65 dust/waterproof
- Auto power off

wristband (included)


standard solution (included)

SPECIFICATION

Conductivity	range	0.00μS/cm~200mS/cm
	resolution	0.01μS/cm minimum
	electronic unit accuracy	±1.0%FS
	measurement accuracy	±1.5%FS
	reference temperature	77°F/25°C
	calibration point	1
	standard recognition	84μS/cm, 1413μS/cm, 12.88mS/cm
TDS	range	0.00mg/L~300g/L
	resolution	0.01mg/L minimum
	accuracy	±1.0%FS
Temperature	range	23~230°F/-5~110°C
	resolution	.2°F/.1°C
	accuracy	±.7°F/±.4°C
Input		electrode with 5-pin aviation connector
Power supply		rechargeable battery
Dimension		3.1×8.9×1.4"
Weight		.88lb

STANDARD DELIVERY

Main unit	1 pc
Electrode	1 pc
Electrode holder	2 pcs
Wristband	1 pc
Silicone rubber case	1 pc
AC/DC adapter and charging cable	1 pc
Standard solution	1 bottle

PEN-TYPE pH TESTER
PART NO. 0432-HB22

VIDEO

- 3 types of pH electrodes: bulb type, plane type and puncture type
- Suitable for water quality testing, sewage treatment, food and cosmetics testing, agriculture and scientific research, etc.
- Can measure the ORP, the same series of electrodes can be replaced with each other
- Automatic temperature compensation
- Alarm function: the red backlight displays alarm mode
- With the stabilizing and locking functions of the reading
- Probe protection level: IP67
- Can be used normally in any environment with three colors of backlight
- Auto power off
- Lightweight, easy to carry and operate

ORP "platinum needle" electrode (**optional**)

pH "bulb type" electrode (included)

pH "puncture type" electrode (**optional**)

pH "plane type" electrode (**optional**)

SPECIFICATION

Measuring range	-2.00~16.00pH
	temperature 0~122°F
	ORP -1000mV~+1000mV
Resolution	0.01pH
	temperature .2°F
	ORP 1mV
Accuracy	±0.02pH
	temperature ±.9°F
	ORP ±0.2%FS
Calibration mode	1~3 points
Standard solution	USA (pH buffers: 4.00, 7.00, 10.01) NIST (pH buffers: 4.01, 6.86, 9.18)
Power supply	4×1.5V AAA batteries
Dimension	7.0×1.6×1.6"
Weight	.29lb

STANDARD DELIVERY

Main unit	1 pc
Standard solution	3 bottles (USA)
Test cup	3 pcs
KCl powder	1 bottle
1.5V AAA battery	4 pcs
pH bulb type electrode	1 pc

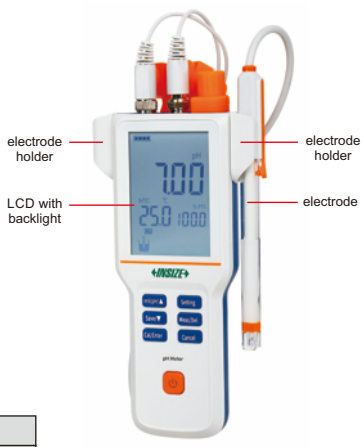
OPTIONAL ACCESSORY

pH plane type electrode	0432-HB-F
pH puncture type electrode	0432-HB-P
ORP electrode	0432-HB-O

PORTABLE pH METER
PART NO. 0431-0018

VIDEO

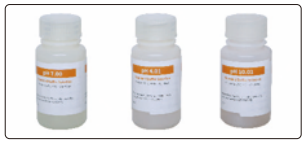
IP65 WATERPROOF



- Reading mode: auto-read and continuous-read
- Automatic/manual temperature compensation
- Auto-hold feature senses and locks the measurement endpoint
- 1 or 2 points calibration with standard recognition
- Data capacity up to 200 sets for each parameter
- IP65 dust/waterproof
- Auto power off

wristband (included)

KCl powder (included)


standard solution (included)

SPECIFICATION

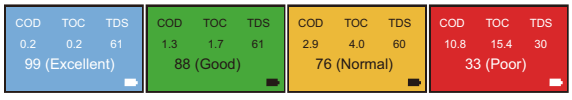
pH	range	-2.00~18.00pH
	resolution	0.01pH
	electronic unit accuracy	±0.01pH
	measurement accuracy	±0.02pH
	calibration point	1 or 2
	standard recognition	NIST pH buffers: 4.01, 7.00, 10.01
Voltage	range	-1999~1999mV
	resolution	1mV
	accuracy	±0.1%FS
Temperature	range	23~230°F/-5~110°C
	resolution	.2°F/.1°C
	accuracy	±.7°F/±.4°C
Inputs		pH electrode: BNC (Q9)
		temp. probe: 4-pin aviation connector
Power supply		rechargeable battery
Dimension		3.1×8.9×1.4"
Weight		.88lb

STANDARD DELIVERY

Main unit	1 pc
Electrode	1 pc
Electrode holder	2 pcs
Wristband	1 pc
Silicone rubber case	1 pc
AC/DC adapter and charging cable	1 pc
Standard solution	3 bottles
KCl powder	1 bottle

WATER QUALITY TESTER
PART NO. 0410-EA31

- Suitable for measuring tap water, purified water, underground water, surface water (unpolluted) and other drinking water, to determine microorganisms and pesticide residues in water
- Use UV absorption method to measure COD, TOC, UV275 parameters of drinking water, and measure the conductivity to determine TDS of drinking water
- Can simultaneously measure 6 parameters: COD (chemical oxygen demand), TOC (total organic carbon), UV275 (ultraviolet wavelength 275nm), TDS (total dissolved solids), EC (electric conductivity), T (temperature) for comprehensive evaluation of water quality
- With intelligent scoring feature: 4 colors backlight indicate 4 grades of water quality
- Automatic temperature compensation
- Probe protection level: IP67



COD (mg/L)	TOC (mg/L)	TDS (ppm)	Colour	Score	Grade
0~0.75	0~1.25	0~250	blue	90~100	Excellent
0.75~1.5	1.25~2.5	250~500	green	80~90	Good
1.5~3	2.5~5	500~1000	yellow	60~80	Normal
3~7.5	5~12.5	1000~2000	red	0~60	Poor

water quality grade

VIDEO

SPECIFICATION

Measuring range	COD	0~50mg/L
	TOC	0~50mg/L
	conductivity	0~4000μS/cm
	TDS	0~2000ppm
	UV275	0~1au/cm
	temperature	32~122°F
Resolution	COD	0.01mg/L
	TOC	0.01mg/L
	conductivity	1μS/cm
	TDS	1ppm
	UV275	0.001au/cm
	temperature	.18°F
Accuracy	COD	0~5mg/L, ±0.5mg/L 5~50mg/L, ±10%
	TOC	0~5mg/L, ±0.5mg/L 5~50mg/L, ±10%
	conductivity	±3.5%FS
	TDS	±3.5%FS
	UV275	0~0.1au/cm, ±0.01au/cm 0.1~1au/cm, ±10%
	temperature	±1.8°F
Power supply		2×1.5V AAA batteries
Dimension		6.18×31.46×.55"
Weight		.15lb

STANDARD DELIVERY

Main unit	1pc
Pure water calibration cup	1pc

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 (2.1×6%)=12.6%
- Automatic power off

STANDARD DELIVERY

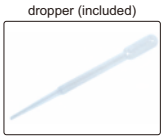
Main unit	1 pc
Dropper	1 pc
Battery (AAA)	1 pc

VIDEO

SPECIFICATION

Measuring range	0~50% (1.3330~1.4200RI)
Accuracy	±0.2% (±0.0003RI)
Resolution	0.1% (0.0001RI)
Power supply	1×AAA battery
Dimension	4.76×2.28×.98"
Weight	.2lb

dropper (included)

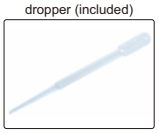


MINI DIGITAL REFRACTOMETER
PART NO. 5801-A55

SUITABLE FOR WATER BASED COOLANT

- Quickly measure the concentration of coolant
- Automatic temperature compensation
- Brix and refractive index can be displayed
- Refer to the refraction coefficient of coolant, for example: the refraction coefficient of grinding emulsion is 2.1, the reading value is 6%, so the actual concentration is (2.1×6%)=12.6%
- Automatic power off

dropper (included)



STANDARD DELIVERY

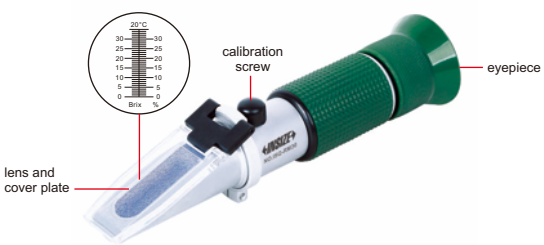
Main unit	1 pc
Dropper	1 pc

SPECIFICATION

Measuring range	0~50% (1.3330~1.4200RI)
Accuracy	±0.2% (±0.0003RI)
Resolution	0.1% (0.0001RI)
Power supply	built-in 3.7V rechargeable lithium battery
Dimension	5.79×1.81×1.06"
Weight	.25lb (including battery)

PORTABLE REFRACTOMETER
PART NO. ISQ-RM30

SUITABLE FOR WATER BASED COOLANT



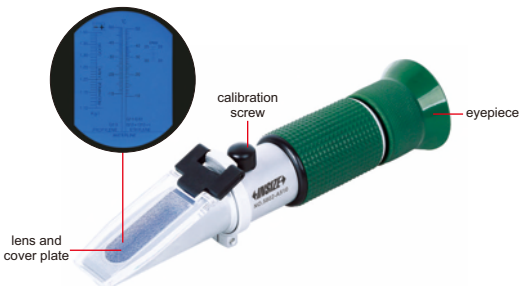
- Quickly measure the concentration of coolant, sugar solution, juice and drinks
- Refer to the refraction factor of coolant, for example: the refraction factor of grinding emulsion is 2.1, the reading value is 6%, so the actual concentration is (2.1×6%)=12.6%

SPECIFICATION

Measuring range	0~32%
Accuracy (20°C)	±0.2%
Resolution	0.2%
Dimension	1.06×1.57×6.3"
Weight	.46lb

VIDEO

PORTABLE REFRACTOMETER FOR AUTOMOTIVE LIQUID
PART NO. 5802-A510



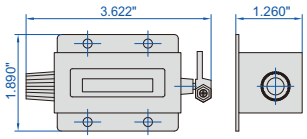
- Measure the freezing point of the antifreeze and the concentration of urea in diesel exhaust fluid
- Measure the specific gravity of battery fluid

SPECIFICATION

Measuring object	ethylene glycol	propylene glycol	urea	battery fluid
Measuring range	-50~0°C	-50~0°C	30~35%	1.10~1.40kg/l
Accuracy	±5°C	±5°C	±1%	±0.02kg/l
Resolution	1°C	1°C	1%	0.01kg/l
Dimension	1.06x1.57x6.30"			
Weight	.38lb			

STROKE COUNTER

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



SPECIFICATION

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

DIGITAL STOPWATCH
PART NO. DSW-A010

- Split time, total time and continuous time can be displayed
- 10 groups of results can be read out from memory after resetting
- Scroll back and forth to read out the memory digits
- The fastest, slowest and average time can be displayed
- Able to record the split times (00-199)

VIDEO

STANDARD DELIVERY

Main unit	1 pc
String	1 pc

SPECIFICATION

Measuring range		0~9 hours, 59 minutes, 59.99 seconds
Resolution		0.01s
Accuracy		±0.5s
Function	memory	10 groups
	timer	up to 10 hours
	time	12-hour or 24-hour time display, alarm can be set
Power supply		LR44 battery
Screen dimension		1.32×.54"
Dimension		2.99×2.48×.63" (metal case)

WATERPROOF DIGITAL STOPWATCH
PART NO. DSW-B024

WATERPROOF

- Single row display with backlight
- Count up to 23 hours 59 minutes and 59 seconds
- 2 recallable memory
- Time and calendar display with hour, minute, second, month, date and day

VIDEO

STANDARD DELIVERY

Main unit	1 pc
String	1 pc

SPECIFICATION

Chronograph	range	0~23 hours 59 minutes and 59 seconds
	resolution	.01s (<30mins) 1s (>30mins)
	accuracy	±1.5s (day error)
Clock	display	12/24 hour format
	function	alarm and hourly chime
Waterproof level		3bar (30meters)
Operation environment*		32°F~122°F
Power supply		CR2032 battery
Dimension		2.99×2.52×.87"
Weight		.14lb

* Underwater button operation is not supported.

INDUCTIVE MOISTURE METER
PART NO. 0120-IM24

- Suitable for wood, gypsum and cement
- MAX/MIN/HOLD mode
- Alarm function
- Low battery indication
- Auto power off

SPECIFICATION

Measuring range	0~100%
Resolution	1%
Accuracy	±4%
Detection depth	.79~1.57"
Sampling time	0.5s
Battery	9V
Dimension	7.28×2.17×1.50"
Weight	.43lb

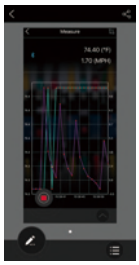
STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	1 pc

ANEMOMETER
PART NO. 0110-1125

- Measure air velocity and temperature
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off
- Supplied with APP for Apple and Android

App measurement



App record

SPECIFICATION

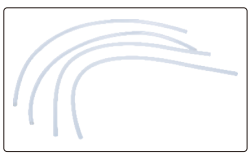
	Unit	Measuring range	Resolution	Accuracy
Air velocity	MPH	2.5~56.0	0.1	±(3%+0.4)
	knots	2.2~48.0	0.1	
	m/s	1.1~25.0	0.01	±(3%+0.3)
	km/h	4~90	0.1	±(3%+1)
	ft/min	220~4920	1	±(3%+40)
Air temperature	°F	32~122	0.1	±4
	°C	0~50	0.1	±2
Sensors	air velocity sensor, NTC-type precision thermistor			
Sampling time	0.5s			
Operation altitude	max 7000ft			
Operation environment	32~122°F, 0~80%RH			
Storage environment	14~140°F, 0~80%RH			
Auto power off	10 minutes			
Data port	Bluetooth 4.0			
Power supply	9V			
Dimension	8.39×2.13×1.42"			
Weight	.38lb			

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

DIFFERENTIAL PRESSURE MANOMETER
PART NO. 0140-DP05

- Offset and differential measurement
- Record maximum/minimum/average value with relative timestamp
- Built-in USB interface for data transmission
- Unit: psi, inH_2O, bar, mbar, kPa, inHg, mmHg, oz/in^2, ftH_2O, cmH_2O, kg/cm^2
- Zero adjust
- Data hold
- Display with backlight
- Low battery indication
- Automatic power off
- Safety rating: CAT III 600V

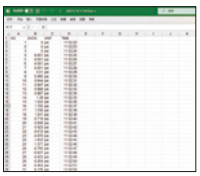


soft tubes (included)

software (included), connect to PC via USB cable

export data

display realtime value and curve



export data to Excel

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
9V battery	1 pc
Software and USB cable	1 pc
Soft tubes	4 pcs

SPECIFICATION

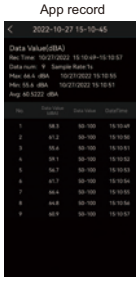
Pressure range	-5~5psi
Maximum pressure	20psi
Unit	kPa
Resolution	0.01
Accuracy	±0.3%FSO (77°F)
Repeatability	±0.2% (Max. ±0.5%FSO)
Linearity/hysteresis	±0.29%FSO
Response time	0.5s typical
Operation temperature	32°F~122°F
Power supply	1×9V 6F22 battery or AC/DC adapter
Dimension (LxWxH)	6.50×3.54×1.57"
Weight	.77lb

SOUND LEVEL METER (BASIC TYPE)
PART NO. 0010-A35

- Auto range selection
- Over range indication
- Display backlight
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off
- Supplied with APP for Apple and Android

App measurement

App record



SPECIFICATION

Frequency	31.5Hz~8KHz
Measuring range	35dB~130dB
Accuracy	±3.0dB (ref 94dB@1kHz)
Resolution	0.1dB
Frequency weighting	A and C
Display update	2 times/sec
Microphone	1/2 inch electret condenser microphone
Power supply	9V battery
Operation temperature	32°F~104°F/0°C~40°C
Humidity	10%RH~90%RH
Dimensions	7.28×2.13×1.42"
Weight	.41lb

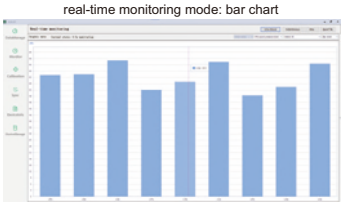
STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc
Windscreen	1 pc

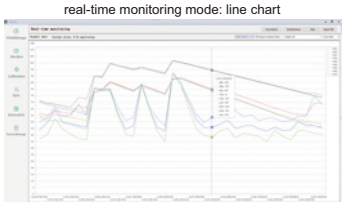
SOUND LEVEL METER (ADVANCED TYPE)
PART NO. 0011-FA25

software (included), monitor and collect data to PC software via USB cable, data can sent to Excel

real-time monitoring mode: bar chart



real-time monitoring mode: line chart



- Integral function: 1s~24h (adjustable)
- Wide frequency range, large dynamic range, low background noise
- Parallel time weight and frequency weight
- Single range without shifting
- Software is included: on-line monitoring, data storage

SPECIFICATION

Accuracy	IEC 61672-1:2013 class 2
Microphone	1/2 inch prepolarized condenser microphone
Measuring range	25dB (A)~141dB (A); 35dB (C)~141dB (C); 50dB (Z)~141dB (Z) other frequency linear ranges: 31.5Hz: 26dB (A)~101dB (A); 12.5kHz: 25dB (A)~136dB (A)
Frequency	20Hz~12.5kHz
Self-generated electrical noise	<17dB (A), <23dB (C), <33dB (Z)
Frequency weighting	parallel A, C, Z weightings
Time weighting	parallel F (Fast), S (Slow), I (Impulse) weightings
Measuring function	Lp, Leq,t, Leq,T, Lmax, Lmin, Lpeak, SEL
Integral time	1s-24h (adjustable)
Start mode	button/clock/limit/interval
Power setting	power on or off regularly
Data storage	4MB FLash RAM 4 sets of parameter templates, 128 measurement point names; 64 calibration records
Language	Chinese, English, Portuguese
Power	<80mA/5V
Power supply	4×AAA batteries (for 10 hours working) AC/DC adapter: 5V/2A
Operation condition	temperature: 14°F~122°F humidity: 25%RH~90%RH, non-condensing pressure: 9.43psi~15.66psi
Dimension	9.05×2.71×1.02"
Weight	.40lb

STANDARD DELIVERY

Main unit	1 pc
Software	1 pc
Windscreen	1 pc
Battery (AAA)	4 pcs
AC/DC adapter	1 pc

DIGITAL SOUND LEVEL METER (ADVANCED TYPE)
PART NO. 9353-413

- Automatic range conversion
- Over range indicator
- Maximum mode
- Data hold
- AC signal output: 0.707Vrms, impedance approx.100Ω
  DC signal output: 20mV/dB, impedance approx.1kΩ

VIDEO

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	4 pcs
Screwdriver	1 pc

SPECIFICATION

Measuring range	40dB~130dB (ref.20μPa)
Frequency	20Hz~12.5kHz
Resolution	0.1dB
Accuracy	IEC 61672-1:2013 class 2
Frequency weighting	a weighting
Response time	fast (125ms), slow (1s)
Microphone	pre polarization condenser microphone
Reference direction	axial direction of condenser microphone
Power supply	4×1.5V AAA batteries
Dimension	8.27×2.68×1.06"
Weight	.53lb

LIGHT METER (ECONOMIC TYPE)
PART NO. 0131-A120

SPECIFICATION

Measuring range	Lux	0.01~19.99	0.1~199.9	1~1999	10~19990
Resolution	Lux	0.01	0.1	1	10
Measuring range	FC	0.1~199.9	1~1999	10~19990	100~199900
Resolution	FC	0.1	1	10	100
Accuracy		±(4%+10d), range<2000FC/20000Lux ±(5%+10d), range≥2000FC/20000Lux (d is resolution, calibrated with standard incandescent lamp at color temperature 2856K)			
Repeatability		±2%			
Sampling time		0.5s			
Operation environment		32~104°F, 0~70%RH			
Storage environment		14~122°F, 0~80%RH			
Battery		9V			
Dimension		7.28×2.68×1.50"			
Weight		.29lb			

- Photosensor can rotate 90° clockwise and rotate 180° counterclockwise
- Build-in calibration filters ensure the accuracy when working in different colors
- Data hold function
- FC/Lux unit switch
- Low battery alarm

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

VIDEO

LIGHT METER (ECONOMIC TYPE)
PART NO. 0130-L110

SPECIFICATION

Measuring range	Lux	1~1999	10~19999	100~100000
Resolution	Lux	1	10	100
Accuracy		±(4%+10d), range<10000Lux ±(5%+10d), range≥10000Lux (d is resolution, calibrated with standard incandescent lamp at color temperature 2856K)		
Repeatability		±2%		
Sampling time		0.5s		
Operation environment		32~104°F, 0~70%RH		
Storage environment		14~122°F, 0~80%RH		
Battery		9V		
Photodetector dimension		4.13×2.28×1.10"		
Main unit dimension		5.12×2.83×1.18"		
Weight		.37lb		

- Suitable for measuring illuminance in various occasions
- Data hold function
- Fast switching of measuring range, easy to operate

VIDEO

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

UV LIGHT METER
PART NO. 0132-UV199

VIDEO

- Self-recognize probes
- Real-time value, maximum value, minimum value, average value, time, energy value are displayed at the same time

MAIN UNIT SPECIFICATION

Display	240×160 LCD
Power supply	4 AAA alkaline batteries
Dimension	5.83×2.99×1.02"
Weight	.43lb

STANDARD DELIVERY

Main unit	1 pc
Probe 0132-UVA1	1 pc
Battery	4 pcs

PROBE SPECIFICATION

Probe part no.	**0132-UVA1** (included)	**0132-UVC0 (optional)**	**0132-UVCWP1 (optional)**
Application	general purpose low power UVA intensity and energy measurement	intensity and energy measurement of 254nm UV sterilization mercury lamp	intensity and energy measurement of 254nm UV sterilization mercury lamp
Spectral response	λp=365nm 315nm-400nm	λp=254nm 230nm-280nm	λp=254nm 230nm-280nm
Power measuring range	0~200000μW/cm²		
Resolution	0.1μW/cm²		
Energy measuring range	0-9999999μJ/cm²		
Measuring accuracy	±10%		
Record time	0-99999s		
Sampling speed	6 times/second		
Measuring unit	μW/cm² (default), mW/cm², W/m²		
Test hole diameter	.39" DIA		
Probe size	1.54×1.26×.59"	1.54" DIA×.59"	1.97" DIA×.79"
Waterproof depth	—	—	39.37"

PROBE SPECIFICATION

Probe part no.	**0132-UVCLED0 (optional)**	**0132-UVB0 (optional)**	**0132-UVA0 (optional)**
Application	measurement of 260nm-285nm UV LED sterilization lamp	general purpose UVB intensity and energy measurement	Intensity and energy measurement of light source of high pressure mercury lamp in UV curing industry
Spectral response	280nm-315nm*	λp=310nm** 280nm-315nm	λp=365nm 315nm-400nm
Power measuring range	0~200000μW/cm²		0~2000mW/cm²
Resolution	0.1μW/cm²		0.1mW/cm²
Energy measuring range	0-9999999μJ/cm²		
Measuring accuracy	±10%		
Record time	0-99999s		
Sampling speed	6 times/second		2048 times/second
Measuring unit	μW/cm² (default), mW/cm², W/m²		mW/cm² (default), W/m²
Test hole diameter	.39" DIA		
Probe size	1.54" DIA×.59"	1.54" DIA×.59"	1.54×1.26×.59"

*Wide spectral range, avoid using in strong light
**Suitable for measuring UVB light source with wavelength 297nm, 308nm, and 313nm

PROBE SPECIFICATION

Probe part no.	**0132-UVALED0 (optional)**	**0132-UVALED1 (optional)**	**0132-UVALED3 (optional)**
Application	intensity and energy measurement of area light source of UV LED in UV curing industry	intensity and energy measurement of point light source of UV LED in UV curing industry	general purpose UVA+UVV LED intensity and energy measurement, low power measuring range
Spectral response	calibrated with 395nm UV LED 340nm-420nm		
Power measuring range	0~20000mW/cm²		0~200000μW/cm²
Resolution	1mW/cm²		0.1μW/cm²
Energy measuring range	0-9999999μJ/cm²		
Measuring accuracy	±10%		
Record time	0-99999s		
Sampling speed	2048 times/second		6 times/second
Measuring unit	mW/cm² (default), W/cm², W/m²		μW/cm² (default), mW/cm², W/m²
Test hole diameter	.39" DIA	.04" DIA	.39" DIA
Probe size	1.54×1.26×.59"		

SINGLE GAS DETECTORS

IP65 WATERPROOF

- Detect combustible gas (EX, including CH_4, C_3H_8, H_2, etc), O_2, CO or H_2S, support more than 30 types of gas sensors, customization for detecting toxic gases (such as NO, NH_3, PH_3, etc) available
- Adjustable alarm level, alarm mode: sound, light, vibration
- Adjustable calibration level
- Sampling method: natural diffusion
- High concentration protection for sensor
- Up to 500 alarm records storage capacity
- Self-test on startup
- Display with backlight
- Language: English, Chinese
- Low battery indication
- Explosion proof level: Ex ib IIC T4 Gb

calibration cap (included)

0611-SG01

SPECIFICATION

Part No.	0611-SG01	0611-SG02	0611-SG03	0611-SG04
Gas	combustible gas/EX	O_2	CO	H_2S
Range	0-100%LEL	0-30%vol	0-1000ppm	0-100ppm
Resolution	1%LEL	.1%vol	1ppm	1ppm
Accuray	±5%FS			
Response time	T_{90}<60s			
Operation environment	temperature: 14°F~131°F; humidity: <95%RH, no condensation			
Sensor lifetime	2 years (depending on working environment)			
Power supply	3.7V rechargeable Li-ion battery, working time>8h			
Dimension (LxWxH)	4.88×2.36×1.81"			
Weight	.45lb			

STANDARD DELIVERY

Main unit	1 pc
Calibration cap	1 pc
AC/DC adapter and charging cable	1 pc

MULTI GAS DETECTOR PART NO. 0612-MG04

DATA OUTPUT

IP66 WATERPROOF

software flash disk (included)

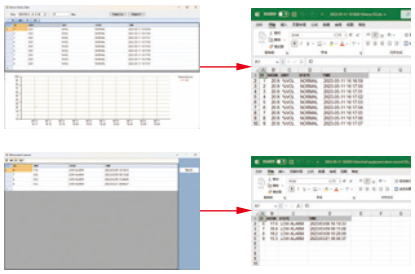
charging cable (included)

calibration cap (included)

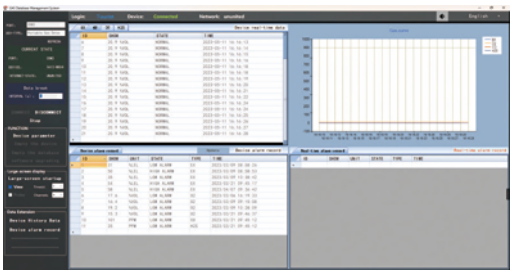
charging and data transmission interface on the back

- Detect combustible gas (EX, including CH_4, C_3H_8, H_2, etc), oxygen (O_2), carbon monoxide (CO) and hydrogen sulfide (H_2S), optional configuration includes other toxic gases such as NO, Nh_3, PH_3, etc; support more than 30 types of gas sensors, flexible sensor combination and customization available
- Adjustable alarm level, alarm mode: sound, light, vibration and screen display
- Adjustable calibration level
- Sampling method: natural diffusion
- High concentration protection for sensor
- Data transmission via charging interface
- Up to 1000 alarm records storage capacity
- Self-test on startup
- Display with backlight
- Language: English, Chinese and Spanish (Portuguese and Russian customizable)
- Low battery indication
- Explosion proof level: Ex ib IIC T4 Gb

software (included), connect to PC via USB cable, display test data and export record



export history data and alarm record



display real-time data and alarm record

STANDARD DELIVERY

Main unit	1 pc
Calibration cap	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

SPECIFICATION

Gas	combustible gas (EX)	O_2	CO	H_2S
Range	0-100%LEL	0-30%vol	0-1000ppm	0-100ppm
Resolution	1%LEL	0.1%vol	1ppm	1ppm
Accuracy	±5%FS			
Response time	T_{90}<60s			
Operation environment	temperature: 14°F~122°F; humidity: <95%RH, no condensation			
Sensor lifetime	2 years (depending on working environment)			
Power supply	3.7V rechargeable Li-ion battery, working time>8h			
Dimension (LxWxH)	5.91×2.83×1.89"			
Weight	.68lb			

RADIATION DETECTOR
PART NO. 0522-RF10

- Detect X ray*, β ray, γ ray radiation
- Measure radiation dose rate in real-time and record cumulative dose at the same time, display real-time dose rate curve
- Adjustable dose rate alarm and dose alarm threshold
- Data stored in built-in memory will not lose after power off
- Particle sound switch
- LCD display with backlight
- Battery level display and low battery indication
- Language: English, Chinese

*X ray radiation measurement is for reference only, cannot meet the energy response requirement.

SPECIFICATION

Sensor	glass Geiger counter tube
Dose rate range	.1μSv/h~10mSv/h
Dose range	.00μSv~10Sv
Relative error	<10% (at 1mSv/h)
Sensitivity	>1cps/μSv/h (relative to ^{60}Co)
Energy response	48keV~1.5MeV
Working environment	14°F~122°F
Power	3×1.5V AAA batteries or USB-C
Power supply	<60mW
Dimension	4.57×2.36×1.30"
Weight	.32lb

STANDARD DELIVERY

Main unit	1 pc

DC TESLAMETERS

DATA OUTPUT

- Measure magnetic induction of DC magnetic field
- Directly display the N/S polarity of the measured magnetic field
- One-key zero function: eliminate the influence of zero drift before measurement
- Maximum value hold: record the maximum value of the changing magnetic field
- Unit switch between mT or G (1mT=10G)
- Auto ranging
- Built-in USB interface for data transmission
- Display with backlight
- Auto power off

0501-MA01

radial probe (included)

magnetic shielding cavity (**optional**)

standard magnet (**optional**)

SPECIFICATION

Part No.	0501-MA01	0501-MA05
Range	2000mT	
Resolution	.01mT (0~200mT) .1mT (200mT~2000mT)	
Accuracy	±1.0%	±2.0% (≤1000mT) ±5.0% (1000mT~2000mT)
Temperature coefficient	±.1%/K	
Zero drift	±.5mT/h	
Interface	USB	
Power supply	3x1.5V AA batteries or USB	
Dimension (LxWxH)	6.50×3.54×1.57"	
Weight	.77lb	

STANDARD DELIVERY

Main unit	1 pc
Radial probe	1 pc
Battery (AA)	3 pcs

OPTIONAL ACCESSORY

Axial probe	0501-PA
Magnetic shielding cavity	0501-SHIELD
Standard magnet	0501-CT□□□, for verifying accuracy, not applicable for calibration (□□□ is DC magnetic field specification, 100~600mT customizable)

axial probe (**optional**)

LASER BELT TENSION METER
PART NO. 5900-HZ18

- Laser sensor, direct measurement, easy to use
- Two sensors: internal and external, external sensor is suitable for measurement in narrow spaces
- Automatic power off

SPECIFICATION

Measuring range		10~800Hz
Input parameter range		maximum free belt length: 999.9" maximum belt weight: 9.999lb/ft
Accuracy		±5%
Unit		lbf, N
Measuring distance		.12~.79"
Operation temperature		50~122°F
Power supply		4×1.5V AAA batteries
Dimension	main unit	7.01×2.83×1.34"
	external sensor	4.88×.83×.47"
Weight		.40lb

STANDARD DELIVERY

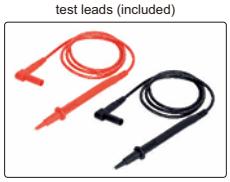
Main unit	1 pc
External sensor	1 pc

external sensor

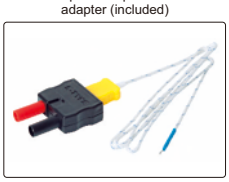
internal sensor

DIGITAL MULTIMETER
PART NO. 9216-F520

test leads (included)



temperature probe and adapter (included)



SPECIFICATION

Function	Range	Resolution	Accuracy ("d" is the least reading)
DC Voltage	200mV	.1mV	±(.5%+2d)
	2V/20V/200V	.001V/.01V/.1V	±(1.0%+2d)
	600V	1V	±(1.2%+2d)
AC Voltage (50~60Hz)	200mV	.1mV	±(1.5%+30d)
	2V	.001V	±(1.2%+3d)
	20V/200V	.01V/.1V	±(1.5%+3d)
	600V	1V	±(2.0%+4d)
DC Current	200μA	.1μA	±(1.0%+3d)
	2000μA/20mA/200mA	1μA/.01mA/.1mA	±(1.5%+3d)
	10A	.01A	±(2.5%+5d)
AC Current (50~60Hz)	200μA	.1μA	±(1.5%+5d)
	2000μA/20mA/200mA	1μA/.01mA/.1mA	±(1.8%+5d)
	10A	.01A	±(3.0%+7d)
Resistance	200Ω	.1Ω	±(1.2%+4d)
	2kΩ	.001kΩ	±(1.0%+2d)
	20kΩ/200kΩ/2MΩ	.01kΩ/.1kΩ/.001MΩ	±(1.2%+2d)
	20MΩ	.01MΩ	±(2.0%+3d)
Temperature (Type-K)	-58°F to 1832°F	1°F	±(3.0%+8°F)
	-50°C to 1000°C	1°C	±(3.0%+5°C)
Diode test	test current .3mA typical	1mV	±(10%+5d)
Continuity check	less than 100Ω		
Power supply	9V battery		
Dimension (LxWxH)	5.91×2.76×1.89"		
Weight	.56lb		

- 2000 counts digital display
- Auto ranging (except 200mV AC)
- Data hold
- Max hold
- Display with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V

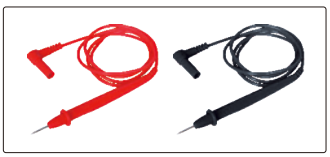
STANDARD DELIVERY

Main unit	1 pc
Thermocouple adapter	1 pc
Temperature probe	1 pc
9V battery	1 pc
Test lead	2 pcs

MINI DIGITAL MULTIMETER (BASIC TYPE)
PART NO. 9242-ML100A

POPULAR MODEL

- Portable size with protective case
- 1999 counts digital display
- Data hold
- Display with backlight
- Low battery indication
- Auto power-off
- Safety rating: CAT II 600V



test leads (included)

SPECIFICATION

Function	Range	Resolution	Accuracy ("d" is the least reading)
DC Voltage	200.0mV	. 1mV	±(. 7%+3d)
	2000mV	1mV	±(.5%+2d)
	20.00V/200.0V/600V	.01V/.1V/1V	±(.7%+3d)
AC Voltage (50/60Hz)	200.0V/600V	.1V/1V	±(1.2%+3d)
DC Current	200.0μA/200.0mA	.1μA/.1mA	±(1.0%+2d)
	10.00A	.01A	±(1.2%+5d)
Resistance	200.0Ω	.1Ω	±(1.0%+2d)
	2000Ω/20.00kΩ/200.0kΩ	1Ω/.01kΩ/.1kΩ	±(.8%+2d)
	20.00MΩ	.01MΩ	±(1.2%+3d)
Battery test	1.5V/9V/12V battery check		
Diode test	open circuit voltage: 2.1V DC		
Continuity check	<50Ω		
Power supply	2×1.5V AAA batteries		
Dimension (LxWxH)	5.28×3.03×1.85"		
Weight	.45lb		

VIDEO

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs

DIGITAL MULTIMETER (WITH JACK INDICATOR LIGHT)
PART NO. 9246-180

VIDEO

- Jack indicator light: jacks flash green to indicate the corresponding jacks for test leads
- NCV detection and judge the strength by light and buzzer
- Self-calibration when power on to ensure accuracy
- LIVE firewire recognition
- Double color backlight (orange backlight prompts high voltage or current: the orange backlight automatically lights up when voltage is higher than 80V or the current is higher than 1A)
- Large range capacitance meter 100mF
- True RMS measurement
- Battery test function, Max/Min mode, data hold
- Low battery indication, auto power off
- Safety rating: CAT III 1000V, CAT IV 600V

test leads (included)

SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	600mV/6V/60V/600V/1000V	.1mV/.001V/.01V/.1V/1V	±(0.5%+3)
AC Voltage	6V/60V/600V/750V	.001V/.01V/.1V/1V	±(0.8%+5)
DC Current	60μA/60mA/600mA/10A	.01μA/.01mA/.1mA/.01A	±(1.2%+3)
AC Current	60mA/600mA/10A	.01mA/.1mA/.01A	±(1.5%+3)
Resistance	600Ω/6kΩ/60kΩ/600kΩ	.1Ω/.001kΩ/.01kΩ/.1kΩ	±(1.0%+3)
	6MΩ/60MΩ	.001MΩ/.01MΩ	±(1.5%+3)
Capacitance	10nF/100nF/1000nF/10μF/100μF/1000μF	.001nF/.01nF/.1nF/.001μF/.01μF/.1μF	±(4.0%+5)
	10mF/100mF	.001mF/.01mF	±(5.0%+5)
Frequency	10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz	.001Hz/.01Hz/.1Hz/.001kHz/.01kHz/.1kHz	±(1.0%+3)
	10MHz	.001MHz	±(3.0%+3)
Duty cycle	1~99%	.1%	±(3.0%+3)
Diode measurement	forward DC current 2.5mA, reverse DC voltage 3.0V		
Continuity measurement	<30Ω		
Power	2x1.5V AA batteries		
Dimension (LxWxH)	7.4×3.46×1.97"		
Weight	.93lb		

STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Battery (AA)	2 pcs

SMART DIGITAL MULTIMETER
PART NO. 9247-190

- Automatically identify test mode for AC voltage/DC voltage/resistance/continuity
- NCV detection, and judge the strength by light and buzzer
- Self-calibration when power on to ensure accuracy
- LIVE firewire recognition
- Display with backlight, true RMS measurement, data hold
- Low battery indication, auto power off
- Safety rating: CAT III 600V

test leads (included)

VIDEO

SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	60mV/600mV/6V/60V/600V	.01mV/.1mV/.001V/.01V/.1V	±(0.5%+3)
AC Voltage	60mV/600mV/6V/60V/600V	.01mV/.1mV/.001V/.01V/.1V	±(1.0%+3)
DC Current	6000μA/60mA/600mA	1μA/.01mA/.1mA	±(1.2%+5)
AC Current	6000μA/60mA/600mA	1μA/.01mA/.1mA	±(1.5%+5)
Resistance	600Ω/6kΩ/60kΩ/600kΩ	.1Ω/.001kΩ/.01kΩ/.1kΩ	±(1.0%+5)
	6MΩ/60MΩ	.001MΩ/.01MΩ	±(1.5%+3)
Capacitance	6nF/60nF/600nF/6μF/60μF/600μF	.001nF/.01nF/.1nF/.001μF/.01μF/.1μF	±(4.0%+5)
	6mF/60mF	.001mF/.01mF	±(5.0%+5)
Frequency	10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz	.001Hz/.01Hz/.1Hz/.001kHz/.01kHz/.1kHz	±(1.0%+5)
	10MHz	.001MHz	±(3.0%+5)
Duty cycle	1~99%	.1%	±(3.0%+5)
Diode measurement	open circuit voltage 2.0V		
Continuity measurement	<50Ω		
Power	2×3V CR2032 batteries		
Dimension (LxWxH)	5.23×2.68×.71"		
Weight	.39lb		

STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Battery (CR2032)	2 pcs

DIGITAL AC/DC CLAMP METER
PART NO. 9315-CF210

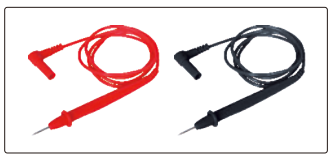
VIDEO

- 4000 counts display
- 1.10" jaw opening
- NCV detection with light and sound alarm
- True RMS measurement
- Auto ranging
- REL (zero) function
- Data hold
- Polarity indication
- LCD screen with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 300V/CAT II 600V

SPECIFICATION

Function	Range	Resolution	Accuracy ("d" is the least reading)
DC Current	40.00A/400.0A	.01A/.1A	±(2.0%+5d)
AC Current*	40.00A/400.0A	.01A/.1A	±(2.0%+5d)
DC Voltage	400.0mV	.1mV	±(.7%+3d)
	4.000V/40.00V/400.0V/600V	.001V/.01V/.1V/1V	±(.5%+2d)
AC Voltage*	4.000V	.001V	±(1.0%+5d)
	40.00V/400.0V/600V	.01V/.1V/1V	±(.8%+5d)
AC Voltage frequency	10Hz~60kHz	.01Hz~.01kHz	±(.5%+2d)
Resistance	400.0Ω	.1Ω	±(1.0%+2d)
	4.000kΩ/40.00kΩ/400.0kΩ	.001kΩ/.01kΩ/.1kΩ	±(.8%+2d)
	4MΩ/40MΩ	.001MΩ/.01MΩ	±(2.5%+5d)
Capacitance	40.00nF/400.0nF/4.000μF/ 40.00μF/400.0μF	.01nF/.1nF/.001μF/ .01μF/.1μF	±(4.0%+5d)
	4.000mF/40.00mF	.001mF/.01mF	±10.0%
Frequency	10Hz~10MHz	.01Hz~.01MHz	±(.1%+4d)
Duty cycle	.1%~99.0%	.1%	±(3.0%+5d)
Diode test	open circuit voltage: 4V		
Continuity check	<30Ω		
Power supply	2×1.5V AAA batteries		
Dimension (L×W×H)	8.46×2.95×1.46"		
Weight	.52lb		

*AC voltage/current frequency response: 45Hz~400Hz, true RMS display



test leads (included)

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs

AC PHASE AND VOLTAGE DETECTOR
PART NO. 9723-400

- Non-contact detection of phase sequence, high and low voltage, wire distinction
- Low battery indication
- Auto power off
- Flashlight

VIDEO

SPECIFICATION

Phase sequence detection	screen display clockwise or counterclockwise
High and low voltage detection	beep: slow~fast backlight: green~red analog bar: low~high
Wire distinction	green backlight indicates neutral wire red backlight indicates live wire
Power supply	2×1.5V AAA batteries
Dimension	6.2×1.1×.9"
Weight	.07lb

DIGITAL VOLTAGE TESTER
PART NO. 9721-250

VIDEO

- Direct AC test (contact): 12-250V two way display: voltage displays on LCD screen and neon lamp lights up (when voltage>80V)
- Induction AC test (non-contact): 12-250V to detect power source or recognize the phase line, ground line and break point
- Direct DC test (contact): 6-36V instant sense and display
- Work without battery
- Tester tip: CRV material

SPECIFICATION

Range	AC: 12-250V; DC: 6-36V
Neon lamp life	30000 times
Dimension	5.2×.8×.7"
Weight	.05lb

VOLTAGE TESTER
PART NO. 9722-250

- Tester tip: CRV material

SPECIFICATION

Range	AC: 100-250V
Neon lamp life	30000 times
Dimension	5.7×.6" DIA
Weight	.05lb

INFRARED THERMAL IMAGING CAMERA (BASIC TYPE)
PART NO. 9132-T400

NON-CONTACT TEMPERATURE MEASUREMENT | IP54 WATERPROOF | DATA OUTPUT

VIDEO

front view

- IR/visible/laser indicator
- Trigger button for photo taking
- 6.6ft drop test, IP54 protection

SPECIFICATION

IR image	IR resolution	120×90@.0007"
	detector type	VOx/.0003"~.0006"
	frame rate	25Hz/9Hz
	thermal sensitivity/NETD	60mk
	focal length	.09"/F1.13
	field of view (FOV)	50°×38°
	spatial resolution (IFOV)	7.6mrad
	focus	focus-free
Visible camera	visible camera resolution	320×240, focus-free
	flashlight	yes
Image display	display	2.4" IPS technology TFT display
	display resolution	320×240
	image model	IR/visible/picture-in-picture
	color palettes	6: white hot, iron red, hot iron, arctic, rainbow 1, rainbow 2
Temperature measurement	temperature range	-4~302°F, 212~752°F (auto switching)
	accuracy	±3.6°F or ±3%, whichever is greater (target temp ≥32°F, ambient temp is 59~86°F)
	measurement spot	center spot
	measurement area	3 (incl. max & min temp)
	auto max & min spot tracking	yes
	alarm	full screen max & min spot alarm
Image storage	storage media	TF card (16G)
	IR image format	full radiometric (JPG) (120 x 90)
	visible image	yes, 320x240
Connections & communications	USB	type-C, TF card slot
	tripod interface	yes
	mobile APP	yes
	PC IR analysis software	yes
Power system	battery type	rechargeable li ion battery
	battery operation time	>5 hours
	bharging time	internal charge, ≤2.5 hours
Environmental parameters	operation temperature	14~122°F
	storage temperature	-40~158°F
	protection	IP54, 6.6ft drop test
	certification	CE/ROHS/FCC
	dimension (LxWxH)	7.64×2.42×2.99"
	weight	.77lb

STANDARD DELIVERY

Main unit	1 pc
Power supply adapter	1 pc
Type-C cable	1 pc
16G TF card	1 pc

INFRARED THERMAL IMAGING CAMERA
PART NO. 0231-IC650

DATA OUTPUT

IP54 WATERPROOF

VIDEO

- Suitable for electric power, metallurgy, petrochemical, scientific research and teaching, manufacturing, rail transit, building testing, electronic equipment overhaul, mechanical equipment maintenance, etc.
- Four image presentation: IR, VIS, MIF, PIP
- Real-time image can be photographed and video recorded
- Software is included: image browsing, image parameter editing, infrared image analysis, batch report generation, video editing, etc.
- WIFI real-time sharing, one-click connection to mobile device

STANDARD DELIVERY

Main unit	1 pc
64G SD card	1 pc
Lithium-ion battery	2 pcs
Desktop charger	1 pc
Power adapter	1 pc
Software	1 pc

SPECIFICATION

Imaging and optics	detector type	unrefrigerated vanadium oxide/.0003"~.0006"
	infrared resolution	256×192@.0005"
	super resolution	upgrade to 512×384
	thermal sensitivity/NETD	<45mK
	infrared frame rate	30Hz/9Hz
	focal length	.41"
	field of view	25°×19°
	spatial resolution (IFOV)	1.7mrad
	minimum object distance	3.94"
	distance to spot size (D:S)	588:1
	focusing mode	manual/automatic/continuous autofocus
	digital zoom	1.1X~8X
	shot recognition	auto
	laser ranging	indication/ranging: 3.94"~1574.8"
Measurement and analysis	measurement range	support auto-switching: -40°F~302°F, 302°F~1202°F
	measurement accuracy	±3.6°F or ±2%, whichever is greater
	analyzed target	spot×5, line×5, area×5
	tracking/alarm	full screen maximum, minimum and average temperature tracking; the maxium, minimum and average temperature tracking of analyzed target; full screen temperature threshold alarm (image, voice and flash)
	temperature measuring parameter	emissivity, reflected temperature, target distance, humidity, atmospheric, transmittance, optical transmittance, dew point
	other	isothermals, smart stroke, intelligently calculate the area

To be continued

Continued from previous page

Image display	display screen	4.3", 800×480 pixel touch screen LCD
	digital camera	5MP
	image mode	IR, VIS, MIF, PIP
	image adjustment	level span mode: automatic, semi-automatic, manual
	color palettes	white hot, iron red, arctic, rainbow 2, hot iron, rainbow 1, fulgurite, medical, tint, black hot, blue hot, sepia, green hot, ice and fire, amber, customized
Function	recording function	photo and video (infrared & visible light)
	cloud service	available
	other	customized physical button, intelligent diagnosis, OTA update
Storage and transmission	storage	local storage (64GB) and external 64GB SD
	image storage	JPG with temperature information
	video storage	MP4 (without temperature information), can be used to record audio synchronously; Irgd (with temperature information), up to 30 Hz for temperature analysis
	external interface	TYPE-C, SD card slot
	WIFI	can be connected to the mobile terminal for image and real-time video transmission
	bluetooth	bluetooth 5.0, support image transmission (only for Android)
Power system	battery type	lithium-ion rechargeable battery, working time≥5 hours
	charging mode	TYPE-C charging; PC/portable charger; capable of charging while using
	charging time	90% of full charge in 2.5 hours
Environmental parameter	operation temperature	-4°F~122°F
	storage temperature	-40°F~140°F
	protection	IP54, 78.7" drop test
	certification	CE, FCC, ROHS
Physical parameter	hardware	illuminator, microphone, speaker, electronic compass, GPS
	dimension	11.49×4.92×4.92"
	weight	2.53lb

INFRARED THERMOMETER (BASIC TYPE)
PART NO. 0222-C520

- Unit: °F, °C
- Automatic data hold
- MAX/MIN/AVG/DIF mode
- High and low alarm
- Adjustable emissivity
- Low battery display
- Over range indicator
- Automatic power off

SPECIFICATION

Temperature range	-58°F~932°F/-50°C~500°C
Temperature resolution	.2°F/.1°C
Temperature accuracy	±(4°F+0.1°F/°F) (at -58°F~32°F), ±4.0°F or ±2% (at 32°F~932°F)
	±(2°C+0.1°C/°C) (at -50°C~0°C), ±2.0°C or ±2% (at 0°C~500°C)
Distance to spot size (D:S)	12:1
Emissivity	.10~1.00 (adjustable)
Repeatability	±1.0°F or ±.5%; ±.5°C or ±.5%
Response time	≤500ms (95% of reading)
Spectral response	8μm~14μm
Diode laser	output<1mW, wavelength 630nm~670nm, class 2 laser product
Power supply	2×AAA batteries, working time≥6h
Automatic power off	about in 15 seconds
Operation environment	temperature: 32°F~122°F/0°C~50°C; humidity: <90%RH (non-condensing)
Storage environment	temperature: -4°F~140°F/-20°C~60°C; humidity: <90%RH (non-condensing)
Dimension	5.82×3.35×1.81"
Weight	.35lb

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

INFRARED THERMOMETER (STANDARD TYPE)
PART NO. 0213-A500

- Unit: °F, °C
- Dual laser sighting
- Negativity display
- Automatic power off
- Automatic data hold
- Over range indicator
- Max/Min display

SPECIFICATION

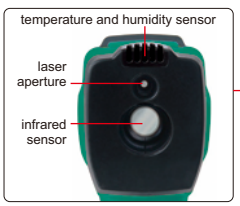
Temperature range	-4°F~716°F/-20°C~380°C
Temperature accuracy	±4.5°F (at -4°F~68°F), ±2% or ±3.6°F (at 68°F~716°F)
	±2.5°C (at -20°C~20°C), ±2% or ±2.0°C (at 20°C~380°C)
Temperature resolution	.1°F/.1°C
Distance to spot size (D:S)	12:1
Emissivity	.95 (fixed)
Repeatability	±1.8°F/±1.0°C
Response time	150ms
Spectral response	8~14μm
Diode laser	output<1mW, wavelength 630~670nm, class 2 laser product
Operation temperature	32°F~122°F/0°C~50°C
Operation humidity	10%RH~90%RH
Storage temperature	14°F~140°F/-10°C~60°C
Storage humidity	<80%RH
Power supply	1×9V battery
Dimension	5.39×2.87×1.50"
Weight	.30lb

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

INFRARED THERMOMETER (MEDIUM-HIGH TEMPERATURE TYPE)
PART NO. 0215-A900

- Ambient temperature, dew point temperature and humidity detection
- Unit: °F, °C
- Circular laser sighting
- Display backlight
- Automatic power off
- Automatic data hold
- Adjustable emissivity
- High and low alarm



SPECIFICATION

Infrared sensor	temperature range	-22°F~1472°F/-30°C~800°C
	temperature resolution	0.1°F (-22°F~1000°F), other range 1°F
		0.1°C
	temperature accuracy	±5.4°F (at -22°F~68°F) ±(1% of reading+1.8)°F (at 68°F~842°F) ±(2% of reading)°F (at 842°F~1472°F)
	distance to spot size (D:S)	20:1
	emissivity	adjustable 0.10~1.00
	response time	<150ms
	spectral response	8~14μm
	diode laser	output<1mW, wavelength 630~670nm class 2 laser product
Temperature and humidity sensor	air temperature range	32°F~122°F/0°C~50°C
	dew point temperature range	32°F~122°F/0°C~50°C
	temperature resolution	0.1°F/0.1°C
	temperature accuracy	±1.8°F/±1.0°C
	humidity range	0%RH~100%RH
	humidity resolution	±5%RH (20%RH~80%RH), other range ±7%RH
Automatic power off		about in 10 seconds
Power supply		1×9V battery
Dimension (H×W×D)		6.69×1.77×3.35"
Weight		.43lb

STANDARD DELIVERY

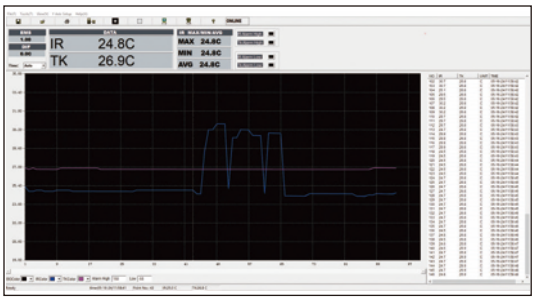
Main unit	1 pc
Battery	1 pc

INFRARED THERMOMETER (HIGH TEMPERATURE TYPE) PART NO. 0218-B610

DATA OUTPUT

- Unit: °F/°C
- MAX/MIN/AVG/DIF mode
- Trigger lock continuous measurement function
- Adjustable emissivity: .10~1.00
- 100 data storage
- High and low alarm
- Automatic data hold
- Low battery display
- Automatic power off
- Computer software is included

computer software (included): connect to software via USB cable to collect, display and store data



SPECIFICATION

Infrared system	temperature range	-58°F~3362°F/-50°C~1850°C
	temperature accuracy	±(2%·|t|+5.4°F) (at-58°F~68°F); ±(1%·t+1.8°F) (at 68°F~932°F); ±1.5% (at 932°F~1832°F); ±2.0% (at 1832°F~3362°F)
	temperature resolution	.1°F/°C (<1000°F/°C), 1°F/°C (≥1000°F/°C)
	distance to spot size (D:S)	50:1
	emissivity	.10~1.00 (adjustable)
	repeatability	±2.7°F (at -58°F~68°F) ±.5% or ±.9°F (at 68°F~3362°F)
	response time	150ms
	spectral response	8~14μm
	diode laser	output<1mW, wavelength 630nm~670nm class 2 laser product
K-Type thermocouple system (electrical signal)	temperature range	-58°F~2498°F/-50°C~1370°C
	temperature accuracy	±(1.5%·|t|+5°F) (at -58°F~1832°F) ±(1.5%·t+3.6°F) (at 1832°F~2498°F)
	temperature resolution	.1°F/°C (<1000°F/°C), 1°F/°C (≥1000°F/°C)
	repeatability	±1.5%
Power supply		1×9V battery
Operation environment		temperature: 32°F~122°F humidity: 10%RH~90%RH (non-condensing)
Storage environment		temperature: 14°F~140°F humidity: <80%RH (non-condensing)
Dimension		8.03×6.10×2.05"
Weight		.69lb

tripod (included)

K-type thermocouple (included)

STANDARD DELIVERY

Main unit	1 pc
9V battery	1 pc
USB cable	1 pc
K-type thermocouple	1 pc
Tripod	1 pc

SPECIFICATION OF K-TYPE THERMOCOUPLE

Temperature range	-40°F~482°F
Temperature accuracy	±4.5°F
Length	39.3"

INFRARED AND PENETRATION THERMOMETER PART NO. 0321-IT42

IP65 WATERPROOF

VIDEO

SPECIFICATION

Infrared system	temperature range	5°F~536°F/-15°C~280°C
	temperature resolution	.1°F/.1°C
	temperature accuracy	±5.4°F (at 5°F~68°F), other range ±(1%+1.8)°F
		±3.0°C (at -15°C~20°C), other range ±(1%+1.0)°C
	distance to spot size (D:S)	4:1
	emissivity	0.95 (fixed)
	spectral response	8~14μm
Penetration system	temperature range	-40°F~392°F/-40°C~200°C
	temperature resolution	0.1°F/0.1°C
	temperature accuracy	±3.6°F (at -40°F~32°F), other range ±(1%+1.8)°F
		±2.0°C (at -40°C~0°C), other range ±(1%+1.0)°C
Repeatability		<1.8°F
Measurement response time		<500ms
Power supply		2×1.5V AAA batteries
Dimension		5.51×1.54×.94"
Weight		.31lb

- Can measure the surface and inside temperature of objects
- Low battery display
- Display backlight
- High and low alarm
- Automatic data hold (infrared system)
- Automatic power off (infrared system)
- Unit: °F/°C

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

THERMOCOUPLE THERMOMETER (FOUR CHANNELS)
PART NO. 0323-CT47

BUILT-IN BLUETOOTH

DATA OUTPUT

- Unit: °F/°C/K
- Channels are compatible with 7 types of thermocouples K, J, T, E, R, S and N
- MAX/MIN/AVG/DIF mode
- 72000 data storage
- Offset value compensation
- Data hold function
- Display backlight
- Over range indicator
- Battery level display
- Automatic power off
- Built-in Bluetooth, mobile APP is included
- Computer software is included

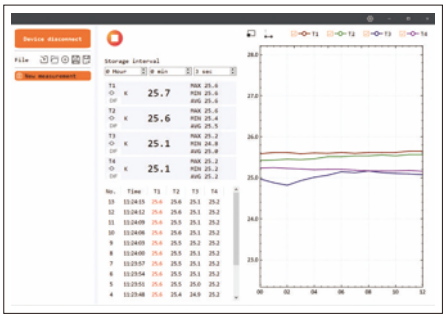
VIDEO

SPECIFICATION

Thermocouple type	J/K/T/E/R/S/N
Temperature range (electrical signal)	K: -328.0°F~2501°F
	J: -346.0°F~2192°F
	T: -418.0°F~752.0°F
	E: -238.0°F~1832°F
	R: 32.0°F~3212°F
	S: 32.0°F~3212°F
	N: -328.0°F~2372°F
Temperature accuracy * (electrical signal)	±(0.2%·|t|+0.9°F) (at 14°F~3212°F); ±(0.2%·|t|+1.8°F) (at -328°F~14°F); ±(0.2%·|t|+4.5°F) (at -418°F~-328F)
Temperature resolution	0.1°F (<1000°F); 1°F (≥1000°F)
Repeatability	±(0.1%·|t|+0.6°F)
Response time	500ms
Logging interval	1s~24h (adjustable)
Memory capacity	72000
Data transmission	TYPE-C USB, Bluetooth
Power frequency anti-interference	50/60Hz
Input protection	60Vmax
Drop proof	39.3"
Power supply	3×AAA alkaline batteries, working time>30h; TYPE-C USB (only be connected to a PC power)
Operation environment	temperature: 14°F~122°F
	humidity: <90%RH (non-condensing)
Storage environment	temperature: -4°F~140°F
	humidity: <90%RH (non-condensing)
Dimension	7.09×2.48×1.50"
Weight	.55lb (including batteries)

*Accuracy is specified for ambient temperature between 64.4°F and 82.4°F, the above specification does not include thermocouple probe error

computer software (included): connect to PC software via USB cable to collect, display and store data



mobile APP (included): connect to mobile APP via Bluetooth to collect, display and store data, and can export the data stored on the device

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs
USB cable	1 pc
K-type thermocouple (0323-K01)	4 pcs

SPECIFICATION OF K-TYPE THERMOCOUPLE**

Part No.	Range	Accuracy	Length
0323-K01	-40°F~500°F	±0.75%	35.4"

**Other models, temperature range and length of thermocouples can be customized

K-TYPE THERMOCOUPLE THERMOMETER (ECONOMIC TYPE)
PART NO. 0320-K230

- Contact K-type thermocouple
- Unit: °F/°C
- Data hold function
- Low battery display
- Display backlight

SPECIFICATION

Temperature range	-58°F~392°F/-50°C~200°C
Temperature accuracy	±3.6°F/±2.0°C
Temperature resolution	.1°F (at -58°F~199.9°F), 1°F (at -58°F~392°F)
	.1°C (at -50°C~199.9°C), 1°C (at -50°C~200°C)
Sampling rate	2.5 times/sec
Power supply	3×3V CR2450 batteries (for 300 hours working)
Operation voltage	6.8V~10V
Dimension	5.87×2.99×1.34"
Weight	.49lb

STANDARD DELIVERY

Main unit	1 pc
Thermocouple (K-type)	1 pc
CR2450 battery	3 pcs

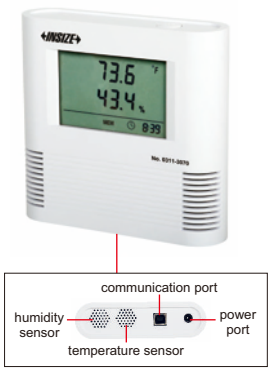
DATA LOGGER FOR TEMPERATURE AND HUMIDITY (BUILT-IN SENSOR)
PART NO. 0311-3070

IP54 WATERPROOF

DATA OUTPUT

VIDEO

- Signal acquisition, display, storage, analysis function
- Low power consumption
- Built-in high-precision temperature and humidity sensor
- Software is included



stand (included)

SPECIFICATION

Temperature range	-22°F~158°F/-30°C~70°C
Temperature accuracy	±.6°F (at 73.4°F±3.6°F), other range ±.9°F
	±.3°C (at 23°C±2°C), other range ±.5°C
Temperature resolution	.2°F/.1°C
Humidity range	0%RH~100%RH
Humidity accuracy	±3%RH (at 10%RH~85%RH), other range ±5%RH
Humidity resolution	.1%RH
Memory capacity	10918
Alarm	function: alarm when over high or low limit method: display+buzz+backlight
Sampling interval	2s, 5s, 10s, 30s, 60s, 255s (adjustable)
Logging interval	2 seconds~24 hours (adjustable)
Start with delay	1~120 seconds (adjustable)
Start mode	start immediately/delay start/timing start
End mode	full/FIFO/preset/timing end
Timing start/end	random start/end with format YYMMDD HHMMSS
Interface	USB
Time battery	CR2032
Power supply	3.6V lithium battery (ER14505) or 5~24V DC
Dimensions	4.84×4.61×1.30"
Weight	.57lb

software (included), record and download data to PC software via USB cable

STANDARD DELIVERY

Main unit	1 pc
Software and USB cable	1 pc
Power adapter	1 pc
Time battery	1 pc
Lithium battery	1 pc

DIGITAL THERMOHYGROMETER (ADVANCED TYPE)
PART NO. 9362-TH27

IP50
DUSTPROOF

- Measure humidity, ambient temperature and dew-point temperature
- Max/Min/Average mode
- Alarm function
- IP50 protection grade

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	1 pc

SPECIFICATION

Sensor	NTC thermistor/humidity capacitance/digital sensor
Temperature range	-4°F~158°F/-20°C~70°C
Temperature accuracy	±0.9°F/±0.5°C
Temperature resolution	0.2°F (minimum adjustable unit is 0.2°F in setting mode)/0.1°C
Humidity range	0~100%RH
Humidity accuracy	±5%RH
Humidity resolution	0.1%RH
Sampling interval	5s
Battery	1.5V AAA
Dimensions	3.74×4.12×.71"
Weight	.23lb

MINI TEMPERATURE AND HUMIDITY METER
PART NO. 0319-TH60

- 3.5" LCD screen
- Temperature/humidity/time/comfort display
- Highest/lowest temperature and humidity memory function
- Unit: °F/°C

SPECIFICATION

Temperature range	32°F~131°F/0°C~55°C
Temperature resolution	.1°F/.1°C
Temperature accuracy	±.9°F/.5°C
Humidity range	0%RH~99%RH (non-condensing)
Humidity resolution	1%RH
Humidity accuracy	±5%RH (at 10%RH~90%RH), other range ±7%RH
Power supply	2×3V CR2032 batteries
Dimension	3.46×2.76×.47"
Weight	.14lb

STANDARD DELIVERY

Main unit	1 pc
Battery (CR2032)	2 pcs

THERMOHYGROMETER (BASIC TYPE)
PART NO. 0316-TH62

- Temperature/humidity/time display
- High and low alarm
- Low battery display
- Display backlight
- Environment comfort display

SPECIFICATION

Temperature range	-20°C~60°C
Temperature resolution	.1°C
Temperature accuracy	±.5°C (at 26°C~42°C), other range ±1.0°C
Humidity range	10%RH~99%RH
Humidity resolution	.1%RH
Humidity accuracy	±3%RH (45%RH~79%RH), other range ±5.0%RH
Sampling interval	3s
Power supply	2×AAA batteries
Dimension	4.60×3.70×.91"
Weight	.33lb

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

THERMOHYGROMETER (EXTERNAL SENSOR)
PART NO. 0313-TH48

SPECIFICATION

Temperature range	-40°F~176°F/-40°C~80°C
Temperature accuracy	±2°F (at -20°F~176°F), ±3°F (at -40°F~-20°F)
	±.5°C (at -20°C~60°C), ±1.0°C (at 60°C~80°C), ±2°C (at -40°C~-20°C)
Temperature resolution	.1°F (at -20°F~100°F), other range 1°F
	.1°C (at -20°C~80°C), other range 1°C
Humidity range	0%RH~99.9%RH
Humidity accuracy	±5%RH (at 50°F~140°F), other range ±7%RH ±5%RH (at 10°C~60°C), other range ±7%RH
Humidity resolution	.1%RH
Sensitivity attenuation value	temperature: <.2°F/year (<.1°C/year) humidity: <1%RH/year
Sampling interval	5s
Power supply	built-in rechargeable lithium battery (USB 5V charging) working time at least one month
Dimension	3.46×3.46×.83"
Weight	.38lb

- External sensor, 118.1" cable
- Time/temperature/humidity display
- Temperature and humidity upper and lower limit alarm function
- Unit: °F/°C
- Low battery alarm

STANDARD DELIVERY

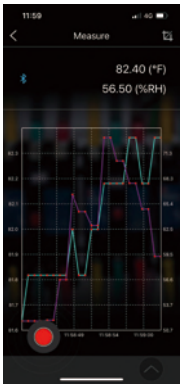
Main unit	1 pc
USB charging cable	1 pc

THERMOHYGROMETER
PART NO. 0310-H26

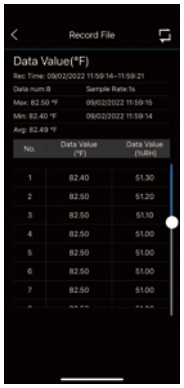
VIDEO

- Measure humidity, ambient temperature, dew point temperature and wet bulb temperature
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off
- Supplied with APP for Apple and Android

App measurement



App record



SPECIFICATION

Function	Measuring range	Resolution	Accuracy
Ambient temperature	32°F~122°F 0°C~50°C	0.1°F/0.1°C	±1.8°F/±1.0°C
Wet bulb temperature	32°F~122°F 0°C~50°C	0.1°F/0.1°C	±1.8°F/±1.0°C
Dew point temperature	32°F~122°F 0°C~50°C	0.1°F/0.1°C	±1.8°F/±1.0°C
Humidity	0%RH~80%RH	0.1%RH	±5.0%RH
Auto power off	30 minutes		
Data port	Bluetooth 4.0		
Power supply	9V battery		
Dimension	8.03×2.13×1.42"		
Weight	.38lb		

STANDARD DELIVERY

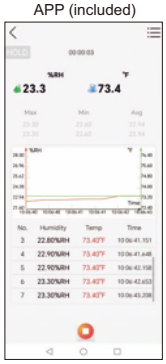
Main unit	1 pc
Battery	1 pc

THERMOHYGROMETER
PART NO. 0315-HT164

BUILT-IN BLUETOOTH

- Real-time value/maximum/minimum display
- Unit: °F/°C
- Display backlight
- Automatic power off
- Low battery display
- Over range indicator
- Built-in bluetooth, mobile APP is included

APP (included)



SPECIFICATION

Temperature range	14°F~140°F/-10°C~60°C
Temperature resolution	.2°F/.1°C
Temperature accuracy	±2.0°F/±1.0°C
Humidity range	0%RH~99.9%RH
Humidity resolution	.1%RH
Humidity accuracy	±5.0%RH
Sampling interval	1s
Power supply	3×AAA batteries, working time≥12h
Operation environment	temperature: 32°F~104°F humidity: <90%RH (non-condensing)
Storage environment	temperature: -4°F~140°F humidity: <75%RH (non-condensing)
Dimension	5.39×2.16×1.10"
Weight	.22lb

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs

TEMPERATURE AND HUMIDITY METER (ECONOMIC TYPE)
PART NO. 0312-TH50

- Environment comfort display: COMFORT, WET, DRY
- Time/temperature/humidity display
- Highest/lowest temperature and humidity memory function
- Alarm clock function
- Unit: °F, °C

SPECIFICATION

Temperature range	32°F~122°F/0°C~50°C
Temperature accuracy	±1.8°F (at 41°F~104°F), other range ±2.7°F
	±1.0°C (at 5°C~40°C), other range ±1.5°C
Temperature resolution	.1°F/.1°C
Humidity range	10%RH~90%RH
Humidity accuracy	±5%RH (at 40%RH~80%RH), other range ±8%RH
Humidity resolution	1%RH
Power supply	1×AAA 1.5V Battery
Dimension	4.25×2.36×.59"
Weight	.16lb

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

ROUGHNESS TESTER
PART NO. ISR-C002

- 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

VIDEO

CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS

BLUETOOTH

DATA OUTPUT

bluetooth printer (**optional**)

software flash disk (included)

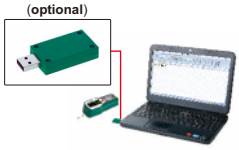
operate roughness tester by mobile phones

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

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

via bluetooth

receiver (**optional**)

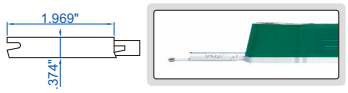


via SPC cable

SPC cable (**optional**)

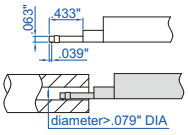
receiver (**optional**)

extension rod (optional), part no. ISR-C002-ER

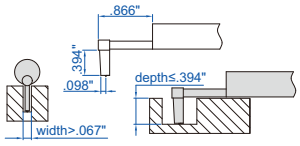


transverse rod (optional), part no. ISR-C002-TR

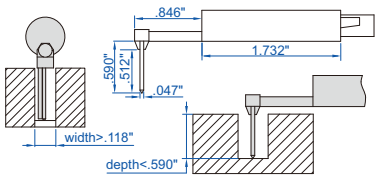
tiny hole probe (optional), part no. ISR-C002-SBP



deep groove probe (optional), part no. ISR-C002-DGP



deep groove probe (optional), part no. ISR-C002-DGP1

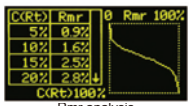


operate roughness tester by computers

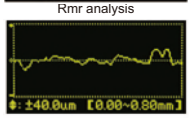
connect to computers via USB cable (software is included), display roughness values, profile and curve

screen display

measurement result



Rmr analysis



roughness profile

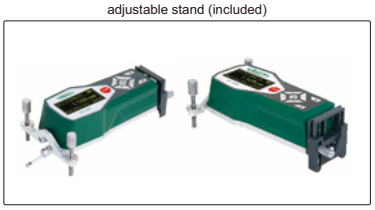
light duty test stand (**optional**)

the maximum workpiece height is 8.66"

heavy duty test stand (**optional**)

the maximum workpiece height is 12.20"

adjustable stand (included)



probe cover (included)

put the small workpieces directly under the probe for measurement

SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, RS, R3z, R3y, Rt, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry (JIS), Rmax
Range		12598μin (-6299μin~6299μin)
Accuracy		±10%
Resolution (Ra)		.01μin
Probe	type	inductive
	stylus radius/angle	196μin/90°
	stylus material	diamond
Measuring force		.01ozf
Measuring unit		μin/μm
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

DATA OUTPUT | BLUETOOTH | TOUCH SCREEN | POPULAR MODEL

VIDEO

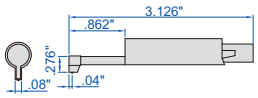
CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS

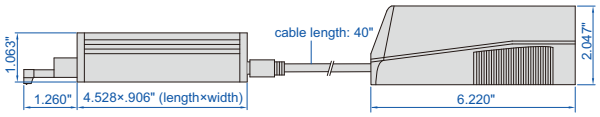
probe and main unit can be combined together

- 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

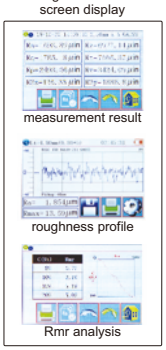
bluetooth printer (**optional**)

software flash disk (included)

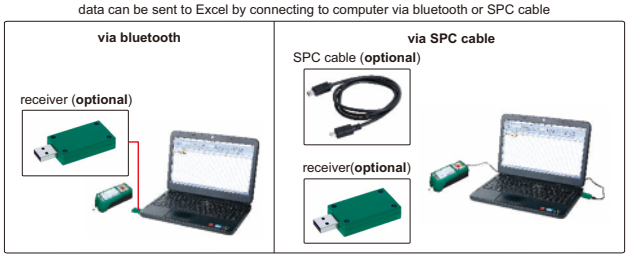




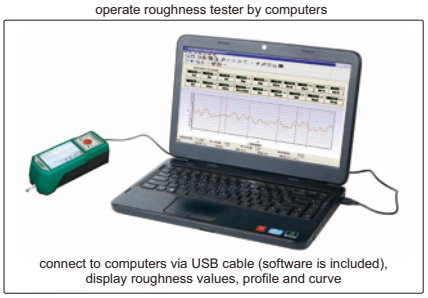
roughness tester screen display



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

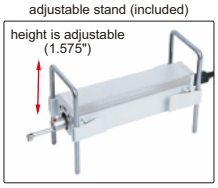


operate roughness tester by computers

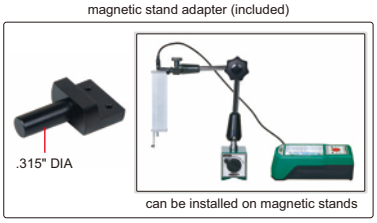


connect to computers via USB cable (software is included), display roughness values, profile and curve

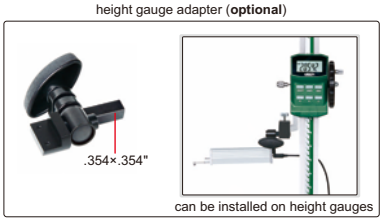
adjustable stand (included)



magnetic stand adapter (included)



height gauge adapter (**optional**)



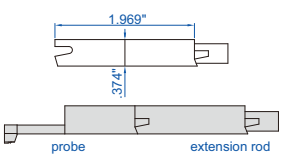
NOTE: Please check whether the adapter can fit your height gauges. When using **INSIZE** height gauges, please use the dial test indicator holder of height gauges

operate roughness tester by mobile phones

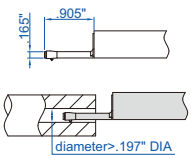
connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

optional probes

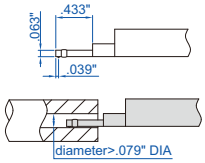
extension rod (optional), part no. ISR-C002-ER



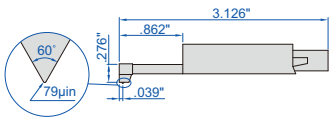
small hole probe (optional), part no. ISR-C002-PROBE



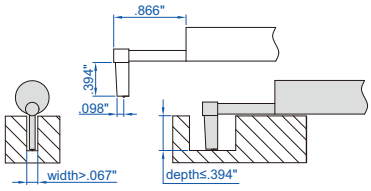
tiny hole probe (optional), part no. ISR-C002-SBP



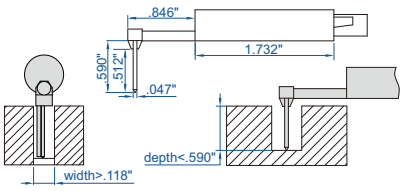
79μin/60˚ probe (optional), part no. ISR-C300-P2UM (when Ra<20μin, the accuracy with this probe is better)



deep groove probe (optional), part no. ISR-C002-DGP

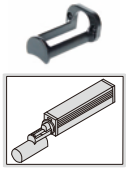


deep groove probe (optional), part no. ISR-C002-DGP1

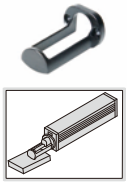


probe support (**optional**)

support for cylindrical surface



support for flat surface



To be continued

Continued from previous page

SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	X axis	.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 gauge 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**

light duty test stand (**optional**)

the maximum workpiece height is 8.66"

heavy duty test stand (**optional**)

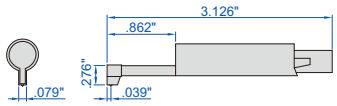
the maximum workpiece height is 12.20"

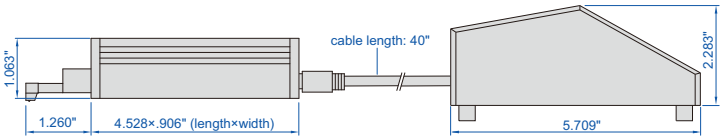
ROUGHNESS TESTER
PART NO. ISR-T120

VIDEO

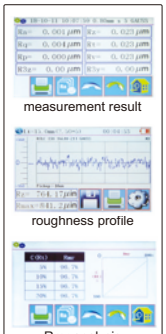
CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS | BLUETOOTH | TOUCH SCREEN | DATA OUTPUT

- 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
- Built-in printer can print measurement results and graphics
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Automatic power off





roughness tester screen display

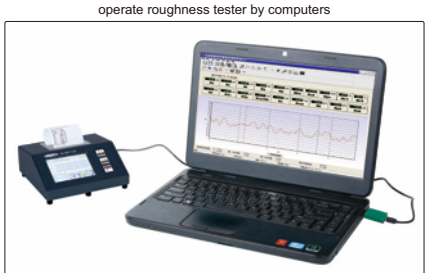


measurement result

roughness profile

Rmr analysis

operate roughness tester by computers



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

operate roughness tester by mobile phones

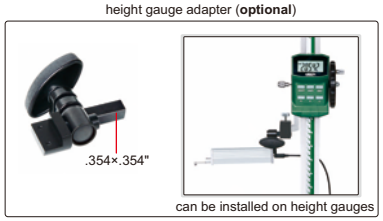
connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

To be continued

Continued from pevious page

magnetic stand adapter (included)

height gauge adapter (**optional**)

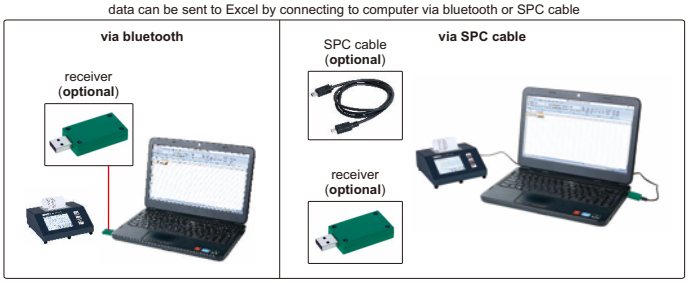


NOTE: Please check whether the adapter can fit your height gauges. When using **INSIZE** height gauges, please use the dial test indicator holder of height gauges

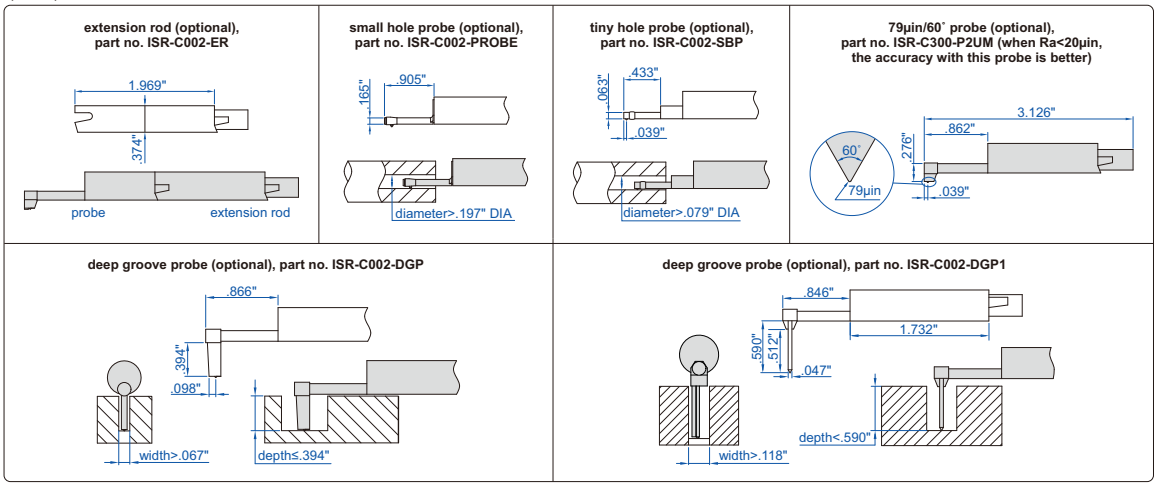
heavy duty test stand (**optional**)

light duty test stand (**optional**)

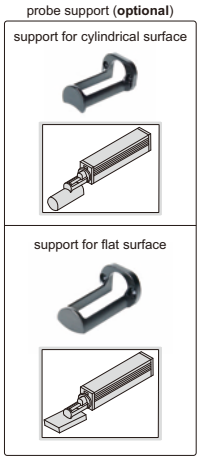
data can be sent to Excel by connecting to computer via bluetooth or SPC cable



optional probes



probe support (**optional**)



STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	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

SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	X axis	.689"
	Z axis	25197μin (-12598μin~12598μin)
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
Traverse speed		.005"/s, .02"/s, .04"/s
Memory		100 measurement results
Output		bluetooth and USB
Power		built-in rechargeable battery
Dimension (L×W×H)		6.10×5.71×2.28"
Weight		2.20lb

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
79μin/60° probe	ISR-C300-P2UM
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
Height gauge 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-T120**

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

ATTENTION: THIS ROUGHNESS TESTER IS NOT SUITABLE FOR ROUGH TURNING, MILLING AND PLANING WORKPIECES

VIDEO

- Unit: µm, µin
- Automatic power off

fixture for small shafts (**optional**)

clamping range : .12~.79"DIA

application

calibration block (included)

STANDARD DELIVERY

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

SPECIFICATION

Parameters*		Ra, Rz, Rq, Rt
Range		Ra, Rq: 2~590µin Rz, Rt: 4~1968µin
Accuracy		±10%
Resolution (Ra)		.01µin
Probe	**type**	piezoelectric
	stylus radius/angle	393µin/90°
	stylus material	diamond
Measuring force		.012ozf
Measuring unit		µin/µm
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

* Rmax parameter can be customized

OPTIONAL ACCESSORY

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

SURFACE ROUGHNESS SPECIMEN SET
PART NO. ISR-CSE130

INSIZE PLUS
MADE IN ERROPE

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

Machining method	Roughness (Ra)*	Roughness (Rz)*	Quantity
Flat lapping	2, 4, 8µin	22.1, 40, 63µin	3 pcs
	0.05, 0.1, 0.2µm	0.55, 1, 1.6µm	
Reaming	16, 32, 63µin	120, 240, 400µin	3 pcs
	0.4, 0.8, 1.6µm	3, 6, 10µm	
Plain grinding	2, 4, 8, 16, 32, 63µin	22.1, 40, 63, 120, 240, 400µin	6 pcs
	0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm	0.55, 1, 1.6, 3, 6, 10µm	
Horizontal milling	16, 32, 63, 125, 250, 500µin	100, 160, 320, 640, 1280, 2000µin	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm	2.5, 4, 8, 16, 32, 50µm	
Vertical milling	16, 32, 63, 125, 250, 500µin	100, 160, 320, 640, 1280, 2000µin	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm	2.5, 4, 8, 16, 32, 50µm	
Turning	16, 32, 63, 125, 250, 500µin	100, 160, 320, 640, 1280, 2000µin	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm	2.5, 4, 8, 16, 32, 50µm	

*The actual value is the value to be calibrated.

SURFACE ROUGHNESS SPECIMEN SET
PART NO. ISR-CS2E

ATTENTION: PLEASE APPLY ANTI-RUST OIL AFTER USE

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

Maching method	Roughness (Ra)*	Roughness (Rz)*	Quantity
Horizontal milling	16, 32, 63, 125, 250, 500µin	100, 160, 320, 640, 1280, 2000µin	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm	1.6, 3.2, 6.3, 12.5, 25, 50µm	
Vertical milling	16, 32, 63, 125, 250, 500µin	100, 160, 320, 640, 1280, 2000µin	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm	1.6, 3.2, 6.3, 12.5, 25, 50µm	
Turning	16, 32, 63, 125, 250, 500µin	100, 160, 320, 640, 1280, 2000µin	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm	1.6, 3.2, 6.3, 12.5, 25, 50µm	
Plain grinding	2, 4, 8, 16, 32, 63µin	22.1, 40, 63, 120, 240, 400µin	6 pcs
	0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm	0.2, 0.4, 0.8, 1.6, 3.2, 6.3µm	
Flat lapping	2, 4µin	22.1, 40µin	2 pcs
	0.05, 0.1µm	0.2, 0.4µm	
External grinding	8, 16, 32, 63µin	63, 120, 240, 400µin	4 pcs
	0.2, 0.4, 0.8, 1.6µm	0.8, 1.6, 3.2, 6.3µm	

*The actual value is the value to be calibrated

MOTORIZED DIGITAL ROCKWELL HARDNESS TESTER
PART NO. HDT-RT151

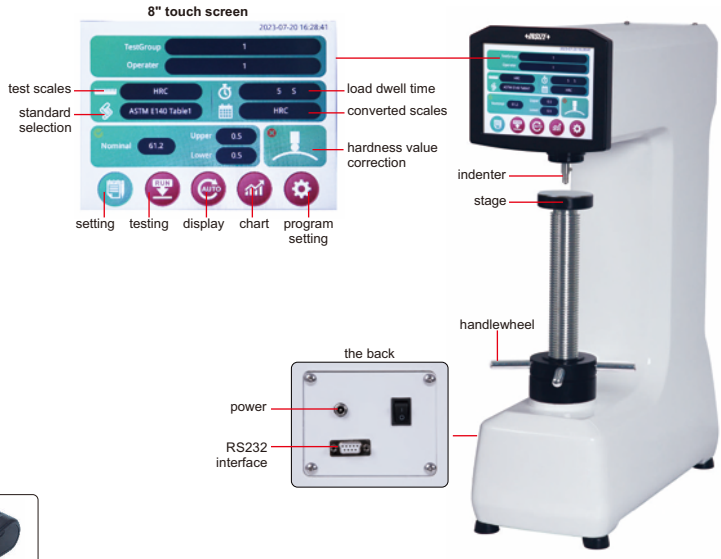
TOUCH SCREEN

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

INSPECTION CERTIFICATE

POPULAR MODEL

- Electronic loading test force, high accuracy of force value, and stable measurement value
- Touch screen operation and display, simple operation interface
- 15 types of Rockwell hardness scales can be tested
- Convertible to various hardness standards such as HB and HV
- 500 sets of storage
- With correction function, the hardness value can be corrected based on the size of the cylinders
- According to ISO 6508



2.28" DIA flat anvil (included)

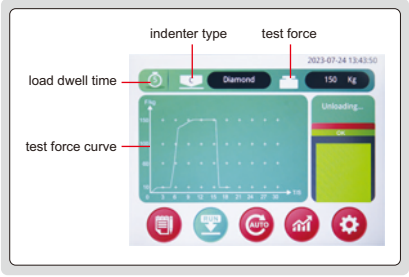
5.91" DIA flat anvil (included)

V-type anvil (included)

bluetooth printer (included)

VIDEO

test interface



test result display interface

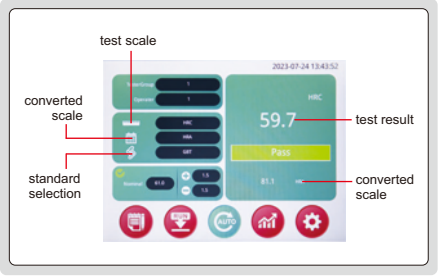
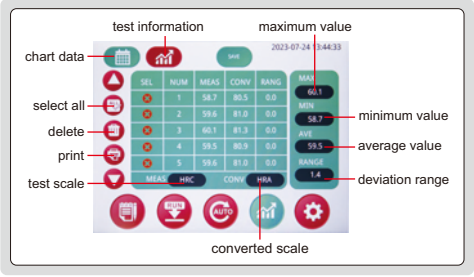


chart interface



STANDARD DELIVERY

Main unit	1 pc
Diamond indenter	1 pc
1/16" DIA carbide ball indenter	1 pc
5.91" DIA flat anvil	1 pc
2.28" DIA flat anvil	1 pc
V-type anvil	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block HRC40~50	1 pc
Hardness test block HRC60~70	1 pc
Hardness test block HRBW80~100	1 pc
Hardness test block HRA80~90	1 pc
Bluetooth printer	1 pc
Anti-dust cover	1 pc

SPECIFICATION

Measurement range		20~88HRA, 20~100HRB, 20~70HRC
Hardness scale	with indenter included	HRA, HRB, HRC, HRD, HRF, HRG
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
Preliminary test force		98N/10kgf for Rockwell
Test force		588N (60kg), 980N (100kg), 1471N (150kg)
Stage elevation		manual
Load control		automatic (load/dwell/unload)
Load dwell time		2~60 second
Resolution		0.1 HR
Max. workpiece height		9.06"
Max. testing width		6.69"
Power supply		100~240V, 50/60HZ
Dimension		18.70×7.87×27.56"
Weight		154lb

OPTIONAL ACCESSORY

Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRB80~100	HDT-B-HRB
Hardness test block HR15N78~88	HDT-B-HR15N2
Hardness test block HR30N55~73	HDT-B-HR30N2
Hardness test block HR30T73~82	HDT-B-HR30T

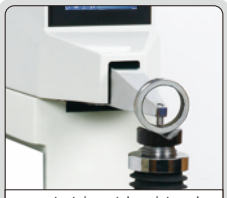
MOTORIZED DIGITAL ROCKWELL HARDNESS TESTER (DOLPHIN-NOSE TYPE)

INSPECTION CERTIFICATE | TOUCH SCREEN | FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

- Full closed-loop precise control, real-time monitoring of test force, greatly increase the accuracy
- Dolphin-nose structure indenter, more measuring space
- Measurements on 30 Rockwell and Surface Rockwell scales
- Convertible to various hardness standards such as HB, HV, HLD, HK and tensile strength
- 5000 sets of data are stored independently in the mainframe, which can be accessed at any time
- Mean, variance, maximum and minimum statistics are available
- USB communication port, can be connected to an external computer, measurement data Excel output
- Correction function automatically corrects the measurement results of curved parts
- Conforms to ASTM E-18, ISO 6508

HDT-DM290-U

workpiece demonstration



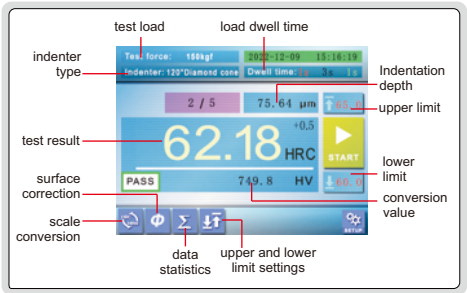
can test rings, tubes, internal surfaces of frame parts, etc

5.91" flat anvil (included)

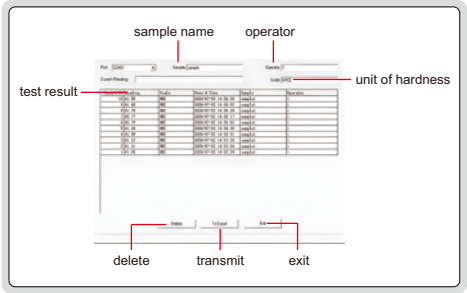
V-type anvil (included)

integrated printer (**optional**)

test interface



computer software (included)



SPECIFICATION

Part No.		HDT-DM290-U
Hardness scale	with indenter included	HRA, HRB, HRC, HRD, HRF, HRG
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
Preliminary test force		98N/10kgf for Rockwell
Test force		588N (60kg), 980N (100kg), 1471N (150kg)
Stage elevation		manual
Load control		automatic (load/dwell/unload)
Load dwell time		2~250 seconds, can be set
Resolution		0.01 HR
Max. workpiece height		11.81"
Max. testing width		8.66"
Max. bore depth		5.12"
Min. testing inner diameter		1.18"
Power supply		110V, 50/60HZ
Dimension		27.17×11.02×33.86"
Weight		187lb

VIDEO

STANDARD DELIVERY

Main unit	1 pc
Diamond indenter	1 pc
1/16" DIA carbide ball indenter	1 pc
5.91" DIA flat anvil	1 pc
V-type anvil	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block HRC35~55	1 pc
Hardness test block HRC60~70	1 pc
Hardness test block HRB85~100	1 pc
Hardness test block HRA80~88	1 pc
Computer software and USB cable	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block HRC35~55	HDT-B-HRC2
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRA80~84	HDT-B-HRA
Hardness test block HR15N78~88	HDT-B-HR15N2
Hardness test block HR15T88~93	HDT-B-HR15N2
Hardness test block HR30N55~73	HDT-B-HR30N2
Hardness test block HR30T73~82	HDT-B-HR30T
3.54" DIA flat anvil	HDT-DM290-FA
9.06" DIA flat anvil	HDT-DM290-FB
Integrated printer (Require pre-installation)	HDT-DM290-PT

MANUAL ROCKWELL HARDNESS TESTER
PART NO. ISH-R150

INSPECTION CERTIFICATE

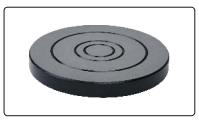
VIDEO

- According to ISO 6508

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N/10kgf
Test force	588N/60kgf, 980N/100kgf, 1471N/150kgf
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	6.69"
Max. testing width	6.50" (from the center of indenter to the wall of main body)
Dimension	20.47×6.30×27.56"
Weight	132lb

2.36" DIA flat anvil (included)



5.91" DIA flat anvil (included)

STANDARD DELIVERY

Main unit	1 pc
2.36" DIA flat anvil	1 pc
5.91" DIA flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
1/16" DIA carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Anti-dust cover	1 pc

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

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

desk (**optional**)

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

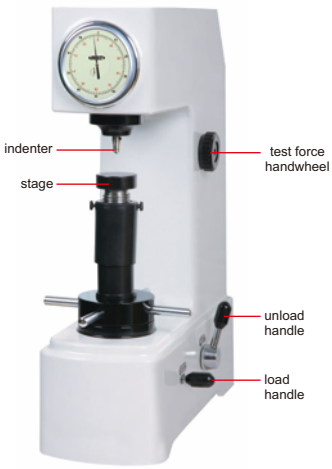
MANUAL ROCKWELL HARDNESS TESTER (BASIC TYPE)
PART NO. HDT-RW160

INSPECTION CERTIFICATE

VIDEO

POPULAR MODEL

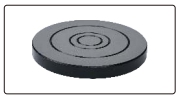
- According to ISO 6508



SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N (10kg)
Test force	588N (60kg), 980N (100kg), 1471N (150kg)
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	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

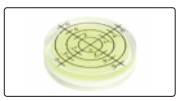
2.28" DIA flat anvil (included)


5.91" DIA flat anvil (included)

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

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

desk (**optional**)


level (included)

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

DIGITAL MICRO-VICKERS HARDNESS TESTER (STANDARD TYPE)
PART NO. HDT-MVH1100-U

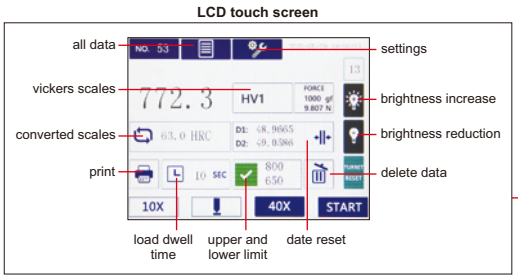
MOTOR DRIVEN TURRET

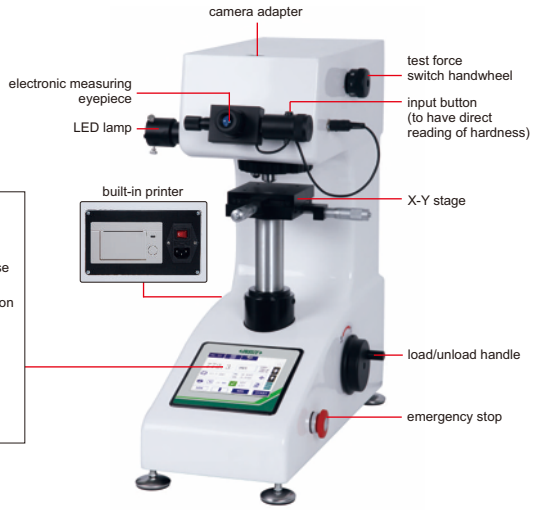
PRESS INPUT BUTTON TO HAVE DIRECT READING OF HARDNESS

INSPECTION CERTIFICATE

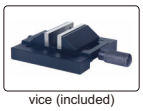
TOUCH SCREEN

VIDEO





cylinder holder (included)


vice (included)

slice holder (included)

camera (**optional**)

- Touch screen color LCD display
- Data storage and average value calculation
- Automatic switch between the indenter and objective lens
- According to ISO 6507

camera and measuring software (**optional**)

SPECIFICATION

Test force	0.098N (10gf), 0.245N (25gf), 0.49N (50gf), 0.98N (100gf), 1.96N (200gf), 2.94N (300gf), 4.9N (500gf), 9.8N (1kgf)
Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
Converted scales	HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Range	5~3000HV
Length measurement resolution	1μin/0.025μm
Objective/indenter switch	motor driven turret
Stage lifting	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~60 second
Objective	10X, 40X
Eyepiece	10X
Total magnification	10X (for measurement or observation), 400X (for measurement)
Max. workpiece height	3.54"
Max. testing width	3.74" (from the center of indenter to the wall of main body)
X-Y stage	dimensions: 3.94×3.94", travel range .98×.98"
Data output	built-in printer
Power supply	110V, 50/60Hz
Dimension	20.08×11.42×22.44"
Weight	88lb

STANDARD DELIVERY

Main unit	1 pc
10X, 40X objective	1 pc of each
Micro Vickers indenter	1 pc
Hardness test block 400~500HV0.2	1 pc
Hardness test block 700~750HV1	1 pc
Slice holder	1 pc
Vice	1 pc
Cylinder holder	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block 400~500HV0.2	**HDT-B-HV02C**
Hardness test block 700~750HV1	**HDT-B-HV1F**
Knoop indenter	**HDT-MV-KNOOP**
Camera	**HDT-MVH-CM**
Measuring system (manual)	**HDT-MVH-SW**
Measuring system (automatic)	**HDT-MVH-AW**

MOTORIZED DIGITAL BRINELL HARDNESS TESTER (STANDARD TYPE)

TOUCH SCREEN

FORCE LOADING BY ELECTRIC MOTOR (WITHUOT WEIGHT)

INSPECTION CERTIFICATE

LCD touch screen

VIDEO

- Touch screen color LCD display
- Measure the indentation with microscope, automatically calculate the hardness value and display it on the screen
- Electric loading test force, without weights
- Casting case, structurally stable and not deformed
- According to ISO 6506

SPECIFICATION

Part No.		HDT-MB710-U
Turret rotation		automatic
Test force		612.5N (62.5kgf), 980N (100kgf), 1.225kN (125kgf), 1.837kN (187.5kgf), 2.45kN (250kgf), 4.9kN (500kgf), 7.35kN (750kgf), 9.8kN (1000kgf), 14.7kN (1500kgf), 29.4kN (3000kgf)
Brinell scale		HBW2.5/62.5, HBW2.5/187.5, HBW5/125, HBW5/750, HBW10/100, HBW10/250,HBW10/500,HBW10/1000,HBW10/1500, HBW10/3000
Range		8~650HBW
Hardness resolution		0.1HBW
Stage elevation		manual
Load control		automatic (load/dwell/unload)
Load dwell time		0~60 second
Measuring microscope	magnification	20X
	resolution	0.1μm/3.94μin
Max. workpiece height		7.84"
Max. testing width		5.31" (form the center of indenter to the wall of main body)
Data output		built-in printer, RS232
Power supply		110V, 50/60Hz
Dimension		20.08×8.27×29.53"
Weight		287lb

3.07" DIA flat anvil (included)

7.87" DIA flat anvil (included)

V-type anvil (included)

desk (**optional**)

STANDARD DELIVERY

Main unit	1 pc
3.07" DIA flat anvil	1 pc
7.87" DIA flat anvil	1 pc
V-type anvil	1 pc
.098" DIA carbide ball indenter	1 pc
.197" DIA carbide ball indenter	1 pc
.394" DIA carbide ball indenter	1 pc
Hardness test block 100~200HBW2.5/187.5	1 pc
Hardness test block 90~200HBW10/1000	1 pc
Hardness test block 100~200HBW10/3000	1 pc

OPTIONAL ACCESSORY

Hardness test block 100~200HBW2.5/187.5	HDT-B-HB25A1
Hardness test block 90~200HBW10/1000	HDT-B-HB10C1
Hardness test block 100~200HBW10/3000	HDT-B-HB10A1
Desk	HDT-DESK
Measuring system	HDT-MB□□□

ULTRASONIC HARDNESS TESTERS

ATTENTION: HARDNESS BLOCKS FOR CALIBRATION ARE OPTIONAL

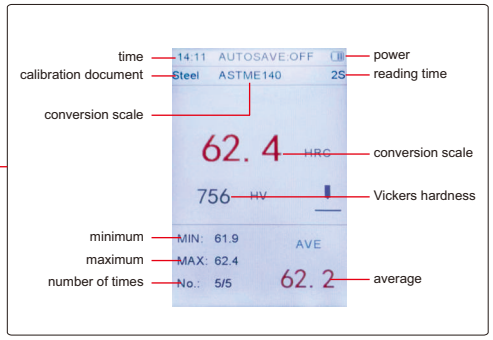
ATTENTION: NEED TO CONFIRM IF THE WORKPIECES ARE SUITABLE BEFORE PURCHASE

INSPECTION CERTIFICATE

SMALL TEST INDENTATION

- Small size, light weight, portable, convenient for on-line measurement and can be used to measure large workpieces
- Support 360°measurement, fast test speed, the fastest results in 1 second
- Standard Vickers indentation, small test indentation and low damage to the workpiece
- 100 measurement data sets and 10 calibration data sets can be stored
- Large display, directly shows the current measured value, maximum value, minimum value, average value and unit conversion value
- For unspecified conversion tables and unknown materials, multi-point calibration on any hardness scale you can choose to eliminate of systematic errors due to conversion tables
- According to DIN 50159, ASTM A1038 standards

9646-300



bluetooth printer
(included in **9646-301**)

Applications:
1. Hardness measurement of flange edges and gearoot stampings, gears and gear grooves with hardened die sheet surfaces, taper sections
2. Hardness measurement of shafts and thin-walled pipes and vessels
3. Hardness measurement of thin plated layers, wheels, turbine rotors and welded parts
4. Measurement of the depth of a certain hole diameter deep holes, curvature of the larger dents and convex marks, irregular planes
5. Covering the majority of hardness measurement of industrial production of ferrous metals, non-ferrous metals and their alloys

STANDARD DELIVERY

Part No.	9646-300	9646-301
Main unit	1 pc	1 pc
19.6N manual probe	1 pc	1 pc
Bluetooth printer	—	1 pc
charger	1 pc	1 pc
USB cable	1 pc	1 pc
Randomized standard hardness block	1 pc	1 pc

SPECIFICATION

Part No.	9646-300	9646-301
Data printout	without printer	with bluetooth printer
Main test parameter	HV	
Convertible parameters	HRA, HRB, HRC, HBW, HS, MPa	
Measurement range	50-1599HV, 20-68HRC, 85-650HB, 41-100HRB 61-85.6HRA, 34.2-97.3HS, 255-2180MPa	
Resolution	1HV, 0.1HRA, 0.1HRB, 0.1HRC, 1HB, 0.1HS, 1MPa	
Accuracy	±4%HV, ±4%HB, ±1.5HR	
Calibration method	normal material: one-point calibration special materials: multi-point calibration	
Operating temperature	14°F~104°F	
Power supply	built-in rechargeable lithium battery (for 10 hours working)	
Dimension of main unit	7.48×3.23×1.18"	
Dimension of probe	5.91×.87" DIA	
Weight	1.19lb	

OPTIONAL ACCESSORY

9.8N manual probe	9646-300-10
29.4N manual probe	9646-300-30
49N manual probe	9646-300-50
98N manual probe	9646-300-98
Hardness test block HRC20~30	HDT-B-HRCU1
Hardness test block HRC35~55	HDT-B-HRCU2
Hardness test block HRC60~70	HDT-B-HRCU3
Hardness test block 200~300HV5	HDT-B-HV5U1
Hardness test block 400~500HV5	HDT-B-HV5U2
Hardness test block 700~750HV5	HDT-B-HV5U3
Hardness test block 90~200HBW10/1000	HDT-B-HB10U1
Hardness test block 200~300HBW10/3000	HDT-B-HB10U2
Hardness test block 400~500HBW10/3000	HDT-B-HB10U3

SPECIFICATION OF PROBE

Probe Type	9.8N (**optional**)	19.6N (included)	29.4N (**optional**)	49N (**optional**)	98N (**optional**)**
Diameter	.87"	.87"	.87"	.87"	.87"
Length	5.91	5.91"	5.91"	5.91"	5.91"
Maximum roughness of measuring surface	Ra<126μin	Ra<197μin	Ra<197μin	Ra<394μin	Ra<591μin
Minimum workpiece weight	.66lb*	.66lb*	.66lb*	.66lb*	.66lb*
Minimum thickness of workpiece	.08"	.08"	.08"	.08"	.08"
Application	mold shells, fixtures, thin-walled parts, bearings, tooth sides and pipe interiors			measurement of grooves, gear flanks and gear roots	workpieces with low roughness requirements

*If the weight or thickness of workpieces is less than required, the workpieces should be fixed or coupled on solid support

For larger measuring force, it is recommended to use it with the stand (optional**)

PORTABLE LEEB HARDNESS TESTER
PART NO. ISH-PHB

INSPECTION CERTIFICATE

VIDEO

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

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±6HLD (when HLD=800)	
Display	Leeb (HLD), converted hardness, material, impact direction, test times, average value, date	
Output	bluetooth	
Applicable workpiece	minimum weight	11.02lb
		4.41lb (on solid support)
		.22lb (coupled on plate)
	minimum thickness .20"	
	minimum radius of curved surface: 1.18"	
	maximum roughness (Ra): 63μin	
Power supply	3×AAA batteries	
Dimension	5.91×3.31×1.10"	
Weight	.44lb	

hardness test block D (included)

small support ring (included)

wireless printer (**optional**)

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Wireless printer	**ISH-DS-PRINTER**
Couplant	**ISH-COUPLANT**
Support rings	**ISH-PH-SP9**
Hardness test block D	**HDT-B-HLD3**

PORTABLE LEEB HARDNESS TESTER (BASIC TYPE)
PART NO. HDT-LP200

INSPECTION CERTIFICATE

POPULAR MODEL

VIDEO

- 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 (σb)
- 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

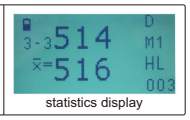
SPECIFICATION

Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HSD/1σb
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/σb(rm) 255-2639N/mm²
Power supply	2xAA battery
Dimension	5.31×3.03×1.26"
Weight	.53lb

hardness test block D (included)

small support ring (included)

large font display



statistics display

STANDARD DELIVERY

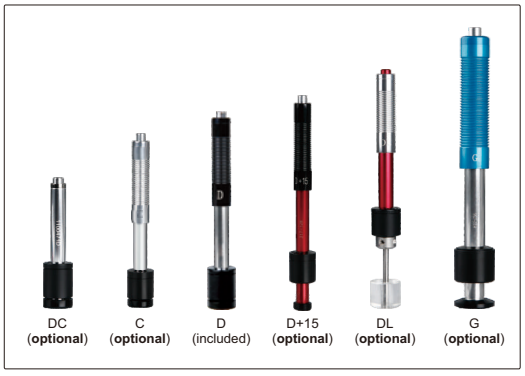
Main unit	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
Impact device D	1 pc

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



DC (**optional**) C (**optional**) D (included) D+15 (**optional**) DL (**optional**) G (**optional**)

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)		80μin	16μin	80μin	80μin	80μin	280μin
Minimum weight of workpiece	direct measurement	11.02lb	3.31lb	11.02lb	11.02lb	11.02lb	33.08lb
	on solid support	4.41lb	1.10lb	4.41lb	4.41lb	4.41lb	11.02lb
	coupled on plate	.11lb	0.04lb	.11lb	.22lb	.11lb	1.10lb
Minimum thickness of workpiece		.12"	.04"	.12"	.12"	.12"	.39"

PORTABLE LEEB HARDNESS TESTER WITH WIRELESS PROBE
PART NO. HDT-WP201

INSPECTION CERTIFICATE

VIDEO

hardness test block D (included)

small support ring (included)

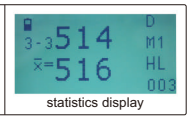
bluetooth printer (**optional**)

- Bluetooth digital probe
- 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 (σb)
- 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, DIN 50156 GB/T 17394

SPECIFICATION

Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HSD/1σb
Accuracy	±6HLD (when HLD=800)
Measuring range	HL 170-960/HRC 17-69/HRB 13-101.7/HB 20-655/ HV 80-940/HSD 32-99.5/σb (rm) 255-2180N/mm²
Power supply	2xAA battery
Dimension	5.31×3.03×1.26"
Weight	.53lb

large font display



statistics display

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-WL320-DCW**
Impact device C	**HDT-WL320-CW**
Impact device DL	**HDT-WL320-DLW**
Impact device G	**HDT-WL320-GW**
Hardness test block D	**HDT-B-HLD3****
Hardness test block G	**HDT-B-HLG2***
Bluetooth printer	**ISH-LP200-PRINTER**
Support rings	**ISH-PH-SP9**

*Hardness test block G (**HDT-B-HLG2**) is for probe G (**HDT-WL320-GW**)
Hardness test block D (HDT-B-HLD3**) is for all others probes

DC **(optional)** | C **(optional)** | D (included) | DL **(optional)** | G **(optional)**

APPLICABLE WORKPIECE

Impact device		**DC**	**C**	**D**	**DL**	**G**
Application		inner wall of small space	small or thin workpiece, coating layer	general use	narrow slot or small hole	casting or forging workpiece
Maximum roughness of workpiece (Ra)		80μin	16μin	80μin	80μin	280μin
Minimum weight of workpiece	**direct measurement**	11.02lb	3.31lb	11.02lb	11.02lb	33.08lb
	on solid support	5.51lb	1.10lb	4.41lb	4.41lb	11.02lb
	coupled on plate	.11-4.41lb	0.04lb	.11-4.41lb	.22lb	1.10lb
Minimum thickness of workpiece		.12"	.04"	.12"	.12"	.39"

PEN-TYPE LEEB HARDNESS TESTER (ADVANCED TYPE)
PART NO. HDT-L410

DATA OUTPUT | HIGH ACCURACY | DL PROBE IS OPTIONAL

INSPECTION CERTIFICATE

VIDEO

wireless printer (**optional**)

hardness test block D (included)

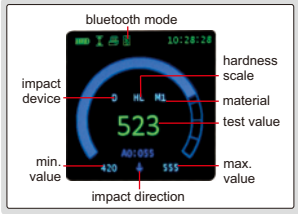
small support ring (included)

software flash disk (included)

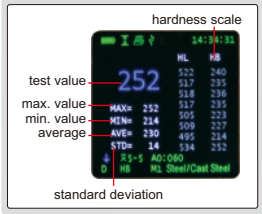
- Metal housing
- HD TFT 320×320 display
- Impact device D
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Four display modes
- Automatic direction correction
- Tolerance testing
- Automatic power off, automatic calculation of statistics
- Dual value display, shows both Leeb and other conversion values
- 31 files can be saved, each containing 100 measurement data
- Connected to PC software via USB or Bluetooth 2.0
- Connected with printer via Bluetooth
- Operation temperature: -4°F~158°F
- According to ASTM A956, DIN 50156, GB/T 17394

DL probe can be installed (**optional**)

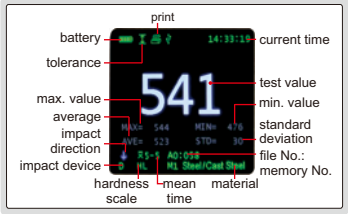
dynamic ring display



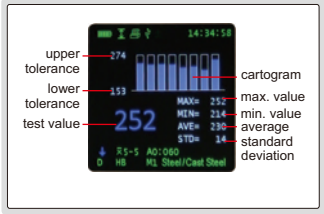
statistic display



can choose large font display



histogram display

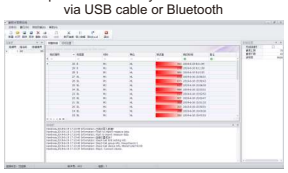


SPECIFICATION

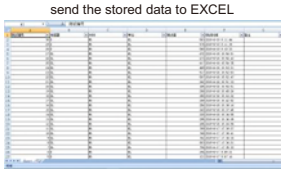
Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM	
Accuracy	±4HLD (when HLD=800)	
Output	USB and bluetooth	
Applicable workpiece	minimum weight	11.02lb (direct measurement)
		4.41lb (on solid support)
		.22lb (coupled on plate)
	minimum thickness .20"	
	minimum radius of curved surface: 1.18"	
	maximum roughness (Ra): 79μin	
Power supply	built-in 3.7V rechargeable battery	
Dimension	5.83×1.73×.87"	
Weight	.25lb	

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

upload the memory to PC software via USB cable or Bluetooth



send the stored data to EXCEL



STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
AC/DC adapter	1 pc
Software flash disk and USB cable	1 pc

OPTIONAL ACCESSORY

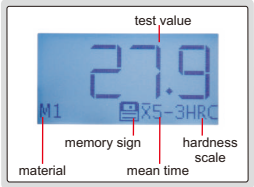
Printer	**HDT-L410-PRINTER**
Support rings	**ISH-PH-SP9**
Hardness test block D	**HDT-B-HLD3**
DL probe	**HDT-L410-DL**

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

INSPECTION CERTIFICATE

DATA OUTPUT

can choose large font display



VIDEO

software flash disk (included)

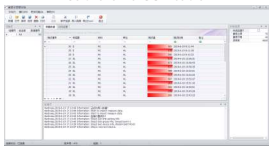
small support ring (included)

hardness test block D (included)

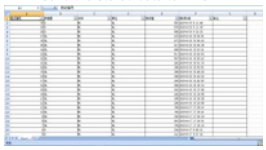
- Impact device D
- Universal testing angle, no need to set impact direction
- Dual-coil probe, high accuracy
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Dual value display, shows both Leeb and converted hardness
- 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

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

upload the memory to PC software via USB cable



send the stored data to EXCEL



SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM	
Accuracy	±6HLD (when HLD=800)	
Output	USB	
Measuring range	HL 100-960/HRC 1-74.7/HRB 1.2-140/HB 28-1027/HV 45-1230 HS 4-112/HRA 7-88.5/SGM (rm) 118-3315N/mm²	
Applicable workpiece	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	
Power supply	1xAAA battery	
Dimension	5.83×1.77×0.83"	
Weight	.23lb	

STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Cleaning brush	1 pc
AAA battery	1 pc
Small support ring	1 pc
Software flash disk and USB cable	1 pc

OPTIONAL ACCESSORY

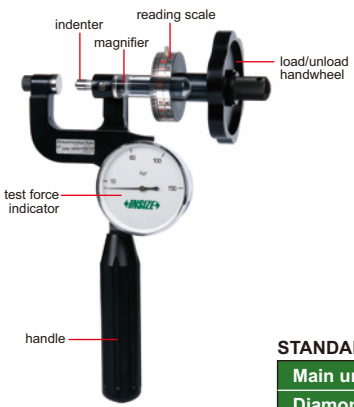
Support rings	ISH-PH-SP9
Hardness test block D	HDT-B-HLD3

PORTABLE ROCKWELL HARDNESS TESTER
PART NO. ISHR-P151

flat anvil (included)

V-type anvil (included)

anvil extension for thin workpieces (included)



VIDEO

- According to ISO 6508, ASTM E18

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	10kg
Test force	60kg, 100kg, 150kg
Load control	manual
Min. reading	1HR
Max. workpiece thickness	.98"
Max. testing depth	.98" (from the center of indenter to the main body)
Dimension	9.45×2.76×6.30"
Weight (with base)	5.51lb

STANDARD DELIVERY

Main unit	1 pc
Diamond indenter	1 pc
1/16" DIA carbide ball indenter	2 pcs
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Flat anvil	1 pc
V-type anvil	1 pc
Base	1 pc
Anvil extension	1 pc
Magnifier	2 pcs

ALUMINUM HARDNESS TESTER
PART NO. ISHW-L20

VIDEO

- To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel, etc.
- According to ASTM B647-84 (2000)

SPECIFICATION

Application	for aluminum alloy general use
Thickness requirement of flat workpiece	.024~.23"
Internal diameter requirement of tube workpiece	>.39" DIA
Wall thickness requirement of tube workpiece	.024~.23"
Hardness range	0~20HW
Min. reading	1HW
Accuracy	±0.5HW (at 5~17HW)
Dimension	8.07×1.18×3.35"
Weight	1.10lb

STANDARD DELIVERY

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

ALUMINUM HARDNESS TESTERS (BASIC TYPE)

- To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel, etc.
- According to ASTM B647-10 (2016)

ISHW-H10

STANDARD DELIVERY

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

SPECIFICATION

Part No.	ISHW-H10	ISHW-H11	ISHW-H12	ISHW-H13	ISHW-H14	ISHW-H15
Application	for aluminum alloy general use	for aluminum alloy thick workpiece	for aluminum alloy small tube	for hard aluminum alloy and hard brass	for soft brass and copper	for soft steel and cold-rolled steel
Thickness requirement of flat workpiece	.024~.23"	.024~.51"	.024~.31"	.024~.23"	.024~.23"	.024~.23"
Internal diameter requirement of tube workpiece	>.39" DIA	>.39" DIA	>.39" DIA	>.39" DIA	>.39" DIA	>.39" DIA
Wall thickness requirement of tube workpiece	.024~.23"	.24~.51" (internal diameter .39~.91" DIA) .024~.23" (internal diameter >.91" DIA)	.024~.31"	.024~.23"	.024~.23"	.024~.23"
Hardness range	0~20HW					
Min. reading	1HW					
Accuracy	±0.5HW (at 5~17HW)					
Dimension	8.07×1.18×3.74"					
Weight	1.10lb					

DIGITAL ALUMINUM HARDNESS TESTER
PART NO. HDT-DB337

INSPECTION CERTIFICATE

- To measure the hardness of workpieces made of pure aluminum, aluminum alloy, fiber reinforced plastic, hard plastic, etc.
- The support can be rotated, no need to disassemble
- Can be converted to HW, HRE, HRF, HV, HB values
- Full scale one key reset, no need to disassemble for external calibration
- According to ASTM B648, ASTM HD2583-2007

VIDEO

SPECIFICATION

Hardness range	0~100HBa
Effective range	40~90HBa (equal to 25~135HBW)
Min. reading	0.1HBa
Accuracy	±2.0HBa (at 42~52HBa) ±1.0HBa (at 84~88HBa)
Repeatability	±2.5HBa (at 42~52HBa) ±1.5HBa (at 84~88HBa)
Min. workpiece thickness	.06"
Dimension	5.63×1.57×3.43"
Weight	.57lb

STANDARD DELIVERY

Main unit	1 pc
Full scale calibration block	1 pc
Hardness test block	2 pcs
Spare pin	1 pc
Wrench	1 pc
Power adapter	1 pc

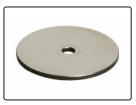
DIGITAL SHORE DUROMETERS

DATA OUTPUT

VIDEO

- According to ISO868, ISO7619, ASTM D 2240
- Average and peak (max.) mode
- Dwell time is adjustable
- Tolerance testing
- 500 memories
- Wireless connection to printer
- Handhold use or work with test stand (part no. **ISH-DS-STANDA**)
- Automatic power off

software flash disk (included)


calibration block (included)

printer (**optinal**)

SPECIFICATION

Part No.	ISH-DSA	ISH-DSD
Unit	Shore A	Shore D
Test material	soft plastic, soft rubber, etc.	hard plastic, hard rubber, etc.
Measuring range*	0~100HA	0~100HD
Resolution	0.1HA	0.1HD
Accuracy	±1HA	±1HD
Indenter protrusion	.10"	
Output	wireless and USB	
Power supply	built-in rechargeable battery	
Dimension	6.02×1.97×1.14"	
Weight	.37lb	

*Use **ISH-DSD** when measuring result is higher than 90HA
Use **ISH-DSA** when measuring result is lower than 20HD

STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Printer	ISH-DS-PRINTER
Test stand	ISH-DS-STANDA

TEST STAND FOR DIGITAL SHORE DUROMETERS
PART NO. ISH-DS-STANDA

weight block D (**optional**) for **ISH-DSD**

- For digital shore durometers (part no. **ISH-DSA** and **ISH-DSD**)
- Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- Special structure for stable loading
- Weight block A (included) for **ISH-DSA**, weight block D (**optional**) for **ISH-DSD**

SPECIFICATION

Stage diameter	4.5" DIA
Max. workpiece height	1.77"
Max. testing width	2.48" (from test point to the column)
Dimension	7.68"×7.68"×14.57"
Weight	12.37lb

STANDARD DELIVERY

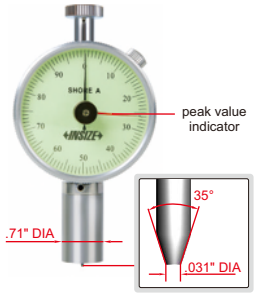
Test stand	1 pc
Weight block A (for ISH-DSA)	1 pc

OPTIONAL ACCESSORY

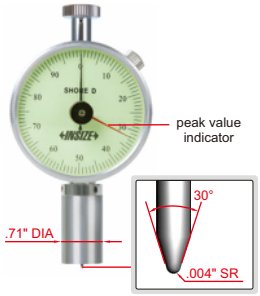
Weight block D (for ISH-DSD)	**ISH-DS-W4**

SHORE DUROMETERS

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



ISH-SAM blunt taper indenter



ISH-SDM sharp point indenter

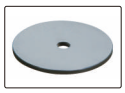
SPECIFICATION

Part No.	**ISH-SAM**	**ISH-SDM**
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	

*Use **ISH-SDM** when measuring result is higher than 90HA
Use **ISH-SAM** when measuring result is lower than 20HD

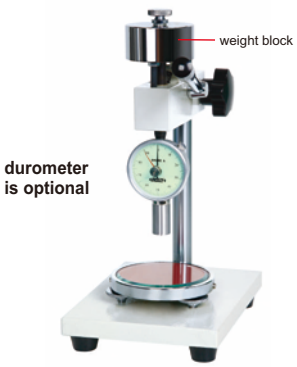
OPTIONAL ACCESSORY

Calibration block	**ISH-DS-BLOCK**


calibration block (**optional**)

TEST STAND FOR SHORE DUROMETER
PART NO. ISH-STAC

- For shore durometers (part no. **ISH-SAM**)
- Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations

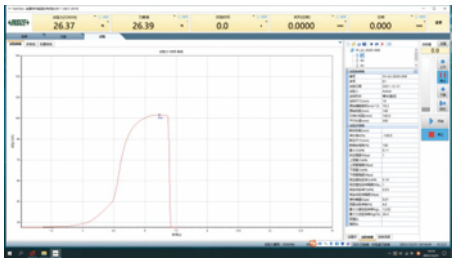


SPECIFICATION

Applicable durometer	ISH-SAM
Stage diameter	3.94" DIA
Max. workpiece height	2.95"
Max. testing width	2.56" (from test point to the column)
Weight block	2.2lb

ELECTRONIC UNIVERSAL TESTING MACHINES

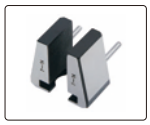
computer and software (included)



- For testing and researching the mechanical properties of metals, ceramics, plastics, rubber and composite materials
- For research and quality control of mechanical properties of materials for a wide range of products such as mechanical components, electronic components, food packaging materials, chemical fibres, films and new energy batteries

UTM-E50-U

V-shaped jaws (included)



flat jaws (included)

SPECIFICATION

Part No.	UTM-E30-U	UTM-E50-U	UTM-E100-U
Max. test force	30kN	50kN	100kN
Accuracy class	0.5 class		
Accuracy of test force	±0.5% of indicated value		
Range of test force	0.2%~100%FS		
Resolution of test force	1/500000FS		
Crossbeam displacement accuracy	±0.5% of indicated value		
Crossbeam displacement resolution	. 99μin		
Range of speed adjustment	39.37μin~19.68in/min		
Accuracy of crossbeam speed	±1% of the set value, (speed<.02in/min) ±0.1% of the set value, (speed≥.02in/min)		
Range of force control speed	0.005~5%FS/s		
Accuracy of constant load force	±1% of the set value, (speed<0.05%FS/s) ±0.5% of the set value, (speed≥0.05%FS/s)		
Compression fixture	3.94" DIA	3.94" DIA	6.30" DIA
Wedge tension fixture	flat jaw: 0~.28" V-jaw: .16~.35" DIA	flat jaw: 0~.55" V-jaw: .16~.55" DIA	flat jaw: 0~.79" V-jaw: .31~1.02" DIA
Effective test width*	17.32"	17.32"	23.62"
Vertical test space*	38.19"	38.19"	49.21"
Effective compression height*	27.56"	27.56"	27.56"
Dimension (WxDxH)	32.28×24.41×74.02"	32.28×24.41×74.02"	42.13×33.66×85.83"
Weight	771.62lb	771.62lb	2204.62lb
Power supply	AC 110V, 60Hz, 0.4kW~1kW		AC 480V, 3Ø, 60Hz, 2kW~5kW

*Can be customized according to test requirements

SPECIFICATION OF LARGE DEFORMATION EXTENSOMETER (OPTIONAL)

Part No.	UTM-EY1	UTM-EY2
Range of deformation	.39~31.50"	
Accuracy of deformation	±1%	
Resolution of deformation	393.70μin	157.48μin
Type of blade	flat blade	
Range of clamp	thicknesses<.39", width<1.18"	

large deformation extensometer
(optional)

OPTIONAL ACCESSORY

Fixture	**UTM-F** series (customized, selection of specifications according to test requirements)
Extensometer	**UTM-EX** series (customizable)
Video extensometer	**UTM-M** series
Large deformation extensometer	**UTM-EY** series (customizable)
Security door	customized, available in plexiglass or wire mesh

STANDARD DELIVERY

Main unit	1 pc
Control box	1 pc
Measuring software	1 pc
Computer	1 pc
Printer	1 pc
Compression fixture	1 set
Wedge tension fixture	1 set

DIGITAL SPRING TESTER

DATA OUTPUT

VIDEO

- Peak hold and automatic release function
- Set upper and lower limits, red and green indicator and buzzer alarm
- Automatic conversion of three units: N, kgf, lbf
- Built in printer
- Automatic power off

SPECIFICATION

Part No.	ISF-S50-U
Maximum load	11lbf
Resolution	.001lbf
Range of digital scale	3.7"
Resolution of digital scale	.0005"
Disk diameter	1.9" DIA
Maximum free length of spring	3.7"
Measuring range of force	5%~100% (maximum load)
Accuracy of force	±1% (maximum load)
Data output	RS232
Power supply	110V, 50/60Hz
Dimension	11.8×9.3×24.4"
Weight	38.14lb

STANDARD DELIVERY

Main unit	1 pc

DIGITAL FORCE GAUGES (HIGH ACCURACY)

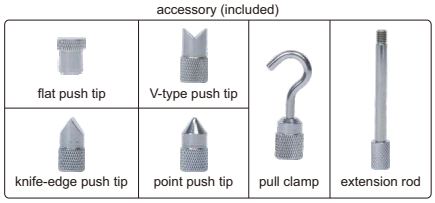
INSPECTION CERTIFICATE

DATA OUTPUT

VIDEO

- Can be used for tension and pressure tests
- Peak (max.) and tracking mode
- Units: lbf, ozf, mN, N, gf, kgf
- 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)



ISF-DF100A

SPECIFICATION

Part No.	ISF-DF50A	ISF-DF100A	ISF-DF200A	ISF-DF500A	ISF-DF1KA
Type	internal sensor				
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				

printer (**optinal**)

software flash disk (included)

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
Software and USB cable	1 pc
Push/pull accessory	6 pcs (flat push tip, V-type push tip, knife-edge push tip, point push tip, pull clamp, extension rod)

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

DIGITAL FORCE GAUGES

INSPECTION CERTIFICATE

DATA OUTPUT

VIDEO

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

ISF-1DF100

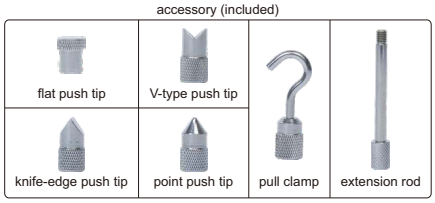
printer (**optinal**)

software flash disk (included)

SPECIFICATION

Part No.	ISF-1DF10	ISF-1DF50	ISF-1DF100	ISF-1DF500	ISF-1DF1000
Load capacity (lbf)	2.2	11	22	110	220
Resolution (lbf)	0.001	0.01	0.01	0.1	0.1
Accuracy	±0.3% (of load capacity)				
Measuring mode	tracking, peak (max.), low and high limits with judgement				
Power supply	built-in rechargeable battery				
Dimension	5.91×2.87×1.30"				
Weight	.99lb				

accessory (included)



STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
Software and USB cable	1 pc
Push/pull accessory	6 pcs (flat push tip, V-type push tip, knife-edge push tip, point push tip, pull clamp, extension rod)

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

TEST STAND FOR DIGITAL FORCE GAUGE PART NO. ISF-MT1K

VIDEO

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

force gauge is optional

SPECIFICATION

Load capacity	220lbf
Travel	7.87" (.12" vertical movement per revolution of handwheel)
Dimension	7.72x9.84x17.56"
Weight	28.67lb

OPTIONAL ACCESSORY

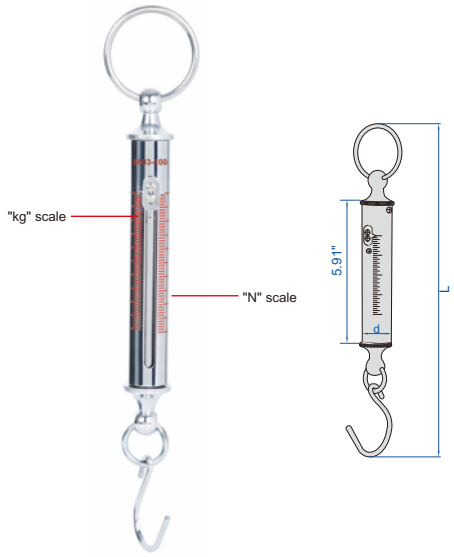
Digital scale (range: 8", resolution .0005"/0.01mm)	ISF-MT1K-SCALE

horizontal orientation test

digital scale (**optional**)

TUBE FORCE GAUGES

- Suitable for measuring weight and tensile forces



8603-100

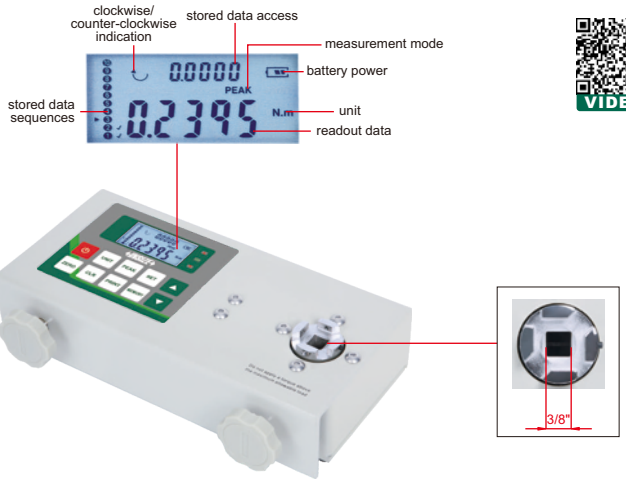
SPECIFICATION

Part No.	8603-10	8603-20	8603-30	8603-50	8603-100	8603-200
Max. test force	10N/1kg	20N/2kg	30N/3kg	50N/5kg	100N/10kg	200N/20kg
Resolution	.2N/0.02kg	.4N/0.04kg	.5N/0.05kg	1N/0.1kg	2N/0.2kg	4N/0.4kg
Unit	kg, N					
Accuracy	±2%F.S.					
Tube diameter (d)	.87" DIA	.87" DIA	.87" DIA	.87" DIA	.98" DIA	1.26" DIA
Overall length (L)	11.02"	11.02"	11.02"	11.02"	13.39"	13.39"
Weight	.62lb	.62lb	.62lb	.62lb	1.06lb	1.54lb
Operation temperature	14~104°F					
Operation humidity	30%~90%RH					
Maximum safe load	120%F.S.					
Limited overload	240%F.S.					

TORQUE TESTERS

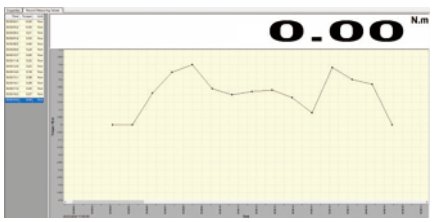
INSPECTION CERTIFICATE

VIDEO

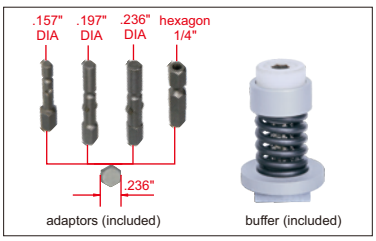


IST-HP1-U

- For testing electric, pneumatic and manual torque screwdrivers and torque wrenches and other torque tools
- Clockwise and counter-clockwise operation
- Peak and track working modes
- High-definition display, backlighting available
- High sampling frequency for accurate peak capture
- Unit: N.m, lb.in, kgf.cm
- Upper and lower limits can be set, automatic audible and visual alarm with red and green indicator lights and buzzer
- Store 10 sets of data and calculate the average value
- Serial RS232 output, connect to PC to view torque curves by test software
- Automatic zero setting, automatic shutdown



software (included)



adaptors (included) buffer (included)

buffer test example

SPECIFICATION

Part No.	IST-HP1-U	IST-HP2-U	IST-HP5-U	IST-HP10-U	IST-HP20-U
Maximum range	8.85lbf.in	17.70lbf.in	44.25lbf.in	88.5lbf.in	177.0lbf.in
Resolution	.005lbf.in	.01lbf.in	.02lbf.in	.05lbf.in	.1lbf.in
Accuracy	±1%				
Maximum test speed	3000rpm				
Number of memory	10 groups				
Power supply	built-in rechargeable battery, can be used for 40 hours				
Dimension	9.06×4.33×1.97"				
Weight	5.29lb				

STANDARD DELIVERY

Main unit	1 pc
Buffer	1 pc
Adaptor	4 pcs
Power adapter	1 pc
Software and RS232 cable	1 pc

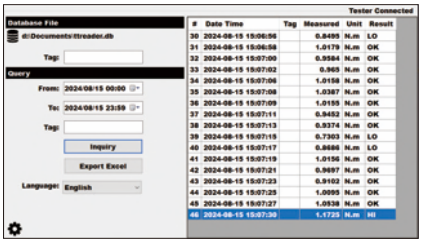
DIGITAL TORQUE TESTERS

ATTENTION: NOT SUITABLE FOR HICH SPEED SHOCK TORQUE MEASUREMENT

- Test torque wrenches, torque screwdrivers and other torque tools
- Clockwise operation
- Peak, track and first peak working modes
- Tolerance testing
- LED indicator for the target torque alarm:
  - Green LED light on when the value is within tolerance
  - Red LED light on when the value is above the high tolerance
- Ability to upload data in real time, save data and export data to EXCEL
- Power off automatically in 2 minutes without any operations

IST-04TT350

adaptor



software (included)

SPECIFICATION

Part No.	IST-04TT5	IST-04TT28	IST-04TT68	IST-04TT350
Range	4.42~44.2in.lb	24.8~247.8in.lb	60.2~602in.lb	310~3097in.lb
	.369~3.69ft.lb	2.06~20.65ft.lb	5.01~50.1ft.lb	25.8~258.1ft.lb
Accuracy	±1% (clockwise)			
Resolution	.01in.lb	.1in.lb	.1in.lb	1in.lb
	.001ft.lb	.01ft.lb	.01ft.lb	.1ft.lb
Unit	in.lb, ft.lb, kg.cm, N.m			
Square socket/hex driver	1/4"	3/8"	3/8"	1/2"
Power supply	AC 100~240V, 50/60Hz			
Weight	1.65lb	1.65lb	2.43lb	2.43lb

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
Adaptor	1 pc
AC/DC adapter	refer to details

BLUETOOTH DIGITAL TORQUE WRENCHES (KEYBOARD SIGNAL)

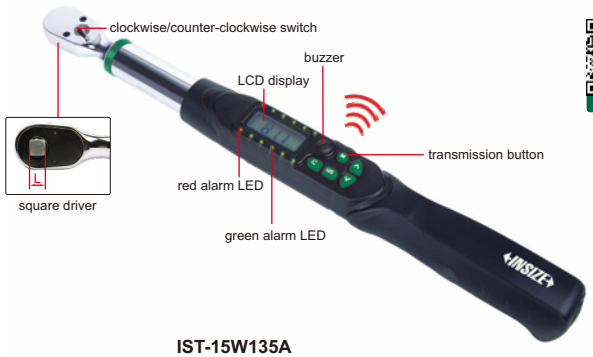
BUILT-IN BLUETOOTH

OPTIONAL ACCURACY: CLOCKWISE: ±1% COUNTER-CLOCKWISE: ±2%

INSPECTION CERTIFICATE

Torque wrenches:

- Ratchet head
- Unit: in.lb, ft.lb, N.m, kg.cm
- Clockwise and counter-clockwise operation
- Peak and track working mode
- Can set tolerance with judgement in peak working mode
  9 target torque values can be set, with audible and visible alarm:
  LED lights up in sequence, and the buzzer gets louder and
- louder when torque value is 80%~99.5% of target torque
- Power off in 2 minutes automatically
- Non-slip grip handle
- With overload record (once the torque reaches 110% of the maximum range)



IST-15W135A

Data transmission:

- Built-in Bluetooth 4.0 module, which can be connected with computers (with Bluetooth function), mobile phones, tablets and other devices
- Keyboard signal, can be transmitted to Excel, Word, TXT
- Transmission distance is 32.8 feet (no obstacles, no electromagnetic interference)
- Bluetooth connection and disconnection are respectively shown by indicator lights

SPECIFICATION

Part No.		IST-15W30A	IST-15W135A	IST-15W200A	IST-15W340A
Range		53~265.5in.lb	239~1195in.lb	354~1770in.lb	602~3009in.lb
		4.4~22.12ft.lb	19.9~99.5ft.lb	29.5~147.5ft.lb	50.1~250.7ft.lb
Accuracy	clockwise	±2%			
	counter-clockwise	±3%			
Tolerance setting range		-20%~+20% (target torque value)			
Resolution		0.1in.lb	1in.lb	1in.lb	1in.lb
		0.01ft.lb	0.1ft.lb	0.1ft.lb	0.1ft.lb
Square driver (L)		1/4"	3/8"	1/2"	1/2"
Power supply		2xAA batteries			
Length		15.35"	16.34"	20.87"	25.59"
Weight		1.68lb	2.07lb	2.95lb	3.40lb

transmission distance is 32.8 feet
(no obstacles, no electromagnetic interference)

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE

DIGITAL TORQUE WRENCHES

OPTIONAL ACCURACY:
CLOCKWISE: ±1%
COUNTER-CLOCKWISE: ±2%
ONLY FOR RANGE FOR 53.1~7521in.lb

INSPECTION CERTIFICATE

VIDEO

- Ratchet head
- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
  - Green LED light on and buzzer sounds when torque value is 90%~100% of target torque
  - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations
- Non-slip grip handle
- With damp record
- With overload record
  (once the torque reaches 110% of the maximum range)

IST-W135A

SPECIFICATION

Part No.	Type	Range		Accuracy	Resolution		Square driver (L)	Power supply	Length	Weight
IST-W30A	A	53.1~265.5in.lb	4.42~22.12ft.lb	clockwise: ±2% counter-clockwise: ±3%	0.1in.lb	0.01ft.lb	1/4"	2×AA batteries	15.35"	1.83lb
IST-W135A		239~1195in.lb	19.9~99.5ft.lb		1in.lb	0.1ft.lb	3/8"		16.34"	2.09lb
IST-W200A		354~1770in.lb	29.5~147.5ft.lb		1in.lb	0.1ft.lb	1/2"		20.87"	3.09lb
IST-W340A		602~3009in.lb	50.1~250.7ft.lb		1in.lb	0.1ft.lb	1/2"		25.59"	3.53lb
IST-W500A*	B	885~4424in.lb	73.7~368.7ft.lb	clockwise: ±2.5% counter-clockwise: ±3.5%	1in.lb	0.1ft.lb	3/4"		50.59"	15.43lb

OPTIONAL ACCESSORY

Calibration cable	IST-W-CABLE

*The accuracy of this part no. is not optional

MECHANICAL TORQUE WRENCHES (DIGITAL SETTING)

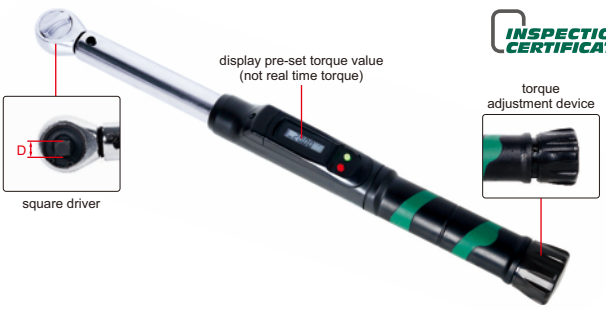
ATTENTION: DISPLAY PRE-SET TORQUE VALUE (NOT REAL TIME TORQUE)

ATTENTION: CLOCKWISE OPERATION ONLY

INSPECTION CERTIFICATE

VIDEO

- Ratchet head
- Unit: ft.lb, in.lb, N.m
- Mechanical "click" torque wrench, the pre-set torque value is shown on the display



IST-20WM80

SPECIFICATION

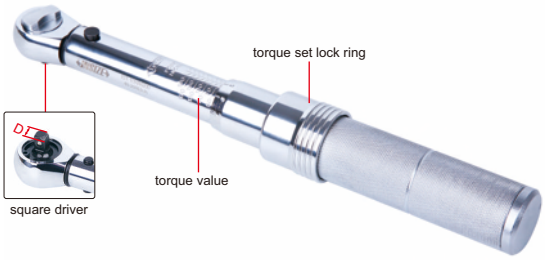
Part No.	IST-20WM80	IST-20WM150	IST-20WM250
Range (clockwise)	16~80ft.lb	30~150ft.lb	50~250ft.lb
Accuracy	±3%	±3%	±3%
Resolution	0.1ft.lb	0.1ft.lb	0.1ft.lb
Square driver (D)	3/8"	1/2"	1/2"
Length	17.91"	20.55"	20.03"
Weight	3.20lb	3.53lb	3.97lb

TORQUE WRENCHES

ATTENTION: CLOCKWISE OPERATION ONLY

INSPECTION CERTIFICATE

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



IST-10WM200

SPECIFICATION

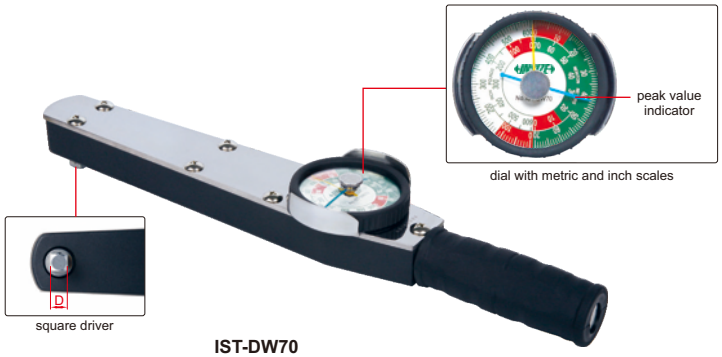
Part No.	IST-10WM200	IST-10WM250	IST-10WM100	IST-10WM150	IST-10WM250A	IST-10WM400	IST-10WM600
Range (clockwise)	40~200lb.in	50~250lb.in	20~100lb.ft	30~150lb.ft	50~250lb.ft	80~400lb.ft	100~600lb.ft
Accuracy	±4%	±4%	±4%	±4%	±4%	±4%	±4%
Graduation	1lb.in	1lb.in	.5lb.ft	1lb.ft	1lb.ft	2lb.ft	2.5lb.ft
Square driver (D)	1/4"	3/8"	3/8"	1/2"	1/2"	3/4"	3/4"
Length	11.02"	12.40"	16.73"	19.88"	20.67"	33.66"	41.54"
Weight	1.50lb	1.81lb	2.29lb	2.56lb	2.87lb	11.021b	13.01lb

DIAL TORQUE WRENCHES

INSPECTION CERTIFICATE

VIDEO

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



IST-DW70

SPECIFICATION

Part No.	IST-DW3D5	IST-DW9	IST-DW18	IST-DW35	IST-DW70	IST-DW140	IST-DW240	IST-DW350
Range	0.7~3.5N.m 6~30in.lb	1.8~9N.m 15~75in.lb	3.6~18N.m 30~150in.lb	7~35N.m 60~300in.lb	14~70N.m 120~600in.lb	28~140N.m 20~100ft.lb	48~240N.m 35~175ft.lb	70~350N.m 50~250ft.lb
Accuracy	±4%	±4%	±4%	±4%	±4%	±4%	±4%	±4%
Graduation	0.05N.m .5in.lb	0.1N.m 1in.lb	0.2N.m 2in.lb	0.5N.m 5in.lb	1N.m 10in.lb	2N.m 1ft.lb	3N.m 2.5ft.lb	2.5N.m 2.5ft.lb
Square driver (D)	1/4"	1/4"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"
Length	10"	10"	10"	10"	14.88"	21.5"	21.5"	21.5"
Weight	1.06lb	1.06lb	1.06lb	1.06lb	1.82lb	2.89lb	2.89lb	2.89lb

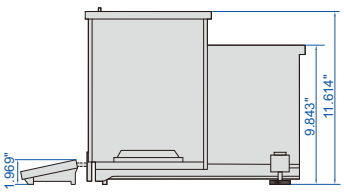
ELECTRONIC ANALYTICAL BALANCES

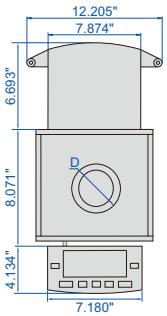
DATA OUTPUT

VIDEO

- Rear electromagnetic sensor
- Separated display unit and weighing unit, reduce vibration error
- Digital processing technology improves reading stability and response speed for micro sample addition, sample weight and balance reading is consistent
- Unit: g, oz, ct, lb
- Weighing, counting, taring, percentage
- Data output

8310-320A





SPECIFICATION

Part No.	8310-120M	8310-210M	8310-320M	8310-120A	8310-210A	8310-320A
Calibration	external calibration			internal calibration		
Maximum weighing	.246554lb/120g	.462970lb/210g	.705479lb/320g	.246554lb/120g	.462970lb/210g	.705479lb/320g
Minimum weighing	.000022lb/10mg	.000022lb/10mg	.000022lb/10mg	.000022lb/10mg	.000022lb/10mg	.000022lb/10mg
Resolution (d)	.000001lb/0.1mg	.000001lb/0.1mg	.000001lb/0.1mg	.000001lb/0.1mg	.000001lb/0.1mg	.000001lb/0.1mg
Verification interval (e)	.00001lb/1mg	.00001lb/1mg	.00001lb/1mg	.00001lb/1mg	.00001lb/1mg	.00001lb/1mg
Accuracy (m is load)	m≤.110231lb: ±.0 00001lb; .110231lb<m≤.440924lb: ±.000002lb; m>.440924lb: ±.000003lb			m≤.110231lb: ±.0 00001lb; .110231lb<m≤.440924lb: ±.000002lb; m>.440924lb: ±.000003lb		
Repeatability	±.000001lb					
Linearity	±.000004lb					
Stabilization time	2.5s					
Weighing pan size (D)	3.543" DIA					
Output	RS232					
Operation temperature	50~86°F					
Operation humidity	20~85% RH					
Power supply	power adapter (12V/2A)					
Dimension (L×W×H)	18.898×12.205×12.598"					
Weight	13.228lb					

printer (**optional**)

calibration weight
(included in **8310-120M**, **8310-210M** and **8310-320M**)

OPTIONAL ACCESSORY

RS232 cable	8304-CABLE*
Printer	8303-PRINTER

*Used to connect with computers

ELECTRONIC ANALYTICAL BALANCES (BASIC TYPE)

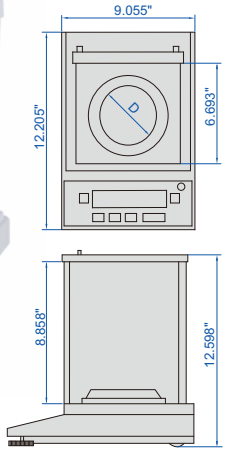
DATA OUTPUT

- Downward-mounted electromagnetic sensor
- Weighing, counting, taring, percentage
- LCD display, with backlight
- Data output
- Unit: g, ct, oz, lb

calibration weight (included)

printer (**optional**)

8304-120



VIDEO

SPECIFICATION

Part No.	8304-120	8304-220
Maximum weighing	.264554lb/120g	.485017lb/220g
Minimum weighing	.000022lb/10mg	.000022lb/10mg
Resolution (d)	.000001lb/0.1mg	.000001lb/0.1mg
Verification interval (e)	.000010lb/1.0mg	.000010lb/1.0mg
Accuracy (m is load)	m≤.110231lb: ±.000001lb; .110231lb<m≤.440924lb: ±.000002lb	m≤.110231lb: ±.000001lb; .110231lb<m≤.440924lb: ±.000002lb m>.440924lb: ±.000003lb
Repeatability	±.000004lb	
Linearity	±.000004lb	
Stabilization time	2.5s	
Output	RS232	
Weighing pan size (D)	3.543" DIA	
Operation temperature	50~86°F	
Operation humidity	20~85% RH	
Power supply	power adapter (12V/2A)	
Dimension (L×W×H)	9.055×12.205×12.598"	

OPTIONAL ACCESSORY

RS232 cable	8304-CABLE*
Printer	8303-PRINTER
Data output cable (keyboard format)	7302-8304

*Used to connect with computers

ELECTRONIC PRECISION BALANCES

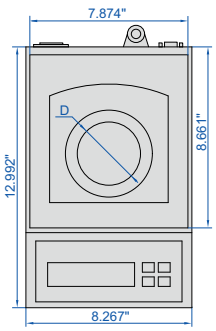
DATA OUTPUT

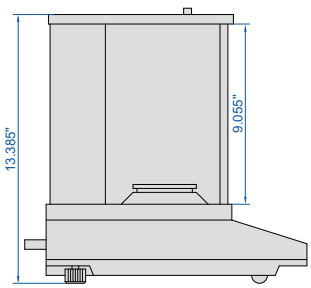
- Aluminum alloy shell, wind shield, three side glass sliding doors
- Electromagnetic balance sensor
- Unit: g, ct, ozt, oz, gn, dwt, mg
- Weighing, counting, taring
- Data output
- With a hook at the bottom

calibration weight (included)

printer (**optional**)

8303-520-U





SPECIFICATION

Part No.	8303-220-U	8303-320-U	8303-520-U	8303-620-U	8303-1020-U
Maximum weighing	220g/1100ct	320g/1600ct	520g/2600ct	620g/3100ct	1020g/5100ct
Minimum weighing	20mg/.1ct	20mg/.1ct	100mg/.5ct	100mg/.5ct	100mg/.5ct
Resolution (d)	1mg/.005ct	1mg/.005ct	1mg/.005ct	1mg/.005ct	1mg/.005ct
Verification interval (e)	10mg/.05ct	10mg/.05ct	10mg/.05ct	10mg/.05ct	10mg/.05ct
Accuracy (m is load)	m≤250ct: ±.025ct 250ct<m≤1000ct: ±.05ct m>1000ct: ±.075ct		m≤2500ct: ±.025ct m>2500ct: ±.05ct		
Weighing pan size (D)	3.150" DIA				4.724" DIA
Operation temperature	59~86°F		64.4~73.4°F		
Operation humidity	40%~80% RH		50%~70% RH		
Power supply	110V, 50/60Hz				
Dimension (L×W×H)	12.992×8.267×13.385"				

OPTIONAL ACCESSORY

RS232 cable	8301-CABLE*
Printer	8303-PRINTER
Data output cable (keyboard format)	7302-8001
Wireless transmitter (receiver is needed)	7315-8301

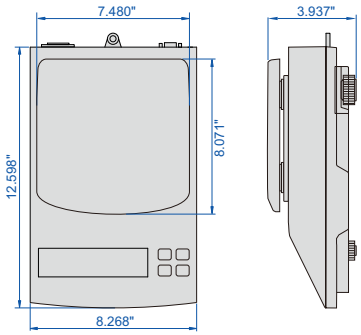
*Used to connect with computers

ELECTRONIC BALANCES (STANDARD TYPE)

DATA OUTPUT

- LCD display, with backlight
- Unit: g, ct, ozt, oz, GN, dwt, lb, kg
- Weighing, counting, taring
- Data output
- With a hook at the bottom

8305-5000-U



OPTIONAL ACCESSORY

RS232 cable	8301-CABLE*
Printer	8303-PRINTER
Data output cable (keyboard format)	7302-8001
Wireless transmitter (receiver is needed)	7315-8301

*Used to connect with computers

SPECIFICATION

Part No.	8305-2000-U	8305-3000-U	8305-5000-U	8305-6000-U
Maximum weighing	4.4lb/2kg	6.6lb/3kg	11.0lb/5kg	13.2lb/6kg
Minimum weighing	.00125lb/0.5g	.00125lb/0.5g	.00125lb/0.5g	.00125lb/0.5g
Resolution (d)	.00001lb/0.01g	.00001lb/0.01g	.00001lb/0.01g	.00001lb/0.01g
Verification interval (e)	.0001lb/0.1g	.0001lb/0.1g	.0001lb/0.1g	.0001lb/0.1g
Accuracy (m is load)	m≤1.1lb: ±.0001lb 1.1lb<m≤4.4lb: ±.0002lb	m≤1.1lb: ±.0001lb 1.1lb<m≤4.4lb: ±.0002lb m>4.4lb: ±.0003lb	m≤1.1lb: ±.0001lb 1.1lb<m≤4.4lb: ±.0002lb m>4.4lb: ±.0003lb	m≤1.1lb: ±.0001lb 1.1lb<m≤4.4lb: ±.0002lb m>4.4lb: ±.0003lb
Weighing pan size	7.48×8.07"			
Output	RS232			
Operation temperature	32~104°F			
Operation humidity	≤80% RH			
Power supply	110V/60Hz			
Dimension (L×W×H)	12.598×8.268×3.937"			

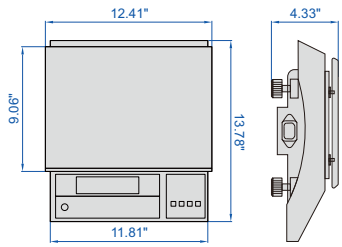
printer (**optional**)

calibration weight (included in **8305-2000-U** and **8305-3000-U**)

INDUSTRIAL ELECTRONIC BALANCES (BASIC TYPE)

- Double weighing pan in stainless steel and plastic
- Weighing, simple counting, taring
- Strain balance sensor
- LCD display, with backlight
- Unit: g, lb, ct, oz
- Overload alarm

8306-20



SPECIFICATION

Operation temperature	14~104°F
Operation humidity	≤85% RH
Dimension of pan	12.41×9.06"
Power	rechargeable lead acid battery (6V/4Ah)
Stable reading time	≤2s

printer (**optional**)

Part No.	Maximum weighing	Resolution (d)	Minimum weighing	Verification interval (e)	Number of verification interval (n)	Accuracy (m is load)
8306-10	10kg/22lb	1g/.001lb	20g/.044lb	10g/.01lb	1000	m≤11lb: ±.011lb; m>11lb: ±.022lb
8306-20	20kg/44lb	1g/.001lb	20g/.044lb	10g/.01lb	2000	m≤11lb: ±.011lb; m>11lb: ±.022lb
8306-30	30kg/66lb	1g/.001lb	20g/.044lb	10g/.01lb	3000	m≤11lb: ±.011lb; 11lb<m≤44lb: ±.022lb; m>44lb: ±.033lb
8306-5A	5kg/11lb	0.1g/.0001lb	5g/.011lb	1g/.001lb	5000	±.0011lb
8306-10A	10kg/22lb	0.1g/.0001lb	5g/.011lb	1g/.001lb	10000	m≤11lb: ±.0011lb; m>11lb: ±.0022lb

OPTIONAL ACCESSORY

RS232 cable	8306-CABLE*
Printer	8306-PRINTER

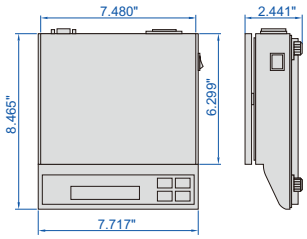
*Used to connect with computers

ELECTRONIC BALANCES

DATA OUTPUT

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

8301-3000-U



SPECIFICATION

Part No.	8301-300-U	8301-600-U	8301-1200-U	8301-3000-U	8301-6000-U
Maximum weighing	1500ct/9.6000ozt	3000ct/19.2000ozt	6000ct/38.5000ozt	15000ct/96.400ozt	30000ct/192.900ozt
Minimum weighing	1ct/.0064ozt	1ct/.0064ozt	1ct/.0064ozt	10ct/.064ozt	10ct/.064ozt
Resolution (d)	.05ct/.0001ozt	.05ct/.0001ozt	.05ct/.0001ozt	.5ct/.001ozt	.5ct/.001ozt
Verification interval (e)	.5ct/.001ozt	.5ct/.001ozt	.5ct/.001ozt	5ct/.01ozt	5ct/.01ozt
Accuracy (m is load)	m≤250ct/1.6075ozt: ±.25ct/.0016ozt; 250ct/1.6075ozt<m≤1000ct/32.1507ozt: ±.5ct/.0032ozt; m>1000ct/32.1507ozt: ±.75ct/.0048ozt			m≤2500ct/16.075ozt: ±2.5ct/.016ozt; 2500ct/16.075ozt<m≤10000ct/64.301ozt: 5ct/.032ozt; m>10000ct/64.301ozt: ±7.5ct/.048ozt	
Operation pan size	5.315" DIA			7.48×6.30"	
Operation temperature	32~104°F				
Operation humidity	≤80% RH				
Power supply	110V, 50/60Hz				
Dimension (L×W×H)	8.465×7.717×2.441"				

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

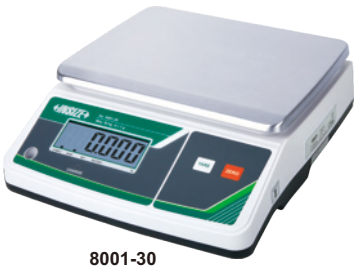
calibration weight
(included in **8301-300-U**, **8301-600-U** and **8301-1200-U**)

OPTIONAL ACCESSORY

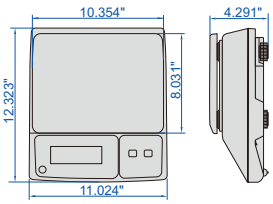
RS232 cable	8301-CABLE
Data output cable (keyboard format)	7302-8001
Wireless transmitter (receiver is needed)	7315-8301

WEIGHING SCALES (HIGH PRECISION)

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



8001-30



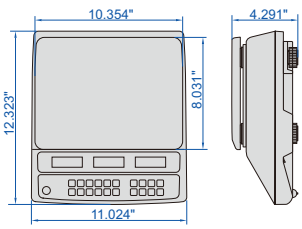
SPECIFICATION

Part No.	8001-6	8001-15	8001-30
Maximum weighing	12lb/6kg	30lb/15kg	60lb/30kg
Minimum weighing	.0090lb/4g	.022lb/10g	.044lb/20g
Resolution (d)	.0005lb/0.2g	.001lb/0.5g	.002lb/1g
Accuracy (m is load)	m≤2.2lb: ±.0025lb 2.2lb<m≤8.8lb: ±.0005lb m>8.8lb: ±.0075lb	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
Units	lb, kg		
Operation temperature	14~104°F		
Power	rechargeable battery (6V/3.2Ah), power adapter (12V/500mA)		
Dimensions of pan	10.354×8.031"		

COUNTING SCALES

- 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.	8101-6	8101-15	8101-30
Maximum weighing	12lb/6kg	30lb/15kg	60lb/30kg
Minimum weighing	.0090lb/4g	.022lb/10g	.044lb/20g
Resolution (d)	.0005lb/0.2g	.001lb/0.5g	.002lb/1g
Accuracy (m is load)	m≤2.2lb: ±.0025lb 2.2lb<m≤8.8lb: ±.0005lb m>8.8lb: ±.0075lb	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"		

ELECTRONIC POCKET SCALE (ECONOMIC TYPE)

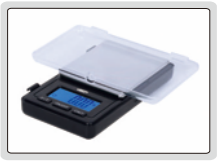
ATTENTION:
LOW ACCURACY

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

8601-100

SPECIFICATION

Part No.	8601-100
Maximum weighing	3.5oz
Minimum weighing	0.005oz
Resolution (d)	0.0005oz
Accuracy (m is load)	0.005oz≤m≤0.05oz: ±0.0015oz; 0.05oz<m≤1.5oz: ±0.0025oz 1.5oz<m≤2.5oz: ±0.0035oz; m>1.5oz: ±0.007oz
Units	oz, g, dwt, ozt
Dimension of pan	2.165×2.520"
Dimension (L×W×H)	4.252×2.559×.827"
Operation temperature	14~104°F
Power supply	2×AAA batteries



use of pan

ELECTRONIC POCKET SCALE (ECONOMIC TYPE)

ATTENTION:
LOW ACCURACY

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

8602-200

SPECIFICATION

Part No.	8602-200
Maximum weighing	7oz
Minimum weighing	0.01oz
Resolution (d)	0.001oz
Accuracy (m is load)	0.01oz≤m≤0.1oz: ±0.003oz; 0.1oz<m≤3oz: ±0.005oz 3oz<m≤5oz: ±0.007oz; m>5oz: ±0.014oz
Units	oz, g, dwt, ozt
Dimension of pan	2.165×2.520"
Dimension (L×W×H)	4.724×2.756×.669"
Operation temperature	14~104°F
Power supply	2×CR2032 batteries

use of pan

WEIGHING SCALES (ECONOMIC TYPE)

- Unit: lb, oz, g, tl

8003-3

SPECIFICATION

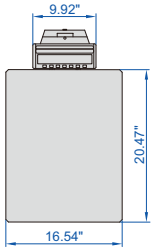
Part No.	8003-3	8003-6	8003-10
Maximum weighing	6.61lb	13.23lb	22.05lb
Minimum weighing	.02lb	.02lb	.04lb
Resolution (d)	.001lb	.001lb	.002lb
Accuracy	±.003lb	±.006lb	±.010lb
Weighing pan size	6.18×6.18"		
Operation temperature	41~95°F		
Power supply	2×AAA batteries, power adapter		
Dimension (L×W)	6.30×8.86"		

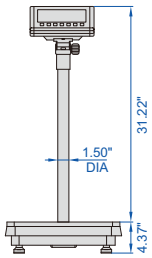
PLATFORM SCALES

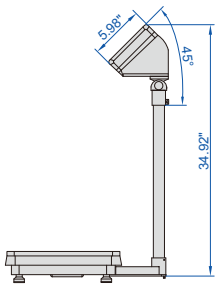
DATA OUTPUT

8501-AL150

printer (**optional**)







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

OPTIONAL ACCESSORY

Printer	8001-PRINTER
Data output cable (keyboard format)	7302-8001

SPECIFICATION

Part No.	8501-AL60	8501-AL150	8501-AL300
Maximum weighing	130lb	330lb	660lb
Minimum weighing	.20lb	.40lb	.80lb
Resolution (d)	.01lb	.02lb	.04lb
Accuracy	±.02lb	±.04lb	±.06lb
Operation temperature	14~104°F		
Material	platform: stainless steel, base: die-cast aluminum		
Dimension of platform	16.54×20.47"		
Power	rechargeable lead acid battery (6V/4Ah)		
Output	RS232		
Weight	40.34lb		

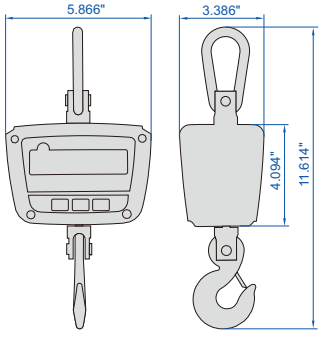
DIRECT VIEW ELECTRONIC CRANE SCALES

IP65 WATERPROOF

- Dust/waterproof level: IP65
- LED display, remote control
- Low voltage indicator
- Unit: lb, kg
- Automatic power off
- Overload alarm
- 360° safe rotary hook and shackle
- Aluminum alloy die casting case with high strength

remote controller (included)

8201-150KG



SPECIFICATION

Part No.	8201-50KG	8201-150KG	8201-300KG
Maximum weighing	10lb	330lb	660lb
Minimum weighing	1lb	2lb	4lb
Resolution (d)	.05lb/.02lb	.10lb/.05lb	.20lb/.10lb
Verification interval (e)	.05lb	.10lb	.20lb
Accuracy	±.05lb	±.10lb	±.20lb
Operation temperature	14~104°F		
Operation humidity	30%~90% RH		
Overload alarm	100%F.S.+9e		
Maximum safe load	125%F.S.		
Limited overload	400%F.S.		
Power supply	rechargeable battery 6V/3Ah (for 40 hours working)		
Stable reading time	≤8s		

STANDARD DELIVERY

Main unit	1 pc
Remote controller	1 pc
Battery charger	1 pc

WIRELESS ELECTRONIC CRANE SCALES

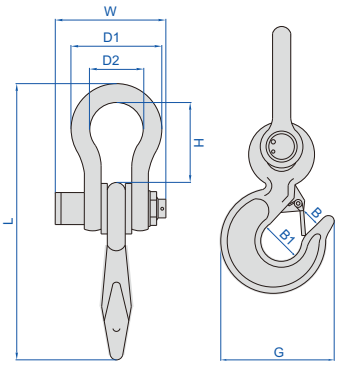
IP65 WATERPROOF

VIDEO

- Wireless zero-setting, subracting tare value, totalization
- Remote reading
- Wireless transmission distance up to 300ft
- Low voltage indication, overload alarm
- Unit: kg, lb
- Automatic power off

remote controller (included)

8205-3T



SPECIFICATION

Overload alarm	100%F.S.+9e
Maximum safe load	150%F.S.
Limited overload	400%F.S.
Stable reading time	≤8s
Power supply	rechargeable battery 4.2V/1A (for 40 hours working)
Operation temperature	14~104°F
Operation humidity	≤85% RH

Part No.	L	G	D2 (DIA)	H	D1 (DIA)	W	B	B1 (DIA)
8205-2T	12.6"	4.9"	2.8"	3.5"	3.5"	7.8"	1.3"	1.8"
8205-3T	12.6"	4.9"	2.8"	3.5"	5.2"	7.8"	1.3"	1.8"
8205-5T	16.1"	6.3"	3.5"	4.1"	6.3"	8.6"	1.7"	2.2"
8205-10T	18.3"	7.9"	3.7"	4.1"	6.7"	9.7"	1.7"	2.6"
8205-15T	20.5"	7.9"	4.7"	5.1"	8.5"	10.3"	2.4"	3.1"
8205-20T	24.4"	11.2"	5.6"	5.3"	9.9"	11.6"	2.9"	4.1"
8205-30T	30.3"	12.1"	7.1"	8.1"	12.8"	14.1"	3.3"	4.9"
8205-50T	40.2"	18.5"	7.9"	13.3"	14.2"	17.2"	5.3"	6.7"

SPECIFICATION

Part No.	8205-2T	8205-3T	8205-5T	8205-10T	8205-15T
Maximum weighing	4400lb	6600lb	11000lb	22000lb	33000lb
Minimum weighing	22lb	44lb	88lb	220lb	220lb
Resolution (d)	1lb/.5lb	1lb/.5lb	2lb/1lb	5lb	5lb
Accuracy (m is load)	m≤1100lb: ±1lb; m>1100lb: ±2lb	m≤1100lb: ±1lb; 1100lb<m≤4400lb: ±2lb; m>4400lb: ±3lb	m≤2200lb: ±2lb; 2200lb<m≤8800lb: ±4lb; m>8800lb: ±6lb	m≤5500lb: ±5lb; m>5500lb: ±10lb	m≤5500lb: ±5lb; 5500<m≤22000lb: ±10lb; m>22000lb: ±15lb

Part No.	8205-20T	8205-30T	8205-50T
Maximum weighing	44000lb	66000lb	110000lb
Minimum weighing	440lb	440lb	880kg
Resolution (d)	10lb	10lb	20lb
Accuracy (m is load)	m≤11000lb: ±10lb; m>11000lb: ±20lb	m≤11000: ±10lb; 5t<m≤44000: ±20lb; m>44000: ±30lb	m≤11000lb: ±20lb; 11000t<m≤44000t: ±40lb; m>44000t: ±60lb

large display (**optional**)

wireless printer (**optional**)

wireles receiver (**optional**)

STANDARD DELIVERY

Main unit	1 pc
Remote controller	1 pc

OPTIONAL ACCESSOR

Wireless printer	**8205-PRINTER** (must be supplied with scales together)
Large display	**8205-SCREEN** (must be supplied with scales together)
Wireless receiver (serial port signal, connect to computers)	**8205-RECEIVER** (must be supplied with scales together)

PORTABLE CRANE SCALE
PART NO. 8604-40

ATTENTION:
LOW ACCURACY

- Zero-setting, subtracting tare value
- Automatic power off
- LCD display, with backlight
- Unit: kg
- Overload indication

8604-40

built-in measuring tape
(included)

SPECIFICATION

Maximum weighing	40kg
Minimum weighing	1kg
Resolution (d)	50g
Accuracy	±50g
Operation temperature	14~113°F
Operation humidity	30%~90%RH
Limited load	50kg
Power supply	2×AAA batteries

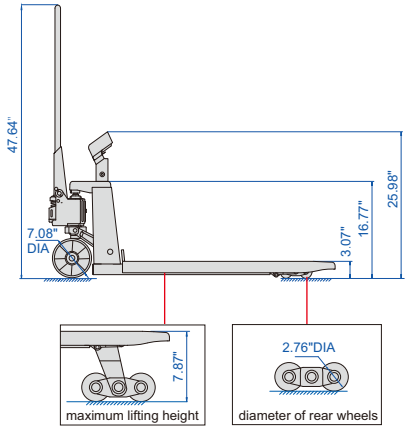
FORKLIFT SCALES

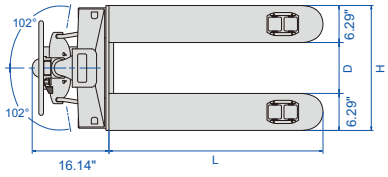
VIDEO

- Zero-setting, subracting tare value, counting, check weighing
- Automatic screen off, automatic power off
- Low voltage indication, overload indication
- Weight hold, weight totalisation, percentage display
- LED large screen display
- Unit: kg, lb

LED indicator

8801-A20





SPECIFICATION

Part No.	8801-A15	8801-A20	8801-A25	8801-B15	8801-B20	8801-B25
Maximum weighting	1500kg/3300lb	2000kg/4400lb	2500kg/5500lb	1500kg/3300lb	2000kg/4400lb	2500kg/5500lb
Minimum weighting	10kg/22lb	20kg/44lb	20kg/44lb	10kg/22lb	20kg/44lb	20kg/44lb
Resolution	0.5kg/1lb	1kg/2lb	1kg/2lb	0.5kg/1lb	1kg/2lb	1kg/2lb
Accuracy	±1kg/±2lb	±1kg/±2lb	±2kg/±4lb	±1kg/±2lb	±1kg/±2lb	±2kg/±4lb
Forklift arm length (L)	45.28"			48.03"		
Forklift arm distance (D)	8.67"			14.17"		
Overall forklift width (H)	21.26"			26.77"		
Weight	216.05lb			231.49lb		
Material	mild steel					
Indicator power supply	rechargeable lead acid battery(6V/4Ah)					
Operation temperature	14~122°F					
Operation humidity	30%~90%RH					
Limited load	2500kg/5500lb	3000kg/6600lb	3000kg/6600lb	2500kg/5500lb	3000kg/6600lb	3000kg/6600lb

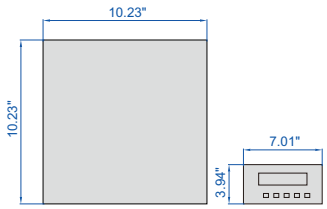
PARCEL SCALES

- Weighting, counting, subtracting tare value
- LED display, adjustable brightness
- Low voltage indication
- Automatic power off
- Overload indication
- Unit: kg, lb

8502-30

SPECIFICATION

Part No.	8502-30	8502-50	8502-60	8502-75
Maximum weighing	66lb	110lb	132lb	165lb
Minimum weighing	.004lb	.04lb	.04lb	.04lb
Resolution (d)	m≤6.6lb: .0001lb 6.6lb<m≤66lb: .001lb	.001lb	.001lb	.001lb
Accuracy (m is load)	m≤6.6lb: ±.0006lb; 6.6lb<m≤66lb: ±.006lb	±.006lb	±.006lb	±.006lb
Weight of calibration	20kg	50kg	50kg	50kg
Weighing pan size	10.23×10.23"			
Material	platform: ABS plastic, base: die-cast aluminum			
Operation temperature	40~95°F			
Operation humidity	30%~80%RH			
Power supply	power adapter (6V/300mA) or 4×1.5V AA batteries			



OPTIONAL ACCESSOR

Cast iron weights	8913

WEIGHT SETS

INSPECTION CERTIFICATE

8910-5KGF1

- Supplied with manufacturer inspection certificate

CLASS AND MATERIAL

Specification	Part No.				
	E2 (non-magnetic stainless steel)	F1 (non-magnetic stainless steel)	F1 (304 stainless steel)	F2 (304 stainless steel)	M1 (304 stainless steel)
1mg~100g	8910-100GE2	8910-100GF1	8910-100GF1S	8910-100GF2	8910-100GM1
1mg~200g	8910-200GE2	8910-200GF1	8910-200GF1S	8910-200GF2	8910-200GM1
1mg~1kg	8910-1KGE2	8910-1KGF1	8910-1KGF1S	8910-1KGF2	8910-1KGM1
1mg~2kg	8910-2KGE2	8910-2KGF1	8910-2KGF1S	8910-2KGF2	8910-2KGM1
1mg~5kg	8910-5KGE2	8910-5KGF1	8910-5KGF1S	8910-5KGF2	8910-5KGM1

SPECIFICATION AND SHAPE

Weight	Specification				
	1mg~100g	1mg~200g	1mg~1kg	1mg~2kg	1mg~5kg
1mg	⬟	⬟	⬟	⬟	⬟
2mg	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*
5mg	⬟	⬟	⬟	⬟	⬟
10mg	⬟	⬟	⬟	⬟	⬟
20mg	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*
50mg	⬟	⬟	⬟	⬟	⬟
100mg	⬟	⬟	⬟	⬟	⬟
200mg	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*	⬟ ⬟*
500mg	⬟	⬟	⬟	⬟	⬟
1g	▮	▮	▮	▮	▮
2g	▮ ▮*	▮ ▮*	▮ ▮*	▮ ▮*	▮ ▮*
5g	▮	▮	▮	▮	▮
10g	▮	▮	▮	▮	▮
20g	▮ ▮*	▮ ▮*	▮ ▮*	▮ ▮*	▮ ▮*
50g	▮	▮	▮	▮	▮
100g	▮	▮	▮	▮	▮
200g		▮ ▮*	▮ ▮*	▮ ▮*	▮ ▮*
500g			▮	▮	▮
1kg			▮	▮	▮
2kg				▮ ▮*	▮ ▮*
5kg					▮
Quantity	21 pcs	23 pcs	25 pcs	27 pcs	28 pcs
Total range	1mg~211.11g	1mg~611.11g	1mg~2111.11g	1mg~6111.11g	1mg~11111.11g

⬟ sheet ▮ cylinder

⬟* sheet, with mark ▮* cylinder, with mark

INSIZE is a world leader in metric and offering 4,000 SKU's. These popular items are stocked or available generally in 7 days. On these pages you will find some very popular metric tools, but for the full offering visit our metric site www.insizecanada.com or request a metric catalog from sales@insizecanada.com

DIAL CALIPERS

SHOCK PROOF

INSPECTION CERTIFICATE

Dial indicator graduation 0.02mm (mm)

Part No.	Range	Accuracy	L	a	b	c	d	D	t
1312-150A*	0-150mm	±0.03mm	235	21	16.5	16	40	Ø39	6.5
1312-200A*	0-200mm	±0.03mm	288	24	19	16	48	Ø39	6.5
1312-300A*	0-300mm	±0.03mm	410	28	22	20	62	Ø44.5	7.5

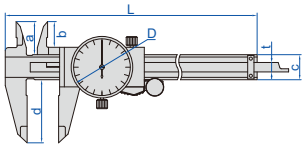
Dial indicator graduation 0.01mm (mm)

Part No.	Range	Accuracy	L	a	b	c	d	D	t
1311-150A*	0-150mm	±0.03mm	235	21	16.5	16	40	Ø39	6.5
1311-200A*	0-200mm	±0.03mm	288	24	19	16	48	Ø39	6.5
1311-300A*	0-300mm	±0.03mm	410	28	22	20	62	Ø44.5	7.5

*Supplied with manufacturer inspection certificate

1312-150A

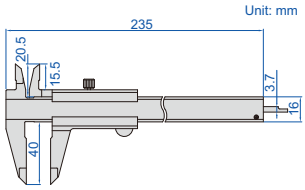
- Shockproof dial indicator
- Made of stainless steel



VERNIER CALIPERS

POPULAR MODEL

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



1205-150S

Part No.	Range	Accuracy	Graduation
1205-150S	0-150mm/0-6"	±0.05mm	0.05mm/1/128"
1205-1502S	0-150mm/0-6"	±0.03mm	0.02mm/0.001"

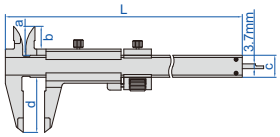
VERNIER CALIPER WITH FINE ADJUSTMENT

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

1233-130

(mm)

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



VERNIER CALIPERS WITH THUMB CLAMP

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

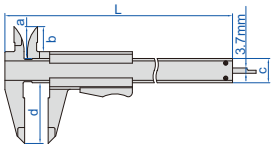
1223-150

Graduation 0.05mm/1/128" (mm)

Part No.	Range	Accuracy	L	a	b	c	d
1223-150	0-150mm/0-6"	±0.05mm	230	20.5	16.5	16	40
1223-200	0-200mm/0-8"	±0.05mm	295	23.5	19	16	50

Graduation 0.02mm/0.001" (mm)

Part No.	Range	Accuracy	L	a	b	c	d
1223-1502	0-150mm/0-6"	±0.03mm	230	20.5	16.5	16	40
1223-2002	0-200mm/0-8"	±0.03mm	295	23.5	19	16	50

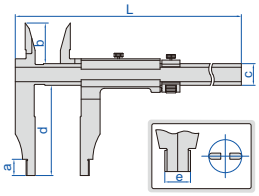


VERNIER CALIPER (SOLID TYPE)

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

1236-614

solid type (without screw)



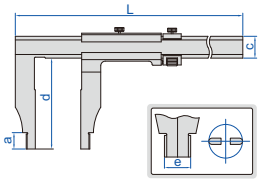
Graduation 0.05mm/1/128"

Part No.	Range	Accuracy	a	b	c	d	e	L
1236-614	0-600mm/0-24"	±0.08mm	18mm	45mm	24mm	100mm	20mm	770mm

VERNIER CALIPER (SOLID TYPE)

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

1208-614



solid type (without screw)

Graduation 0.05mm/1/128" **(mm)**

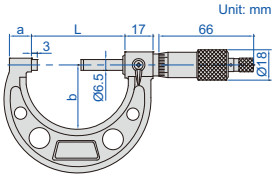
Part No.	Range	Accuracy	a	c	d	e	L
1208-614	0-600mm/0-24"	±0.08mm	18	24	100	20	770

OUTSIDE MICROMETERS

POPULAR MODEL

INSPECTION CERTIFICATE

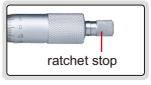
- Graduation: 0.01mm
- Carbide measuring faces
- Ratchet stop
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)



3203-25A

3203-50A

3203-1004A



Part No.	Range	Accuracy	L	a	b
3203-25A*	0-25mm	±2μm	32mm	9mm	28mm
3203-50A*	25-50mm	±2μm	57mm	14mm	38mm
3203-75A*	50-75mm	±2μm	82mm	15mm	49mm
3203-100A*	75-100mm	±3μm	107mm	15mm	60mm
3203-125A	100-125mm	±3μm	133mm	16.5mm	73mm
3203-150A	125-150mm	±3μm	158mm	16.5mm	85mm
3203-175A	150-175mm	±4μm	183mm	19.4mm	104mm
3203-200A	175-200mm	±4μm	209mm	19.4mm	117mm
3203-225A	200-225mm	±4μm	234mm	19.4mm	130mm
3203-250A	225-250mm	±5μm	260mm	19.4mm	142mm
3203-275A	250-275mm	±5μm	285mm	19.4mm	155mm

*Supplied with manufacturer inspection certificate

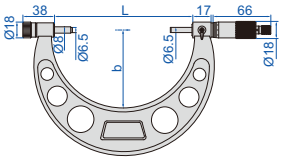
Part No.	Range	Micrometers included	Packaging
3203-753A*	0-75mm	3203-25A, 3203-50A, 3203-75A	blow mould case
3203-1004A*	0-100mm	3203-25A, 3203-50A, 3203-75A, 3203-100A	blow mould case
3203-1506A	0-150mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A	blow mould case
3203-3012A	0-300mm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

OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

3206-150A

3206-400

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



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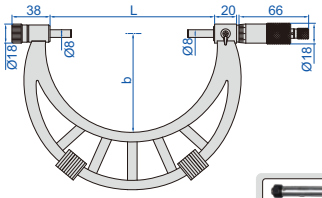

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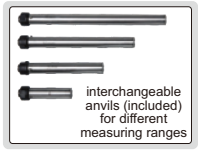


(mm)

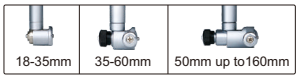
Part No.	Range	Accuracy	L	b	Setting standard (included)	Type
3206-150A	0-150mm	6μm	158mm	82mm	25, 50, 75, 100, 125	A
3206-300A	150-300mm	9μm	308mm	165mm	150, 175, 200, 225, 250, 275	A
3206-400	300-400mm	11μm	409mm	224mm	325, 375	B
3206-500	400-500mm	13μm	509mm	275mm	425, 475	B
3206-600	500-600mm	14μm	609mm	321mm	525, 575	B

BORE GAUGES (WITH DIAL INDICATOR)

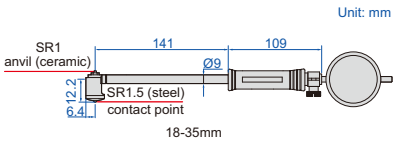
POPULAR MODEL

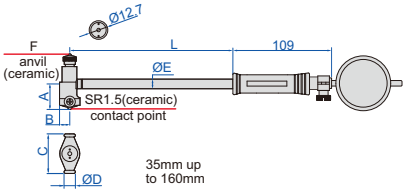
ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

VIDEO



- Optional accessory: setting ring (part no. **6312**), long handle (part no. **7351**), bore gauge setter





2322-35A

(mm)

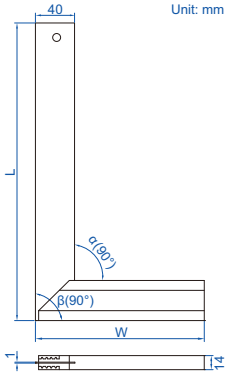
Range	A	B	C	ØD	ØE	F	L
35-60mm	22	9	27	13	12.8	SR2	141
50-160mm	26	9	35	13	12.8	SR2	141

Part No.	Range	Indicator	Accuracy	Repeatability
2322-35A	18-35mm	dial indicator, range 10mm, graduation 0.01mm (part no. **2308-10FA**)	±0.015mm	0.003mm
2322-60A	35-60mm		±0.018mm	0.003mm
2322-160A	50-160mm		±0.018mm	0.003mm

TRY SQUARE

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

2275-300



Part No.	Size (L×W)	Squareness	
		Inside (α)	Outside (β)
2275-300	300×170mm	0.5mm	0.5mm

DIAL TEST INDICATORS

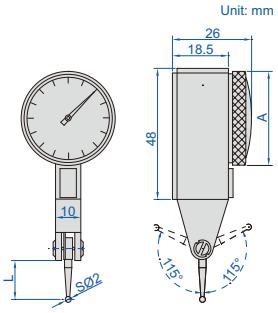
INSPECTION CERTIFICATE

JEWELED BEARING

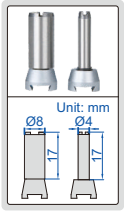
POPULAR MODEL

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

2380-08



clamp (included)



(mm)

Part No.	Range	Graduation	Accuracy	Hysteresis	Dial reading	A	L
2380-08 *	0.8mm	0.01mm	13μm	3μm	0-40-0	Ø30	13.5
2381-08 *	0.8mm	0.01mm	13μm	3μm	0-40-0	Ø37	13.5
2380-02 *	0.2mm	0.002mm	6μm	2μm	0-100-0	Ø30	12.5
2381-02 *	0.2mm	0.002mm	6μm	2μm	0-100-0	Ø37	12.5

*Supplied with manufacturer inspection certificate

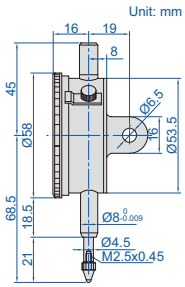
DIAL INDICATORS (STANDARD TYPE)

INSPECTION CERTIFICATE

JEWELED BEARING

- Graduation: 0.01mm
- Hysteresis: 3μm
- Dial reading: 0-100
- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

2308-10A

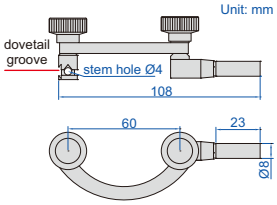


Part No.	Range	Accuracy	Range/rev	Remark	Maximum measuring force	Cap
2308-5A *	5mm	14μm	1mm	lug back	1.5N	can lift
2308-10A *	10mm	17μm	1mm	lug back	1.5N	can lift
2308-10FA *	10mm	17μm	1mm	flat back	1.5N	can lift

*Supplied with manufacturer inspection certificate

DIAL TEST INDICATOR HOLDER

6291-1

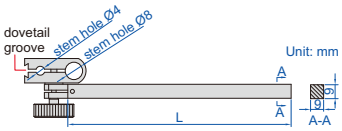


- Can be used with dial test indicators

Part No.
6291-1

DIAL TEST INDICATOR HOLDER

6293-1

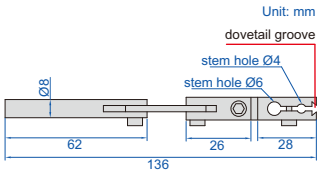


Part No.	Stem section	Stem length (L)
6293-1	9x9mm	100mm

DIAL TEST INDICATOR HOLDER

- Supplied with hex key

6296-1

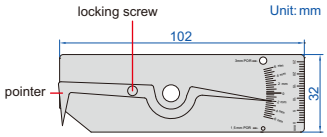


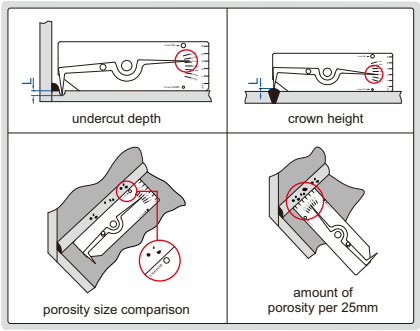
Part No.
6296-1

WELDING GAUGE

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

4834-1

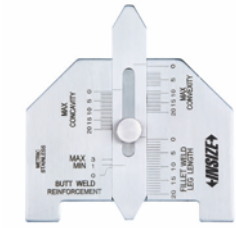




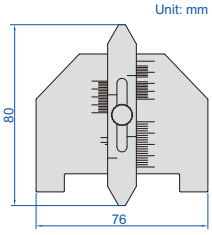
Part No.	Measurement	Range	Graduation	Accuracy
4834-1	undercut depth	0-6mm	0.5mm	±0.5mm
	crown height	0-6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—

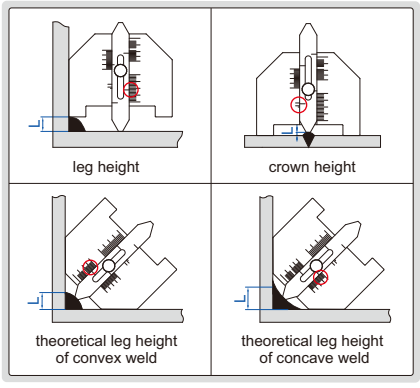
WELDING GAUGE

- Made of stainless steel



4851-1

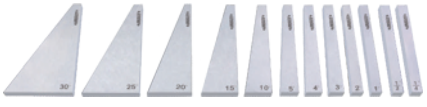




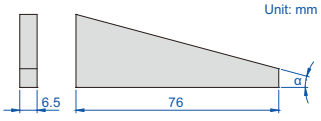
Part No.	Measurement	Range	Graduation	Accuracy
4851-1	leg height	0-20mm	1mm	±0.5mm
	crown height	0-3mm	—	±0.5mm
	theoretical leg height of convex weld	0-20mm	1mm	±0.5mm
	theoretical leg height of concave weld	0-20mm	1mm	±0.5mm

HIGH PRECISION ANGLE PLATE SET

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



4003-12

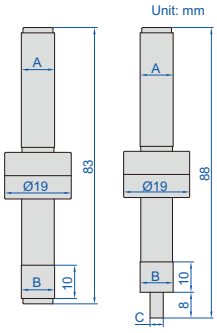


Part No.	Angle plates included	Angle α	Accuracy
4003-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±9 seconds

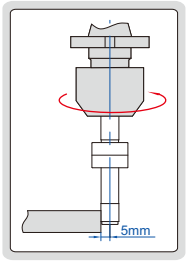
NON-MAGNETIC EDGE FINDERS

- TiAlN coating, non-magnetic, hardness HV2500, extremely wear resistance
- Suitable for machine speed 400~600rpm

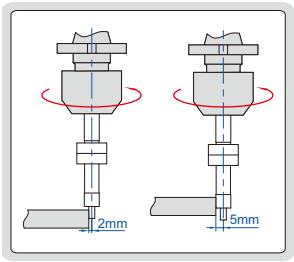
6573-1 6573-2



6573-1 6573-2



6573-1



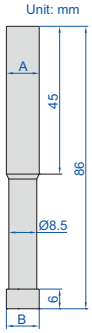
6573-2

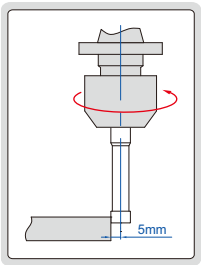
Part No.	Shank (A)	Contact point (B)	Contact point (C)	Accuracy
6573-1	Ø10mm	Ø10mm	—	5μm
6573-2	Ø10mm	Ø10mm	Ø4mm	5μm

CERAMIC EDGE FINDER

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

6568-1





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

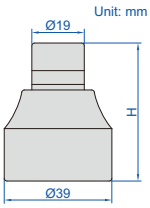
ELECTRONIC ZERO SETTER

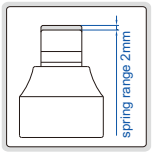
INSIZE PLUS
MADE IN EUROPE

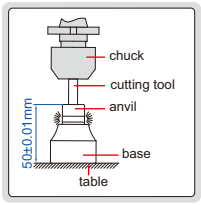
LOW TEST FORCE

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

6553-50







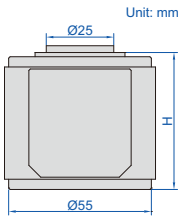
Part No.	Height (H)	Accuracy	Test force
6553-50	50mm	±10μm	7N (at 49mm)

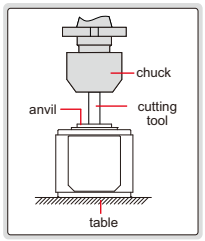
DIGITAL ZERO SETTER

IP65 WATERPROOF

- Resolution: 0.001mm/0.00005"
- IP65 dust/waterproof
- Buttons: on/off, mm/inch, zero
- CR2032 battery
- Automatic power off
- Magnetic base
- Automatic backlight at zero

6557-50





Part No.	Height (H)	Anvil stroke	Accuracy*	Test force	Repeatability
6557-50	50mm	2.5mm	±10μm/0.0004"	10N (at 50mm)	2μm

*The accuracy is ensured within Ø10mm of the center

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