



←INSIZE→

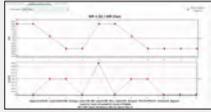
# MEASURING INSTRUMENTS

CATALOG NO. US27

ALL PRODUCTS IN THIS CATALOG ARE USUALLY STOCKED AT INSIZE IN GEORGIA  
Please see our full line catalog US303 or visit [www.insizeus.com](http://www.insizeus.com)

# PRODUCT INDEX

## 1 DATA OUTPUT AND SOFTWARE PAGE 1-6



DATA MANAGEMENT SOFTWARES



WIRELESS DATA TRANSMISSION SYSTEMS

## 2 CALIPERS PAGE 6-24



CALIPERS

## 4 HEIGHT MEASURING TOOLS PAGE 30-33



DIGITAL HEIGHT GAUGES



HEIGHT GAUGES

## 7 BORE DIAMETER AND CIRCUMFERENCE MEASURING TOOLS PAGE 62-73



INSIDE MICROMETERS



INSIDE MICROMETERS



THREE POINTS INTERNAL MICROMETERS



BORE GAUGES



CARBON FIBER BORE GAUGES



TELESCOPING GAUGE SETS



DIGITAL INTERNAL CHAMFER GAUGES

## 8 ARC RADIUS MEASURING TOOLS PAGE 73-76



DIGITAL RADIUS GAUGES



DIGITAL ARC RADIUS CALIPERS



DIGITAL RADIUS CALIPERS

## 3 DEPTH MEASURING TOOLS PAGE 24-29



DEPTH GAUGES



DEPTH GAUGES



DEPTH MICROMETERS

## 5 COMPARISON MEASURING TOOLS PAGE 34-47



UNIVERSAL COMPARISON GAUGES



CARBON FIBER COMPARISON GAUGES



HORIZONTAL MEASURING BENCHES



UNIVERSAL COMPARISON MEASURING BENCHES



INTERNAL/EXTERNAL MEASURING GAUGES

## 6 MICROMETERS PAGE 48-62



DIGITAL MICROMETERS/SNAP GAUGES



OUTSIDE MICROMETERS



3-WIRES



SPECIAL PURPOSE MICROMETERS

## 9 KEYWAY AND CHAMFER MEASURING TOOLS PAGE 76-78



DIGITAL CHAMFER GAUGES



DIGITAL CHAMFER GAUGES



KEYWAY SYMMETRY DIGITAL CALIPERS



KEYWAY DEPTH GAUGES

# PRODUCT INDEX

## 10 INDICATORS AND DIAL INDICATOR STANDS PAGE 78-96



DIAL TEST INDICATORS



INDICATORS



DIAL TEST INDICATOR HOLDERS



MAGNETIC STANDS



DIAL INDICATOR STANDS (NON-MAGNETIC)



DIAL INDICATOR STANDS

## 12 STANDARDS AND GAUGE BLOCKS PAGE 106-115



GAUGE BLOCKS



ANGLE BLOCK SETS



CALIPER/HEIGHT GAUGE CHECKERS



PIN GAUGE SETS



SETTING RINGS



ADJUSTABLE SNAP GAUGES



MEASURING BALLS



THREAD RING/PLUG GAUGES



AUTOMATIC THREAD INSPECTION MACHINES



HANDHELD THREAD INSPECTION MACHINES

## 14 CONCENTRICITY AND RUNOUT TESTERS PAGE 121-125



CONCENTRICITY GAUGES



BENCH CENTERS

## 11 INDICATING MEASURING TOOLS PAGE 96-105



INTERNAL CALIPER GAUGES



EXTERNAL CALIPER GAUGES



THICKNESS GAUGES



TUBE THICKNESS GAUGES



SNAP GAUGES



STEP AND GAP GAUGES



MINI DIGITAL HEIGHT GAUGES



DIGITAL HEIGHT GAUGES



DIGITAL FLUSHNESS GAUGES



DIGITAL CRANKSHAFT TESTERS

## 15 SIMPLE MEASURING TOOLS PAGE 126-140



FEELER GAUGES



RADIUS GAUGES



TAPER SLOT GAUGES



TAPER BORE GAUGES



WELDING GAUGES



INSIDE/OUTSIDE CALIPERS



MEASURING TAPES



MEASURING WHEELS



STEEL RULERS



DIGITAL SCALES WITH MICROSCOPES



COMBINATION SQUARES



SCRIBING CALIPERS



PRECISION SCREWDRIVER SETS



MEASURING TOOL SETS

# PRODUCT INDEX

## 13 ANGLE, STRAIGHTNESS, FLATNESS MEASURING TOOLS PAGE 116-121



PROTRACTORS



GRANITE SQUARES



PERPENDICULARITY TESTERS



SQUARES



STRAIGHT EDGES



STRAIGHT EDGES



FLATNESS MEASUREMENT STANDS



STRAIGHTNESS GAUGES

## 17 LEVELS PAGE 148-157



LEVELS



CROSS-LINE LASER LEVELS



SELF-LEVELING ROTARY LASERS

## 19 LINEAR SCALES PAGE 162-164



LINEAR SCALES



SCALES

## 22 PROFILE PROJECTORS, QUICK MEASUREMENT SYSTEMS, VISION MEASURING SYSTEMS PAGE 175-185



PROFILE PROJECTORS



QUICK MEASUREMENT SYSTEMS



VISION MEASURING SYSTEMS

## 16 SET-UP TOOLS PAGE 140-147



GRANITE SURFACE PLATES



V-BLOCKS



PERMANENT MAGNETIC CHUCKS



PARALLELS



1-2-3/2-4-6 BLOCKS



ANGLE PLATE SETS



ADJUSTABLE ANGLE BLOCKS



SINE BARS



PRECISION VISES

## 18 ON-MACHINE MEASUREMENT PAGE 158-161



CENTERING INDICATORS



EDGE FINDERS



3D TESTERS



TRIGGER-TYPE 3D PROBES



ZERO SETTERS



VERTICAL MILLING MACHINE PERPENDICULARITY MEASURING GAUGES

## 20 PROFILE AND ROUGHNESS TESTERS PAGE 164-170



SURFACE PROFILE MEASURING MACHINES



ROUGHNESS TESTERS

## 21 GAUGE BLOCK STANDS AND JIGS FOR CMM PAGE 171-174



GAUGE BLOCK STANDS FOR CMM



JIGS FOR CMM

# PRODUCT INDEX

## 23 CUTTING TOOLS INSPECTION

PAGE 186-187



TOOL PRESETTERS

## 25 VIDEOSCOPIES

PAGE 211-213



VIDEOSCOPIES

## 26 OTHER DIMENSION MEASURING INSTRUMENTS

PAGE 214-223



ELECTROMAGNETIC ULTRASONIC THICKNESS GAUGES



ULTRASONIC THICKNESS GAUGES



LASER DISTANCE METERS



AUTO LEVELS



HANDHELD 3D SCANNERS



LASER SCAN MICROMETERS



AIR GAUGE DISPLAYS

## 29 TESTING MACHINES, FORCE GAUGES, TENSION METERS

PAGE 242-246



UNIVERSAL TESTING MACHINES



DIGITAL SPRING TESTERS



TENSILE AND COMPRESSION TESTING MACHINES



FORCE GAUGES



TENSION METERS

## 24 MICROSCOPES, MAGNIFIERS

PAGE 188-211



DIGITAL MICROSCOPES



MICROSCOPES



MAGNIFIERS



TELESCOPING INSPECTION MIRRORS

## 27 HARDNESS TESTERS

PAGE 224-239



HARDNESS TESTERS

## 28 FLAW DETECTORS

PAGE 239-241



ULTRASONIC FLAW DETECTORS

## 30 TORQUE TESTERS TORQUE WRENCHES

PAGE 247-251



TORQUE TESTERS



TORQUE SCREWDRIVERS



TORQUE WRENCHES

## 32 COATING INSPECTION

PAGE 253-258



COATING THICKNESS GAUGES



SURFACE PROFILE GAUGES



GLOSS METERS



SPECTROPHOTOMETERS



ROTATIONAL VISCOMETERS

# PRODUCT INDEX

## 31 COMPONENT ANALYSIS PAGE 252



SPECTROMETERS

## 34 OTHER INSTRUMENTS PAGE 278-285



TACHOMETERS



LED STROBOSCOPES



VIBRATION METERS



STROKE COUNTERS



DIGITAL STOPWATCHES



MOISTURE METERS



PERSONAL DOSIMETERS



EDDY CURRENT CONDUCTIVITY TESTERS



TESLAMETERS



LIGHT TRANSMITTANCE METERS

## 37 ELECTRONIC TESTING PAGE 304-311



DIGITAL OSCILLOSCOPES



HANDHELD LCR METERS



DC RESISTANCE TESTERS



INSULATION RESISTANCE TESTERS



DC POWER SUPPLIES



DIGITAL MULTIMETERS



CLAMP METERS



VOLTAGE TESTERS



INTELLIGENT LEAD FREE SOLDERING STATIONS

## 33 ENVIRONMENT TESTING PAGE 259-277



INFRARED THERMAL IMAGING CAMERAS



INFRARED THERMOMETERS



THERMOCOUPLE THERMOMETERS



THERMOHYGROMETERS



DIFFERENTIAL PRESSURE MANOMETERS



ANEMOMETERS



HOT WIRE ANEMOMETERS



SOUND LEVEL METERS



LIGHT METERS

## 35 SCALES PAGE 286-294



SCALES



WEIGHTS

## 36 LIQUID AND GAS TESTING PAGE 295-303



CONDUCTIVITY/TDS/ pH TESTERS



WATER QUALITY TESTERS



REFRACTOMETERS



GAS DETECTORS



HANDHELD AIRBORNE PARTICLE COUNTERS

## 38 METRIC PRODUCTS PAGE 312-313



DIAL CALIPERS



VERNIER CALIPERS



OUTSIDE MICROMETERS



BORE GAUGES

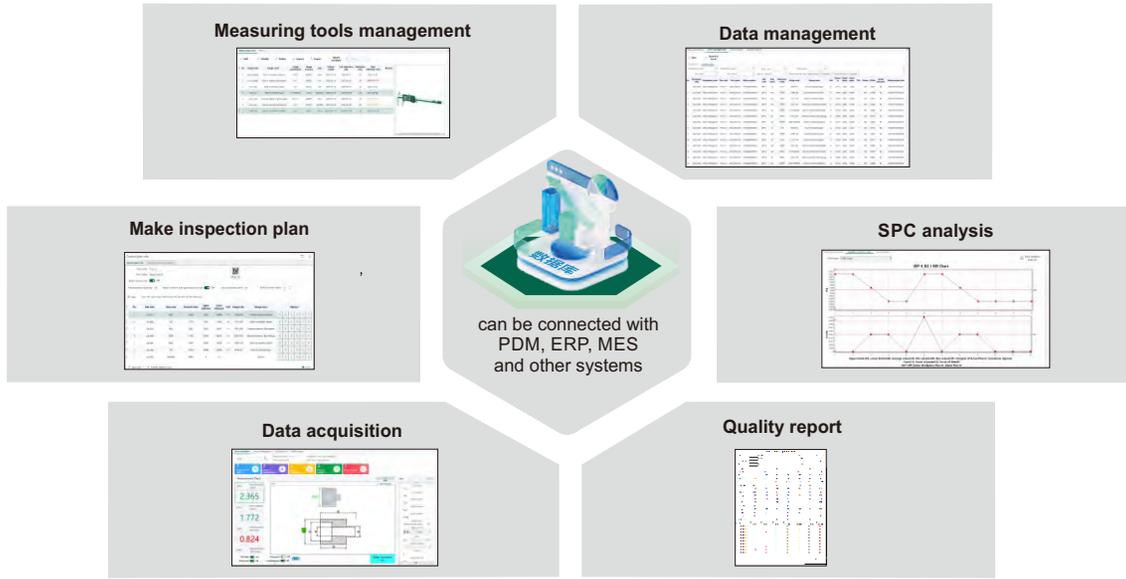


DIAL TEST INDICATORS



DIAL INDICATORS

# MEASUREMENT DATA MANAGEMENT AND ANALYSIS SOFTWARE (BASIC TYPE) PART NO. 7349



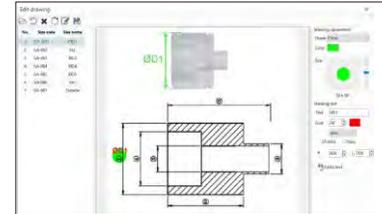
## Measuring tools management

- Information, pictures and calibration date of measuring tools, can import and export Excel



## Make inspection plan

- Define the dimensions, tolerances, measuring tools, drawing guides and formulas of workpieces, can import and export Excel
- Define parameters, QR code and batches of control plans



## Data acquisition

- Drawing-guided measurement, and acquisition data of measuring tools
- Support multiple data acquisition methods
  - manual input: data input with keyboard
  - data transfer: data collection with data output cable
- Support a variety of visual displays such as meters, trend graphs, levels, temperatures and deviations

acquisition interface of drawing-guided measurement

summary

measured value (green display for within-tolerance, red display for out-of-tolerance)

drawing guide

tolerance

switching

acquisition interface of multi-dimension visual

To be continued

Continued from previous page

### Data management

- Query measurement data (red display for out-of-tolerance) and result status (OK/NG, Rework, UpMax/LowMin), can export Excel

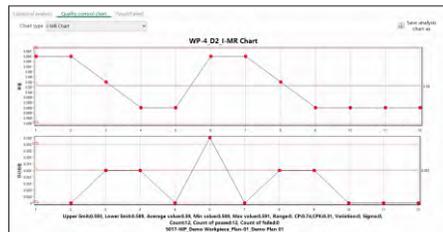
No.	Workpiece code	Workpiece name	Plan code	Plan name	Batch number	Size name	Measured value	Gauge name	Unit	Results	Upper/Lower limits	TOL	Status	Other	Grade	Measurement date	
1	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092601	WP-1	L1	2738	9570-A5	Built-in wireless taper	2.756	0.02	-0.02	-	OK	-0.017	2025-09-26 9:50:11
2	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092602	WP-2	W1	1.961	1008-100	Terminal wireless Leadpin	1.969	0.002	-0.002	-	NG	-0.008	2025-09-26 9:50:12
3	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092603	WP-3	H1	1.654	1113-102	Built-in wireless Leadpin	1.654	0.002	-0.002	-	OK	-0.001	2025-09-26 9:50:12
4	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092604	WP-4	D2	0.589	3091-203	External wireless Micrometer	0.591	0.002	-0.002	-	OK	-0.002	2025-09-26 9:50:12
5	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092605	WP-5	D3	0.394	3123-0586	Built-in wireless Micrometer	0.394	0.002	-0.002	-	NG	-0.002	2025-09-26 9:50:11
6	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092606	WP-6	D1	0.984	2123-154	External wireless Stone Gauge	0.984	0.002	-0.002	-	OK	-0.000	2025-09-26 9:50:13
7	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092607	WP-7	H3	0.197	2008-100108	Built-in wireless Indicator	0.197	0.002	-0.002	-	NG	-0.003	2025-09-26 9:50:14
8	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092608	WP-1	L1	2734	9570-A5	Built-in wireless taper	2.756	0.02	-0.02	-	OK	-0.016	2025-09-26 9:52:23
9	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092609	WP-2	W1	1.962	1008-100	Terminal wireless taper	1.969	0.002	-0.002	-	NG	-0.007	2025-09-26 9:52:24
10	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092610	WP-3	H1	1.655	1113-102	Built-in wireless Leadpin	1.654	0.002	-0.002	-	OK	-0.001	2025-09-26 9:52:24
11	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092611	WP-4	D2	0.589	3091-203	External wireless Micrometer	0.591	0.002	-0.002	-	NG	-0.002	2025-09-26 9:52:24
12	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092612	WP-5	D3	0.394	3123-0586	Built-in wireless Micrometer	0.394	0.002	-0.002	-	OK	-0.000	2025-09-26 9:52:25
13	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092613	WP-6	D1	0.984	2123-154	External wireless Stone Gauge	0.984	0.002	-0.002	-	OK	-0.000	2025-09-26 9:52:25
14	5017-001	Demo Workpiece	Plan-01	Demo Plan 01	PH2025092614	WP-7	H3	0.199	2008-100108	Built-in wireless Indicator	0.197	0.002	-0.002	-	NG	-0.002	2025-09-26 9:52:25

### SPC analysis

- Parameters of SPC analysis: average, min value, max value, range, Cp, Cpk, variation, sigma, counts of OK/NG, can export Excel

No.	Size code	Size name	Nominal value	Upper limit	Lower limit	Average value	Min value	Max value	Range	CP	CPK	Variation	Sigma	Count	Count of passed	Count of failed
1	WP-1	L1	2.756	2.776	2.736	2.747	2.722	2.758	0.036	0.705	0.376	0.000	0.009	12	11	1
2	WP-2	W1	1.969	1.971	1.967	1.967	1.961	1.988	0.027	0.098	0.000	0.000	0.007	12	4	8
3	WP-3	H1	1.654	1.656	1.652	1.655	1.657	1.657	0.005	0.508	0.339	0.000	0.001	12	11	1
4	WP-4	D2	0.591	0.593	0.589	0.590	0.589	0.591	0.002	0.743	0.309	0.000	0.001	12	12	0
5	WP-5	D3	0.394	0.396	0.392	0.394	0.392	0.395	0.003	0.535	0.445	0.000	0.001	12	12	0
6	WP-6	D1	0.984	0.986	0.982	0.985	0.984	0.989	0.005	0.505	0.147	0.000	0.001	12	11	1
7	WP-7	H3	0.197	0.199	0.195	0.196	0.194	0.2	0.006	0.318	0.212	0.000	0.002	12	10	2

- Provide variety of quality analysis control charts: Pie Chart, X Chart, Xbar-R Chart, Xbar-S Chart, I-MR Chart and Run Chart, can export JPEG image



### Quality report

- Generate quality reports with control plan information, SPC parameters, and measurement data, can export Excel

Demo Plan 01 Quality report									
Workpiece code: 5017-WP					Workpiece name: Demo Workpiece				
Plan code: Plan 01					Plan name: Demo Plan 01				
Count of Workpiece: 12					Count of size: 7				
Export date: 2025-9-26					Remark:				
Item	1	2	3	4	5	6	7		
Size name	L1	W1	H1	D2	D3	D1	H3		
Nominal value	2.756	1.969	1.654	0.591	0.394	0.984	0.197		
Upper tolerance	0.02	0.002	0.002	0.002	0.002	0.002	0.002		
Lower tolerance	-0.02	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002		
Average value	2.747	1.967	1.655	0.59	0.394	0.985	0.196		
Min value	2.722	1.961	1.652	0.589	0.392	0.984	0.194		
Max value	2.758	1.988	1.667	0.591	0.395	0.989	0.2		
Range	0.036	0.027	0.005	0.002	0.003	0.005	0.006		
CP	0.705	0.098	0.508	0.743	0.535	0.505	0.318		
CPK	0.376	0	0.339	0.309	0.445	0.147	0.212		
Variation	0	0	0	0	0	0	0		
Sigma	0.009	0.007	0.001	0.001	0.001	0.001	0.002		
Count	12	12	12	12	12	12	12		
Count of passed	11	4	11	12	12	11	10		
Count of failed	1	8	1	0	0	1	2		

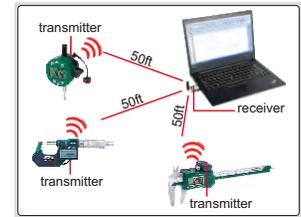
  

No.	Batch number	Built-in wireless gauge	External wireless gauge	Built-in wireless indicator	External wireless Micrometer	Built-in wireless Micrometer	External wireless Indicator	Built-in wireless Indicator
1	PH2025092601	2.76	1.97	1.66	0.59	0.40	0.99	0.20
2	PH2025092602	2.76	1.97	1.66	0.59	0.39	0.99	0.20
3	PH2025092603	2.75	1.99	1.65	0.59	0.39	0.99	0.20
4	PH2025092604	2.75	1.97	1.65	0.59	0.40	0.99	0.20
5	PH2025092605	2.75	1.97	1.66	0.59	0.39	0.99	0.20
6	PH2025092606	2.75	1.97	1.66	0.59	0.39	0.99	0.20
7	PH2025092607	2.75	1.97	1.66	0.59	0.40	0.99	0.20
8	PH2025092608	2.75	1.96	1.66	0.59	0.39	0.99	0.20
9	PH2025092609	2.74	1.96	1.66	0.59	0.39	0.99	0.20
10	PH2025092610	2.72	1.96	1.66	0.59	0.40	0.99	0.20

Sign

## WIRELESS DATA TRANSMISSION SYSTEM

- Through wireless transmission, the readings of measuring tools can be transmitted to computers or mobile phones
- Conform to IEEE802 wireless standard 2.4GHz band communication frequency
- 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			<ul style="list-style-type: none"> <li>Press the button of the transmitter</li> <li>Data is transmitted once, the signal light of the transmitter flashes once</li> </ul>
7315-22	transmitter for large digital calipers			<ul style="list-style-type: none"> <li>Press the button of the transmitter</li> <li>Data is transmitted once, the signal light of the transmitter flashes once</li> </ul>
7315-30	transmitter for digital micrometers			<ul style="list-style-type: none"> <li>Press the "data" button of digital micrometer, can also press the button of the transmitter</li> <li>Data is transmitted once, the signal light of the transmitter flashes once, at the same time, the signal light on the digital micrometer flashes once</li> </ul>
7315-31	transmitter for digital micrometers		 	<ul style="list-style-type: none"> <li>Press the "data" button of digital micrometer</li> <li>Data is transmitted once, the signal light on the digital micrometer flashes once</li> </ul>
7315-51	transmitter for digital indicators		 for 2108, 2138, 2139 series digital indicators  back signal light foot switch (part no. 7304-7, optional)	<ul style="list-style-type: none"> <li>Press the "DATA" button of digital indicator, can also press the button of the transmitter</li> <li>Transmitter button can be fixed on request</li> <li>Data is transmitted once, the signal light on digital indicator flashes once</li> </ul>
			 for other digital indicators  back signal light foot switch (part no. 7304-7, optional)	<ul style="list-style-type: none"> <li>Press the button of the transmitter</li> <li>Transmitter button can be fixed on request</li> <li>Data is transmitted once, the signal light on digital indicator flashes once</li> </ul>

To be continued

Continued from previous page

Part No.	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-50M	transmitter for digital indicators			<ul style="list-style-type: none"> <li>Press the button of the transmitter</li> <li>Data is transmitted once, the signal light of the transmitter flashes once</li> </ul>

### 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		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

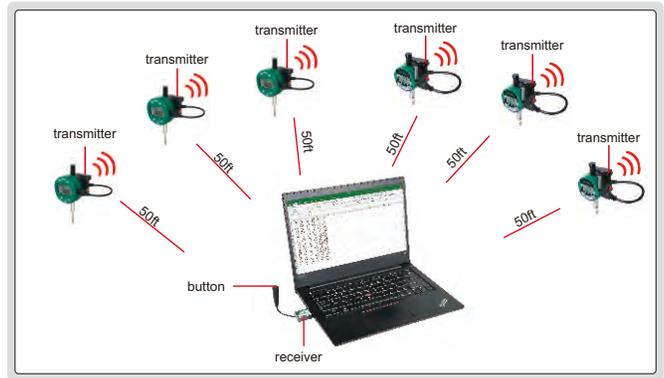
# WIRELESS DATA TRANSMISSION SYSTEM OF DIGITAL INDICATORS (REMOTE CONTROL)



- The readings of digital indicators can be transmitted to computers or mobile phones
- Data acquisition can be remotely controlled through the receiver
- Conform to IEEE802 wireless standard 2.4GHz band communication frequency
- Transmission distance is 50ft (under the condition of no obstruction and no electromagnetic interference)

transmission method: the button on receiver is pressed once, the readings of all digital indicators are transmitted

	channel 1	channel 2	channel 3	channel 4	channel 5	channel 6
	A	B	C	D	E	F
1	24.35	0.4045	57.72	1.949	0.4075	0.03568
2	24.45	0.5045	57.82	2.049	0.5075	0.13568
3	26.35	0.4045	57.72	1.949	0.4075	0.00078
4	27.35	0.4045	57.72	1.7575	0.4075	0.0762
5	28.35	0.4045	57.72	1.7575	0.4075	0.0762
6	29.35	0.4045	57.72	1.7575	0.4075	0.07618
7	30.35	0.4045	57.72	1.7575	0.4075	0.55334
8	31.35	0.4045	57.72	1.7575	0.4075	0.61198
9	24.35	0.4045	57.72	1.7575	0.4075	0.6172



## Transmitter

- Suitable for digital indicators
- CR2032 battery
- 80 hours of operation on a single battery in measurement mode

Part No.	Transmitter	Connecting with digital indicators	Transmit data
7213-56			<ul style="list-style-type: none"> <li>■ Press and hold the button to enter the measurement mode</li> <li>■ Press the receiver button in measurement mode to acquire data</li> </ul>

## 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 key, such as 12.34↵.
- No need to install drivers and softwares  
Data can be transmitted to excel, word, txt etc.
- Suitable for any softwares which can receive keyboard signal

Part No.	Product	Description	Remark	Transmit data
7213-6M		USB port	multichannel receiver connected with 6 transmitters, each channel has status indicator	<ul style="list-style-type: none"> <li>■ Press the button of the receiver</li> <li>■ Data is transmitted once, the signal light of the receiver flashes once</li> </ul>
7213-7M		Type-C port		
7213-8M		Micro USB port		
7213-9M		Lightning port		

hand switch, part no. 7213-SW (included), length 80"



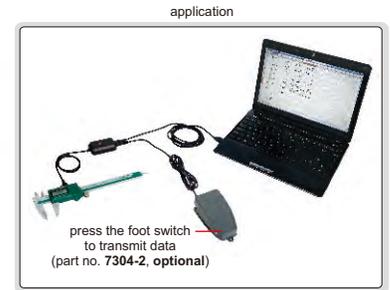
## FOOT SWITCH

- For data transmission

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



7304-2



## IP67 WATERPROOF DIGITAL CALIPERS

←INSIZE→PLUS

- IP67 dust/waterproof
- Resolution .0005"/0.01mm
- Button function: zero, mm/inch, preset, data output
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-80 (receiver is needed), accessory set for digital calipers (part no. 6144, only for range 0-6" and 0-8"), depth base attachment (part no. 6140)



1195-150

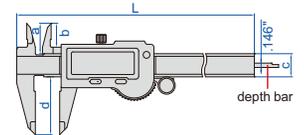
DATA  
OUTPUT

IP67  
WATERPROOF

INSPECTION  
CERTIFICATE

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

- 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
- Optional accessory: accessory set for digital calipers (part no. 6144, only for range 0-6" and 0-8"), depth base attachment (part no. 6140)

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

ATTENTION: NO  
DATA OUTPUT

IP67  
WATERPROOF

INSPECTION  
CERTIFICATE

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"

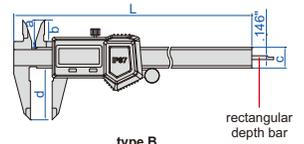
\*Supplied with manufacturer inspection certificate



1118-150B

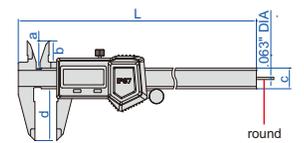


1118-150R



type B

rectangular  
depth bar



type R

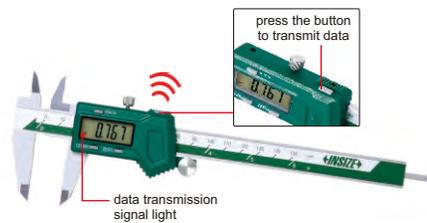
round  
depth bar

## WIRELESS DIGITAL CALIPERS

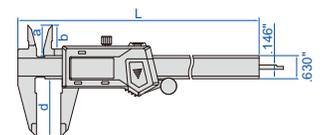
- Non waterproof
- Built-in wireless data transmission module
- Transmission distance is 33 feet (under the condition of no obstruction and no electromagnetic interference)
- Resolution .0005"/0.01mm
- Accuracy: ±.0015"
- Buttons: on/off, zero, inch/mm, data transmission
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: receiver (part no. 7315-2/3/6/7/8/9), accessory set for digital calipers (part no. 6144, only for range 0-6" and 0-8"), depth base attachment (part no. 6140)

INSPECTION  
CERTIFICATE

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



1113-150



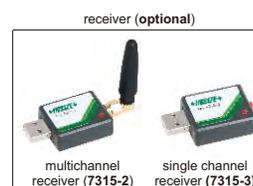
application

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

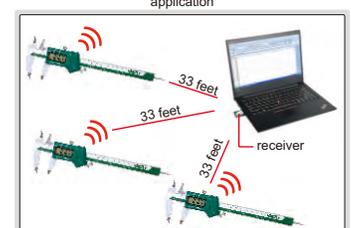


VIDEO



receiver (optional)  
multichannel  
receiver (7315-2)

single channel  
receiver (7315-3)



## DIGITAL CALIPERS (STANDARD TYPE)

INSPECTION  
CERTIFICATE

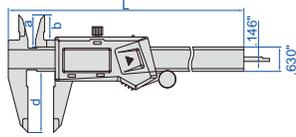
DATA  
OUTPUT

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: wireless transmitter part no. **7315-25** (receiver is needed), accessory set for digital calipers (part no. **6144**, only for range 0-6" and 0-8"), depth base attachment (part no. **6140**)



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

## DIGITAL CALIPERS

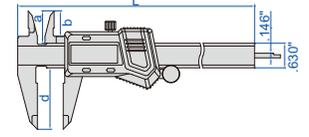
ATTENTION: NO  
DATA OUTPUT

INSPECTION  
CERTIFICATE



1114-150A

- Non waterproof
- Zinc alloy housing for digital unit
- Resolution .0005"/0.01mm
- Buttons: zero, on/off, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: accessory set for digital calipers (part no. **6144**, only for range 0-6" and 0-8"), depth base attachment (part no. **6140**)



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

\*Supplied with manufacturer inspection certificate

## DIGITAL CALIPERS (FRACTION READING)

DATA  
OUTPUT

INSPECTION  
CERTIFICATE

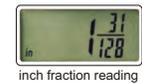
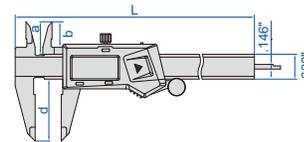
- Non waterproof
- Resolution: 1/128", 0.01mm, .0005"
- Buttons: unit (inch fraction/mm/inch), on/off, zero
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Data output (for inch and mm)
- Made of stainless steel
- Optional accessory: wireless transmitter part no. **7315-25** (receiver is needed), accessory set for digital calipers (part no. **6144**, only for range 0-6" and 0-8"), depth base attachment (part no. **6140**)

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



1102-150



## HEAVY DUTY 12" DIGITAL CALIPER

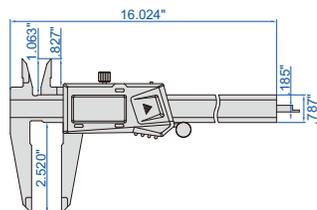
INSPECTION  
CERTIFICATE

DATA  
OUTPUT



1196-300

- 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: wireless transmitter part no. **7315-22** (receiver is needed)



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

\*Supplied with manufacturer inspection certificate

## DIGITAL CALIPER WITH ROUND DEPTH BAR

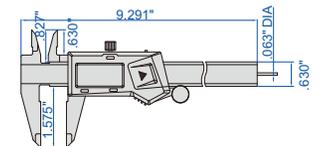
DATA  
OUTPUT

INSPECTION  
CERTIFICATE



1119-150

- 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: wireless transmitter part no. **7315-25** (receiver is needed), accessory set for digital calipers (part no. **6144**), depth base attachment (part no. **6140**)



Part No.	Range	Accuracy
1119-150*	0-6"/0-150mm	±.0015"

\*Supplied with manufacturer inspection certificate

## DIGITAL CALIPERS WITH CARBIDE TIPPED JAWS

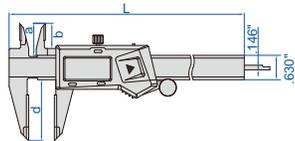


1110-150A



1110-150B

- 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: wireless transmitter part no. 7315-25 (receiver is needed), depth base attachment (part no. 6140)



### 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"

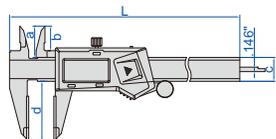
\*Supplied with manufacturer inspection certificate

## DIGITAL CALIPERS WITH CERAMIC TIPPED JAWS



1193-150

- Non waterproof
- Accuracy: ±.0015"
- Ceramic tipped jaws for outside measurement, extremely wear-resistant, non-magnetic, non-conductive
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed), depth base attachment (part no. 6140)



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

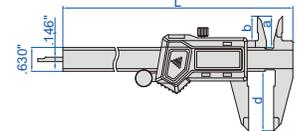
\*Supplied with manufacturer inspection certificate

## LEFT HAND DIGITAL CALIPERS



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: wireless transmitter part no. 7315-22 (receiver is needed), accessory set for digital calipers (part no. 6144, only for range 0-6" and 0-8"), depth base attachment (part no. 6140)



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"

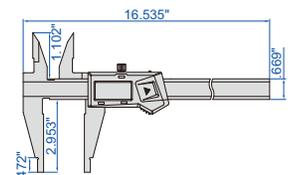
\*Supplied with manufacturer inspection certificate

## DIGITAL CALIPER



1523-127

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)



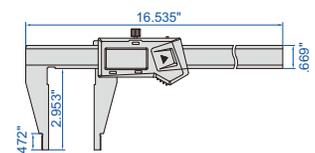
Part No.	Range	Accuracy
1523-127	0-12"/0-300mm	±.0025"

## DIGITAL CALIPER

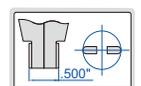


1522-127

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)



Part No.	Range	Accuracy
1522-127	0-12"/0-300mm	±.0025"



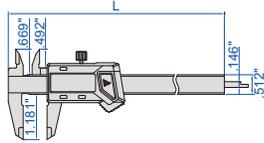
### MINI DIGITAL CALIPERS

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"

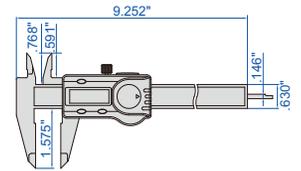
### PLASTIC DIGITAL CALIPER

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



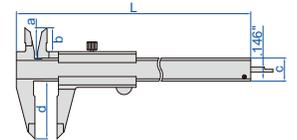
Part No.	Range	Accuracy
1139-150	0-6"/0-150mm	±.004"

### VERNIER CALIPERS

- 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"

### DIAL CALIPERS

INSPECTION CERTIFICATE

SHOCK PROOF

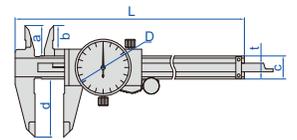
- Dial indicator graduation .001"
- Shockproof dial indicator
- Made of stainless steel



1311-6



1311-6B



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

\*Supplied with manufacturer inspection certificate

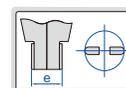
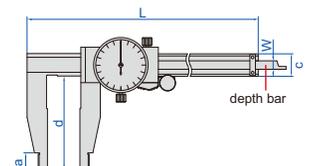
### DIAL CALIPERS

SHOCK PROOF

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



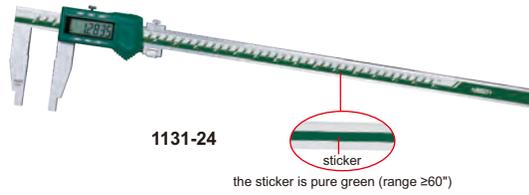
1316-18



Part No.	Range	Accuracy	L	a	c	d	e	W	Remark
1316-18	0-18"	±.0020"	22.835"	.709"	.866"	3.346"	.500"	.315"	with depth bar
1316-24	0-24"	±.0020"	28.740"	.709"	.866"	3.346"	.500"	.315"	with depth bar
1316-40	0-40"	±.0031"	47.240"	.972"	1.109"	5.491"	.800"	-	without depth bar

**DIGITAL CALIPERS**

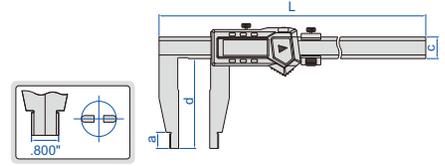
- Non waterproof
- Resolution .0005"/0.01mm
- Button function: on/off, zero, inch/mm, ABS, data preset
- Battery CR2032
- Made of stainless steel
- Data output
- Optional accessory: accessory set for large digital calipers (part no. **6145-500/6146-500B**, for calipers with c=.945")



DATA OUTPUT

POPULAR MODEL

Part No.	Range	Accuracy	a	c	d	L	Wireless transmitter (optional)
1131-24	0-24"/0-600mm	±.0020"	.709"	.945"	3.937"	30.315"	7315-22 (receiver is needed)
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"	7315-20B (receiver is needed)



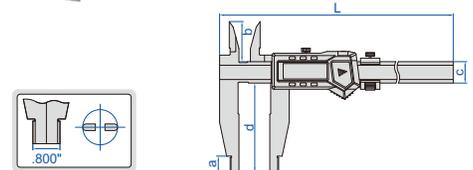
**DIGITAL CALIPERS**

- 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: wireless transmitter part no. **7315-22** (receiver is needed)



DATA OUTPUT

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"

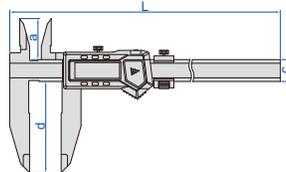


**DIGITAL CALIPERS**

DATA OUTPUT



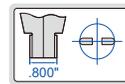
- Non waterproof
- Resolution .0005"/0.01mm
- Button function: on/off, zero, inch/mm, ABS, data preset
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. **7315-22** (receiver is needed)



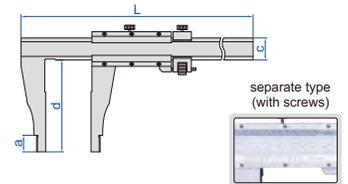
Part No.	Range	Accuracy	a	c	d	L
1135-451	0-18"/0-450mm	±.0020"	1.772"	.945"	3.937"	24.606"
1135-601	0-24"/0-600mm	±.0020"	1.772"	.945"	3.937"	30.315"
1135-1002	0-40"/0-1000mm	±.0030"	2.362"	1.220"	5.906"	48.031"

**VERNIER CALIPERS (SEPARATE TYPE)**

POPULAR MODEL



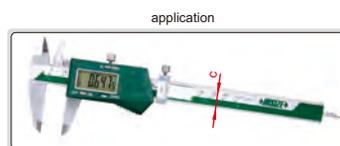
- Graduation .001"/0.02mm
- Graduation on scale: inch on bottom, metric on top
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



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"

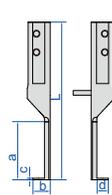
**MEASURING FORCE DEVICE OF CALIPERS**

- Constant force for external measurement
- Made of stainless steel



Part No.	Application
6148	suitable for calipers with beam width (c) .630"

**GROOVE POINTS FOR DIGITAL CALIPER**



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

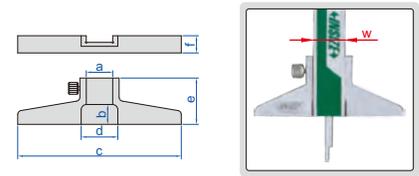
6147-A3

Part No.	L	a	b	c	d
6147-A1	2.165"	.394"	.098"	.016"	.051"
6147-A2	2.323"	.630"	.148"	.016"	.069"
6147-A3	2.677"	.984"	.295"	.026"	.197"



## DEPTH BASE ATTACHMENTS

- To increase the stability of depth measurement
- Made of stainless steel

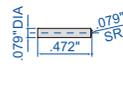
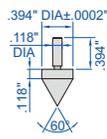
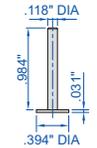
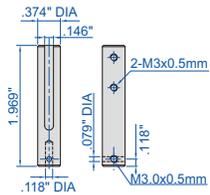


### Application

Part No.	Type	Application
6140	narrow base (f=.236")	suitable for 1195/1118/1113/1108/1103/1114/1130/1193/1110 series digital calipers with beam width (w) .630"
6140-300A	narrow base (f=.354")	suitable for 1196 series digital calipers with beam width (w) .787"
6140-16B	wide base (f=.433"), high stability	suitable for 1195/1118/1113/1108/1103/1114/1130/1193/1110 series digital calipers and 1312/1311/1339 series dial calipers with beam width (w) .630"

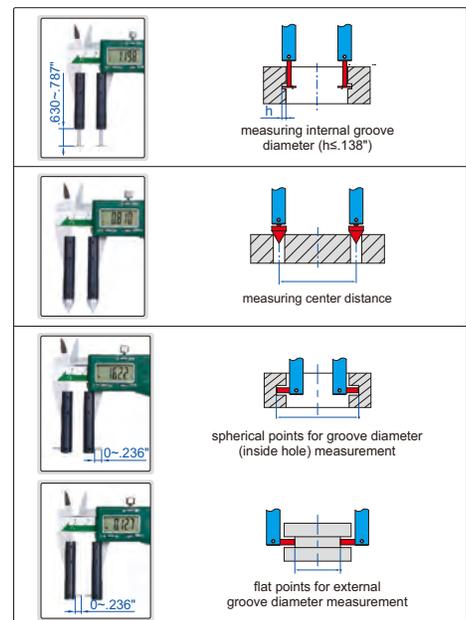
Part No.	a	b	c	d	e	f
6140	.650"	.354"	2.953"	.709"	1.181"	.236"
6140-300A	.787"	.591"	4.921"	.866"	1.339"	.354"
6140-16B	.630"	.492"	2.953"	.965"	1.181"	.433"

## ACCESSORY SET FOR DIGITAL CALIPERS PART NO. 6144



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

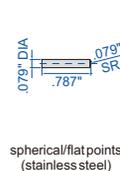
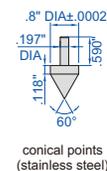
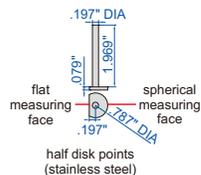
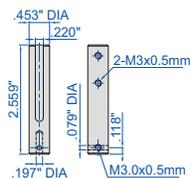
**Part No.**  
**6144**



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

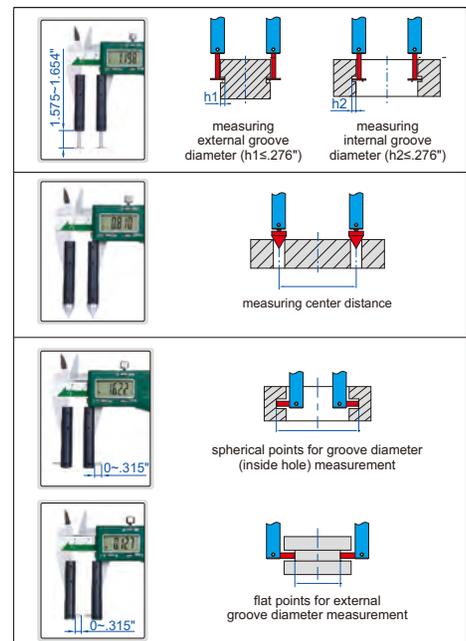


**6145-500**

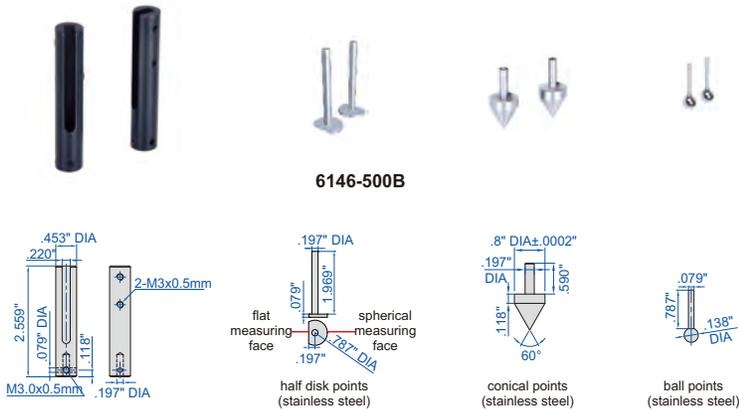


- Suitable for 0-20"/0-500mm and 0-24"/0-600mm digital calipers (thickness of lower jaws ≤ .220")

**Part No.**  
**6145-500**



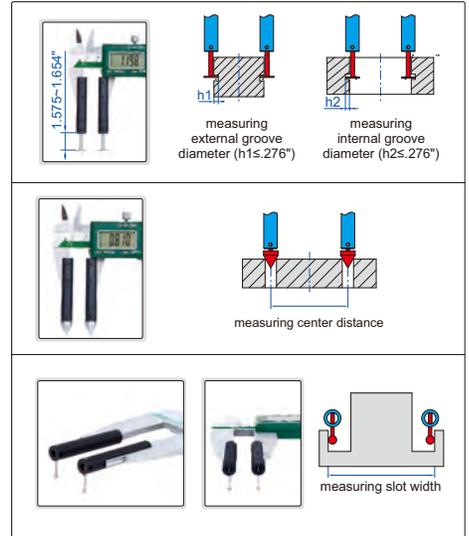
## ACCESSORY SET FOR LARGE DIGITAL CALIPERS (WITH SIDE POINTS) PART NO. 6146-500B



6146-500B

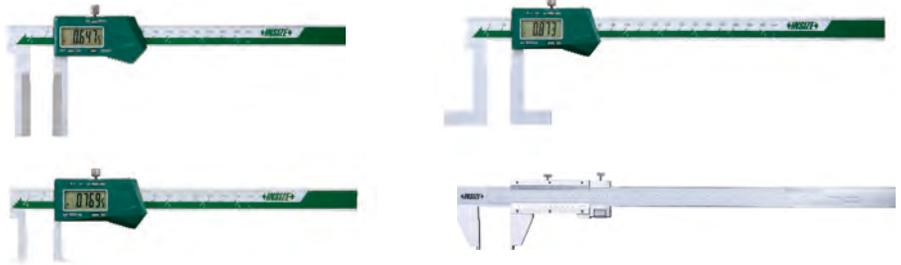
- Suitable for 0-20"/0-500mm and 0-24"/0-600mm digital calipers (thickness of lower jaws ≤ .220")

Part No.  
6146-500B



## CUSTOMIZED CALIPER

- Caliper can be customized according to customers' requirements



## UNIVERSAL CALIPER

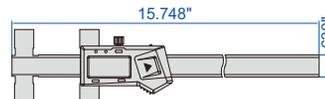
- Non waterproof
- Buttons: on/off, set, inch/mm, ABS, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)



1511-300

Part No.	Range*	Resolution	Accuracy
1511-300	0-12"/0-300mm	.0005"/0.01mm	±.0025"

\*The range changes according to different points

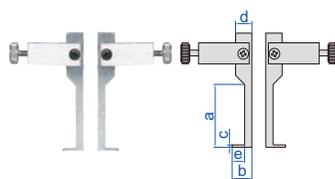


DATA OUTPUT

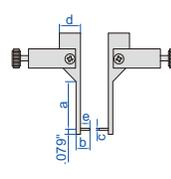
upper and lower jaws can be fitted with a variety of points



### Flat head groove points (optional)



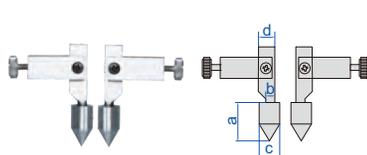
Part No.	a	b	c	d	e
1511-A01	.472"	.098"	.016"	.315"	.039"
1511-A02	.630"	.138"	.016"	.315"	.079"
1511-A03	.984"	.295"	.024"	.315"	.197"
1511-A04	1.181"	.394"	.039"	.315"	.256"
1511-A05	3.150"	.866"	.059"	.472"	.394"



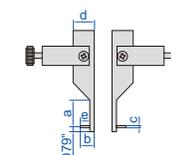
### Cylindrical groove points (optional)

Part No.	a	b	c	d	e
1511-C01	2.480"	.472"	.079" DIA	.472"	.276"
1511-C02	2.480"	.472"	.157" DIA	.472"	.276"

### Centerline points (optional)



Part No.	a	b	c	d
1511-E01	.394"	.157"	.197" DIA	.315"
1511-E02	.787"	.157"	.394" DIA	.315"
1511-E03	.984"	.315"	.591" DIA	.472"



### Cylindrical groove points (optional)

Part No.	a	b	c	d	e
1511-B01	.787"	.197"	.039" DIA	.315"	.079"
1511-B02	1.575"	.394"	.079" DIA	.315"	.197"
1511-B03	3.150"	.866"	.079" DIA	.472"	.394"
1511-D01	2.480"	.472"	.079" DIA	.472"	.276"
1511-D02	2.480"	.472"	.157" DIA	.472"	.276"

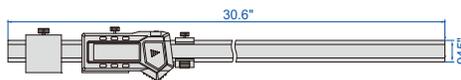
# UNIVERSAL CALIPER



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



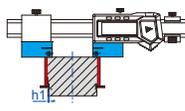
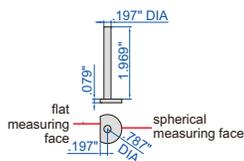
1125-600



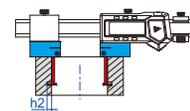
Part No.	Range*	Resolution	Accuracy
1125-600	0-24"/0-600mm	.0005"/0.01mm	±.002"

\*The range changes according to different points

## Half disk points (included)

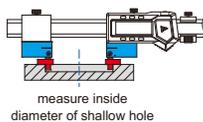
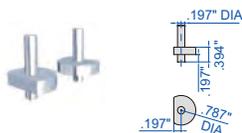


measuring external groove diameter with flat measuring face (depth h1≤.098")



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

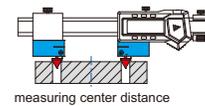
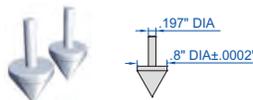
## Round shoulder points (optional)



measure inside diameter of shallow hole

Part No.  
1125-T102

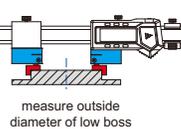
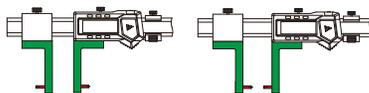
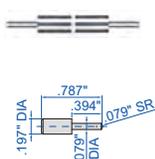
## Conical points (optional)



measuring center distance

Part No.  
1125-T101-1

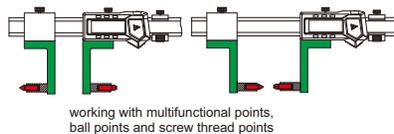
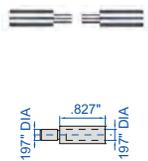
## Spherical points (included)



measure outside diameter of low boss

Part No.  
1125-T103

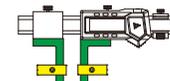
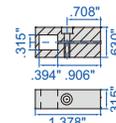
## Point sleeve (optional)



working with multifunctional points, ball points and screw thread points

Part No.  
1125-T104

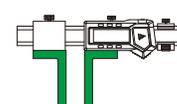
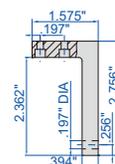
## Depth stop (included)



## Stands (included)



## 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



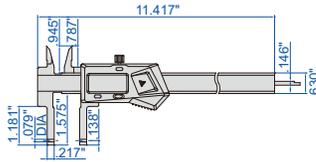
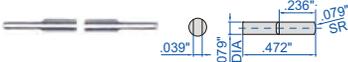
short spherical points (included)



long spherical/flat points (included)



spherical blade points (included)



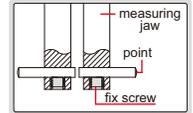
depth stop 6143  
(optional)



zero setting block  
for external  
measurement (included)



install points

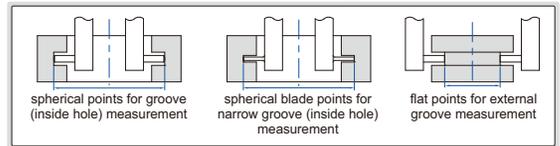


- Non waterproof
- Supplied with 3 pairs of points and zero setting block for external measurement
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: points (part no. 1526-T101, 7392, 7391, 7381, 7321), depth stop (part no. 6143), wireless transmitter part no. 7315-25 (receiver is needed)

preset buttons



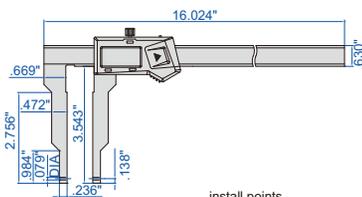
measure internal and external grooves



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

DATA  
OUTPUT



zero setting block  
for external  
measurement (included)



depth stop 6143 (optional)



preset buttons



short spherical/flat points (included)



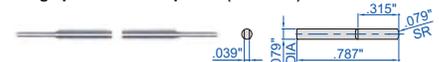
long spherical/flat points (included)



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), wireless transmitter part no. 7315-25 (receiver is needed)

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



VARIOUS POINTS  
ARE AVAILABLE

DATA  
OUTPUT



1530-300

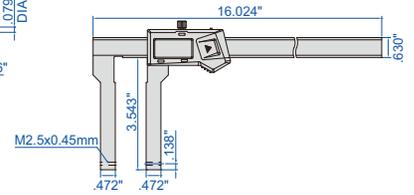
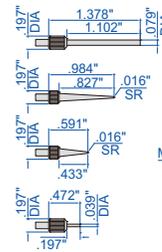
- Non waterproof
- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: points, depth stop (part no. 6143), wireless transmitter part no. 7315-25 (receiver is needed)



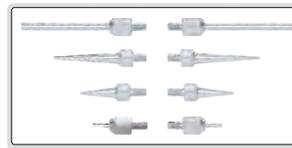
depth stop 6143  
(optional)



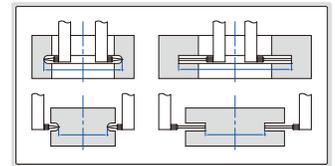
zero setting block for  
external measurement  
(included)



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

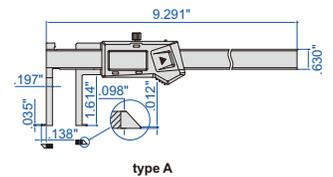
## DIGITAL INSIDE GROOVE CALIPERS

- 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)

depth stop 6143  
(optional)



1520-150



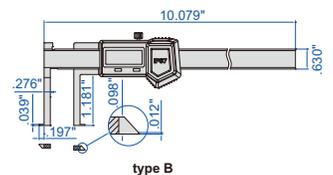
type A

No waterproof, with data interface (optional wireless transmitter part no. 7315-25, receiver is needed)

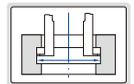
Part No.	Range	Type	Accuracy
1520-150	.43-6"/11-150mm	A	±.0015"



1520-150P



type B



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

Part No.	Range	Type	Accuracy
1520-150P	.56-6"/14-150mm	B	±.0015"

## DIGITAL INSIDE POINT CALIPERS

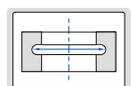
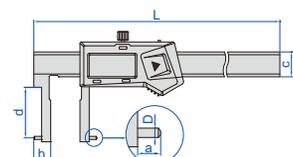
DATA  
OUTPUT

- 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), wireless transmitter part no. 7315-25 (receiver is needed)

depth stop 6143  
(optional)



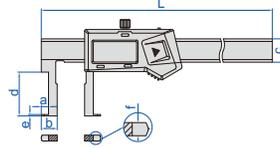
1121-150A



Part No.	Range	Accuracy	L	a	b	c	d	D
1121-150A	.9-6"/24-150mm	±.0015"	9.843"	.197"	.4724"	.630"	1.102"	.079" DIA
1121-200A	1-8"/25-200mm	±.0015"	12.205"	.197"	.4921"	.630"	1.457"	.079" DIA
1121-3001A	2-12"/50-300mm	±.0025"	16.142"	.315"	.9843"	.630"	3.031"	.118" DIA

## DIGITAL INSIDE GROOVE CALIPERS

- Measure groove diameter
- Resolution .0005"/0.01mm
- Buttons type A: on/off, set, inch/mm, preset (+, -), 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  $c=.630"$ )



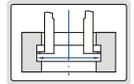
1120-150AE  
type A



1120-150P  
type C

No 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	Wireless transmitter (optional)
1120-150AE	1-6"/25.4-150mm	A	±.0015"	9.843"	.197"	.500"	.630"	1.181"	.039"	.157"	7315-25 (receiver is needed)
1120-200A	1-8"/25-200mm	A	±.0015"	12.205"	.197"	.492"	.630"	1.575"	.039"	.157"	
1120-300A	1.2-12"/30-300mm	A	±.0020"	16.142"	.197"	.591"	.630"	1.969"	.059"	.157"	7315-22 (receiver is needed)
1120-500	1.57-20"/40-500mm	A	±.0030"	26.772"	.197"	.787"	.945"	3.543"	.087"	.217"	



depth stop 6143  
(optional)



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

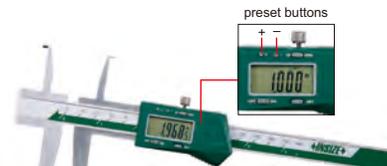
Part No.	Range	Type	Accuracy	L	a	b	c	d	e	f
1120-150P	.87-6"/22-150mm	C	±.0015"	9.843"	.197"	.433"	.630"	1.181"	.039"	.157"

## DIGITAL INSIDE GROOVE CALIPERS

depth stop 6143  
(optional)



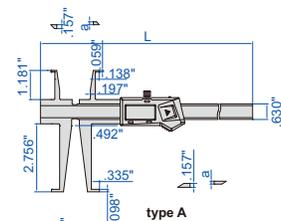
- Measure diameter of grooves inside bores
- Resolution .0005"/0.01mm
- Buttons type A: on/off, set, inch/mm, preset (+, -), type B: on/off, zero, inch/mm, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**)



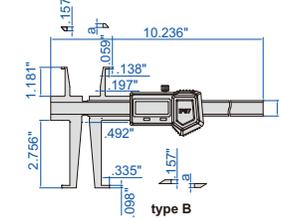
1176-150



1176-150P



type A



type B

sizes to be measured  
(use lower jaws)

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"

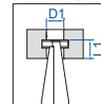
No waterproof, with data interface (optional wireless transmitter part no. 7315-25, receiver is needed)

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"

## DIGITAL DEEP HOLE INSIDE GROOVE CALIPER

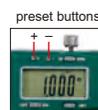
- Non waterproof
- Measure diameter of grooves inside deep holes
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (part no. **6143**), wireless transmitter part no. **7315-25** (receiver is needed)



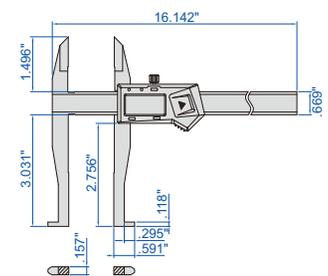
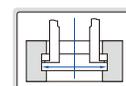
1129-300



depth stop 6143  
(optional)



preset buttons

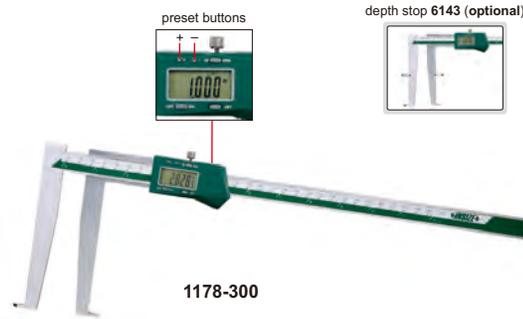


DATA  
OUTPUT

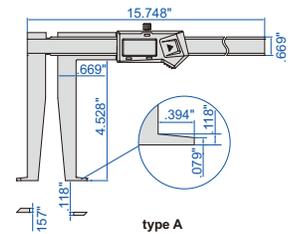
Part No.	Range of upper jaw	Range of lower jaw	Accuracy
1129-300	0-12"/0-300mm	1.2-12"/30-300mm	±.0025"

## 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)



1178-300



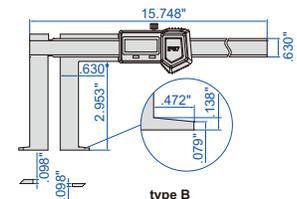
type A

No waterproof, with data interface (optional wireless transmitter part no. 7315-25, receiver is needed)

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



1178-300P



type B

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

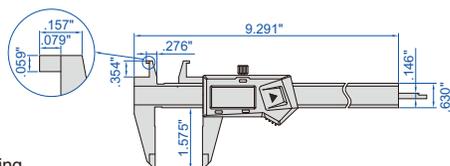
Part No.	Range	Type	Accuracy
1178-300P	1.30-12"/33-300mm	B	±.0020"

## DIGITAL INSIDE GROOVE CALIPER

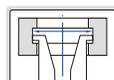
DATA OUTPUT



1191-150



- 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: wireless transmitter part no. 7315-25 (receiver is needed)



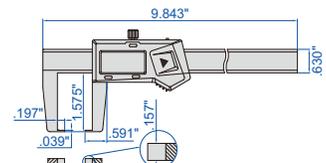
Part No.	Range of upper jaw	Range of lower jaw	Accuracy
1191-150	.3-6"/8-150mm	0-6"/0-150mm	±.0015"

## DIGITAL OUTSIDE NECK CALIPER

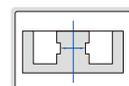
DATA OUTPUT



1187-150A



- 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), wireless transmitter part no. 7315-25 (receiver is needed)



depth stop 6143 (optional)



Part No.	Range	Accuracy
1187-150A	0-6"/0-150mm	±.0015"

## DIGITAL OUTSIDE POINT CALIPER

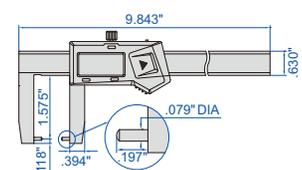
DATA OUTPUT

- 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), wireless transmitter part no. 7315-25 (receiver is needed)

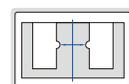


1185-150A

depth stop 6143 (optional)



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



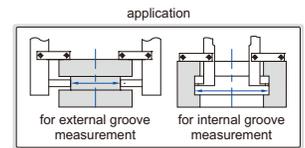
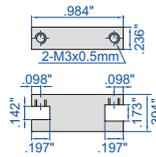
## DEPTH STOP FOR CALIPERS

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

**Part No.**  
6143



6143



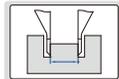
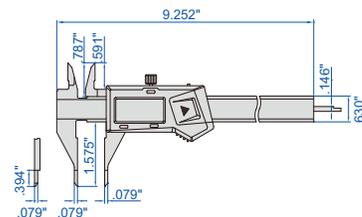
## DIGITAL SMALL POINT CALIPER

**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: wireless transmitter part no. 7315-25 (receiver is needed)



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

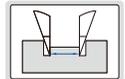
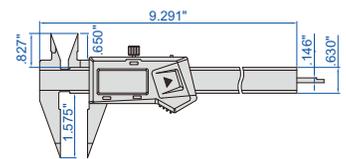
## DIGITAL POINT CALIPER

**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: wireless transmitter part no. 7315-25 (receiver is needed)



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

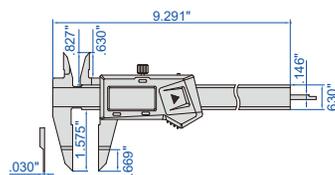
## DIGITAL BLADE CALIPER

**DATA OUTPUT**



1188-150A

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



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

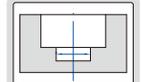
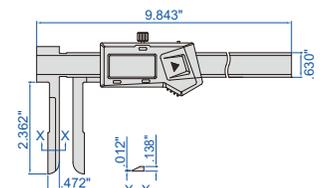
## DIGITAL INSIDE KNIFE-EDGE CALIPER

**DATA OUTPUT**



1123-150A

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



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

## DIGITAL CALIPER WITH KNIFE-EDGE LOWER JAWS

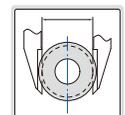
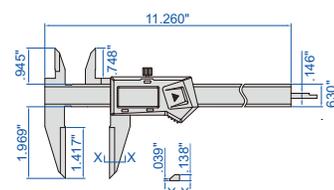
**DATA OUTPUT**

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



1532-200

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

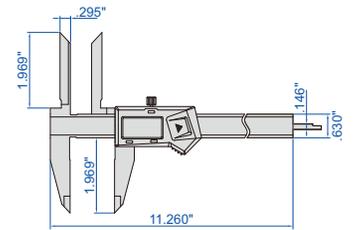


### DIGITAL CALIPER WITH LONG UPPER JAWS

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



1138-200



DATA OUTPUT

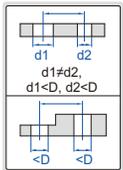
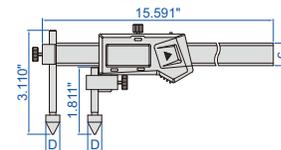
Part No.	Range	Accuracy
1138-200	0-8"/0-200mm	±.0015"

### DIGITAL OFFSET CENTERLINE CALIPER

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



1192-300AE



DATA OUTPUT

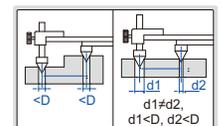
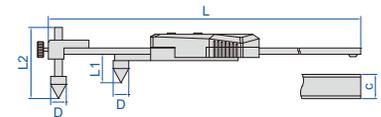
Part No.	Range	Accuracy	c	D (DIA)
1192-300AE	.4-12"/10.5-300mm	±.0035"	.630"	.4"

### DIGITAL BACK-JAW CENTERLINE CALIPERS

- 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



DATA OUTPUT

#### With data interface

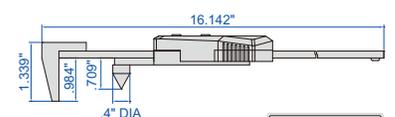
Part No.	Range	Accuracy	c	D (DIA)	L1	L2	L	Wireless transmitter (optional)
1177-300E	.4-12"/10.5-300mm	±.0040"	.630"	.4"	.709"	1.772"	16.142"	7315-25 (receiver is needed)
1177-500E	.8-20"/20.5-500mm	±.0040"	.945"	.8"	1.024"	2.756"	27.244"	7315-22 (receiver is needed)

### DIGITAL BACK-JAW EDGE TO CENTER CALIPER

- 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: wireless transmitter part no. 7315-25 (receiver is needed), calibration stand (part no. 1524-BLOCK)



1524-300E



DATA OUTPUT

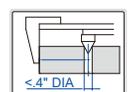
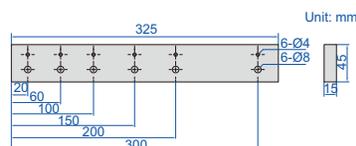
Part No.	Range	Accuracy
1524-300E	.2-12"/5.5-300mm	±.0040"

#### Calibration standard (optional)

Part No.
1524-BLOCK



1524-BLOCK



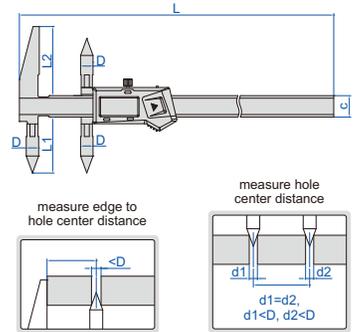
**DIGITAL CENTERLINE AND EDGE TO CENTER CALIPERS**

**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



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	Wireless transmitter (optional)
1525-300E	.2-12"/5.5-300mm	.4-12"/10.5-300mm	±.0030"	.669"	.4"	1.752"	2.165"	16.142"	7315-25 (receiver is needed)
1525-500E	.4-20"/10.5-500mm	.8-20"/20.5-500mm	±.0035"	.945"	.8"	1.575"	1.969"	27.165"	7315-22 (receiver is needed)

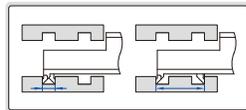
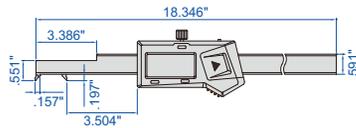
**DIGITAL HOOK CALIPER**

**DATA OUTPUT**



1122-300

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



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

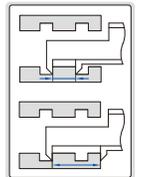
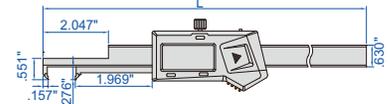
**DIGITAL EXTERNAL HOOK CALIPERS**

**DATA OUTPUT**



1164-200

- 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
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)



Part No.	Range	Accuracy	L
1164-150	0-6"/0-150mm	±.0015"	10.826"
1164-200	0-8"/0-200mm	±.0015"	12.795"

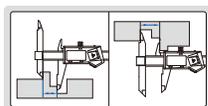
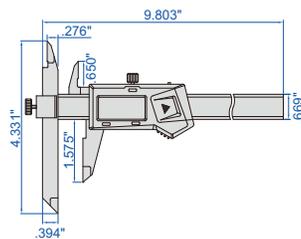
**DIGITAL OFFSET CALIPER**

**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: wireless transmitter part no. 7315-25 (receiver is needed)



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

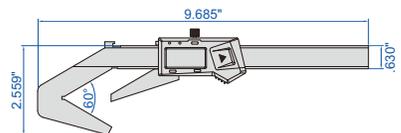
**DIGITAL V SHAPE CALIPER**

**DIRECT READING, CALCULATION IS NOT REQUIRED**

**DATA OUTPUT**



1539-3



- 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, zero, inch/mm
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)

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

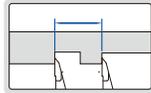
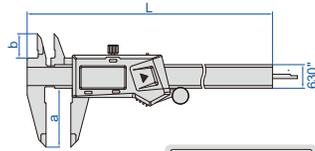
### DIGITAL CALIPER WITH ONE DIRECTION UPPER JAWS

DATA OUTPUT



1184-150

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



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"

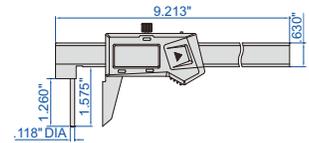
### DIGITAL TUBE THICKNESS CALIPER

DATA OUTPUT

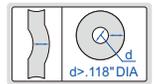


1161-150A

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



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

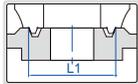
applicable for RTJ ring grooves with angle 23°



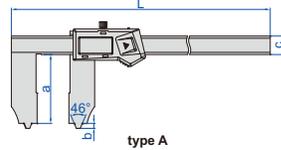
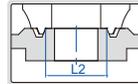
d and e need to be added on the reading



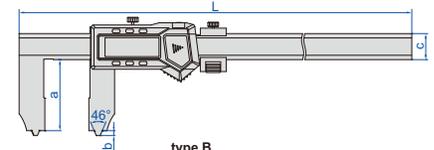
measure outside diameter of RTJ ring groove



measure inside diameter of RTJ ring groove



type A



type B

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	Wireless transmitter (optional)
1179-300	.4-12"/10-300mm	1-12"/25-300mm	23°	±.0025"	A	16.142"	2.500"	.177"	.669"	.984"	.394"	7315-25 (receiver is needed)
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)

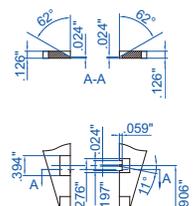
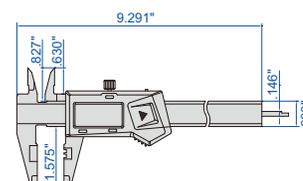
### DIGITAL CRIMP HEIGHT CALIPER

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: wireless transmitter part no. 7315-25 (receiver is needed)



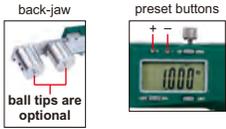
1165-150A



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

### DIGITAL CALIPER WITH INTERCHANGEABLE BALL TIPS

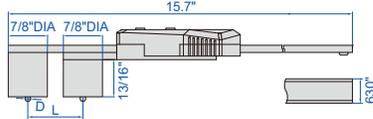
DATA OUTPUT



- 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, wireless transmitter part no. 7315-25 (receiver is needed)



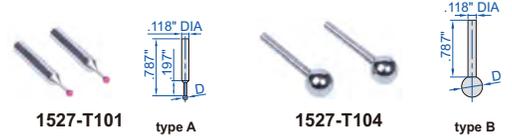
1527-3001



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

\*"D" is the diameter of ball tips.

ball tips (optional, supplied in pair)



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

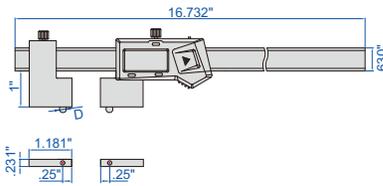
### DIGITAL CALIPER WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT



1528-3001

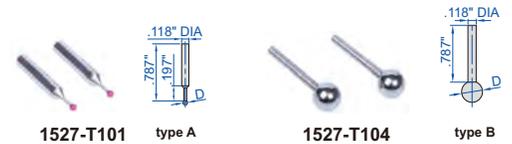
- Non waterproof
- Resolution .0005"/0.01mm
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: ball tips, wireless transmitter part no. 7315-25 (receiver is needed)



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

\*"D" is the diameter of ball tips.

ball tips (optional, supplied in pair)



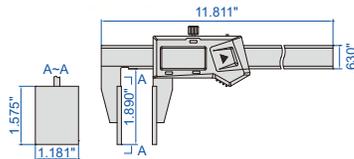
Part No.	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" DIA	.0002"	A	ruby
1527-T102	1/8" DIA	.0002"	B	stainless steel
1527-T103	3/16" DIA	.0002"	B	stainless steel
1527-T104	1/4" DIA	.0002"	B	stainless steel
1527-T105	3/8" DIA	.0002"	B	stainless steel
1527-T106	1/2" DIA	.0002"	B	stainless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

### DIGITAL CALIPER WITH LARGE MEASURING FACES

DATA OUTPUT

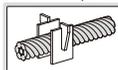


1172-200



- Non waterproof
- Measure diameter of wire ropes, and thickness of soft materials like rubber, sponge, etc.
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)

measure diameter of wire ropes



measure thickness of rubber, sponge, etc.



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

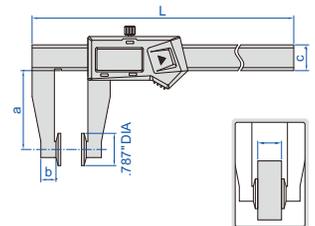
### DIGITAL CALIPER WITH DISK FACES

DATA OUTPUT



1533-150

- 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: wireless transmitter part no. 7315-25 (receiver is needed)

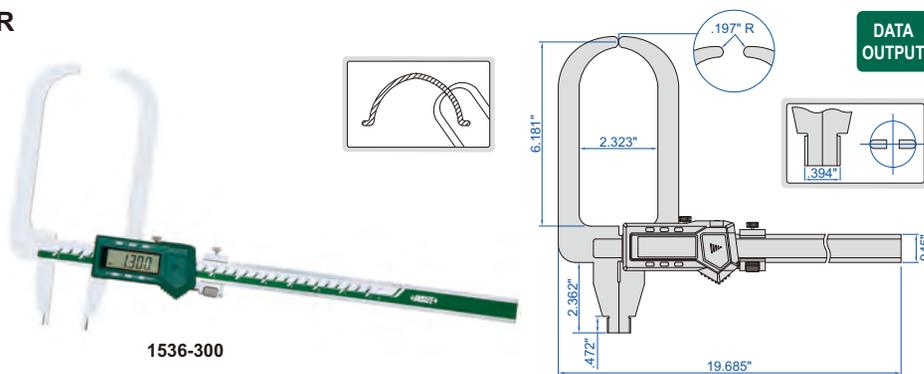


Part No.	Range	Accuracy	L	a	b	c
1533-150	0-6"/0-150mm	±.0015"	9.646"	1.969"	.433"	.630"

### DIGITAL WALL THICKNESS CALIPER

- 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: wireless transmitter part no. 7315-22 (receiver is needed)

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

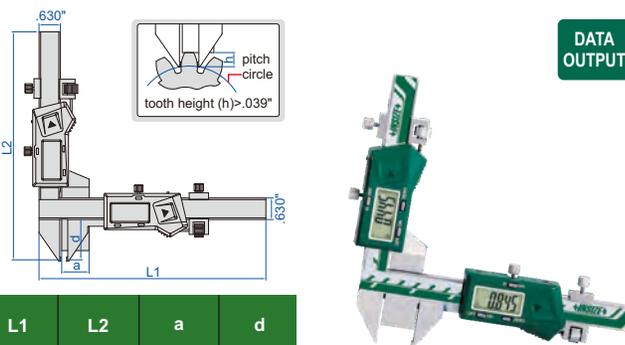


1536-300

### DIGITAL GEAR TOOTH CALIPERS

- 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, data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)

Part No.	Range	Accuracy of height measurement	Accuracy of thickness measurement	Total accuracy	L1	L2	a	d
1181-M25A	P1.06-P25	±.0015"	±.0015"	±.0015"	6.693"	6.516"	.827"	1.201"
1181-M50A	P0.56-P5	±.0015"	±.0015"	±.0015"	8.661"	7.480"	1.988"	2.165"

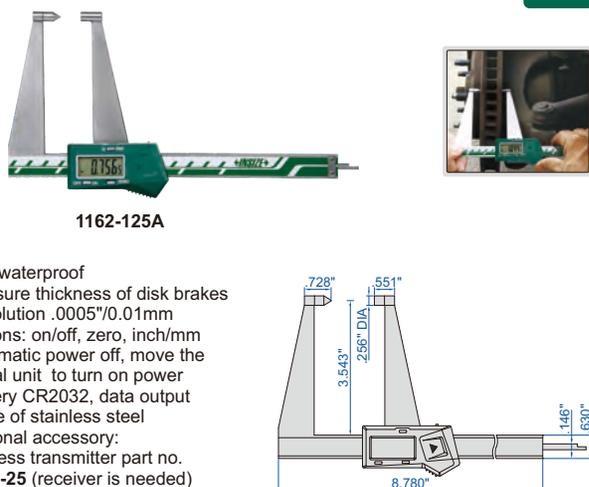


1181-M25A

### DIGITAL DISK BRAKE CALIPER

- 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: wireless transmitter part no. 7315-25 (receiver is needed)

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

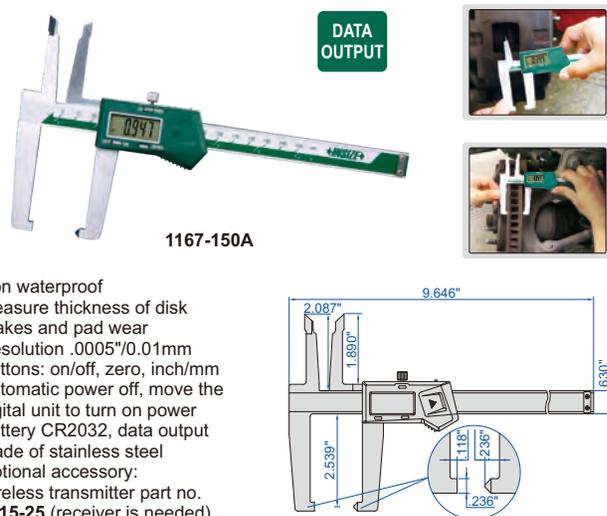


1162-125A

### DIGITAL DISK BRAKE AND PAD CALIPER

- 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: wireless transmitter part no. 7315-25 (receiver is needed)

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



1167-150A

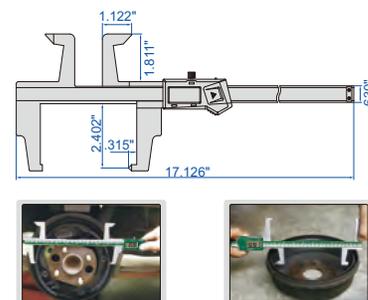
### DIGITAL DRUM BRAKE CALIPER

- 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: wireless transmitter part no. 7315-25 (receiver is needed)



1168-300A

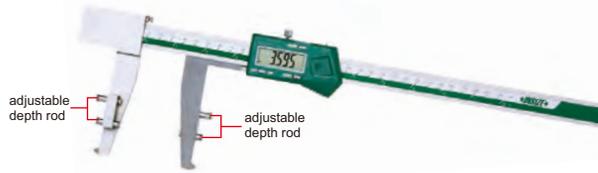
Part No.	Range	Accuracy
1168-300A	0-12"/0-300mm	±.0030"



## DIGITAL DRUM BRAKE CALIPER

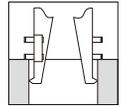
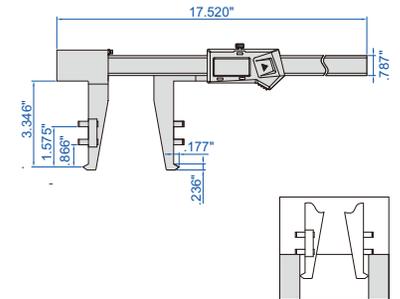
DATA OUTPUT

- 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: wireless transmitter part no. 7315-22 (receiver is needed)



1538-300

calibration block (included)



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

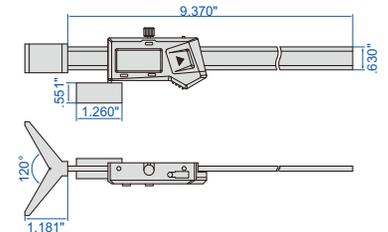
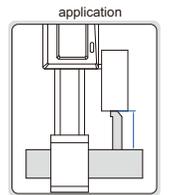
## DIGITAL CALIPER FOR BORING TOOLS

DATA OUTPUT

- Non waterproof
- Measure height of boring tools
- 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: wireless transmitter part no. 7315-25 (receiver is needed)



1512-150



Part No.	Range	Accuracy	Remark
1512-150	0-6"/0-150mm	±.0015"	for shank with diameter .394-3.150" DIA

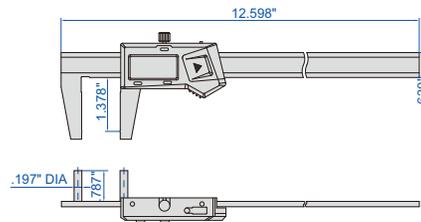
## DIGITAL CALIPER FOR BORES WITH BARRIER INSIDE

DATA OUTPUT

- Non waterproof
- Measure diameter of bores with barrier inside
- 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: wireless transmitter part no. 7315-22 (receiver is needed)



1513-200



Part No.	Range (D)	Diameter of barrier (d)	Accuracy
1513-200	.4-8"/10-200mm	<D-.394" (less than 2.756")	±.0015"

\* For example:  
When measuring size (D) is 1.575", D-.394"=1.181", so the diameter of barrier (d) should be less than 1.181",  
When measuring size (D) is 3.937", D-.394"=3.543", however it should be less than 2.756",  
so the diameter of barrier (d) should be less than 2.756".

## IP67 WATERPROOF DIGITAL DEPTH GAUGES

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

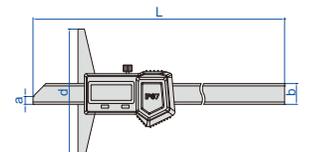
ATTENTION: NO DATA OUTPUT

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

IP67 WATERPROOF



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)

POPULAR MODEL

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

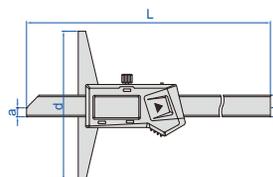


1141-150A

### With data interface

(optional wireless transmitter part no. 7315-25, receiver is needed)

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"
1141-500A	0-20"/0-500mm	±.0020"	23.031"	.276"	.591"	5.906"



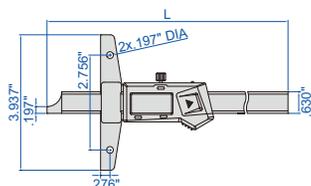
## DIGITAL DEPTH GAUGES WITH MOUNTING HOLES FOR EXTENSION BASE

DATA OUTPUT



1147-300

extension base (optional)



- 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: wireless transmitter part no. 7315-25 (receiver is needed), extension base (part no. 6141)

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"

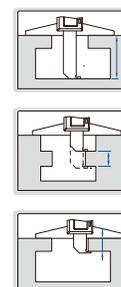
## DIGITAL HOOK DEPTH GAUGE

DATA OUTPUT

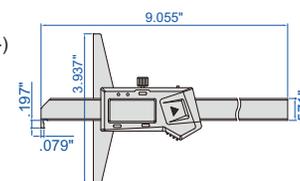


1142-150A

preset buttons



- 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: wireless transmitter part no. 7315-25 (receiver is needed)



Part No.	Range	Accuracy
1142-150A	0-6"/0-150mm	±.0015"

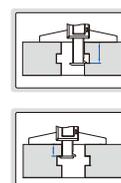
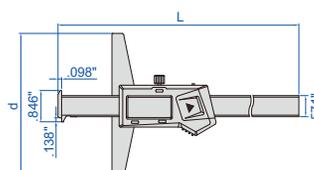
## DIGITAL DOUBLE HOOK DEPTH GAUGES

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
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)



1144-150A



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

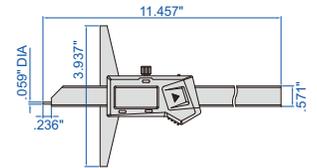
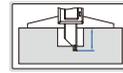
### DIGITAL POINT DEPTH GAUGE

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: wireless transmitter part no. 7315-25 (receiver is needed)



1143-200A



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

### DIGITAL DEPTH GAUGES WITH ROUND DEPTH BAR

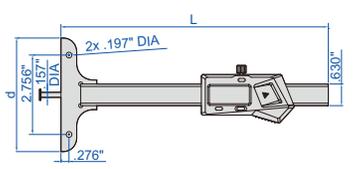
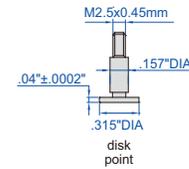
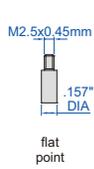
DATA OUTPUT

MEASURE WIDTH AND DEPTH OF GROOVES INSIDE BORE

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



1148-200E

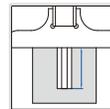


- Non waterproof
- Resolution .0005"/0.01mm
- Supplied with three interchangeable points (flat, spherical, disk)
- Buttons: on/off, set, inch/mm, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed), extension base (part no. 6141, for 1148-200E)

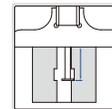
extension base for 1148-200E (optional)



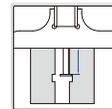
measure depth of small holes (>.157" DIA)



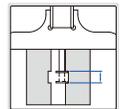
measure depth of grooves inside bore



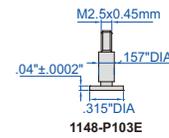
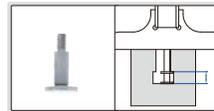
measure depth of grooves inside bore



measure width of grooves inside bore



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



1148-P103E

#### OPTIONAL DISK POINT

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

Part No.	Range*	Accuracy	L	d	Remark
1148-100E	0-4"/0-100mm	±.0010"	7.874"	3.346"	
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

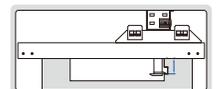
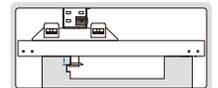
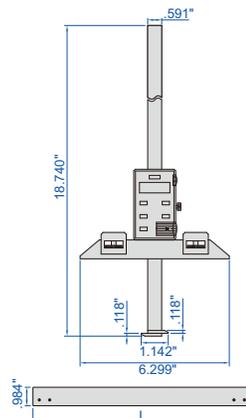
gauge block for zero setting (included)



- 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)



1540-300E



extension base (optional)

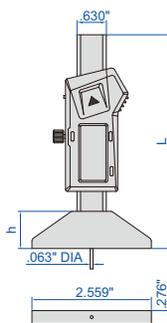
Part No.	L
1540-L300	11.811"
1540-L400	15.748"
1540-L500	19.685"
1540-L600	23.622"
1540-L800	31.496"

## MINI DIGITAL DEPTH GAUGES WITH ROUND BAR

DATA OUTPUT



1140-25



- 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: wireless transmitter part no. 7315-25 (receiver is needed)



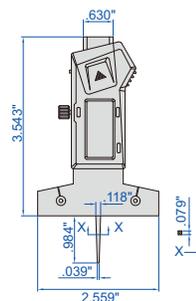
Part No.	Range	Accuracy	L	h
1140-25	0-1"/0-25mm	±.0010"	4.488"	.787"
1140-50	0-2"/0-50mm	±.0010"	5.512"	.787"
1140-100	0-4"/0-100mm	±.0010"	7.480"	.787"
1140-150	0-6"/0-150mm	±.0015"	9.291"	.630"

## MINI DIGITAL DEPTH GAUGE

DATA OUTPUT



1145-25A



- 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: wireless transmitter part no. 7315-25 (receiver is needed)

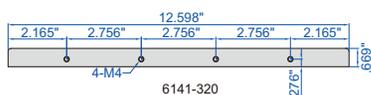
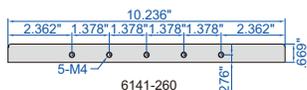
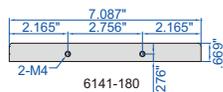
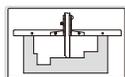
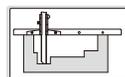


Part No.	Range	Accuracy	Resolution
1145-25A	0-1"/0-25mm	±.0015"	.0005"/0.01mm

## EXTENSION BASES



6141-260



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

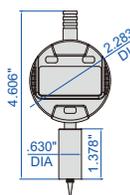
Part No.	Length
6141-180	7.087"
6141-260	10.236"
6141-320	12.598"

## DIGITAL DEPTH GAUGES

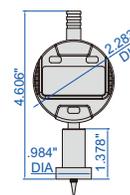
DATA OUTPUT



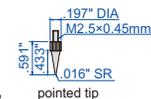
2142-102



2142-101/2142-301



2142-102/2142-302



pointed tip

- 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
- Pointed tip
- Optional accessory: wireless transmitter part no. 7315-50M (receiver is needed)

Part No.	Range	Digital indicator resolution	Accuracy	Base
2142-101	0-.5"/0-12.7mm	.0005"/0.01mm	±.0008"	.630" DIA
2142-102	0-.5"/0-12.7mm	.0005"/0.01mm	±.0008"	.984" DIA
2142-301	0-.5"/0-12.7mm	.00005"/0.001mm	±.0002"	.630" DIA
2142-302	0-.5"/0-12.7mm	.00005"/0.001mm	±.0002"	.984" DIA

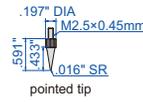
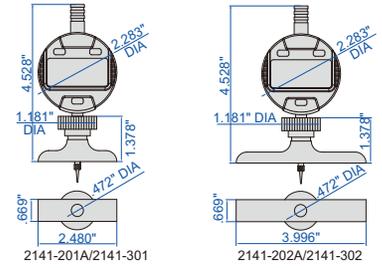
## DIGITAL DEPTH GAUGES

DATA  
OUTPUT

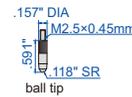


2141-202A

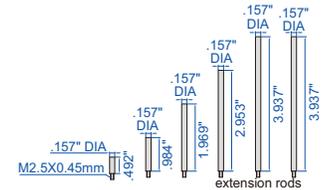
- Range: 0-12"/0-300mm
- Digital indicator stroke .5"/12.7mm
- Button function: on/off, zero, inch/mm, ABS, data preset, change measuring direction
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output, stainless steel base
- Extension rods: .5" (1pc), 1" (1pc), 2" (1pc), 3" (1pc), 4" (2pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: wireless transmitter part no. **7315-50M** (receiver is needed), granite extension holder (part no. **2141-10**)



pointed tip



ball tip

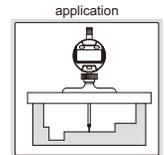
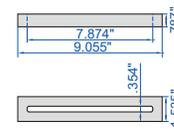


extension rods

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"



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



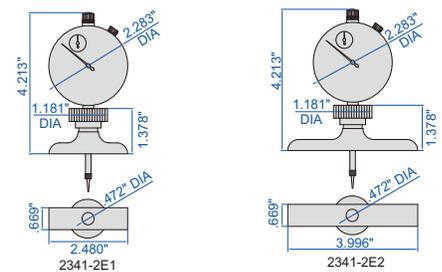
application

## DIAL DEPTH GAUGES

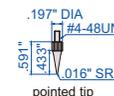


2341-2E2

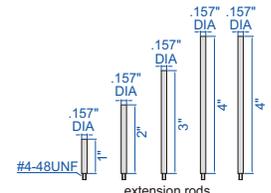
- Dial indicator graduation .001"
- Stainless steel base
- Extension rods: 1" (1 pc), 2" (1 pc), 3" (1 pc), 4" (2 pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: granite extension holder (part no. **2141-10**)



ball tip



pointed tip

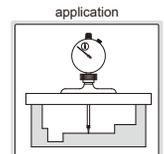
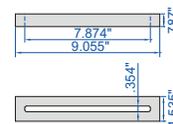


extension rods

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"



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



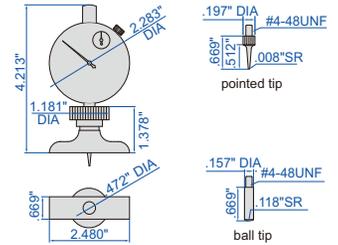
application

## DIAL DEPTH GAUGE

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

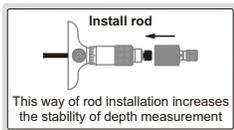


2341-E1



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

## DEPTH MICROMETERS

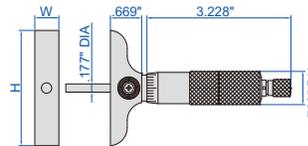


3241-4

- 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

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: H x W=3.996 x .669"

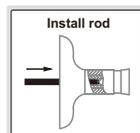
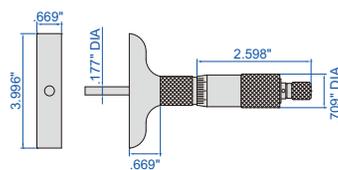
Part No.	Range	Rods
3241-1	0-1"	1 pc
3241-2	0-2"	2 pcs
3241-4	0-4"	4 pcs
3241-6	0-6"	6 pcs
3241-12	0-12"	12 pcs

## 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

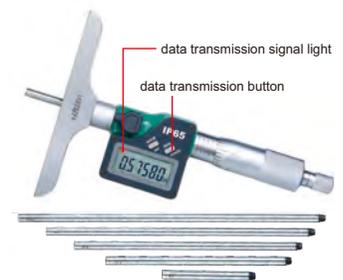
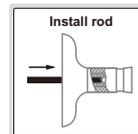


Part No.	Range	Rods
3240-6	0-6"	6 pcs

## DIGITAL DEPTH MICROMETERS

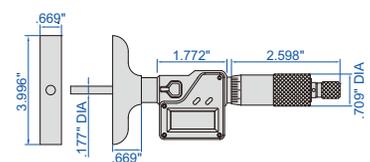
IP65  
WATERPROOF

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 transmission
- IP65 dust/waterproof
- Data output
- Automatic power off
- Rods with flat end
- Ratchet stop
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)



Part No.	Range	Rods
3540-150E	0-6"/0-150mm	6 pcs
3540-300E	0-12"/0-300mm	12 pcs

## HIGH PRECISION DIGITAL HEIGHT GAUGES

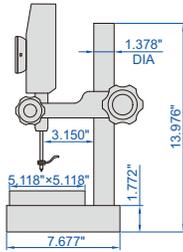
DATA  
OUTPUT



power supplied by charge pal

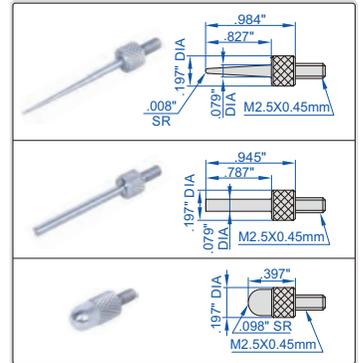


data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero



1155-505

measuring tips (included)



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

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

### STANDARD DELIVERY

Main unit	1 pc
-----------	------

### OPTIONAL ACCESSORY

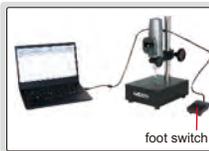
Contact point	part no. 6282
Charge pal	1155-5-POB
Data output cable (including foot switch)	1155-5-FOS

## DIGITAL HEIGHT GAUGES

DATA  
OUTPUT



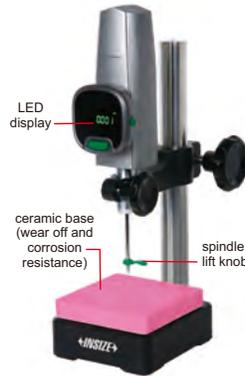
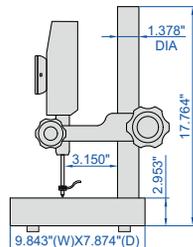
power supplied by charge pal



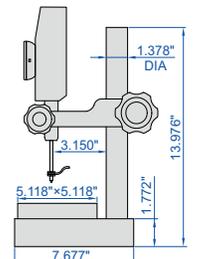
data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero



1157-501



1157-502



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

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

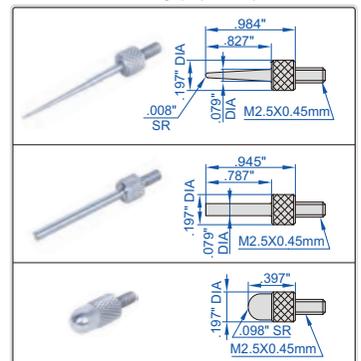
### OPTIONAL ACCESSORY

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

### STANDARD DELIVERY

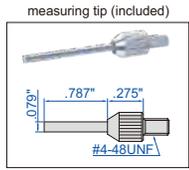
Main unit	1 pc
-----------	------

measuring tips (included)



## DIGITAL HEIGHT GAUGES

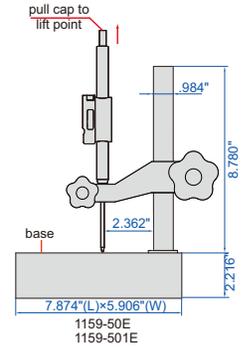
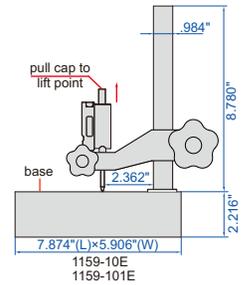
DATA OUTPUT



1159-101E



1159-501E

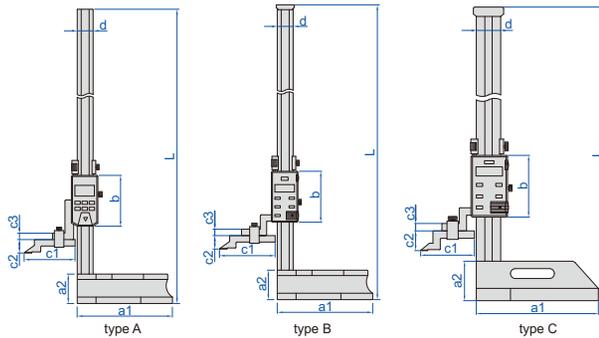
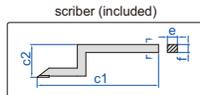


- Granite base flatness: 98µin
- Vertical travel of holder: 6.7"
- Battery CR2032, data output
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Supplied with dust cover
- Optional accessory: wireless transmitter part no. 7315-51 (receiver is needed)

Part No.	Digital indicator stroke	Resolution	Accuracy	Maximum measuring force
1159-10E	.5"/12.7mm	.0005"/0.01mm	±.0015"	.337lbf
1159-50E	2"/50.8mm	.00005"/0.001mm	±.0015"	.562lbf
1159-101E	.5"/12.7mm	.00005"/0.001mm	±.00015"	.337lbf
1159-501E	2"/50.8mm	.0005"/0.01mm	±.00015"	.562lbf

## DIGITAL HEIGHT GAUGES

DATA OUTPUT



1150-300E



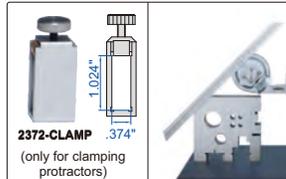
1150-600E



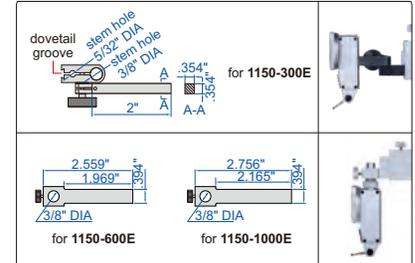
1150-1000E

- Non waterproof
- Resolution .0005"/0.01mm
- Buttons:
  - Type A: on/off, zero, inch/mm, ABS/INC, data hold, set,
  - Type B and type C: 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)
- Data output
- Power: Type A: CR2032  
Type B and type C: LR44
- Supplied with dial test indicator holder
- Supplied with dust cover
- Optional accessory: clamp for protractors (part no. 2372-CLAMP, for 1150-300E)

clamp for protractors (optional) for 1150-300E



dial test indicator holder (included)



Part No.	Range	Type	Accuracy	L	a1	a2	b	c1	c2	c3	d	e	f	Wireless transmitter (optional)
1150-300E	0-12"/0-300mm	A	±.0015"	19.094"	5.433"	1.772"	3.937"	3.150"	1.181"	.394"	1.102"	.354"	.354"	7315-22 (receiver is needed)  7315-1150 (receiver is needed)
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**

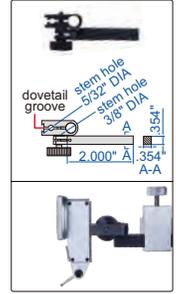


**DATA OUTPUT**

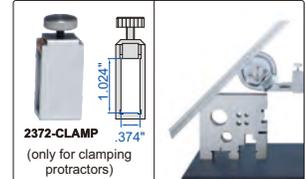
**POPULAR MODEL**



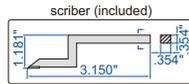
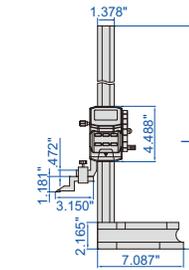
dial test indicator holder (included)



clamp for protractors (optional)



- 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 (except the base)
- Battery CR2032, data output
- Supplied with dust cover
- With dial test indicator holder
- Optional accessory: wireless transmitter part no. **7315-22** (receiver is needed), clamp for protractors (part no. **2372-CLAMP**)



**1156-300E**

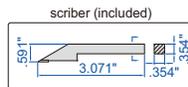
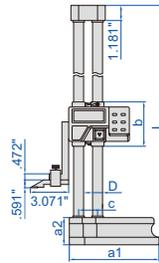
Part No.	Range	Accuracy	L
<b>1156-300E</b>	0-12"/0-300mm	±.0015"	20.276"
<b>1156-600E</b>	0-24"/0-600mm	±.0020"	32.867"

\*Supplied with manufacturer inspection certificate

**DIGITAL HEIGHT GAUGES**

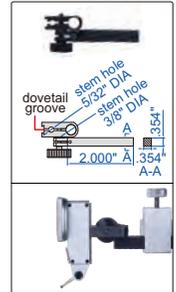
**DATA OUTPUT**

- 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 (except the base)
- 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**)

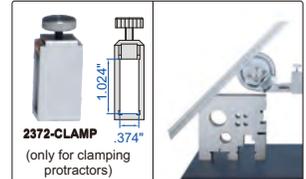


**1151-300AE**

dial test indicator holder (included)



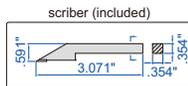
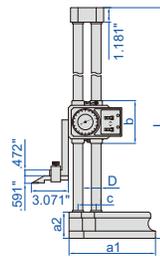
clamp for protractors (optional)



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

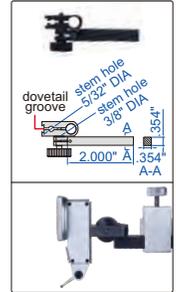
**DIAL HEIGHT GAUGES**

- 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**)

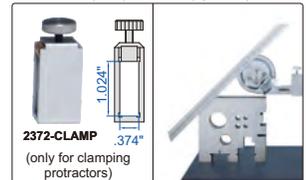


**1351-12**

dial test indicator holder (included)



clamp for protractors (optional)



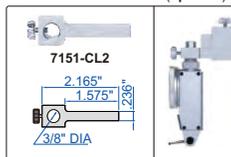
Part No.	Range	Accuracy	L	a1	a2	b	c	D
<b>1351-12</b>	0-12"	±.0016"	18.701"	5.315"	1.693"	3.307"	1.299"	.591" DIA
<b>1351-18</b>	0-18"	±.0020"	25.984"	7.087"	2.126"	3.465"	1.496"	.787" DIA

## MINI DIGITAL HEIGHT GAUGES

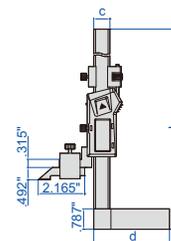
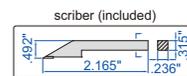
DATA OUTPUT

- Non waterproof
- 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)

dial test indicator holder (optional)



1154-150



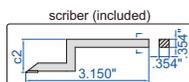
Part No.	Range	Accuracy	L	c	d	Wireless transmitter (optional)
1154-150	0-6"/0-150mm	±.0015"	11.024"	.630"	2.953"	7315-22 (receiver is needed)
1154-200	0-8"/0-200mm	±.0015"	13.386"	.787"	3.543"	

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

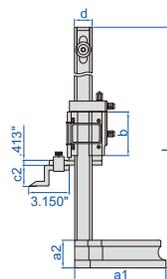
Part No.	Range	Resolution	Accuracy	L	c	d
1154-150WL	0-6"/0-150mm	.0005"/0.01mm	±.0015"	11.024"	.630"	2.953"

## 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)

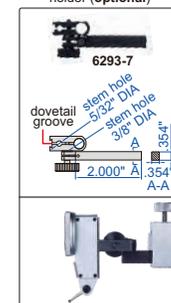


clamp for protractors (optional)



1250-300

dial test indicator holder (optional)



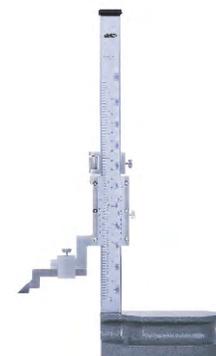
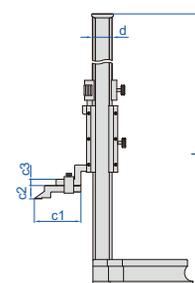
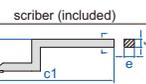
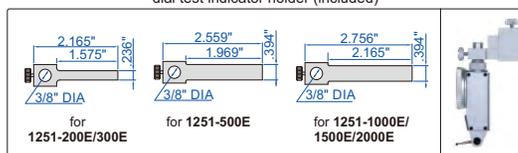
Part No.	Range	Accuracy	L	a1	a2	b	c2	d
1250-300	0-12"/0-300mm	±.0016"	21.457"	5.315"	1.693"	2.953"	1.181"	1.102"
1250-600	0-24"/0-600mm	±.0020"	34.252"	7.087"	2.126"	3.346"	1.614"	1.378"

## 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

dial test indicator holder (included)



1251-200E

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"

## UNIVERSAL COMPARISON GAUGE



- Measure outside diameter, inside diameter and center-to-center distance
- Movable point stroke: .4", effective range of movable point:  $\pm .08"$
- Optional accessory: gauge block accessory (part no. **6881**), gauge block holder (part no. **6886**), individual steel gauge blocks (part no. **4112**)



Part No.	Range of external diameter **	Range of internal diameter **	Accuracy *	Repeatability
2927-M200	0-8"/0-200mm	1.2"-10"/30-250mm	$\pm .0002"$	.0001"

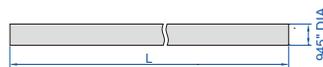
\* After set zero, accuracy is  $\pm .0002"$  within range of  $\pm .08"$  from zero position  
 \*\* The measuring range will change according to different measuring points

### Extension rods (optional)



2927-A1000CF

Part No.	Length (L)	Material
2927-A200	7.874"	steel
2927-A500CF	19.685"	carbon fiber
2927-A1000CF	39.37"	carbon fiber



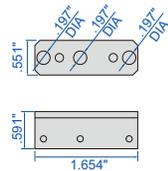
### Digital indicator (optional)



resolution: .00005"/0.001mm

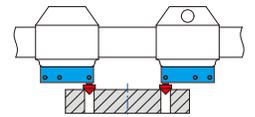
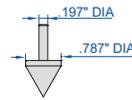
Part No.	Range
2103-10F	.5"/12.7mm

### Stands (optional, supplied in pair)



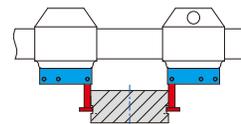
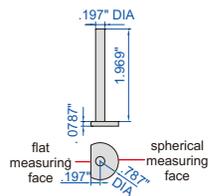
Part No.  
2927-H

### Conical points (optional, supplied in pair)

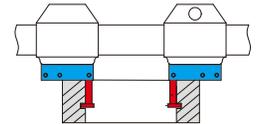


Part No.  
2927-S102

### Half disk points (optional, supplied in pair)



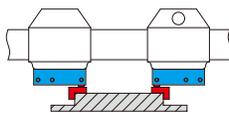
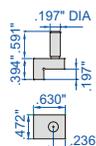
measuring external groove diameter with flat measuring face (depths .098")



measuring internal groove diameter with spherical measuring face (depths .295")

Part No.  
2927-S101

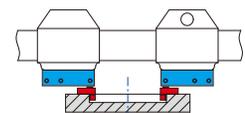
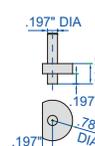
### Flat shoulder points (optional, supplied in pair)



measure outside diameter of low boss

Part No.  
2927-S103

### Round shoulder points (optional, supplied in pair)



measure inside diameter of shallow hole

Part No.  
2927-S104

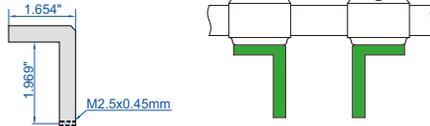
To be continued

Continued from previous page

**Measuring jaws (optional, supplied in pair)**

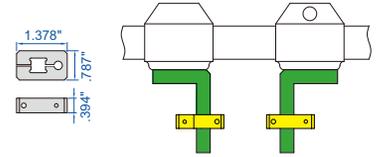
Part No.	Repeatability *
2927-J50	.00015"

\* When installing the measuring jaws



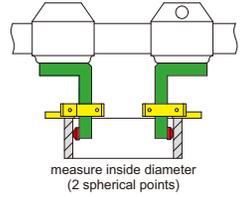
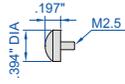
**Depth stop (optional, supplied in pair)**

Part No.
2927-D



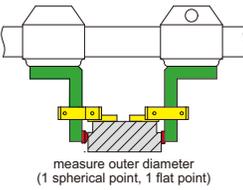
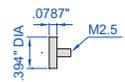
**Spherical point (optional, supplied in single)**

Part No.
2927-S201

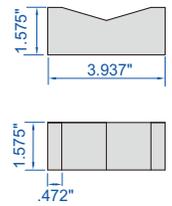


**Flat point (optional, supplied in single)**

Part No.
2927-S202

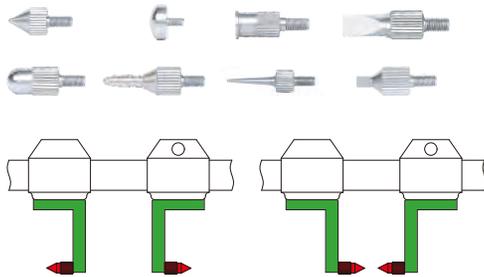


**V-shaped placement brackets (optional, supplied in pair)**

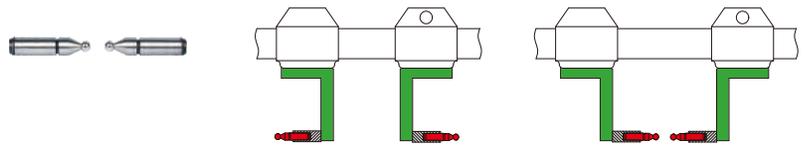


Part No.
2927-V

**Points (optional, supplied in single)**

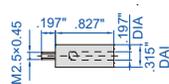


**Ball points (optional, supplied in pair)  
Part No. 7391**



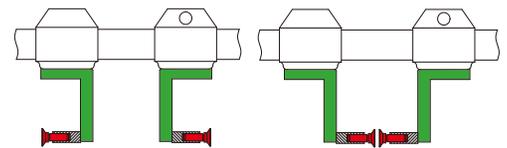
\* It is necessary to use point sleeve (part no. 2927-T101) for these points

**Multifunctional points (optional, supplied in pair)  
Part No. 7392**



Point sleeve (optional, supplied in pair) Part No.
2927-T101

\* It is necessary to use point sleeve (part no. 2927-T101) for these points



**External thread points (optional, supplied in pair)  
Part No. 7381**



\* It is necessary to use point sleeve (part no. 2927-T101) for these points

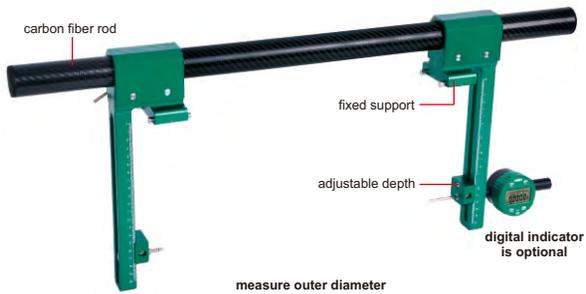
**Internal thread points (optional, supplied in pair)  
Part No. 7321**



\* It is necessary to use point sleeve (part no. 2927-T101) for these points

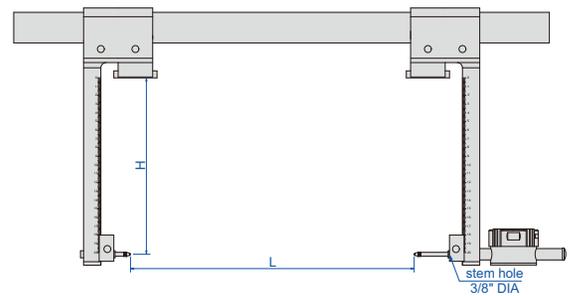
**CARBON FIBER COMPARISON GAUGES**

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



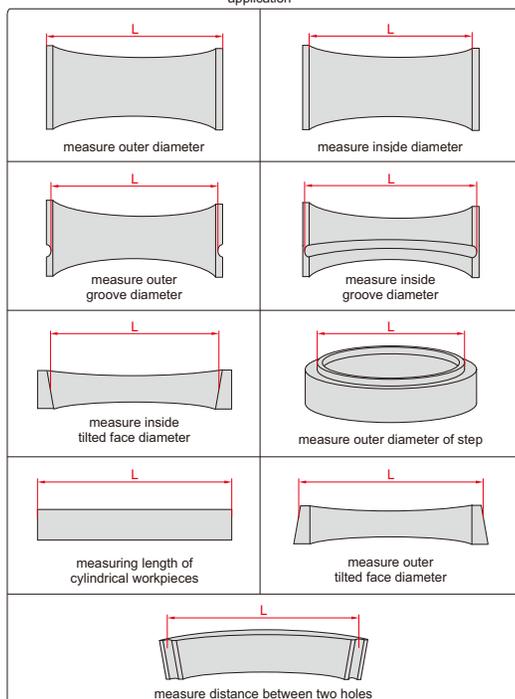
2931-D1000AE

- 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), digital indicators (part no. 2138-25ESP/2139-25ESP/2103-25ESP/2104-25ESP)



Part No.	Maximum measuring range (L)	Measuring depth (H)	Repeatability	Net weight
2931-D1000AE	40"	0-4"/0-100mm	.0002"	4.41lb
2931-D2000BE	80"	0-8"/0-200mm	.0008"	6.39lb
2931-D3000BE	120"	0-8"/0-200mm	.0012"	7.72lb
2931-D3000CE	120"	0-12"/0-300mm	.0024"	8.38lb
2931-D4000CE	160"	0-12"/0-300mm	.0026"	9.70lb

application



**Calibration bracket (optional)**

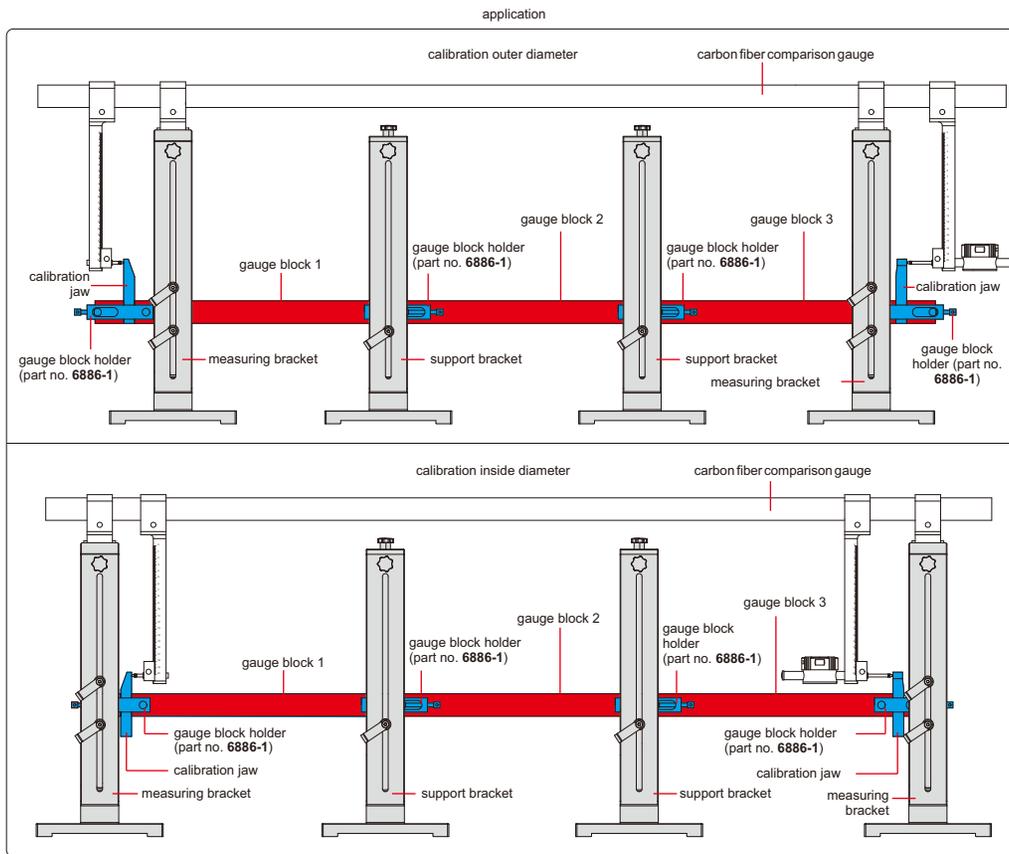
Part No.	Remark
2931-J□□□□	can be customized according to carbon fiber comparison gauges, including 2 measuring brackets and multiple support brackets to support gauge blocks

**Calibration jaw (optional, supplied in pair)**

Part No.	Remark
2931-F	made of carbide

To be continued

Continued from previous page



## HORIZONTAL MEASURING BENCH

**ATTENTION: DIGITAL INDICATOR USES RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING**

**MEASURING FORCE CAN BE CUSTOMIZED, MINIMUM MEASURING FORCE IS 1.4lbf**

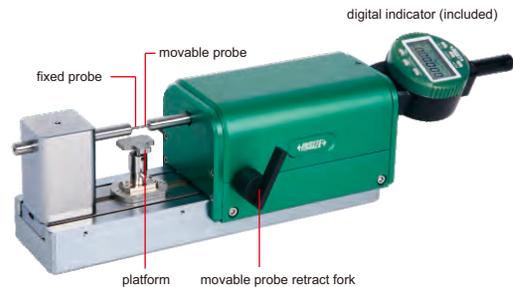
**DIGITAL INDICATOR USES ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF**

**DATA OUTPUT**

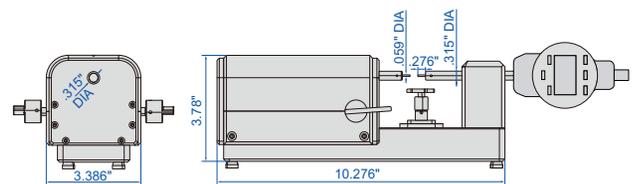


**PROBE AND PLATFORM CAN BE CUSTOMIZED**

- Quickly measure outside diameters
- The platform can move horizontally and the height is adjustable
- For left and right hand operation
- Carbide probes
- Digital indicator uses linear ball bearings and can be used ten million times
- Digital indicator uses absolute encoder, the original data remains after power off
- Digital indicator reading in digital and analog
- Data output
- Digital indicator button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, resolution adjustment
- Digital indicator uses rechargeable battery, for 24 hours continuous working
- Optional accessory: wireless transmitter part no. **7315-60** (receiver is needed)



**6849-60**



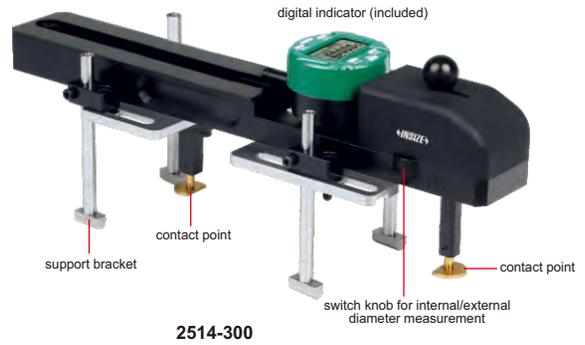
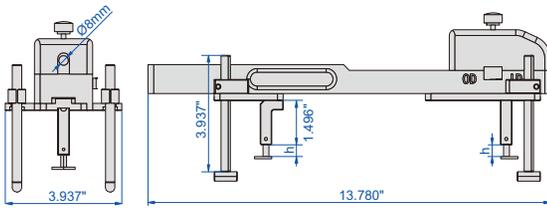
Part No.	Range	Movable probe travel	Resolution	Accuracy	Any $\pm 0.0394$ " accuracy*	Repeatability	Measuring force	Net weight
<b>6849-60</b>	0-1.969"	.787"	.00001"/0.0002mm	.00020"	.00004"	.00002"	.90lbf	14.11lb

\*After set zero at any position, accuracy is .00004" within  $\pm 0.04$ " from zero position

## DIGITAL COMPARISON GAUGE

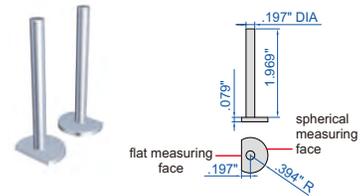
CAN BE CUSTOMIZED

DATA OUTPUT



2514-300

### Contact points (included, supplied in pair)



- Measure internal diameter and external diameter
- Measuring force .67-.9lbf, point height is adjustable(h) .394-1.575"
- Digital indicator display can be rotated by 320°
- Digital indicator button function: on/off, zero setting, tolerance Go and No-Go display, measuring direction change, max./min./TIR measurement, data preset, inch/metric conversion, data output, absolute/incremental measurement
- Digital indicator can keep preset data and tolerance data in memory after restart
- Digital indicator power: with data interface: CR2032 built-in wireless: rechargeable lithium battery
- Optional accessory: gauge blocks (part no. 4101) gauge block accessory (part no. 6881)

With data interface  
(optional wireless transmitter part no. 7315-50M, receiver is needed)

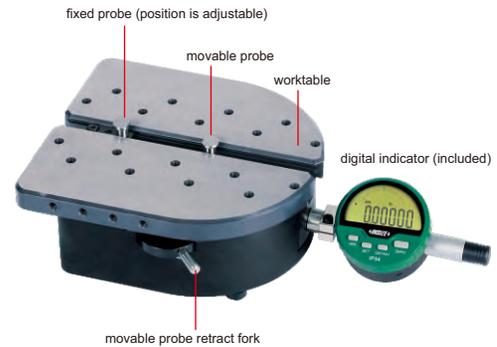
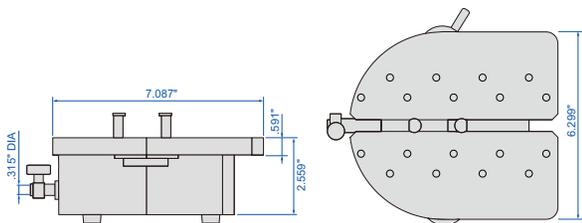
Part No.	Range of internal/external diameter	Contact point stroke	Accuracy	Repeatability	Indicator
2514-300	100-300mm (3.937-11.811")	.394"	.00020"	.00010"	digital indicator, range .5"/12.7mm, resolution .00005"/0.001mm

## UNIVERSAL COMPARISON MEASURING BENCH

ATTENTION: DIGITAL INDICATOR USES RECHARGEABLE BATTERY, FOR 30 HOURS CONTINUOUS WORKING

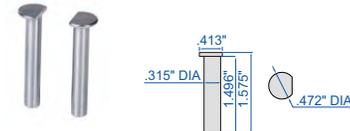
DIGITAL INDICATOR WITH IP54 DUST/WATERPROOF

DIGITAL INDICATOR USES ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF



6848-145

### Probes (included, supplied in pair)



- Switchable measurement direction for measuring internal and external diameter
- Adjustable measuring force .45-1.125lbf
- Movable probe travel ±.394"
- Digital indicator with IP54 dust/waterproof (when cap is lifted, no dust/waterproof)
- Digital indicator uses absolute encoder, the original data remains after power off
- Digital indicator uses rechargeable battery, for 30 hours continuous working
- Digital indicator with automatic power off
- Digital indicator reading in digital and analog
- Digital indicator display can be rotated by 270°
- Digital indicator button function: on/off, zero setting, data preset, tolerance Go and No-Go display, data hold, mm/inch, measuring direction change, max./min./TIR, absolute/incremental measurement, data output
- Data output cable (keyboard format) is included in digital indicator

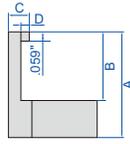
Part No.	Range of external diameter **	Range of internal diameter **	Resolution	Accuracy	Any ±.039" * accuracy	Repeatability
6848-145	0-4" (0-100mm)	1-4.7" (25-120mm)	.00002"/0.0005mm	.00020"	.00008"	.00008"

\* After set zero, accuracy is .00008" within range of ±.039" from zero position  
\*\* The measuring range will change according to different measuring probes

To be continued

Continued from previous page

**Internal groove probes (optional, supplied in pair)**



Part No.	Minimum measuring Internal diameter	A	B	C	D
6848-S201 *	.157"	.787"	.512"	.150"	.055"
6848-S202 *	.276"	.945"	.709"	.236"	.087"
6848-S203 *	.472"	1.102"	.866"	.236"	.079"

\* It is necessary to use internal groove probe holder (part no. 6848-T201)

**Internal groove probe holders (optional, supplied in pair)**



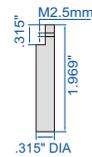
**Part No.**  
6848-T201

**Disk probes (optional, supplied in pair)**



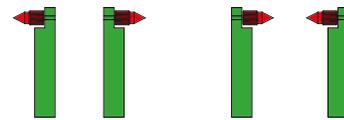
**Part No.**  
6848-S101

**Probe holders (optional, supplied in pair)**



**Part No.**  
6848-T401

**Probes (optional, supplied in single) part no. 6282 \***

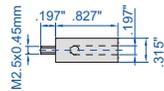


\* It is necessary to use probe holders (part no. 6848-T401) for these probes

**Multifunctional probes (optional, supplied in pair) part no. 7392 \***



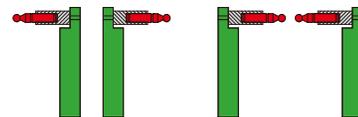
**Probe sleeve (optional, supplied in pair)**



**Part No.**  
2927-T101

\* It is necessary to use probe holders (part no. 6848-T401) and probe sleeve (part no. 2927-T101) for these probes

**Ball probes (optional, supplied in pair) part no. 7391 \***



\* It is necessary to use probe holders (part no. 6848-T401) and probe sleeve (part no. 2927-T101) for these probes

**External thread probes (optional, supplied in pair) part no. 7381 \***



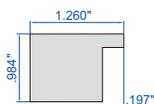
\* It is necessary to use probe holders (part no. 6848-T401) and probe sleeve (part no. 2927-T101) for these probes

**Internal thread probes (optional, supplied in pair) part no. 7321 \***



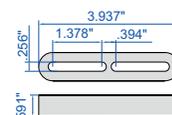
\* It is necessary to use probe holders (part no. 6848-T401) and probe sleeve (part no. 2927-T101) for these probes

**Spacer blocks (optional, supplied in pair)**



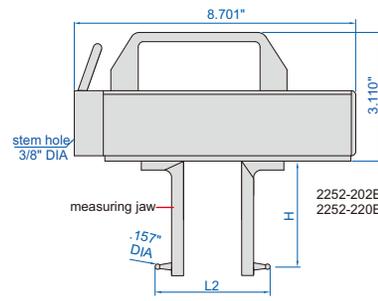
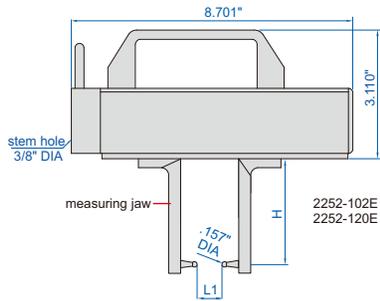
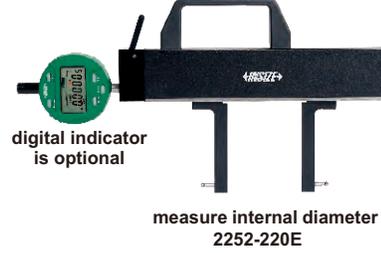
**Part No.**  
6848-B10

**Positioning plate (optional)**



**Part No.**  
6848-A10

**COMPARISON GAUGES**



**Measure external diameter**

Part No.	Range of external diameter (L1)	Accuracy *	Repeatability	H
2252-102E	0-3.54"/0-90mm	±.00020"	.00010"	1.575"
2252-120E	0-3.14"/0-80mm	±.00020"	.00010"	2.756"

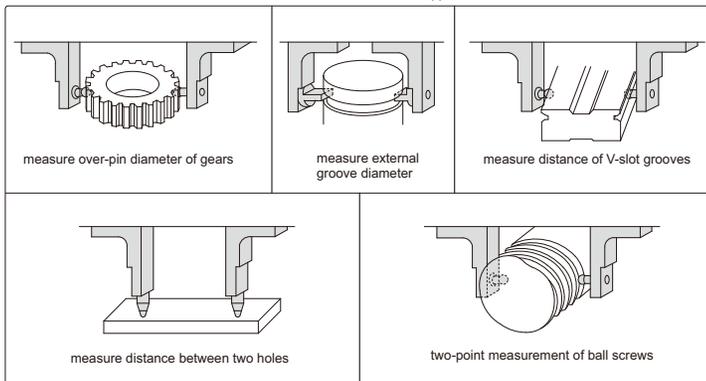
**Measure internal diameter**

Part No.	Range of internal diameter (L2)	Accuracy *	Repeatability	H
2252-202E	1.58-5.71"/40-145mm	±.00020"	.00010"	1.575"
2252-220E	2.17-5.91"/55-150mm	±.00020"	.00010"	2.756"

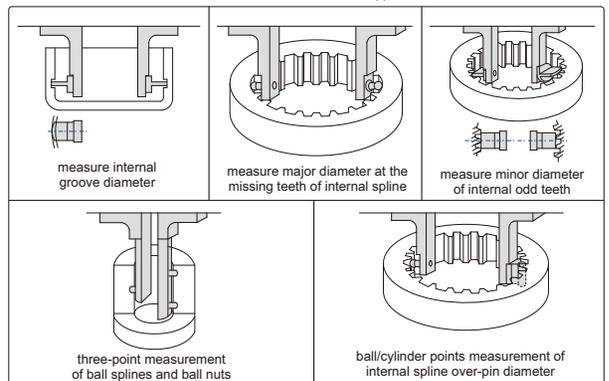
- Measure external diameter, internal diameter and over-pin diameter of gears
- Total range of movable point .32", effective range of movable point: ±.04"
- Optional accessory: digital indicator (part no. 2138-10FE), gauge block grade AS-1 (4112-B series)

\*Within ±.04" effective range

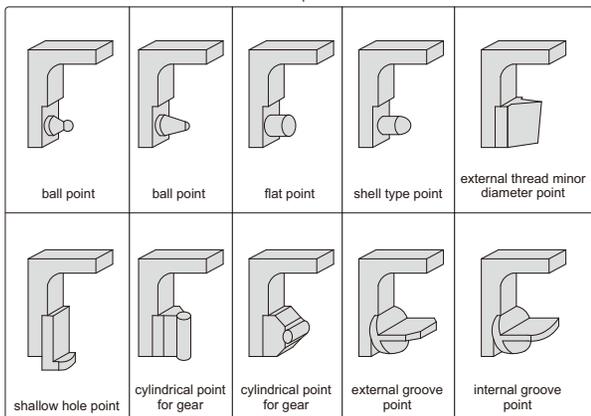
external diameter measurement application



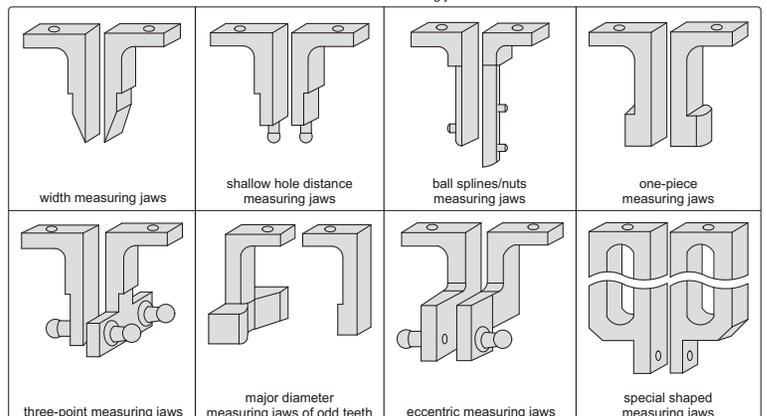
internal diameter measurement application



customizable points



customizable measuring jaws



## DIGITAL INTERNAL MEASURING GAUGE

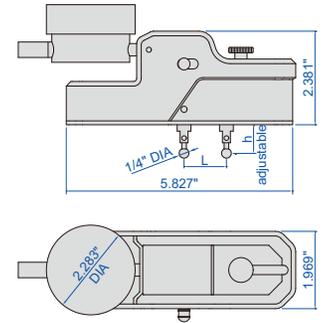


DATA  
OUTPUT

- Measure internal dimensions
- Resolution .00005"/0.001mm
- Accuracy .00025"
- Repeatability .00005"
- Movable point stroke .2"/5mm
- Point height is adjustable, h=.08-1"
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output



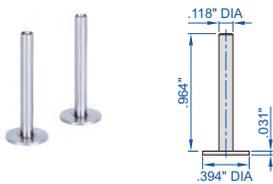
2932-451



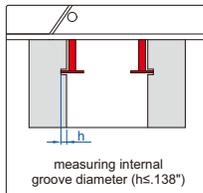
Part No.	Measuring range (L) *	Indicator	Wireless transmitter (optional)
2932-451	.95-2"/24-50mm	with transmission button and signal light; reading in digital and analog; display can be rotated by 320°; button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental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

\* The measuring range will change according for different measuring points

### Disk points (optional, supplied in pair)



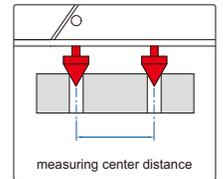
2932-S101



### Conical points (optional, supplied in pair)



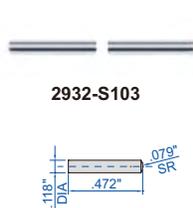
2932-S102



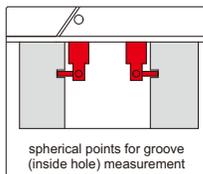
Part No.	Measuring range	Material
2932-S101	1.2-2.2"/30-55mm	stainless steel

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

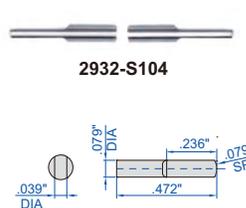
### Spherical points (optional, supplied in pair)



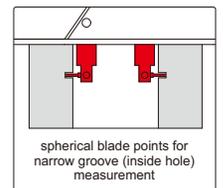
2932-S103



### Spherical blade points (optional, supplied in pair)



2932-S104



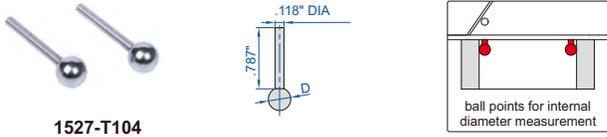
Part No.	Measuring range	Material
2932-S103	1.2-2.4"/30-60mm	stainless steel

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

To be continued

Continued from previous page

**Ball points (optional, supplied in pair)**



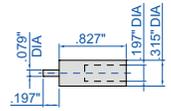
1527-T104

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)**

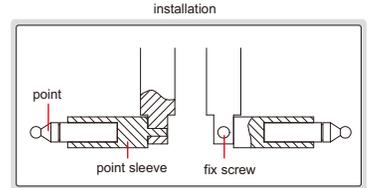


1526-T101



Part No.

1526-T101



**Multifunctional points (optional, supplied in pair)**



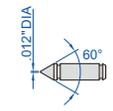
7392-T1



7392-T4



7392-T7



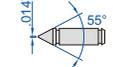
7392-T2



7392-T5



7392-T8



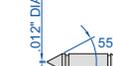
7392-T3



7392-T6



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

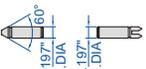
\*\* After installing points and point sleeve

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

**Screw thread points (optional, supplied in pair)**



7321-T16



**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

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)**



7391-T5



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

\*\* After installing points and point sleeve

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

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

# DIGITAL EXTERNAL MEASURING GAUGE

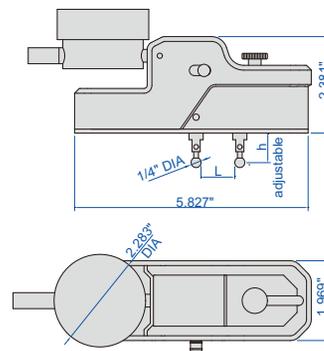
DATA OUTPUT



- Measure external dimensions
- Resolution: .00005"/0.001mm
- Accuracy: .00025"
- Repeatability: .00005"
- Movable point stroke: .2"/5mm
- Point height is adjustable, h=.08-1"
- CR2032 battery, automatic power off (time is adjustable)
- Data output



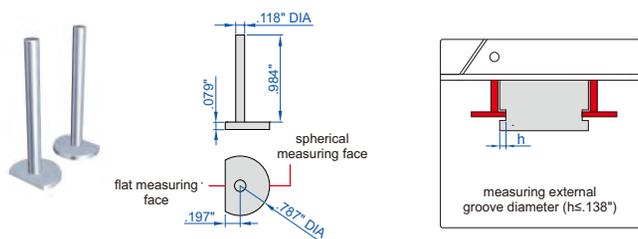
2934-401



Part No.	Measuring range (L) *	Indicator	Wireless transmitter (optional)
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)

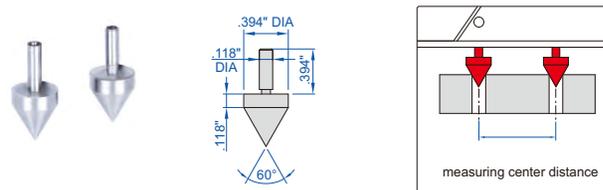
\* The measuring range will change accordingly for different measuring points

## Disk points (optional, supplied in pair)



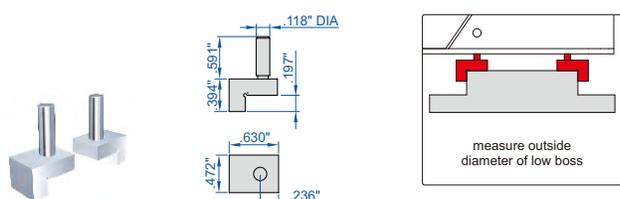
Part No.	Measuring range	Material
2934-S101	.4-1.4"/10-35mm	stainless steel

## Conical points (optional, supplied in pair)



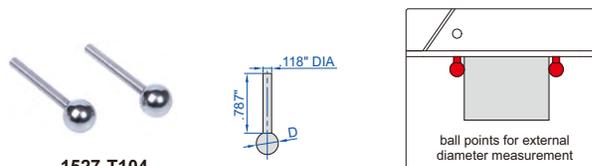
Part No.	Measuring range	Material
2932-S102	.8-1.8"/20-45mm	stainless steel

## 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)

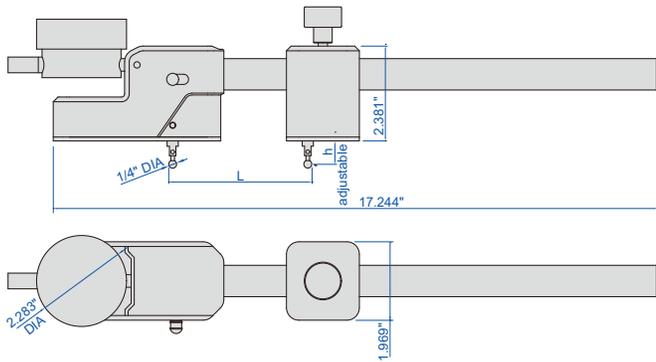


1527-T104

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 GAUGE

DATA  
OUTPUT

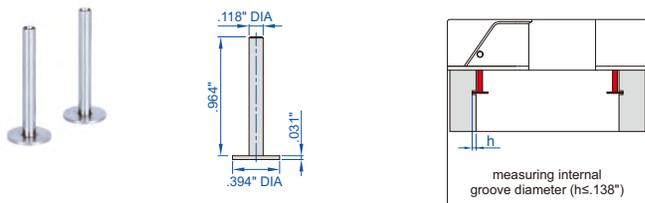


- Measure internal dimensions
- Resolution: .00005"/0.001mm
- Accuracy: .00025"
- Repeatability: .00005"
- Movable point stroke: .2"/5mm
- Point height is adjustable, h=.08-1"
- CR2032 battery, automatic power off (time is adjustable)
- Data output

Part No.	Measuring range (L) *	Indicator	Wireless transmitter (optional)
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)

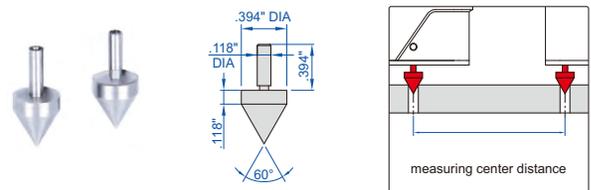
\*The measuring range will change accordingly for different measuring points

## 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)



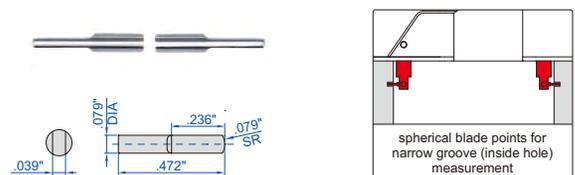
Part No.	Measuring range	Material
2932-S102	1.65-13"/42-320mm	stainless steel

## 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)

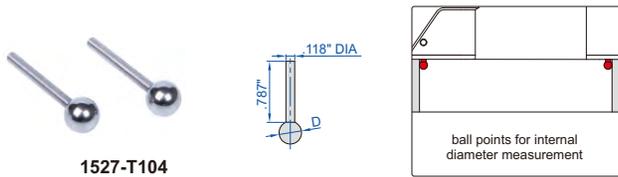


Part No.	Measuring range	Material
2932-S104	2.16-13"/55-330mm	stainless steel

To be continued

Continued from previous page

**Ball points (optional, supplied in pair)**



1527-T104

ball points for internal diameter measurement

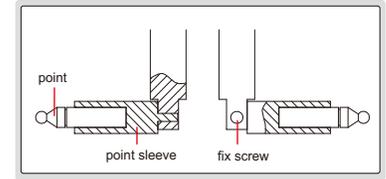
Part No.	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" DIA	±.0002"	stainless steel
1527-T103	3/16" DIA	±.0002"	stainless steel
1527-T104	1/4" DIA	±.0002"	stainless steel
1527-T105	3/8" DIA	±.0002"	stainless steel
1527-T106	1/2" DIA	±.0002"	stainless steel

**Point sleeve (optional, supplied in pair)**



Part No.  
1526-T101

installation



**Screw thread points (optional, supplied in pair)**



7321-T16

**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

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

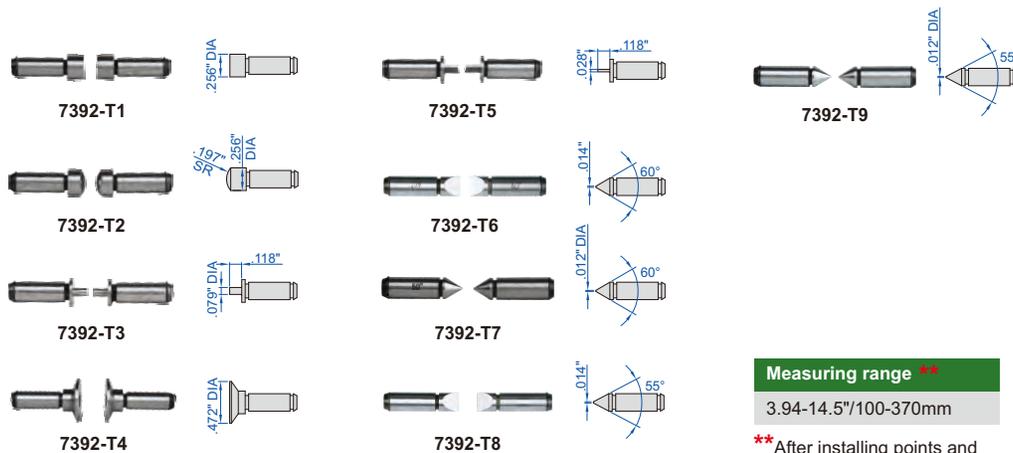
Part No.	Pitch
7321-T1S*	6 pairs/set, including all above points

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)**



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

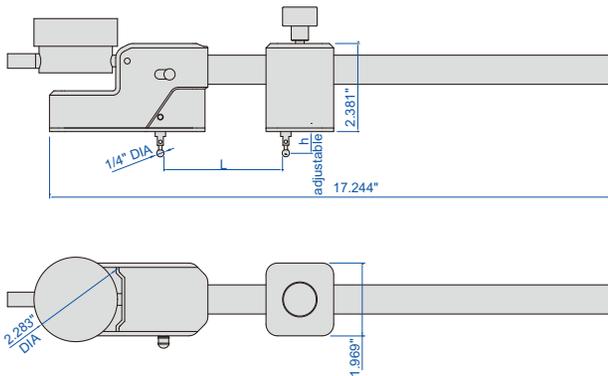
Measuring range**
3.94-14.5"/100-370mm

\*\* 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 GAUGE**

DATA  
OUTPUT



2935-321

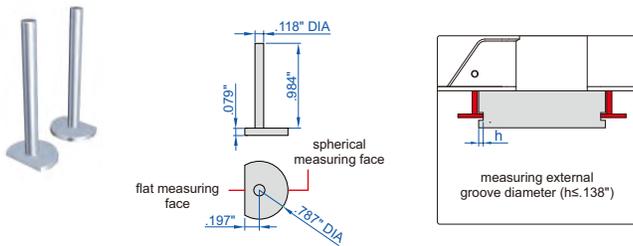


- Measure external dimensions
- Resolution: .00005"/0.001mm
- Accuracy: .00025"
- Repeatability: .00005"
- Movable point stroke: .2"/5mm
- Point height is adjustable, h=.08-1"
- CR2032 battery, automatic power off (time is adjustable)
- Data output

Part No.	Measuring range (L)	Indicator	Wireless transmitter (optional)
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)

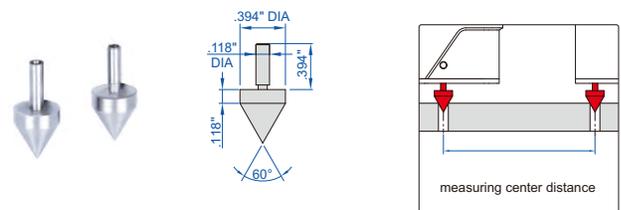
\*The measuring range will change accordingly for different measuring points

**Disk points (optional, supplied in pair)**



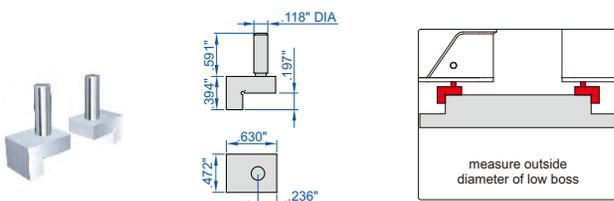
Part No.	Measuring range	Material
2934-S101	1.26-12.6"/32-320mm	stainless steel

**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)**

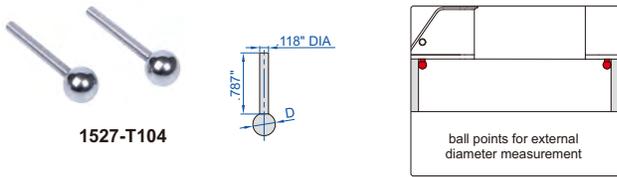


Part No.	Measuring range	Material
2932-S103	1.2-12.6"/30-320mm	stainless steel

To be continued

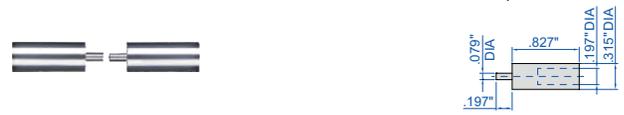
Continued from previous page

**Ball points (optional, supplied in pair)**

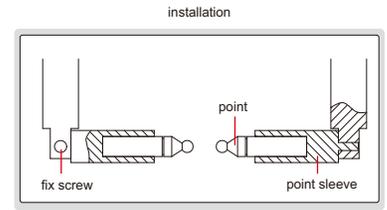


Part No.	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" DIA	±.0002"	stainless steel
1527-T103	3/16" DIA	±.0002"	stainless steel
1527-T104	1/4" DIA	±.0002"	stainless steel
1527-T105	3/8" DIA	±.0002"	stainless steel
1527-T106	1/2" DIA	±.0002"	stainless steel

**Point sleeve (optional, supplied in pair)**



**Part No.**  
**1526-T101**



**Screw thread points (optional, supplied in pair)**



**External thread (60° thread angle)**

Part No.	Pitch	Part No.	Pitch
7381-T11 *	64-48TPI/0.4-0.5mm	7381-T14 *	13-9TPI/2-3mm
7381-T12 *	44-28TPI/0.6-0.9mm	7381-T15 *	8-5TPI/3.5-5mm
7381-T13 *	24-14TPI/1-1.75mm	7381-T16 *	4.5-3.5TPI/5.5-7mm

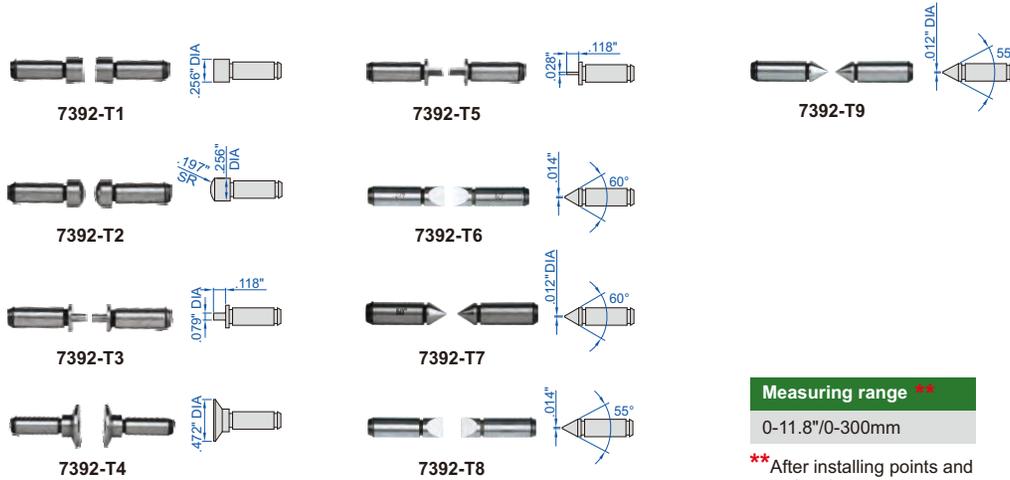
Part No.	Pitch
7381-TS *	6 pairs/set, including all above points

**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)**



**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)**



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 MICROMETER/SNAP GAUGE

ONE TURN OF SLEEVE MAKES .4" SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS .12"

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

NON-ROTATING SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

DATA OUTPUT

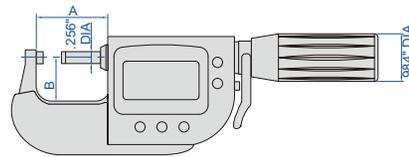


ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

IP65 WATERPROOF



3359-25



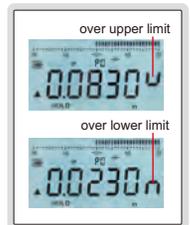
- Absolute encoder, the original data remains after power off
- Resolution .00001"/0.0001mm
- One turn of sleeve makes .4" spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts .12"
- Carbide measuring faces
- Measuring force 5-10N
- Button function: 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

With data interface (optional wireless transmitter part no. 7315-3350, receiver is needed)

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

\*Supplied with manufacturer inspection certificate

alarm when over tolerance



## DIGITAL MICROMETERS/SNAP GAUGES (BASIC TYPE)

ONE TURN OF SLEEVE MAKES .4" SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS .12"

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

NON-ROTATING SPINDLE

IP65 WATERPROOF

DATA OUTPUT



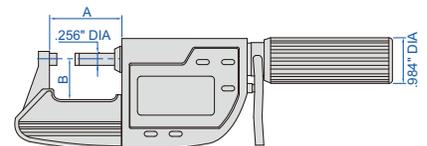
ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING



- 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



3358-25



With data interface (optional wireless transmitter part no. 7315-3350, receiver is needed)

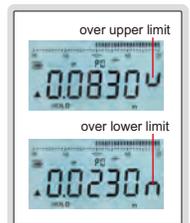
Part No.	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3358-25 *	0-1"/0-25mm	±.00010"	.00005"	.00002"	.00005"	1.496"	.945"
3358-50 *	1-2"/25-50mm	±.00010"	.00005"	.00002"	.00005"	2.520"	1.280"
3358-75 *	2-3"/50-75mm	±.00015"	.00005"	.00002"	.00007"	3.504"	1.811"
3358-100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

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

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

\*Supplied with manufacturer inspection certificate

alarm when over tolerance



## DIGITAL MICROMETERS/SNAP GAUGES

NON-ROTATING SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

IP65 WATERPROOF

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

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

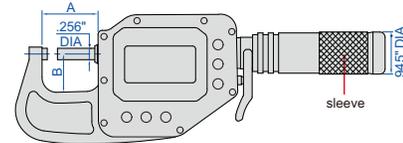
DATA OUTPUT

INSPECTION CERTIFICATE

- 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"
- Carbide measuring faces
- Measuring force 5-10N.  
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



3350-25

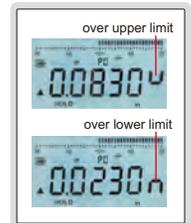


With data interface (optional wireless transmitter part no. 7315-3350, receiver is needed)

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"



alarm when over tolerance



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

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

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

IP65 WATERPROOF

DATA OUTPUT

NON-ROTATING SPINDLE

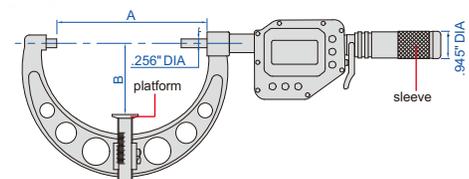
MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

- 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"
- Carbide measuring faces
- Measuring force 5-10N  
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
- Power: rechargeable battery, for 24 hours continuous working



3351-125

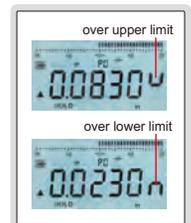


With data interface (optional wireless transmitter part no. 7315-3350, receiver is needed)

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"



alarm when over tolerance

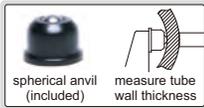


gauge blocks for zero setting (included)

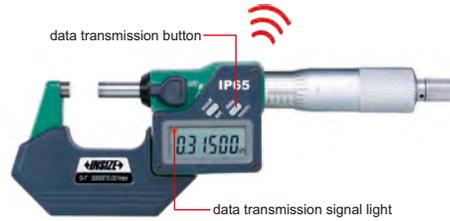


\*Supplied with manufacturer inspection certificate

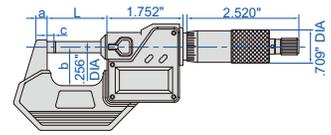
## WIRELESS WATERPROOF DIGITAL OUTSIDE MICROMETERS



- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Built-in wireless data transmission module
- Transmission distance is 33 feet (under the condition of no obstruction and no electromagnetic interference)
- Button function: on/off, set, inch/mm, data transmission
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-1"/0-25mm)
- Built-in rechargeable lithium battery
- Optional accessory: receiver (part no. 7315-2/3/6/7/8/9)

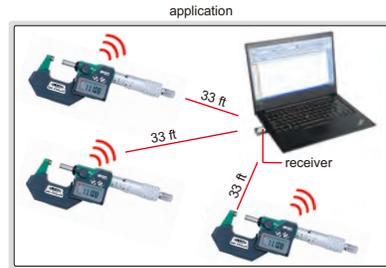


3112-25EWL



Part No.	Range	Accuracy	L	a	b	c
3112-25EWL*	0-1"/0-25mm	±.00010"	1.358"	.236"	.984"	.118"
3112-50EWL*	1-2"/25-50mm	±.00010"	2.343"	.315"	1.260"	.118"
3112-75EWL*	2-3"/50-75mm	±.00015"	3.327"	.315"	1.752"	.118"
3112-100EWL*	3-4"/75-100mm	±.00015"	4.311"	.315"	2.244"	.118"
3112-125EWL	4-5"/100-125mm	±.00015"	5.315"	.394"	2.756"	.118"
3112-150EWL	5-6"/125-150mm	±.00015"	6.319"	.394"	3.228"	.118"

\*Supplied with manufacturer inspection certificate



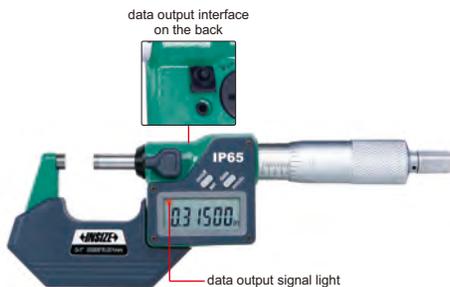
## WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITH DATA OUTPUT)



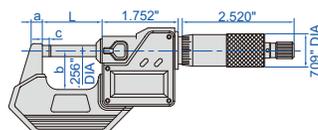
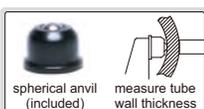
POPULAR MODEL

IP65 WATERPROOF

DATA OUTPUT



3101-25E



- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmission
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-1"/0-25mm)
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)

### 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	portable protective case

\*Supplied with manufacturer inspection certificate

## WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)

INSPECTION CERTIFICATE

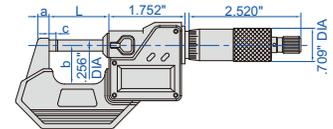
ATTENTION: NO DATA OUTPUT

IP65 WATERPROOF

- 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
- Ratchet stop
- Supplied with spherical anvil
- Setting standards are included (except 0-1"/0-25mm)



3108-1



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"

\*Supplied with manufacturer inspection certificate

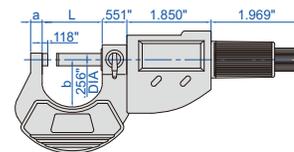
## DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITHOUT DATA OUTPUT)

INSPECTION CERTIFICATE

ATTENTION: NO DATA OUTPUT



3109-25E



POPULAR MODEL

- 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"

\*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	portable protective case

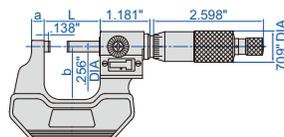
## OUTSIDE MICROMETERS WITH COUNTER



3400-1

INSPECTION CERTIFICATE

- 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 MICROMETER FOR LEFT OR RIGHT HANDERS

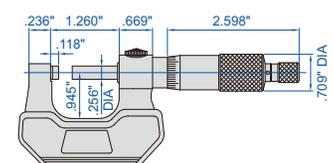


front

back

3236-1B

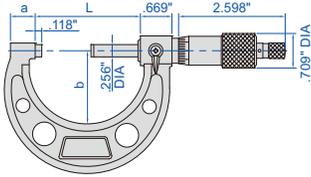
- Graduation .001"
- Graduations on two sides
- Ratchet stop
- Carbide measuring faces



Part No.	Range	Accuracy
3236-1B	0-1"	.00015"

**OUTSIDE MICROMETERS**

**POPULAR  
MODEL**



**3203-2A**

- Graduation .0001"
- Carbide measuring faces
- Ratchet stop type
- 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



**3203-44A**



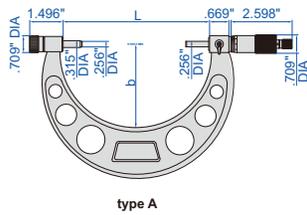
**3203-126A**

\*Supplied with manufacturer inspection certificate

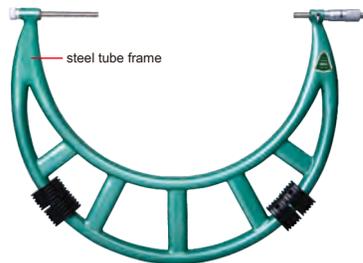
**OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS**



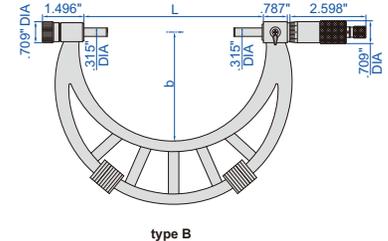
**3206-6**



**type A**



**3206-16**



**type B**

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"
3206-8	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"

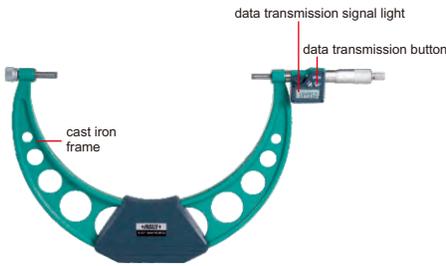
- Graduation .0001" (within 12")  
.001" (over 12")
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



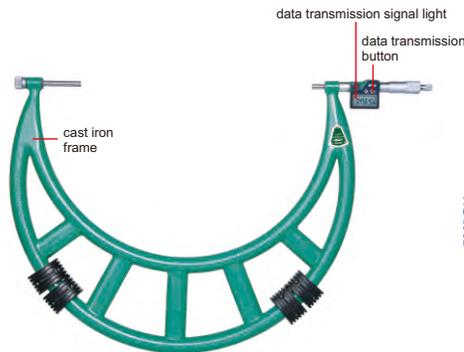
## DIGITAL OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

DATA  
OUTPUT

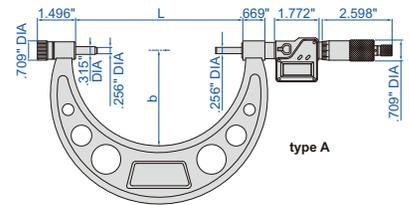
IP65  
WATERPROOF



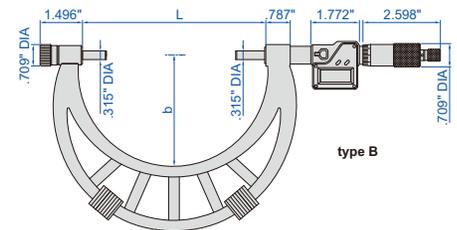
3506-300E



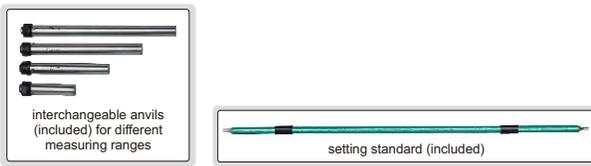
3506-400E



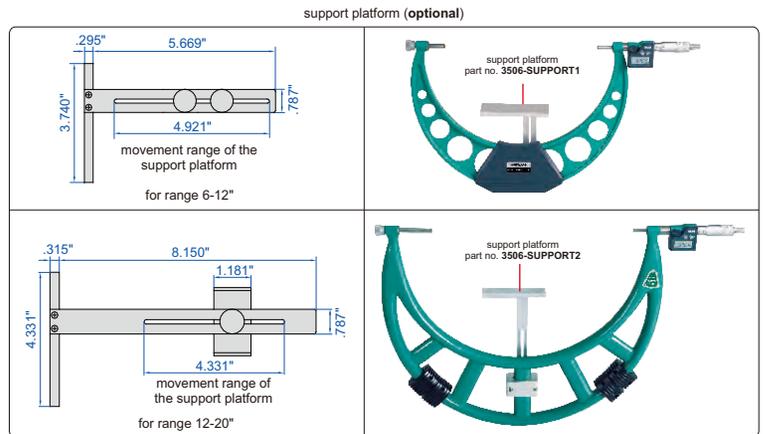
type A



type B



- Resolution .0001"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmission
- Data output, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Battery CR2032
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)



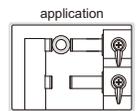
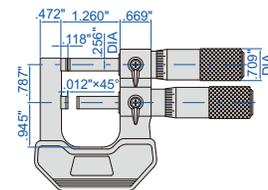
Part No.	Range	Type	Accuracy	L	b	Setting standard (included)	Support platform (optional)
3506-300E	6-12"/150-300mm	A	±.00030"	12.008"	6.496"	6", 7", 8", 9", 10"	part no. 3506-SUPPORT1
3506-400E	12-16"/300-400mm	B	±.00035"	15.945"	8.819"	13", 15"	part no. 3506-SUPPORT2
3506-500E	16-20"/400-500mm	B	±.00045"	19.882"	10.827"	17", 19"	

## LIMIT MICROMETER

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



3235-1



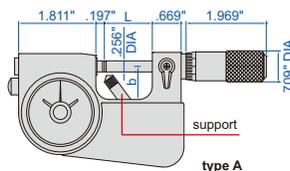
Part No.	Range	Graduation	Accuracy
3235-1	0-1"	.0001"	.00015"

## INDICATING MICROMETERS

ATTENTION: SETTING  
STANDARDS ARE NOT INCLUDED



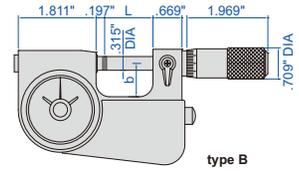
3332-1



type A



3332-1B



type B

- 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

## DIGITAL INDICATING MICROMETERS (WITHOUT DATA OUTPUT)

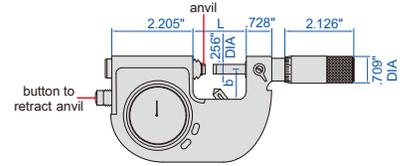
**IP54**  
WATERPROOF

**ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF**

**ATTENTION: SETTING STANDARDS ARE NOT INCLUDED**



3508-25E



warning in red or yellow when over tolerance



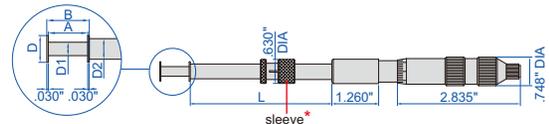
- Absolute encoder, the original data remains after power off
- Measuring stroke of anvil: >.039"
- Reading in digital and analog
- Button function: on/off, zero setting, mm/inch, tolerance, display setting
- Carbide measuring faces
- Power: rechargeable Li-battery, for 20 hours continuous working
- Optional accessory: gauge blocks grade 0 (4112-A series), for zero setting

Part No.	Micrometer head			Digital indicator			Repeatability	L	b
	range	graduation	accuracy	range	resolution	accuracy			
3508-25E	0-1"	.0001"	.00015"	±.002"	.00001"	±.00004"	.00001"	1.398"	.591"
3508-50E	1-2"	.0001"	.00015"	±.002"	.00001"	±.00004"	.00001"	2.382"	.984"
3508-75E	2-3"	.0001"	.00015"	±.002"	.00001"	±.00004"	.00001"	3.386"	1.476"
3508-100E	3-4"	.0001"	.00015"	±.002"	.00001"	±.00004"	.00001"	4.370"	1.969"

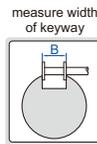
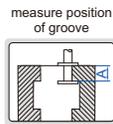
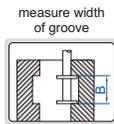
## GROOVE MICROMETERS



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



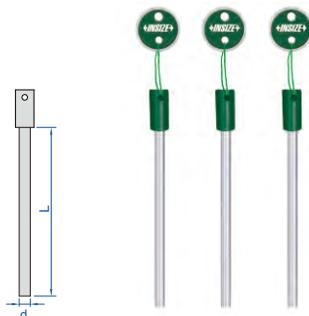
Part No.	Range (outside A)	Range (inside B)	L	D (DIA)	D1 (DIA)	D2 (DIA)
3287-1B	0-1"	.06-1.05"	4.724"	.512"	.256"	.394"
3287-2B	1-2"	1.05-2.05"	4.724"	.512"	.256"	.394"
3287-3B	2-3"	2.05-3.05"	4.724"	.512"	.256"	.394"
3287-4B	3-4"	3.05-4.05"	4.724"	.512"	.256"	.394"
3287-1AB*	0-1"	.06-1.05"	3.543"	.256"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

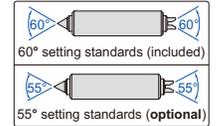
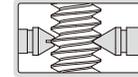
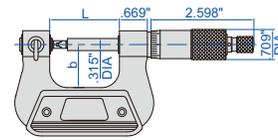
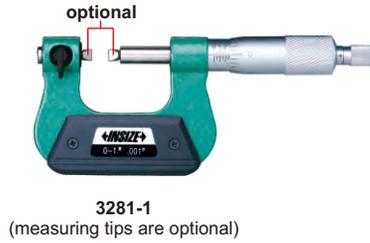
\*Made of alloy steel

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

## 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)



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

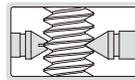
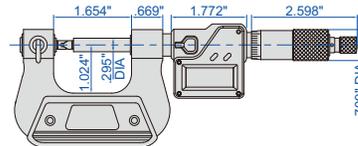
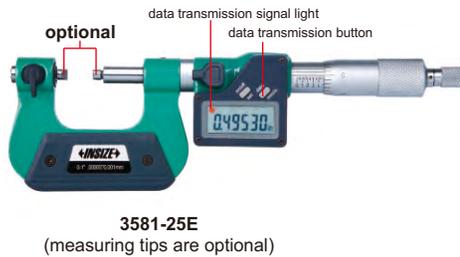
accuracy of micrometers with tips

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"

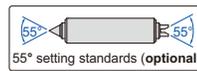
## DIGITAL SCREW THREAD MICROMETER

NON-ROTATING SPINDLE

DATA OUTPUT



- Measure pitch diameter of screw threads
- Resolution .00005"/0.001mm
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Non-rotating spindle
- Ratchet stop
- Optional accessory: 55° setting standards, measuring tips (part no. 7381), wireless transmitter part no. 7315-31 (receiver is needed)



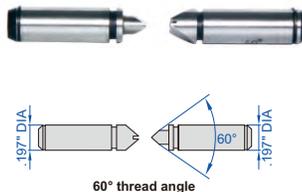
Measuring tips are optional

Part No.	Range
3581-25E	0-1"/0-25mm

accuracy of micrometer with tips

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

## MEASURING TIPS FOR SCREW THREAD MICROMETERS



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

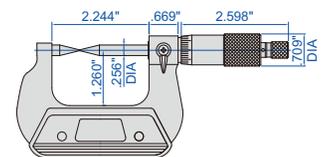
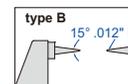
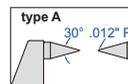
Unified and metric thread (60° thread angle)

Part No.	Pitch
7381-TS	6 pairs/set: 64-48TPI/0.4-0.5mm, 44-28TPI/0.6-0.9mm, 24-14TPI/1-1.75mm, 13-9TPI/2-3mm, 8-5TPI/3.5-5mm, 4.5-3.5TPI/5.5-7mm

## POINT MICROMETERS



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



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

## DIGITAL POINT MICROMETER

- 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 transmission
- Data output
- Automatic power off
- Ratchet stop, carbide tips
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)

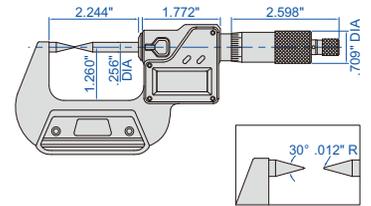


3530-25E

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

DATA OUTPUT

IP65 WATERPROOF

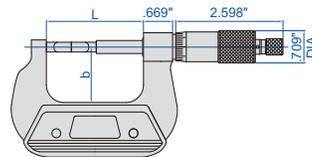
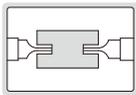


## BLADE MICROMETERS

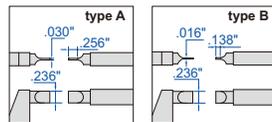
NON-ROTATING SPINDLE



3232-1



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



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"

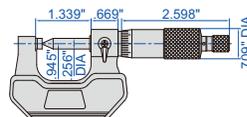
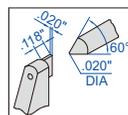
## CRIMP HEIGHT MICROMETER



3266-1B

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

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



## DIGITAL BLADE MICROMETERS

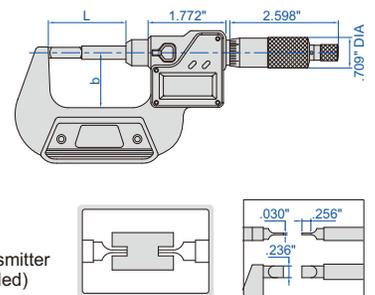
NON-ROTATING SPINDLE

DATA OUTPUT



3532-25E

- Measure the groove diameter of shafts and keyways
- Resolution .00005"/0.001mm
- Non-rotating spindle
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-1"/0-25mm)
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)



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"

## DIGITAL CRIMP HEIGHT MICROMETER

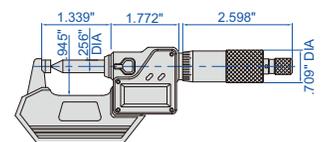
DATA OUTPUT

IP65 WATERPROOF

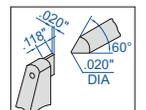


3566-25BE

- Measure the height of crimp contact
- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)



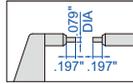
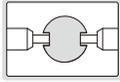
Part No.	Range	Accuracy
3566-25BE	0-1"/0-25mm	±.00015"



### SPLINE MICROMETER

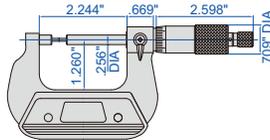


3233-1

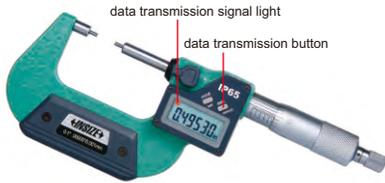


- Measure splined shafts, slots and keyways
- Graduation .0001"
- Ratchet stop
- Carbide measuring faces

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



### DIGITAL SPLINE MICROMETER



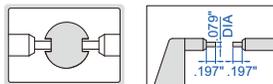
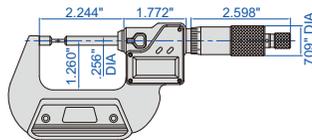
3533-25E

**IP65**  
WATERPROOF

**DATA**  
OUTPUT

- Measure splined shafts, slots and keyways
- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)

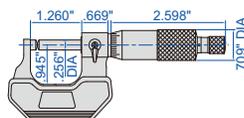
Part No.	Range	Accuracy
3533-25E	0-1"/0-25mm	±.00015"



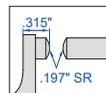
### SPHERICAL ANVIL TUBE MICROMETER



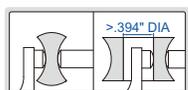
3260-1S



- Measure wall thickness of tubes
- Ratchet stop
- Carbide measuring faces



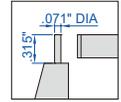
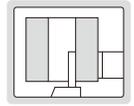
Part No.	Range	Accuracy	Graduation
3260-1S	0-1"	.00015"	.0001"



### CYLINDRICAL ANVIL TUBE MICROMETER

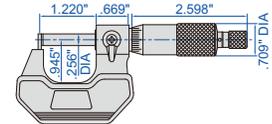


3261-1



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

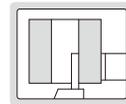
Part No.	Range	Accuracy
3261-1	0-1"	.00025"



### DIGITAL CYLINDRICAL ANVIL TUBE MICROMETER

**DATA**  
OUTPUT

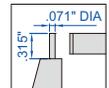
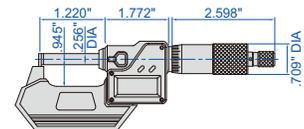
**IP65**  
WATERPROOF



3561-25E

- Measure wall thickness of tubes
- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmission
- Data output, automatic power off
- Ratchet stop
- Carbide spindle tip
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)

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



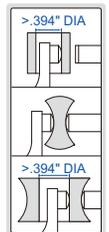
### DIGITAL SPHERICAL ANVIL TUBE MICROMETERS

**IP65**  
WATERPROOF

**DATA**  
OUTPUT

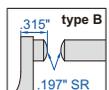
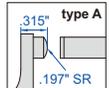
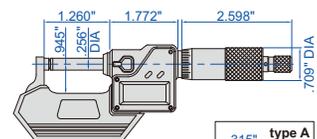


3560-25E

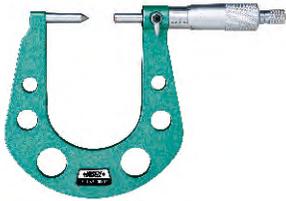


- Measure wall thickness of tubes
- Resolution .00005"/0.001mm
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)

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

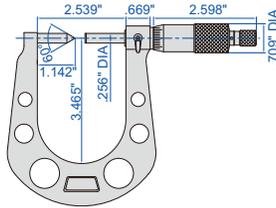


### DISK BRAKE MICROMETER



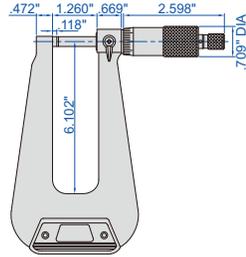
**3288-1**

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



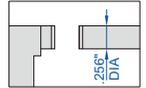
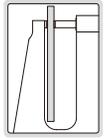
Part No.	Range	Accuracy
3288-1	.3-1.3"	.00020"

### SHEET METAL MICROMETER



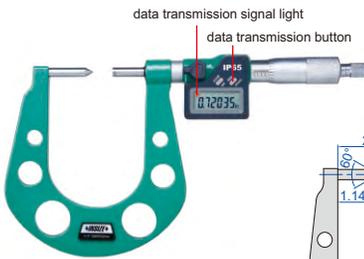
**3239-13**

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



Part No.	Range	Accuracy	Graduation
3239-13	0-1"	.00030"	.0001"

### DIGITAL DISK BRAKE MICROMETER

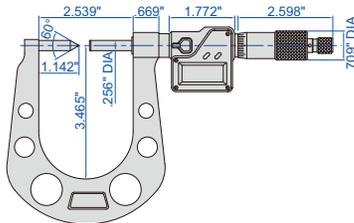


**3588-33E**

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

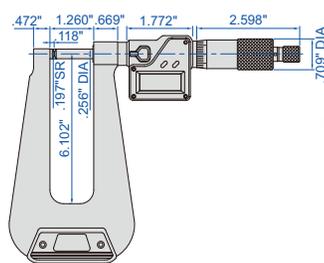
**IP65**  
WATERPROOF

**DATA**  
OUTPUT



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

### DIGITAL SHEET METAL MICROMETER

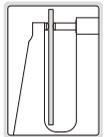


**IP65**  
WATERPROOF

**DATA**  
OUTPUT

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

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

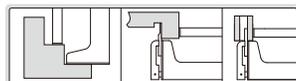
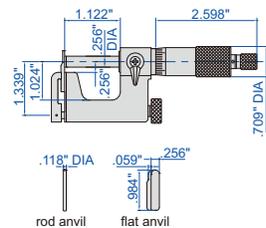


### INTERCHANGEABLE ANVIL MICROMETER



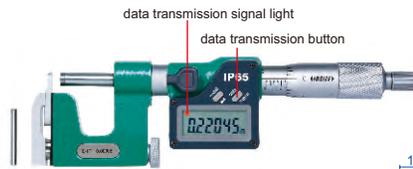
**3262-1**

- 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

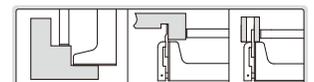
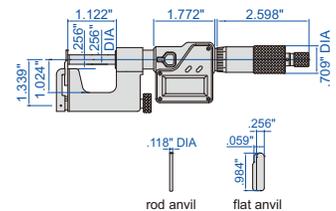


**3562-25E**

**IP65**  
WATERPROOF

**DATA**  
OUTPUT

- 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 transmission
- Data output, automatic power off
- Ratchet stop
- Carbide spindle tip
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)

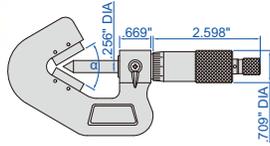


Part No.	Range	Resolution	Accuracy
3562-25E	0-1"/0-25mm	.00005"/0.001mm	±.00015"

### V-ANVIL MICROMETER



3290-063



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

Part No.	Range	Flutes	$\alpha$	Accuracy	Graduation
3290-063	.04-.6"	3	60°	.00015"	.0001"

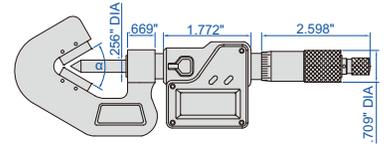
### DIGITAL V-ANVIL MICROMETER

IP65 WATERPROOF

DATA OUTPUT



3590-153E



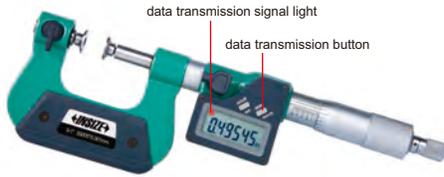
- Resolution .00005"/0.001mm
- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmission
- Data output, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied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

Part No.	Range	Flutes	$\alpha$	Accuracy
3590-153E	.04-.6"/1-15mm	3	60°	±.00015"

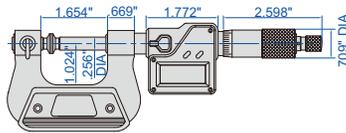
### DIGITAL UNIVERSAL MICROMETER

NON-ROTATING SPINDLE

DATA OUTPUT



3580-25E



- Accuracy  $\pm$ .00015"
- Resolution .00005"/0.001mm
- Non-rotating spindle
- Button function: on/off, set, inch/mm, data transmission
- 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, wireless transmitter part no. 7315-31 (receiver is needed)

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

#### 55° anvil/spindle tip (optional)

Part No. 3280-SP1 Knife-edge	.014" $\alpha$ 55°		
Part No. 3280-SP2 Point	.012" DIA $\alpha$ 55°		

#### Anvil/spindle tip (included)

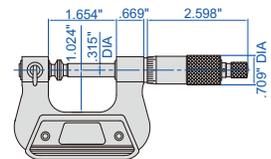
Flat	256" DIA		
Spherical	3/16" $\alpha$ 256" DIA		
Spline	0.79" DIA $\alpha$ 118°		
Disk	4/72" DIA		
Blade	0.281" $\alpha$ 118°		
Knife-edge	.014" $\alpha$ 60°		
Point	.012" DIA $\alpha$ 60°		

### 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 (part no. 3280-SP1 and 3280-SP2)

#### 55° anvil/spindle tip (optional)

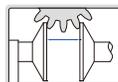
Part No. 3280-SP1 Knife-edge	.014" $\alpha$ 55°		
Part No. 3280-SP2 Point	.012" DIA $\alpha$ 55°		

#### Anvil/spindle tip (included)

Flat	256" DIA		
Spherical	3/16" $\alpha$ 256" DIA		
Spline	0.79" DIA $\alpha$ 118°		
Disk	4/72" DIA		
Blade	0.281" $\alpha$ 118°		
Knife-edge	.014" $\alpha$ 60°		
Point	.012" DIA $\alpha$ 60°		

### DISK MICROMETERS

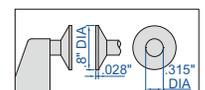
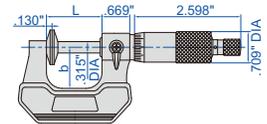
- Measure root tangent length of gear
- Ratchet stop
- Supplied with setting standards



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"



3282-1



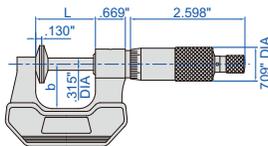
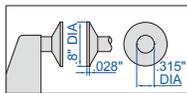
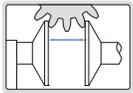
**NON-ROTATING SPINDLE DISK MICROMETERS**

**NON-ROTATING SPINDLE**



3294-1

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



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"

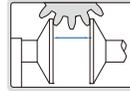
**DIGITAL NON-ROTATING SPINDLE DISK MICROMETERS**

**NON-ROTATING SPINDLE**

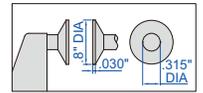
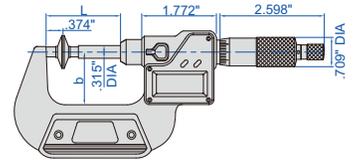
**DATA OUTPUT**



3594-1



- Parallelism:  $\pm .00020"$
- Measure root tangent length of gear
- Resolution  $.00005"/0.001\text{mm}$
- Non-rotating spindle
- Button function: on/off, set, inch/mm, data transmission
- Data output, automatic power off
- Ratchet stop
- Supplied with setting standards
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)

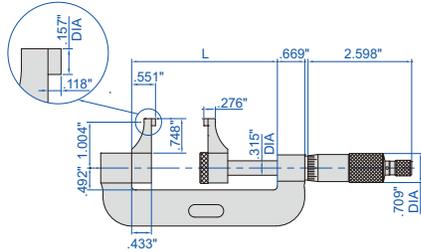
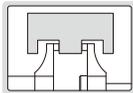


Part No.	Range	Accuracy	L	b
3594-1	0-1"/0-25mm	$\pm .00015"$	1.693"	1.260"
3594-2	1-2"/25-50mm	$\pm .00015"$	2.677"	1.752"
3594-3	2-3"/50-75mm	$\pm .00020"$	3.661"	2.244"
3594-4	3-4"/75-100mm	$\pm .00020"$	4.665"	2.756"

**CALIPER TYPE MICROMETER**



3238-1



- Graduation  $.001"$
- Non-rotating spindle
- Ratchet stop
- Carbide measuring faces

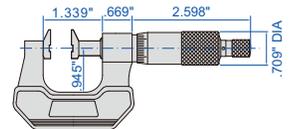
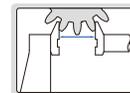
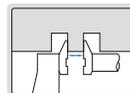
Part No.	Range	Accuracy	L
3238-1	0-1"	.00040"	2.205"

**JAW TYPE MICROMETER**

**NON-ROTATING SPINDLE**

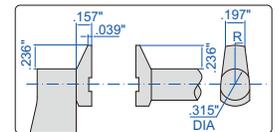


3283-1



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

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

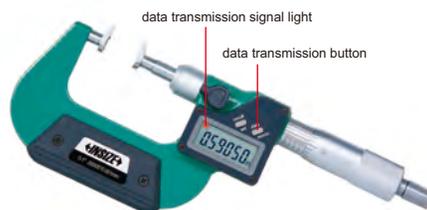


**DIGITAL JAW TYPE MICROMETER**

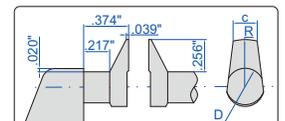
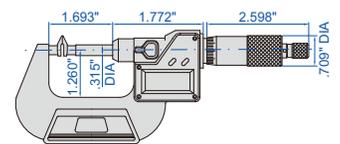
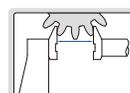
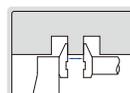
**NON-ROTATING SPINDLE**

**DATA OUTPUT**

- Resolution  $.00005"/0.001\text{mm}$
- Non-rotating spindle
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)



3583-25AE



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

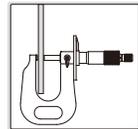
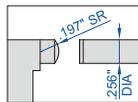
## SHEET METAL MICROMETER



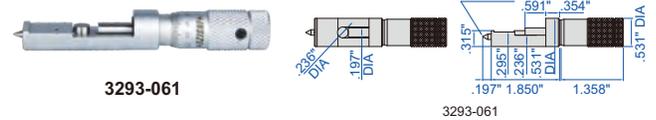
3263-1

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

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

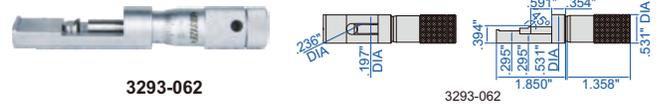


## CAN SEAM MICROMETERS



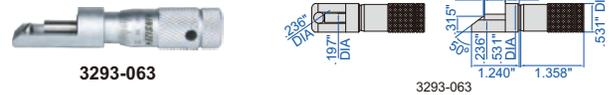
3293-061

3293-061



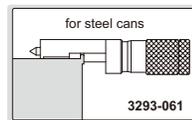
3293-062

3293-062

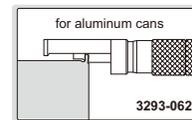


3293-063

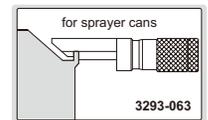
3293-063



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"

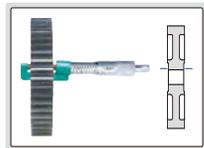
- Measure the width, height and depth of can seams
- Graduation .001"

## HUB MICROMETERS



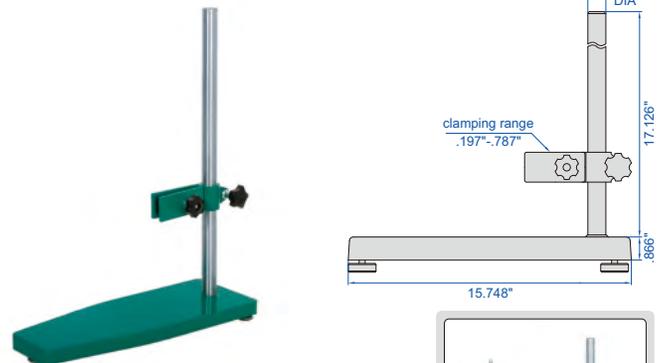
3292-1

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



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"

## MICROMETER STAND



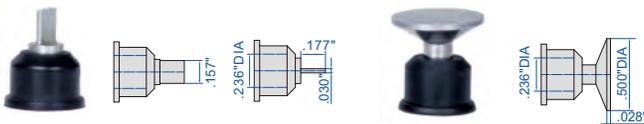
6302

- Suitable for 4-12" outside micrometers (except 3675 series)

Part No.  
6302



## MEASURING TIPS FOR MICROMETERS



7397-3

7397-5

application



- To be installed on micrometer anvils (the measuring range of micrometer is reduced by .394")
- Supplied in single
- Made of stainless steel

Part No.	Description	Application
7397-3	blade tip	suitable for micrometers with anvil diameter .256" (e.g. 3101/3102/3108/3109 series, etc.)
7397-5	disk tip	

## MICROMETER STAND



6300

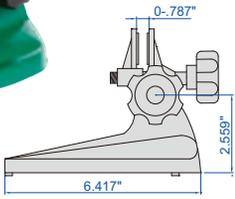
Part No.  
6300

- Suitable for outside micrometers up to 4"

**MICROMETER STAND**



6301

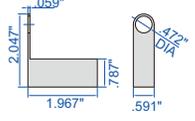


- Suitable for outside micrometers up to 4"

Part No.
6301



6301-1

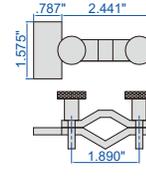


- Suitable for inside micrometers

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



6301-2



- Suitable for three points internal micrometers

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



**MICROMETER SETTING STANDARDS**



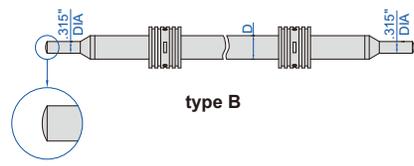
6311-4



6311-12



type A



type B

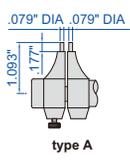
Part No.	Length	Type	Accuracy	D (DIA)
6311-1	1"	A	±.00006"	.276"
6311-2	2"	A	±.00008"	.276"
6311-3	3"	A	±.00010"	.276"
6311-4	4"	A	±.00012"	.315"
6311-5	5"	A	±.00014"	.315"
6311-6	6"	A	±.00016"	.315"
6311-7	7"	A	±.00018"	.315"
6311-8	8"	A	±.00020"	.315"
6311-9	9"	A	±.00022"	.315"
6311-10	10"	A	±.00024"	.315"
6311-11	11"	A	±.00026"	.315"
6311-12	12"	B	±.00028"	.630"

**INSIDE MICROMETERS (ECONOMIC TYPE)**

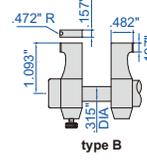
ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES



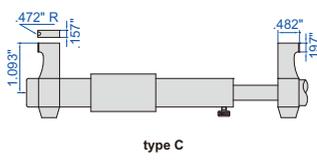
3220-2



type A



type B



type C

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

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, part no. 6313-2)	.00035"
3220-4	3-4"	C	3" DIA (optional, part no. 6313-3)	.00040"

**DIGITAL INSIDE MICROMETERS (ECONOMIC TYPE)**

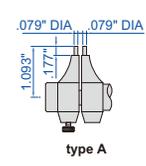
ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES



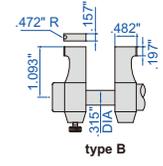
3520-30E

DATA OUTPUT

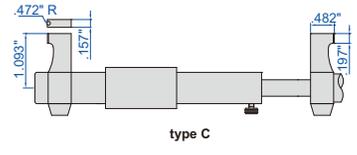
- Resolution .00005"/0.001mm
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed), setting ring (part no. 6313-2 for 3520-75E; part no. 6313-3 for 3520-100E)



type A



type B



type C

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"

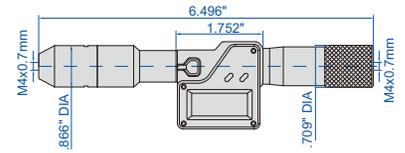
## DIGITAL TUBULAR INSIDE MICROMETERS WITH INTERCHANGEABLE POINTS

**IP65**  
WATERPROOF

**DATA**  
OUTPUT

**POINTS CAN BE**  
CUSTOMIZED

- IP65 dust/waterproof
- Resolution: .00005"/0.001mm
- Accuracy:  $[\pm 0.00005(3+n+L/2)]''$   
n=number of rods  
L=maximum measuring length (inch)
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Optional accessory: gauge blocks (part no. 4112-B8), gauge block holder (6886 series), gauge block accessory (part no. 6881-C)



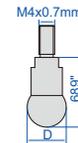
### Ball points (optional)\*\*

- Supplied in pair
- Made of carbide

With data interface (optional wireless transmitter part no. 7315-31, receiver is needed)

Part No.	Range*	Travel of micrometer head	Extension rods
3525-9	8-8.85"	.85"	—
3525-42	8-41.85"	.85"	1", 2" (2 pcs), 4", 8", 16"
3525-82	8-81.85"	.85"	1", 2" (2 pcs), 4", 8" (2 pcs), 16" (3 pcs)

\*Range after installing ball points



Part No.	D
3525-1H4	1/4" DIA
3525-3H8	3/8" DIA
3525-1H2	1/2" DIA
3525-5H8	5/8" DIA

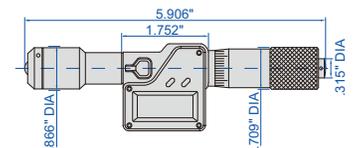
\*\* Points can be customized according to customers' requirements

## DIGITAL TUBULAR INSIDE MICROMETERS

**IP65**  
WATERPROOF

**DATA**  
OUTPUT

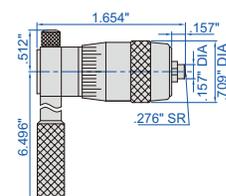
- Micrometer head: 6-7"
- Graduation .00005"/0.001mm
- Accuracy:  $[\pm 0.00005(3+n+L/2)]''$   
n=number of rods  
L=maximum measuring length (inch)
- Carbide measuring faces
- The diameter of extension rods is .866"
- IP65 dust/waterproof
- Button function: on/off, set, inch/mm, data transmission
- Data output
- Automatic power off
- Supplied with setting standards
- Optional accessory: wireless transmitter part no. 7315-31 (receiver is needed)



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

## TUBULAR INSIDE MICROMETERS

- Graduation .001"
- Accuracy:  $[\pm 0.0003 \pm 0.00005(L/2)]''$   
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)

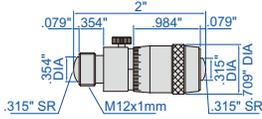


application



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

### TUBULAR INSIDE MICROMETERS



Part No.	Range	Extension rods
3222-6	2-6"	.5", 1", 2"
3222-12	2-12"	.5", 1", 2" (2 pcs), 4"
3222-20	2-20"	.5", 1", 2" (2 pcs), 4", 8"
3222-40	2-40"	.5", 1", 2" (2 pcs), 4", 8" (2 pcs), 12"

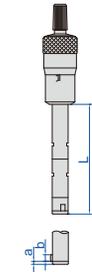
- Micrometer head 2-2.5"
- Graduation .001"
- Accuracy:  $[(.00005(3+n+L/2))]$   
 n=number of rods  
 L=maximum measuring length
- Travel of micrometer head .5"
- Supplied with setting standards
- Carbide measuring faces



### THREE POINTS INTERNAL MICROMETERS



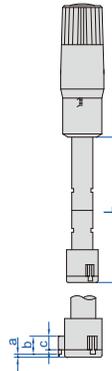
3227-E035



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



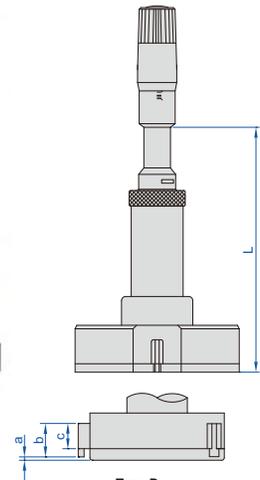
3227-E065



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



3227-E4



Type D  
2-6", carbide  
measuring points  
three points

- .275-.5": graduation .0001"
- .5-6": graduation .0002"
- Ratchet stop
- Optional accessory:  
 setting rings (part no. 6313),  
 micrometer stand and clamp  
 (part no. 6301 and 6301-2)



extension rod  
included



setting ring  
.275-4": included  
4-6": optional

#### 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 (part no. 6313-5)	6"	5.512"	.035"	1.142"	.984"
3227-E6 *	5-6"	D (three points)	.00025"	optional (part no. 6313-5)	6"	5.512"	.035"	1.142"	.984"

micrometer stand with clamp (optional)



#### 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



## DIGITAL THREE POINTS INTERNAL MICROMETERS

DATA  
OUTPUT

IP65  
WATERPROOF

INSPECTION  
CERTIFICATE



setting ring

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



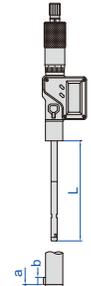
extension rod

included

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



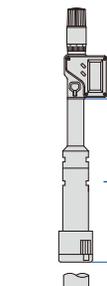
3127-E05



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



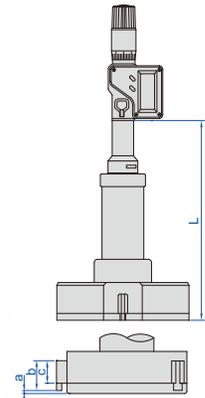
3127-E16



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



3127-E5



type D  
2-6", carbide  
measuring points  
three points

### 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)	2.18"	.059"	.098"	—
3127-E0425 *	.35-.425"/9-11mm	B (three points)	.00015"	.35" DIA (included)	4" (included)	2.18"	.059"	.098"	—
3127-E05 *	.425-.5"/11-13mm	B (three points)	.00015"	.5" DIA (included)	4" (included)	2.18"	.059"	.098"	—
3127-E065 *	.5-.65"/13-17mm	C (three points)	.00015"	.65" DIA (included)	6" (included)	3.2"	.020"	.236"	.177"
3127-E08 *	.65-.8"/17-20mm	C (three points)	.00015"	.65" DIA (included)	6" (included)	3.2"	.020"	.236"	.177"
3127-E1 *	.8-1"/20-25mm	C (three points)	.00015"	1" DIA (included)	6" (included)	3.6"	.020"	.315"	.236"
3127-E112 *	1-1.2"/25-30mm	C (three points)	.00015"	1" DIA (included)	6" (included)	3.6"	.020"	.315"	.236"
3127-E16 *	1.2-1.6"/30-40mm	C (three points)	.00015"	1.6" DIA (included)	6" (included)	3.88"	.020"	.551"	.472"
3127-E2 *	1.6-2"/40-51mm	C (three points)	.00020"	1.6" DIA (included)	6" (included)	3.88"	.020"	.551"	.472"
3127-E25 *	2-2.5"/51-63mm	D (three points)	.00020"	2.5" DIA (included)	6" (included)	4.56"	.020"	.689"	.571"
3127-E3 *	2.5-3"/63-76mm	D (three points)	.00020"	2.5" DIA (included)	6" (included)	4.56"	.020"	.689"	.571"
3127-E35 *	3-3.5"/76-89mm	D (three points)	.00020"	3.5" DIA (included)	6" (included)	4.56"	.020"	.689"	.571"
3127-E4 *	3.5-4"/89-101mm	D (three points)	.00020"	3.5" DIA (included)	6" (included)	4.56"	.020"	.689"	.571"
3127-E5 *	4-5"/101-127mm	D (three points)	.00025"	optional (part no. <b>6313-5</b> )	6" (included)	6"	.035"	1.142"	.984"
3127-E6 *	5-6"/127-152mm	D (three points)	.00025"	optional (part no. <b>6313-5</b> )	6" (included)	6"	.035"	1.142"	.984"

micrometer stand with  
clamp (optional)



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: wireless transmitter part no. **7315-30** (receiver is needed)



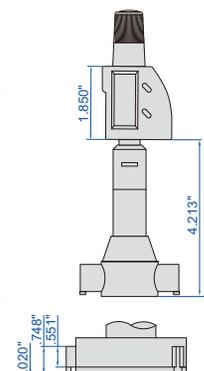
setting ring



extension rod (included)



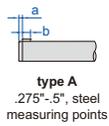
3128-28



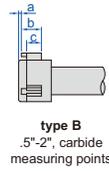
Part No.	Range	Accuracy	Setting ring	Extension rod (included)
3128-28 *	2-2.8"/51-71mm	.00020"	2" DIA (included)	6"
3128-4 *	2.8-4"/71-101mm	.00020"	2.8" DIA (included)	6"
3128-6 *	4-6"/101-152mm	.00025"	4" DIA (included)	6"
3128-10 *	6-10"/152-254mm	.00035"	6" DIA (included)	6"
3128-12 *	8-12"/203-305mm	.00035"	8" DIA (optional, part no. <b>6313-8</b> )	6"

\* Supplied with manufacturer inspection certificate

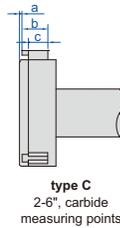
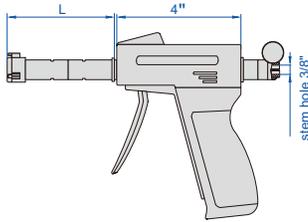
**PISTOL GRIP THREE POINTS BORE GAUGES**



digital indicator  
is optional

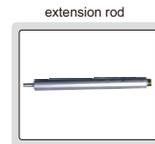


digital indicator  
is optional



digital indicator  
is optional

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



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

included

**Individual**

Part No.	Range	Type	Accuracy (without digital indicator)	Setting ring	Extension rod (included)	L	a	b	c
<b>2124-E035 *</b>	.275-.35"	A	.00015"	.275" DIA (included)	4"	2"	.059"	.098"	—
<b>2124-E0425 *</b>	.35-.425"	A	.00015"	.35" DIA (included)	4"	2"	.059"	.098"	—
<b>2124-E05 *</b>	.425-.5"	A	.00015"	.5" DIA (included)	4"	2"	.059"	.098"	—
<b>2124-E065 *</b>	.5-.65"	B	.00015"	.65" DIA (included)	6"	2.6"	.020"	.236"	.177"
<b>2124-E08 *</b>	.65-.8"	B	.00015"	.65" DIA (included)	6"	2.6"	.020"	.236"	.177"
<b>2124-E1 *</b>	.8-1"	B	.00015"	1" DIA (included)	6"	3.64"	.020"	.315"	.236"
<b>2124-E112 *</b>	1-1.2"	B	.00015"	1" DIA (included)	6"	3.64"	.020"	.315"	.236"
<b>2124-E16 *</b>	1.2-1.6"	B	.00015"	1.6" DIA (included)	6"	3.88"	.020"	.551"	.472"
<b>2124-E2 *</b>	1.6-2"	B	.00020"	1.6" DIA (included)	6"	3.88"	.020"	.551"	.472"
<b>2124-E25 *</b>	2-2.5"	C	.00020"	2.5" DIA (included)	6"	4.48"	.020"	.689"	.571"
<b>2124-E3 *</b>	2.5-3"	C	.00020"	2.5" DIA (included)	6"	4.48"	.020"	.689"	.571"
<b>2124-E35 *</b>	3-3.5"	C	.00020"	3.5" DIA (included)	6"	4.48"	.020"	.689"	.571"
<b>2124-E4 *</b>	3.5-4"	C	.00020"	3.5" DIA (included)	6"	4.48"	.020"	.689"	.571"
<b>2124-E5 *</b>	4-5"	C	.00025"	<b>optional</b> (part no. <b>6313-4D5</b> )	6"	5.51"	.035"	1.142"	.984"
<b>2124-E6 *</b>	5-6"	C	.00025"	<b>optional</b> (part no. <b>6313-5D5</b> )	6"	5.51"	.035"	1.142"	.984"



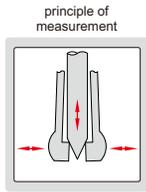
**Set**

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

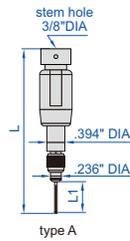
\*Supplied with manufacturer inspection certificate

## SPLIT TYPE DIAL BORE GAUGE SETS

**INSIZE PLUS**



- Split type contact points
- Accuracy (without dial indicator):  
118µin (measuring range .163"~.394"),  
157µin (measuring range .394"~.700")
- Repeatability (without dial indicator): 39µin
- Setting rings and dial indicators  
(graduation .001" or .0001" or .00005") are optional

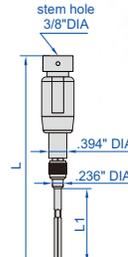


type A

digital indicator  
is optional



type A

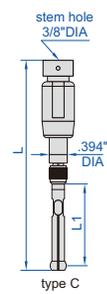


type B

digital indicator  
is optional



type B



type C

digital indicator  
is optional



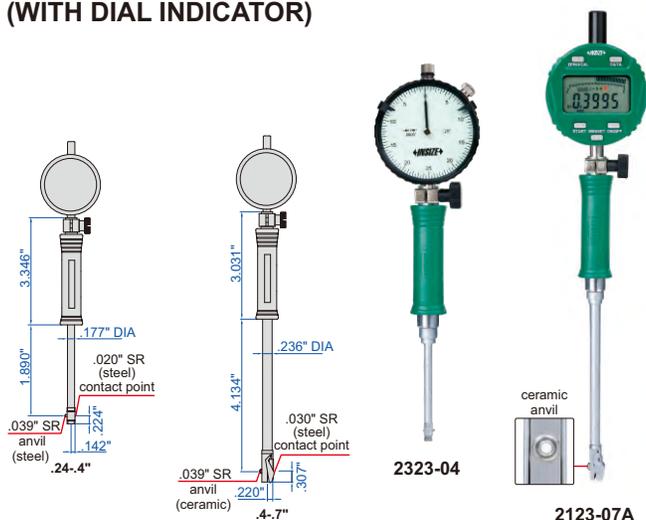
type C

Part No.	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length (L)	Material of point	Type of point	Setting ring (optional)	
								Part No.	Diameter
2421-E1D4	.037-.061"	5	.037-.045"	.512"	3.504"	carbide	A	6313-0D041	.041"
			.042-.049"	.512"	3.504"	carbide	A	6313-0D046	.046"
			.046-.053"	.512"	3.504"	carbide	A	6313-0D050	.050"
			.050-.057"	.512"	3.504"	carbide	A	6313-0D054	.054"
			.054-.061"	.512"	3.504"	carbide	A	6313-0D058	.058"
2421-E4	.059-.165"	10	.059-.075"	.669"	3.661"	carbide	A	6313-0D067	.067"
			.071-.087"	.669"	3.661"	carbide	A	6313-0D079	.079"
			.081-.096"	.669"	3.661"	carbide	A	6313-0D089	.089"
			.091-.106"	.984"	3.976"	carbide	A	6313-0D099	.099"
			.100-.116"	.984"	3.976"	carbide	A	6313-0D108	.108"
			.110-.126"	.984"	3.976"	carbide	A	6313-0D118	.118"
			.120-.136"	.984"	3.976"	carbide	A	6313-0D128	.128"
			.130-.146"	.984"	3.976"	carbide	A	6313-0D138	.138"
			.140-.156"	.984"	3.976"	carbide	A	6313-0D148	.148"
			.150-.165"	.984"	3.976"	carbide	A	6313-0D158	.158"
2421-E7D5	.163-.307"	7	.163-.189"	1.614"	4.646"	DLC coating	B	6313-0D176	.176"
			.185-.209"	1.614"	4.646"	DLC coating	B	6313-0D197	.197"
			.205-.228"	1.614"	4.646"	DLC coating	B	6313-0D217	.217"
			.224-.248"	1.614"	4.646"	DLC coating	B	6313-0D236	.236"
			.244-.268"	1.614"	4.646"	DLC coating	B	6313-0D256	.256"
			.264-.287"	1.614"	4.646"	DLC coating	B	6313-0D276	.276"
			.283-.307"	1.614"	4.646"	DLC coating	C	6313-0D295	.295"

## BORE GAUGES FOR SMALL HOLES (WITH DIAL INDICATOR)

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

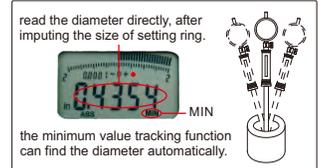
BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL



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



with digital indicator



With dial indicator

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

With digital indicator

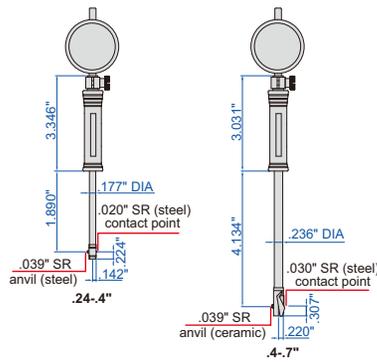
(optional wireless transmitter part no. 7315-51B, receiver is needed)

Part No.	Range	Indicator	Accuracy	Repeatability
2123-04A	.24-.4"	digital indicator, part no. 2108-10EF, range .5"/12.7mm, resolution .0001"/0.002mm (can switch to .0005"/0.01mm)	±.00075"	.0001"
2123-07A	.4-.7"	digital indicator, part no. 2108-10EF, range .5"/12.7mm, resolution .0001"/0.002mm (can switch to .0005"/0.01mm)	±.00075"	.0001"

## PRECISION BORE GAUGES FOR SMALL HOLES (WITH DIAL INDICATOR)

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

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



2721-04

ceramic anvil

2722-07

With dial indicator

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

With digital indicator

(optional wireless transmitter part no. 7315-51B, receiver is needed)

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

read the diameter directly, after inputting the size of setting ring.

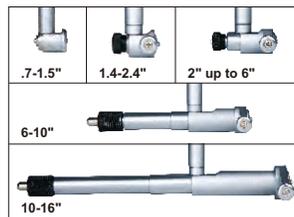


the minimum value tracking function can find the diameter automatically.

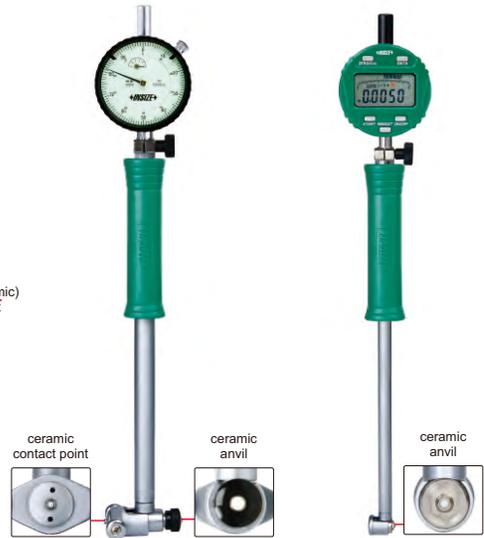
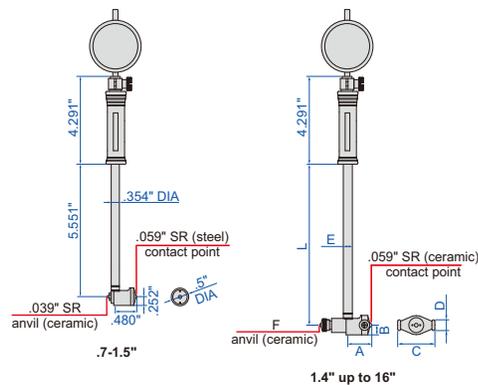


## PRECISION BORE GAUGES (WITH DIAL INDICATOR)

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL



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



2826-6

2720-15

With dial indicator

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

With digital indicator

(optional wireless transmitter part no. 7315-51B, receiver is needed)

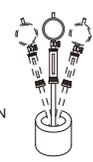
Part No.	Range	Indicator	Accuracy	Repeatability
2720-15	.7-1.5"	digital indicator, part no. 2108-101EF, range .5"/12.7mm, resolution .00005"/0.001mm	±.0003"	.0001"
2720-24	1.4-2.4"		±.0003"	.0001"
2720-6	2-6"		±.0003"	.0001"
2720-10	6-10"		±.0003"	.0001"
2720-16	10-16"		±.0003"	.0001"

with digital indicator

read the diameter directly, after inputting the size of setting ring.



the minimum value tracking function can find the diameter automatically.



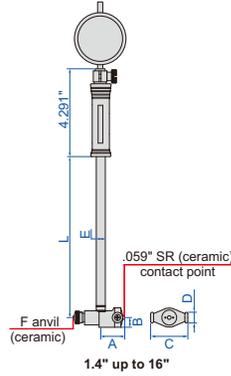
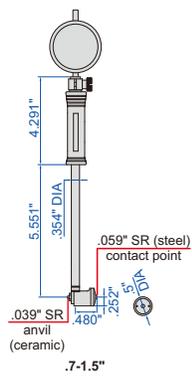
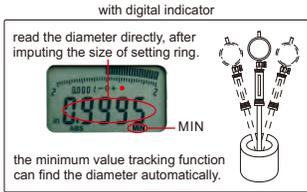
Range	A	B	C	D	E	F	L
1.4-2.4"	.866"	.354"	1.063"	.512" DIA	.504" DIA	.079" SR	5.551"
2-6"	1.024"	.354"	1.378"	.512" DIA	.504" DIA	.079" SR	5.551"
6-10"	2.224"	.512"	2.933"	.591" DIA	.571" DIA	.079" SR	9.488"
10-16"	3.406"	.591"	3.996"	.591" DIA	.571" DIA	.098" SR	9.488"

## BORE GAUGES (WITH DIAL INDICATOR)

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

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

POPULAR MODEL



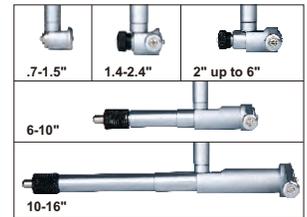
2323-6

2123-15A

- 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

(optional wireless transmitter part no. 7315-51B, receiver is needed)

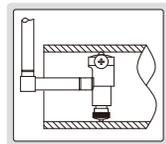
Part No.	Range	Indicator	Accuracy	Repeatability
2123-15A	.7-1.5"	digital indicator, part no. 2108-10EF, range .5"/12.7mm, resolution .0001"/0.002mm (can switch to .0005"/0.01mm)	±.00075"	.0001"
2123-24A	1.4-2.4"		±.0009"	.0001"
2123-6A	2-6"		±.0009"	.0001"
2123-10A	6-10"		±.0009"	.0001"
2123-16A	10-16"		±.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	.504" DIA	.079" SR	9.488"
10-16"	3.406"	.591"	3.996"	.591" DIA	.571" DIA	.098" SR	9.488"

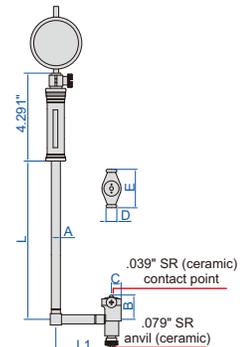
## BORE GAUGES (WITH DIAL INDICATOR)

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

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



2827-6

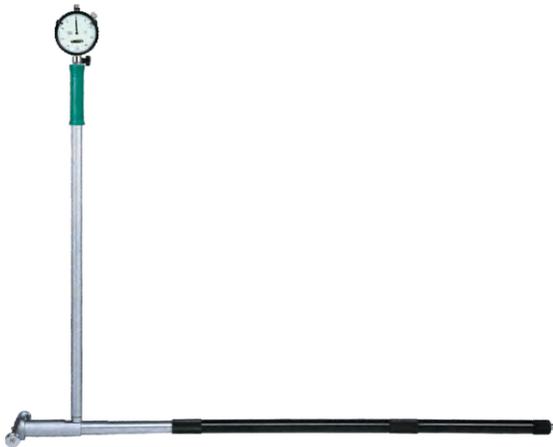


Range	A (DIA)	B	C	D (DIA)	E	L	L1
2-6"	.504"	1.122"	.362"	.512"	1.378"	5.551"	3.000"
6-10"	.571"	2.441"	.500"	.591"	2.933"	15.394"	3.937"
10-16"	.571"	3.602"	.591"	.591"	3.996"	15.394"	3.937"

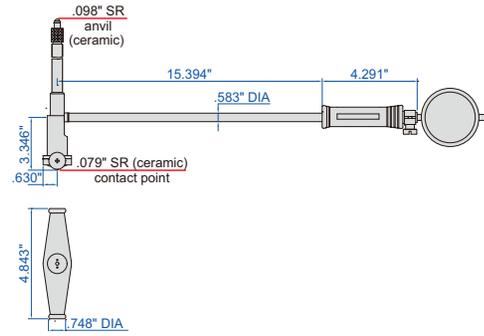
Part No.	Range	Indicator	Accuracy	Repeatability
2827-6	2-6"	dial indicator range .25", graduation .0005"	±.0009"	.00015"
2827-10	6-10"		±.0009"	.00015"
2827-16	10-16"		±.0009"	.00015"

**BORE GAUGE (WITH DIAL INDICATOR)**

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



2828-32



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**

**BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL**

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



2824-S2E

2724-S3E

packaging (part no. 2824-S3E)



with digital indicator

read the diameter directly, after inputting the size of setting ring.

the minimum value tracking function can find the diameter automatically.

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"	.00015"
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"	.00015"

With digital indicator (optional wireless transmitter part no. 7315-51B, receiver is needed)

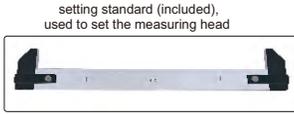
Part No.	Range	Indicator	Bore gauges included	Accuracy	Repeatability
2724-S2E	1.4-6"	digital indicator, part no. 2108-10EF, range .5"/12.7mm, resolution .0001"/0.002mm (can switch to .0005"/0.01mm)	① 1.4-2" (dial indicator and handle are not included) ② 2-6"	1.4-2" ±.0009" 2-6" ±.0009"	.0001"
2724-S3E	.7-6"	digital indicator, part no. 2108-10EF, 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"

## CARBON FIBER BORE GAUGES

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

DATA OUTPUT

SPRING LOADED MEASURING POINT



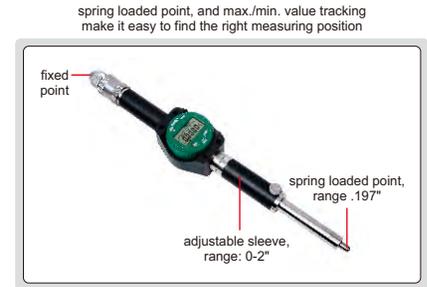
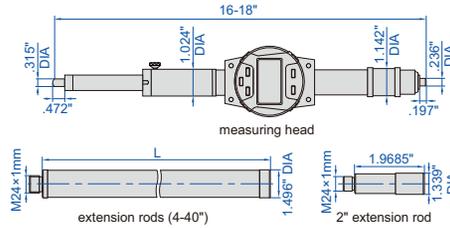
- Carbon fiber extension rods, light weight, not easy to deform, low thermal expansion
- Carbide measuring faces
- Data output
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental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



3522-1500

### Extension rods

Length (L)	Accuracy	Net 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

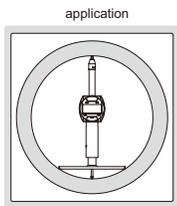


### Measuring head

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

Part No.	Range	Net weight	Extension rods (mm)
3522-1000	16-40"	8.4lb	50 (1.9685"), 100 (3.9370"), 200 (7.8740"), 300 (11.8110")
3522-2000	16-80"	11.7lb	50 (1.9685"), 100 (3.9370"), 200 (7.8740"), 300 (11.8110"), 600 (23.6220"), 2 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

## LARGE RANGE BORE GAUGES

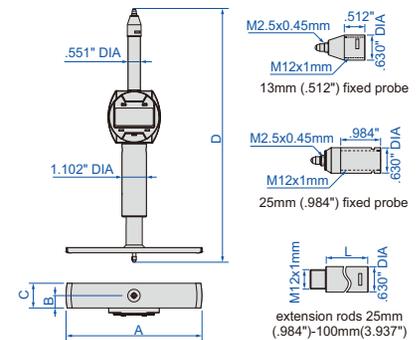


DATA OUTPUT

- Digital indicator reading in digital and analog
- Digital indicator display can be rotated by 320°
- Digital indicator can keep preset data and tolerance data in memory after restart
- Digital indicator button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- Battery CR2032
- Carbide probes
- Data output
- Optional accessory: steel gauge block sets (part no. 4100), gauge block accessory (part no. 6981)



2330-510



### Extension rods

Length (L)	Accuracy	Material
25mm (.984")	.00005"	chrome plated steel
50mm (1.969")	.0001"	chrome plated steel
100mm (3.937")	.0002"	chrome plated steel

### Micrometer head

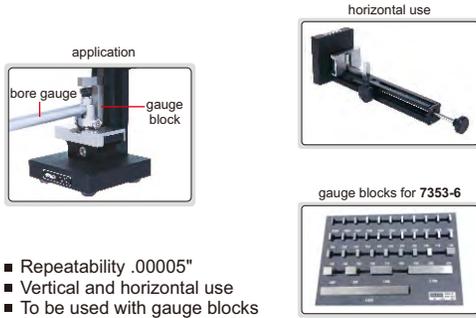
Range	Resolution	Movable probe travel	Accuracy	Repeatability	Remark
180-205mm(7.087-8.071")	.00005"/0.001mm	.512"	.00030"	.00010"	13mm (.512"), 25mm (.984") fixed probe (included)
280-305mm(11.024-12.008")	.00005"/0.001mm	.512"	.00030"	.00010"	13mm (.512"), 25mm (.984") fixed probe (included)

Digital indicator is included (with data interface, optional wireless transmitter part no. 7315-50M, receiver is needed)

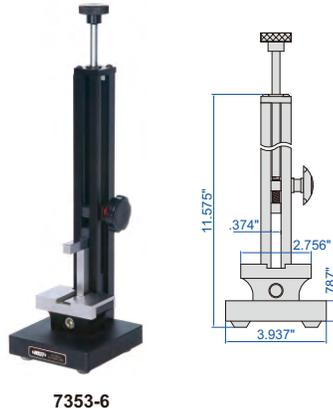
Part No	Range (D)	Micrometer head range	A	B	C	Extension rods
2330-300	180-300mm(7.087-11.811")	180-205mm (7.087-8.071")	3.012"	.492"	.984"	25mm (.984"), 50mm (1.968")×2 pcs
2330-510	280-510mm(11.024-20.079")	280-305mm (11.024-12.008")	6.142"	.551"	1.102"	25mm (.984"), 50mm (1.968")×2 pcs, 100mm (3.937")



**BORE GAUGE SETTERS**



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



**7353-6**

**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	
	.1-1.5	.1"	5 pcs	
1			1 pc	
2			1 pc	
4			1 pc	

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

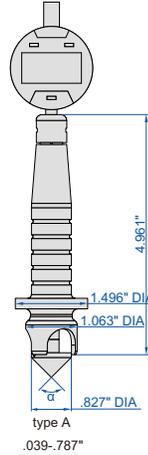
**DIGITAL INTERNAL CHAMFER GAUGES**

**DATA OUTPUT**      **PROBE CAN BE CUSTOMIZED**

- Measure end diameter of chamfer or taper holes
- Resolution .0005"/0.01mm
- Direct read (end diameter), no calculations
- TiN coated, wear/rust-resistant
- Optional accessory: wireless transmitter part no. **7315-51B**, receiver is needed)



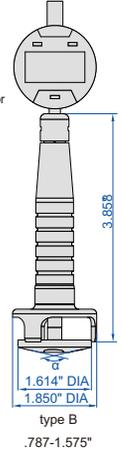
**2937-101**



type A  
.039-.787"



**2937-302**



type B  
.787-1.575"

**angle α=90°**

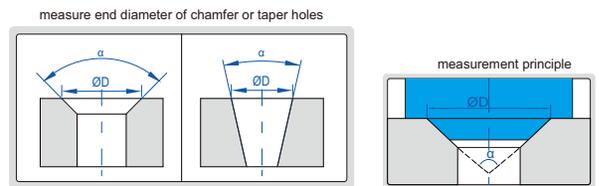
Part No	Measuring range (ØD)	Accuracy	Type	Setting ring (included)
2937-101	.039-.787" DIA	±.0010"	A	Ø10mm (.394" DIA)
2937-102	.787-1.575" DIA	±.0010"	B	Ø30mm (1.181" DIA)

**angle α=130°**

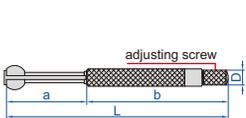
Part No	Measuring range (ØD)	Accuracy	Type	Setting ring (included)
2937-201	.039-.787" DIA	±.0010"	A	Ø10mm (.394" DIA)
2937-202	.787-1.575" DIA	±.0010"	B	Ø30mm (1.181" DIA)

**angle α=150°**

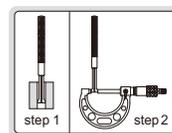
Part No	Measuring range (ØD)	Accuracy	Type	Setting ring (included)
2937-301	.039-.787" DIA	±.0015"	A	Ø10mm (.394" DIA)
2937-302	.787-1.575" DIA	±.0015"	B	Ø30mm (1.181" DIA)



**SMALL HOLE GAUGE SET**



**4208-1**



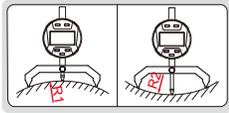
Range	L	a	b	D
.125~.2"	2.992"	.945"	2.047"	.197" DIA
.2~.3"	3.110"	1.063"	2.047"	.197" DIA
.3~.4"	3.465"	1.181"	2.283"	.236" DIA
.4~.5"	3.583"	1.339"	2.283"	.236" DIA

- 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"



**DIGITAL RADIUS GAUGE**



2511

DATA OUTPUT

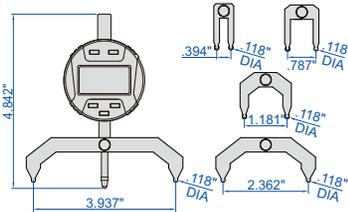


2183-BLOCK

calibration standard application



- 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 320°
- Supplied with 5 jaws for different sizes of arc
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: calibration standard (part no. **2183-BLOCK**), wireless transmitter part no. **7315-50M** (receiver is needed)



Calibration standard (optional)

Part No.	Remark
2183-BLOCK	includes 5 standard blocks

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"

**DIGITAL RADIUS GAUGES**



DATA OUTPUT



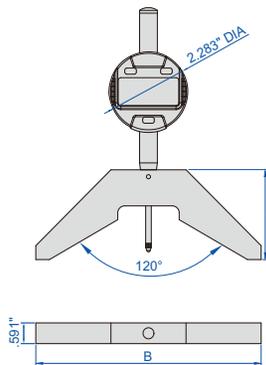
2188-55



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, wireless transmitter part no. **7315-50M** (receiver is needed)

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

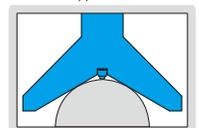


2188-P143

setting standard application



application



## LARGE RANGE DIGITAL RADIUS GAUGE

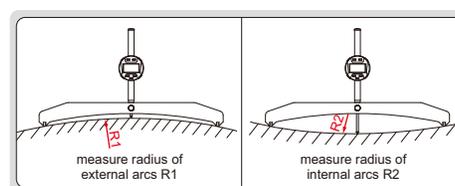
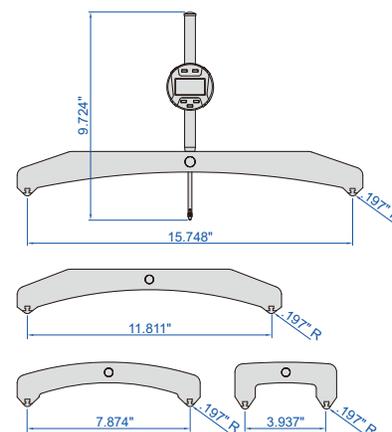


DATA  
OUTPUT



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 320°
- Supplied with 4 jaws for different sizes of arc
- Data output
- Battery CR2032, automatic power off (time is adjustable)
- Optional accessory: wireless transmitter part no. **7315-50M** (receiver is needed)

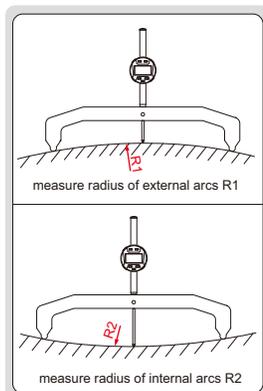


Part No.	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (inch)
2197	4-590"/100-15000mm	4-590"/100-15000mm	±.005R*

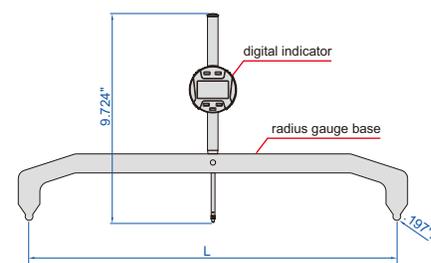
\*R is the radius to be measured. For example, radius is 4", the accuracy is ±.005x4=±.02"

## LARGE RANGE DIGITAL RADIUS GAUGES

DATA  
OUTPUT



2512-300



### Radius gauges (with digital indicator)

Part No.	Range of external radius (R1)	Range of internal radius (R2)	Accuracy *	L
2512-100	4-24.606"/100-625mm	4-24.606"/100-625mm	±.005"R	3.937"
2512-200	11.811-98.425"/300-2500mm	11.811-98.425"/300-2500mm	±.005"R	7.874"
2512-300	19.685-442.913"/500-11250mm	19.685-442.913"/500-11250mm	±.005"R	11.811"
2512-400	43.307-590"/1100-15000mm	43.307-590"/1100-15000mm	±.005"R	15.748"

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

- Measure radius of internal or external arcs
- Resolution: .001"/0.01mm
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Display can be rotated by 320°
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter part no. **7315-50M** (receiver is needed)

### Radius gauge bases (without digital indicator)

Part No.	Range of external radius (R1)	Range of internal radius (R2)	Accuracy *	L	Material
2512-100-BASE	4-24.606"/100-625mm	4-24.606"/100-625mm	±.005"R	3.937"	stainless steel
2512-200-BASE	11.811-98.425"/300-2500mm	43.307-590"/1100-15000mm	±.005"R	7.874"	stainless steel
2512-300-BASE	19.685-442.913"/500-11250mm	19.685-442.913"/500-11250mm	±.005"R	11.811"	stainless steel
2512-400-BASE	43.307-590"/1100-15000mm	11.811-98.425"/300-2500m	±.005"R	15.748"	stainless steel

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

### Digital indicator

Part No.	Range	Resolution	Accuracy	Repeatability
2512-50F	0-2"/0-50.8mm	.001"/0.01mm	.0002"	.0002"

### DIGITAL ARC RADIUS CALIPERS

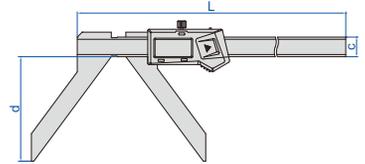
DATA OUTPUT



- 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: wireless transmitter part no. **7315-25** (receiver is needed)



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

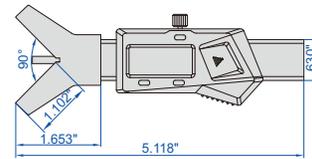
DATA OUTPUT



- Non waterproof
- Measure radius of external arc, arc angle of measured surface should be larger than 90°
- 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
- Supplied with pin gauge for zero setting
- Optional accessory: wireless transmitter part no. **7315-25** (receiver is needed)



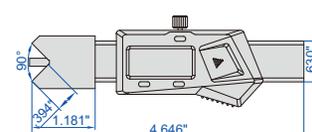
1501-25



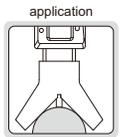
1501-25



1501-10

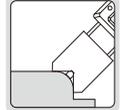


1501-10



1501-10 can measure small workpieces or workpieces with steps

pin gauge (included)



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

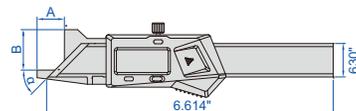
### DIGITAL CHAMFER GAUGES

DATA OUTPUT

- Non waterproof
- Measure 30°/45°/60° 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: wireless transmitter part no. **7315-25** (receiver is needed)

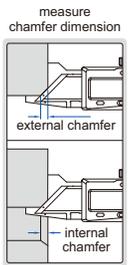
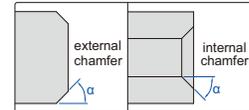
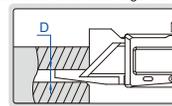


1180-6



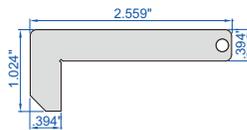
Part No.	Range	Accuracy	Chamfer (α)	A	B	D (DIA)
1180-6	0-.39"/0-10mm	±.0025"	45°	.591"	.866"	.276"
1180-63	0-.39"/0-10mm	±.0025"	30°	.591"	.866"	.315"
1180-66	0-.39"/0-10mm	±.0025"	60°	.551"	.827"	.276"

for internal chamfer measurement, diameter should be larger than D



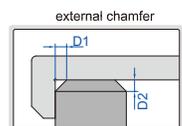
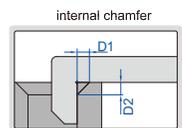
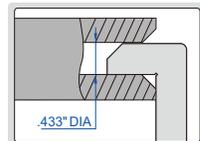
### CHAMFER GAUGE

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



4844-1E

for internal chamfer measurement, diameter should be larger than .433" DIA



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

## DIGITAL CHAMFER GAGUES

DIRECT READING,  
CALCULATION IS NOT REQUIRED

DATA  
OUTPUT

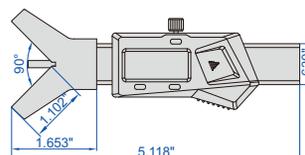
ATTENTION: CHAMFER OF  
HOLES CANNOT BE MEASURED



- Non waterproof
- Measure 45° chamfer length
- 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
- Supplied with pin gauge for zero setting
- Optional accessory: wireless transmitter part no. 7315-25 (receiver is needed)



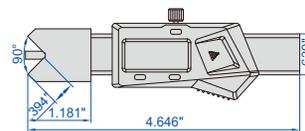
1537-20



1537-20



1537-8

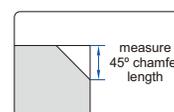
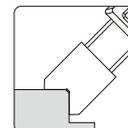


1537-8

pin gauge  
(included)



1537-8 can measure  
small workpieces or  
workpieces with steps



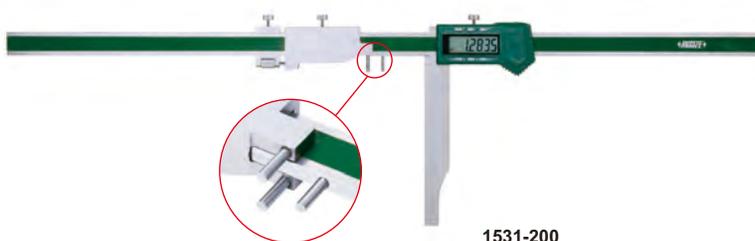
Part No.	Range	Accuracy
1537-20	0-.787"/0-20mm	±.0020"
1537-8	0-.315"/0-8mm	±.0020"

## KEYWAY SYMMETRY DIGITAL CALIPERS

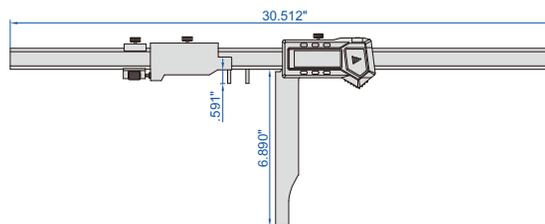
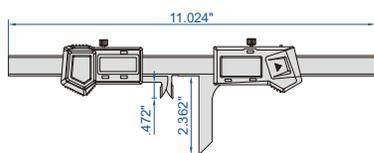
DATA  
OUTPUT



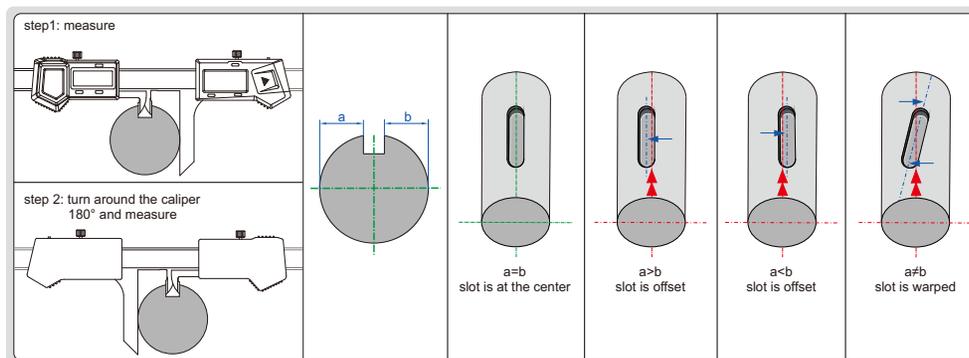
1531-60



1531-200



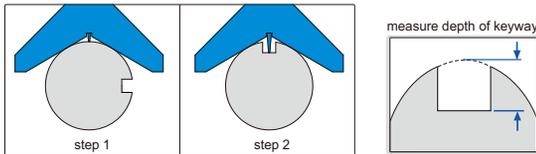
- Non waterproof
- Used to measure the symmetry of shaft keyways
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, made of stainless steel
- Optional accessory: wireless transmitter part no. 7315-22 (receiver is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



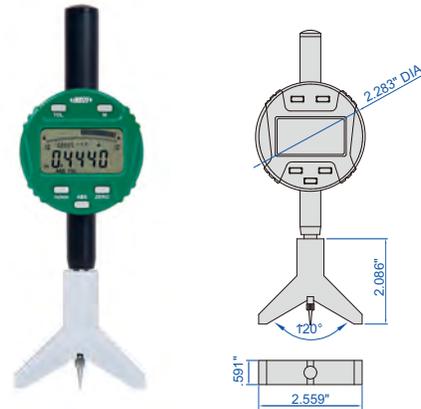
Part No.	Width of keyway	Diameter of shaft	Accuracy	Remarks
1531-60	.24-1.77"	.40-4.72" DIA	±.0020"	can measure keyway width
1531-200	.12-9.84"	.24-13.77" DIA	±.0020"	cannot measure keyway width

## DIGITAL KEYWAY DEPTH GAUGE

DATA OUTPUT



- 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
- Automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Pointed tip
- Optional accessory: wireless transmitter part no. 7315-50M (receiver is needed)



2182-25

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

## DIAL TEST INDICATORS

INSPECTION CERTIFICATE

JEWELLED BEARING

POPULAR MODEL

- 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



2380-31

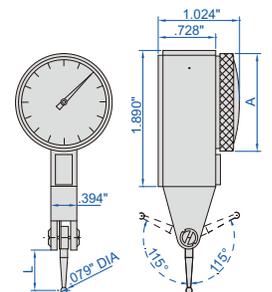
Dial reading: 0-15-0

Part No.	Range	Graduation	Accuracy	Hysteresis	A (DIA)	L
2380-31*	.03"	.001"	±.001"	.0003"	1.181"	.50"
2380-35*	.03"	.0005"	±.0005"	.00016"	1.181"	.50"
2381-31*	.03"	.001"	±.001"	.0003"	1.457"	.50"
2381-35*	.03"	.0005"	±.0005"	.00016"	1.457"	.50"

Dial reading: 0-40-0

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

\*Supplied with manufacturer inspection certificate



## LONG STYLI DIAL TEST INDICATOR

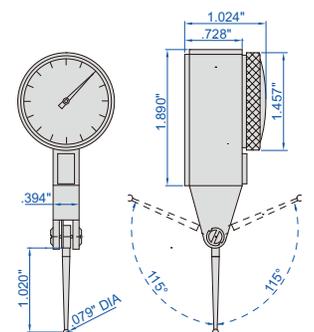
INSPECTION CERTIFICATE

JEWELLED BEARING

- 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



2383-35A



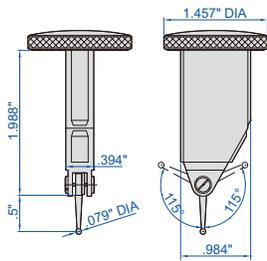
Part No.	Range	Graduation	Accuracy	Hysteresis	Dial reading
2383-35A*	.03"	.0005"	±.0005"	.0002"	0-15-0

\*Supplied with manufacturer inspection certificate

## VERTICAL TYPE DIAL TEST INDICATOR

JEWELLED 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	Hysteresis	Dial reading
2398-03*	.03"	.0005"	±.0005"	.00016"	0-15-0

\*Supplied with manufacturer inspection certificate

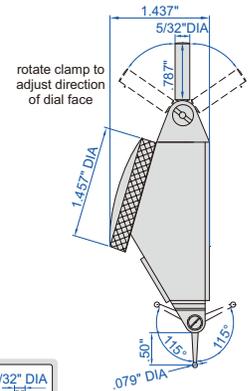
## LARGE RANGE DIAL TEST INDICATOR

INSPECTION CERTIFICATE

JEWELLED BEARING



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	Hysteresis	Dial reading
2386-006A*	.06"	.0005"	±.0008"	.0003"	0-15-0

\*Supplied with manufacturer inspection certificate

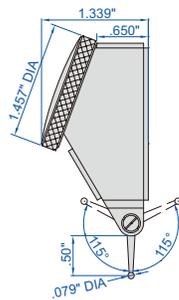
## TILTED FACE TYPE DIAL TEST INDICATOR

INSPECTION CERTIFICATE

JEWELLED BEARING



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	Hysteresis	Dial reading
2399-03*	.03"	.0005"	±.0005"	.00016"	0-15-0

\*Supplied with manufacturer inspection certificate

## LARGE RANGE BACK PLUNGER TYPE DIAL TEST INDICATOR

INSPECTION CERTIFICATE

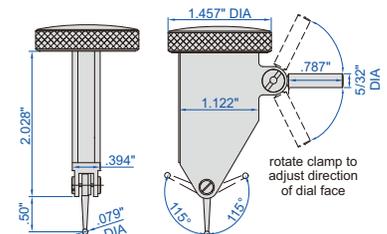
JEWELLED BEARING



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



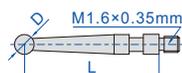
Part No.	Range	Graduation	Accuracy	Hysteresis	Dial reading
2480-06*	.06"	.0005"	±.0008"	.0002"	0-15-0

\*Supplied with manufacturer inspection certificate

## STYLI FOR DIAL TEST INDICATORS



6284-10



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

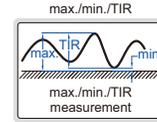
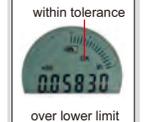
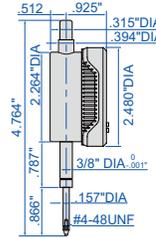
## HIGH PRECISION DIGITAL INDICATOR

ATTENTION: RECHARGEABLE BATTERY, FOR 500 HOURS CONTINUOUS WORKING

HIGH PRECISION



- Reading in digital and analog
- Button function: on/off, zero, data preset, tolerance Go and No-Go display, inch/metric conversion, measuring direction change, max./min./TIR measurement, absolute/incremental measurement
- Automatic power off (time is adjustable)
- Keep preset data and tolerance data in memory after restart
- Real-time data output (text format, virtual com port)
- Power: rechargeable Li-battery
- Optional accessory: contact points



spindle lift knob is included



Part No.	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2503-101FE	.5"/12.7mm	.00005"/0.001mm	±.00012"	.00008"	.337lbf	cannot lift	flat back

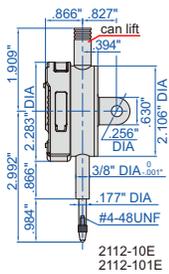
\*Supplied with manufacturer inspection certificate

## DIGITAL INDICATORS (STANDARD TYPE)

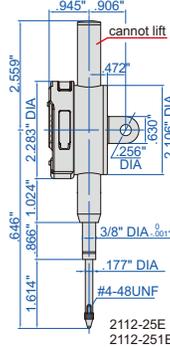


DATA OUTPUT

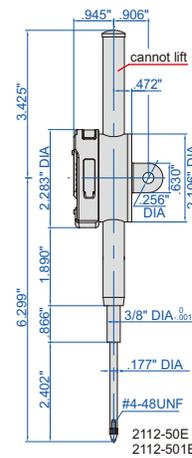
POPULAR MODEL



2112-10E



2112-251E



2112-501E

spindle lift knob is included



### 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

### 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

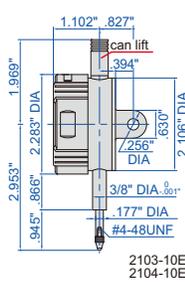
\*Supplied with manufacturer inspection certificate

- 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: wireless transmitter part no. 7315-50M (receiver is needed), backs, contact points

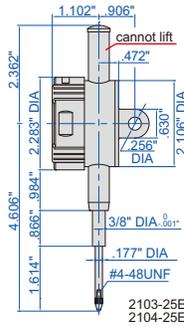
## DIGITAL INDICATORS (ADVANCED TYPE)

INSPECTION CERTIFICATE

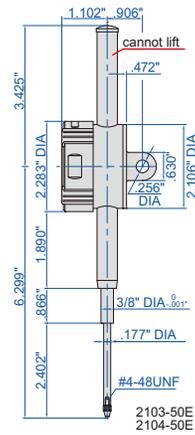
DATA OUTPUT



2103-10E



2103-25E



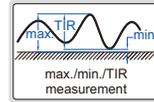
2103-50E



spindle lift knob is included



max./min./TIR



Resolution .00005"/0.001mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
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	±.00015"	.0005"	.337lbf	can lift	lug back
2104-25E*	1"/25.4mm	±.00015"	.0005"	.495lbf	cannot lift	lug back
2104-50E*	2"/50.8mm	±.00015"	.0005"	.562lbf	cannot lift	lug back

\*Supplied with manufacturer inspection certificate

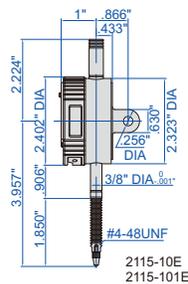
- Meet ASME B89.1.10M-2001
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance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

## WATERPROOF DIGITAL INDICATORS

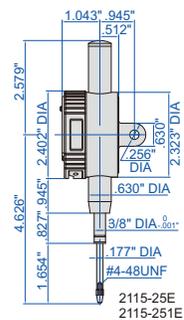
INSPECTION CERTIFICATE

WATERPROOF

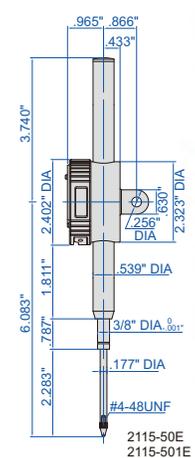
DATA OUTPUT



2115-10E

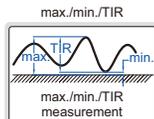


2115-25E



2115-50E

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



alarm when over tolerance



Resolution .00005"/0.001mm

Part No.	Range	Dust/waterproof	Accuracy	Cap	Hysteresis
2115-101E*	.5"/12.7mm	IP65	±.00015"	cannot lift	.00005"
2115-251E*	1"/25.4mm	IP54	±.00015"	cannot lift	.00005"
2115-501E*	2"/50.8mm	IP54	±.00015"	cannot lift	.00005"

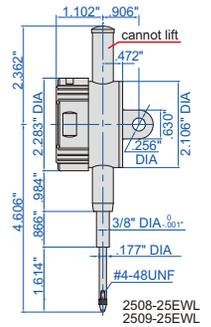
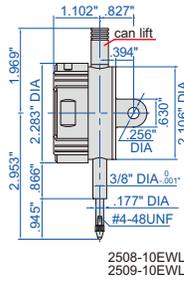
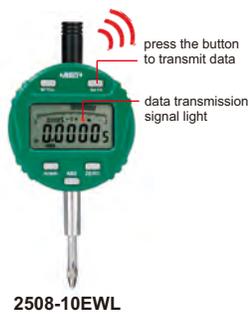
Resolution .0005"/0.01mm

Part No.	Range	Dust/waterproof	Accuracy	Cap	Hysteresis
2115-10E*	.5"/12.7mm	IP65	±.0015"	cannot lift	.0005"
2115-25E*	1"/25.4mm	IP54	±.0015"	cannot lift	.0005"
2115-50E*	2"/50.8mm	IP54	±.0015"	cannot lift	.0005"

\*Supplied with manufacturer inspection certificate

- 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: wireless transmitter part no. 7315-50M (receiver is needed), backs, contact points

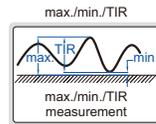
## WIRELESS DIGITAL INDICATORS



2508-10EWL

2509-25EWL

- Meet ASME B89.1.10M-2001
- Built-in wireless data transmission module
- Transmission distance is 33ft (under the condition of no obstruction and no electromagnetic interference)
- Reading in digital and analog
- Display can be rotated by 320°
- 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
- Automatic power off (time is adjustable)
- Power: rechargeable Li-battery
- Optional accessory: receiver (part no. 7315-2/3/6/7/8/9), backs, contact points



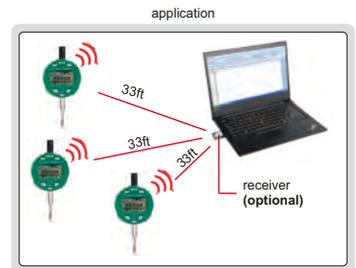
### Resolution .00005"/0.001mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2508-10EWL *	.5"/12.7mm	±.00015"	.00005"	.337lbf	can lift	lug back
2508-25EWL *	1"/25.4mm	±.00015"	.00005"	.495lbf	cannot lift	lug back

### Resolution .0005"/0.01mm

Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2509-10EWL *	.5"/12.7mm	±.0015"	.0005"	.337lbf	can lift	lug back
2509-25EWL *	1"/25.4mm	±.0015"	.0005"	.495lbf	cannot lift	lug back

\*Supplied with manufacturer inspection certificate



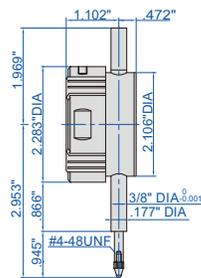
## DIGITAL INDICATORS FOR BORE GAUGES (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)

THE ORIGINAL DATA REMAINS AFTER POWER OFF

DATA OUTPUT



- Specially designed for bore gauges
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after inputting the size of setting ring
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: on/off, minimum value tracking, calibration, data preset, inch/metric conversion, data output
- Data remains after power off, no need to recalibrate after power on
- With flat back
- Automatic power off (time is adjustable)
- Maximum measuring force .337lbf
- Optional accessory: wireless transmitter part no. 7315-51B (receiver is needed), backs, contact points

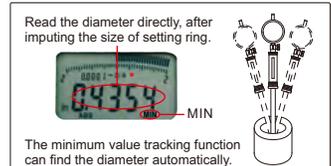


2108-10EF



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

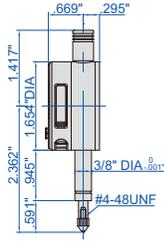
\*Supplied with manufacturer inspection certificate



## COMPACT DIGITAL INDICATORS



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: wireless transmitter part no. **7315-50M** (receiver is needed), contact points

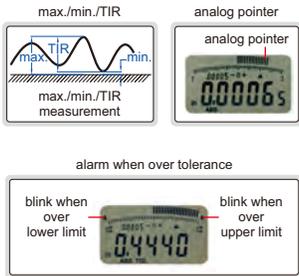
INSPECTION  
CERTIFICATE

DATA  
OUTPUT

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

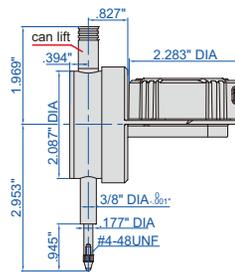
## BACK PLUNGER TYPE DIGITAL INDICATOR



2118-10E

INSPECTION  
CERTIFICATE

DATA  
OUTPUT



display can rotate 320°



- Maximum measuring force: .337lbf
- Cap can lift
- Display can rotate 320°, 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: wireless transmitter part no. **7315-50M** (receiver is needed), backs, contact points

spindle lift knob is included



display direction is changeable

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

Part No.	Range	Resolution	Accuracy	Hysteresis
2118-10E*	.5"/12.7mm	.0005"/0.01mm	±.0015"	.0005"

\*Supplied with manufacturer inspection certificate



VIDEO

## 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: wireless transmitter part no. **7315-50M** (receiver is needed), backs, contact points

Resolution .0005"/0.01mm

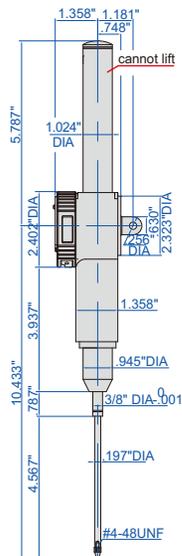
Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap
2117-100E	4"/100mm	±.0015"	.0005"	.719lbf	cannot lift

Resolution .00005"/0.001mm

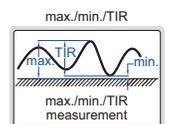
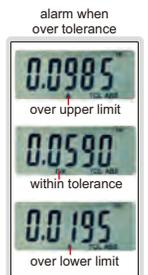
Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap
2117-1001E	4"/100mm	±.00030"	.0001"	.719lbf	cannot lift



2117-100E



2117-100E  
2117-1001E



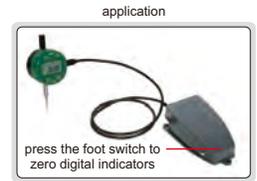
spindle lift knob is included



## ZEROING FOOT SWITCH

- For zeroing of digital indicators

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



## HIGH PRECISION DIGITAL INDICATOR



LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE

DATA OUTPUT

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

- Maximum measuring force: .337lbf
- Cap can lift
- 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),

### High accuracy

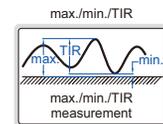
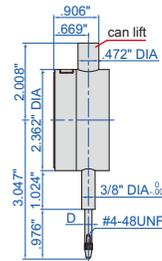
Ruby probe  
Adjustable resolution .00001"/0.0002mm  
.00005"/0.001mm  
.0005"/0.01mm

Part No.	Range	Accuracy	Hysteresis	D (DIA)	Remark
2133-101E*	.5"/12.7mm	±.00006"	.00004"	.157"	flat back

\*Supplied with manufacturer inspection certificate



2133-101E



## BLUETOOTH HIGH PRECISION DIGITAL INDICATOR

COLOR DISPLAY  
LARGE CHARACTERS WITH BACKLIGHT

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

BUILT-IN BLUETOOTH

IP54  
WATERPROOF



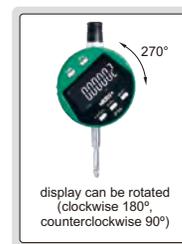
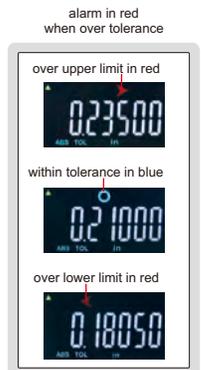
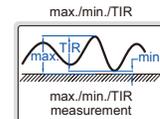
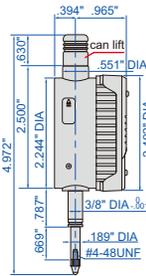
ATTENTION: RECHARGEABLE BATTERY, FOR 30 HOURS CONTINUOUS WORKING



- 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, bluetooth, 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 reduces working hours)



2135-10E



Part No.	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2135-10E*	.5"/12.7mm	±.00008"	.00006"	.337lbf	can lift	flat back

\*Supplied with manufacturer inspection certificate

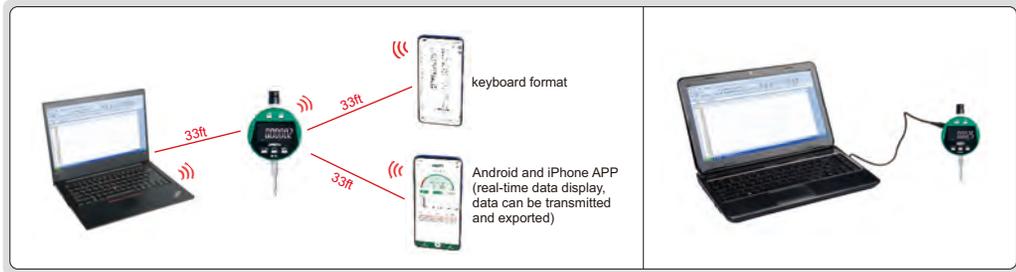
To be continued

Continued from previous page

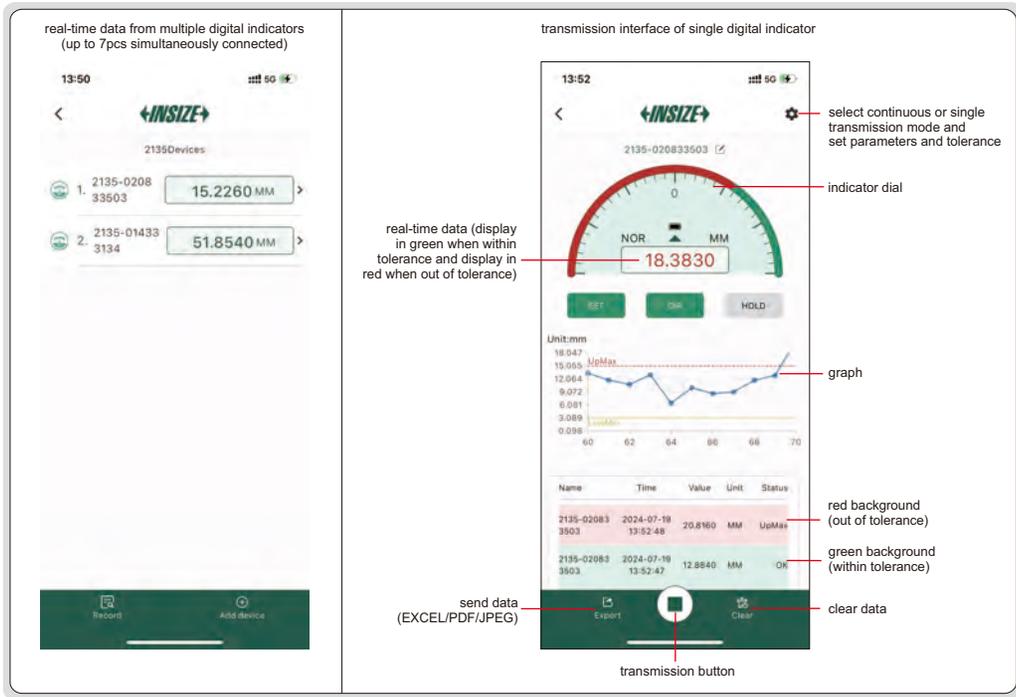
**Data output**

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



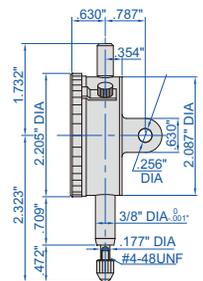
**PRECISION DIAL INDICATOR**

SHOCK PROOF
JEWELLED BEARING
INSPECTION CERTIFICATE

- Meet ASME B89.1.10M-2001
- Shockproof
- Jeweled bearing
- With lug back
- Maximum measuring force: .562lbf
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points



2315-05



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

\*Supplied with manufacturer inspection certificate

## COMPACT DIAL INDICATORS

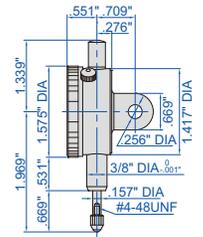


- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

Part No.	Range	Graduation	Accuracy		Range/rev	Dial reading	Maximum measuring force	Cap
			First 2.5 rev	Overall				
2304-01*	.1"	.001"	—	±.001"	.1"	0-100	.405lbf	can lift
2304-02*	.2"	.001"	—	±.001"	.1"	0-100	.405lbf	can lift
2304-025*	.25"	.001"	±.001"	±.001"	.1"	0-100	.405lbf	can lift
2304-015*	.1"	.0005"	—	±.0005"	.05"	0-50	.405lbf	can lift
2304-0255*	.25"	.0005"	±.0005"	±.0015"	.05"	0-50	.405lbf	can lift



2304-01



\*Supplied with manufacturer inspection certificate

## DIAL INDICATORS

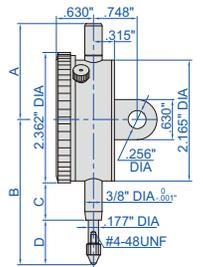


- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

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



2307-1



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"

\*Supplied with manufacturer inspection certificate

## REVERSE READING DIAL INDICATOR

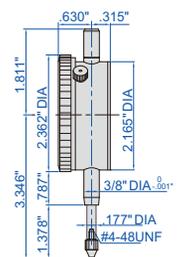


- Meet ASME B89.1.10M-2001
- Maximum measuring force .405lbf
- With flat back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

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



2307-1RF



\*Supplied with manufacturer inspection certificate

## WATERPROOF DIAL INDICATORS



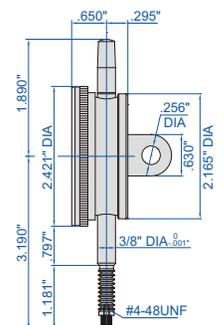
**IP54**  
WATERPROOF

- Meet ASME B89.1.10M-2001
- IP54 dust/waterproof
- Maximum measuring force .405lbf
- With limit pointers
- Optional accessory: backs, contact points

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



2324-04A



\*Supplied with manufacturer inspection certificate

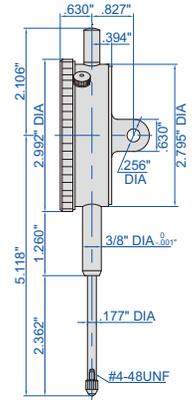
## LARGE DIAL FACE DIAL INDICATORS



- 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	Dial reading	Maximum measuring force	Cap
			First 2.5 rev	Overall				
2312-15*	1.5"	.001"	±.001"	±.004"	.1"	0-100	.562lbf	can lift
2312-2*	2"	.001"	±.001"	±.004"	.1"	0-100	.562lbf	can lift

\*Supplied with manufacturer inspection certificate

## BACK PLUNGER TYPE DIAL INDICATOR

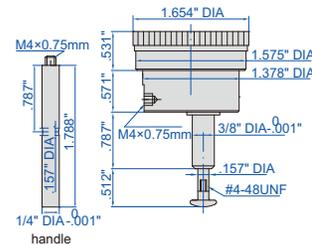


handle can be removed

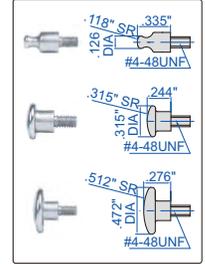


2320-02

- Maximum measuring force .405lbf
- Graduation .001"
- Dial reading: 0-100
- Supplied with handle
- Optional accessory: contact points



points (included)



Part No.	Range	Accuracy	Hysteresis	Range/rev
2320-02*	.2"	±.001"	.00033"	.1"

\*Supplied with manufacturer inspection certificate

## BACK PLUNGER TYPE DIAL INDICATOR SET



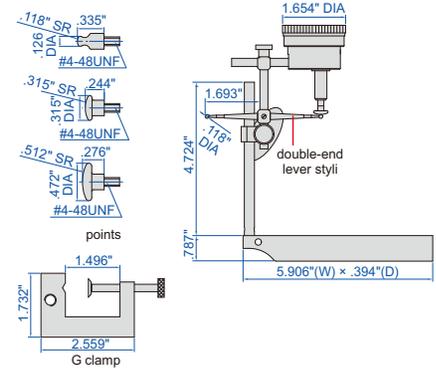
application



- Graduation .001"
- Maximum measuring force .405lbf



2224-02



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

\*Supplied with manufacturer inspection certificate

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

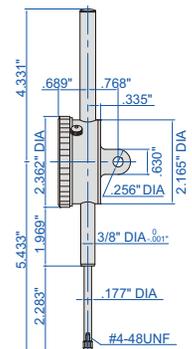
## LONG STROKE DIAL INDICATOR



- 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	Dial reading	Maximum measuring force	Cap
		First 2.5 rev	Overall				
2326-2*	2"	±.001"	±.004"	.1"	0-100	.562lbf	cannot lift

\*Supplied with manufacturer inspection certificate

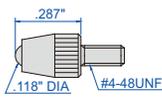
### CONTACT POINTS

**BALL POINT**



**6282-0102**

Part No.	Material of measuring face
6282-0102	carbide

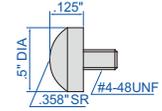


**SPHERICAL POINT**



**6282-0402**

Part No.	Material of measuring face
6282-0402	steel

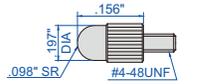


**SHELL TYPE POINT**



**6282-0201**

Part No.	Material of measuring face
6282-0201	steel

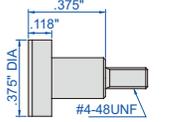


**FLAT POINT**



**6282-1207**

Part No.	Material of measuring face
6282-1207	steel

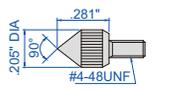


**CONICAL POINT**



**6282-0702**

Part No.	Material of measuring face
6282-0702	steel

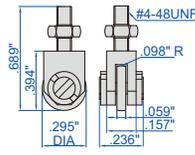


**ROLLER POINT**

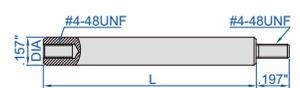


**6282-1902**

Part No.	Material of measuring face
6282-1902	steel



### EXTENSION RODS




**6282-2018**

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

### MAGNETIC BACKS

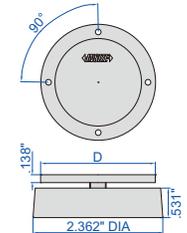



front back

**7331-M2**



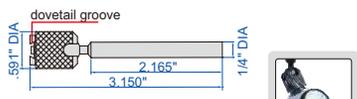
Part No.	D	For digital/ dial indicators
7331-M1	2.028" DIA	2103, 2104, 2112, 2108, 2115, 2508, 2509, 2117, 2118
7331-M2	2.126" DIA	2307



### DIAL TEST INDICATOR UNIVERSAL HOLDER



**6293-5**



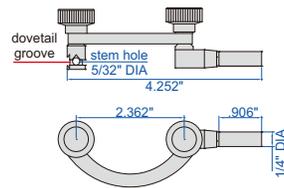
Part No. **6293-5**

- Set the indicators at the desired attitude to the workpiece

### DIAL TEST INDICATOR HOLDER



**6291-2**



Part No. **6291-2**

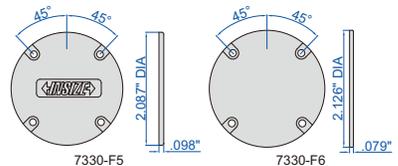
- Can be used with dial test indicators

### FLAT BACKS



**7330-F5**

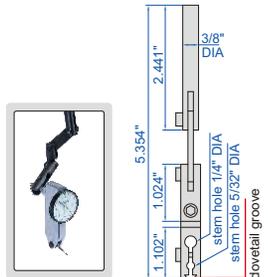
Part No.	For digital/ dial indicators
7330-F5	2103, 2104, 2112, 2108, 2115, 2508, 2509, 2117, 2118
7330-F6	2307, 2326



### DIAL TEST INDICATOR HOLDER



**6296-2**



Part No. **6296-2**

- Supplied with hex key

## DIAL TEST INDICATOR HOLDERS

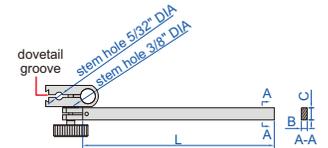
Part No.	Stem section (BxC)	Stem length (L)
6293-7	.354x.354"	2"
6293-3	.25x.5"	4"



6293-7

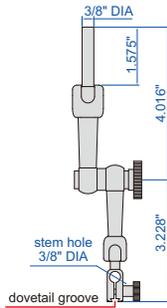


6293-3



## DIAL TEST INDICATOR HOLDER

- Can be used with dial test indicators

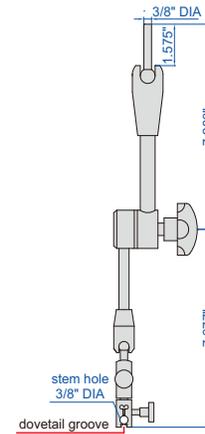


6295-1AE

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: hydraulic pressure is adjustable, dovetail groove, stem hole 3/8" DIA, .551" DIA, .630" DIA, M8x1.25mm, 150°, 1.969"(W)x2.362"(D)

6229-80E: hydraulic pressure is adjustable, dovetail groove, stem hole 3/8" DIA, .551" DIA, .630" DIA, M8x1.25mm, 150°, 1.969"(W)x2.362"(D)

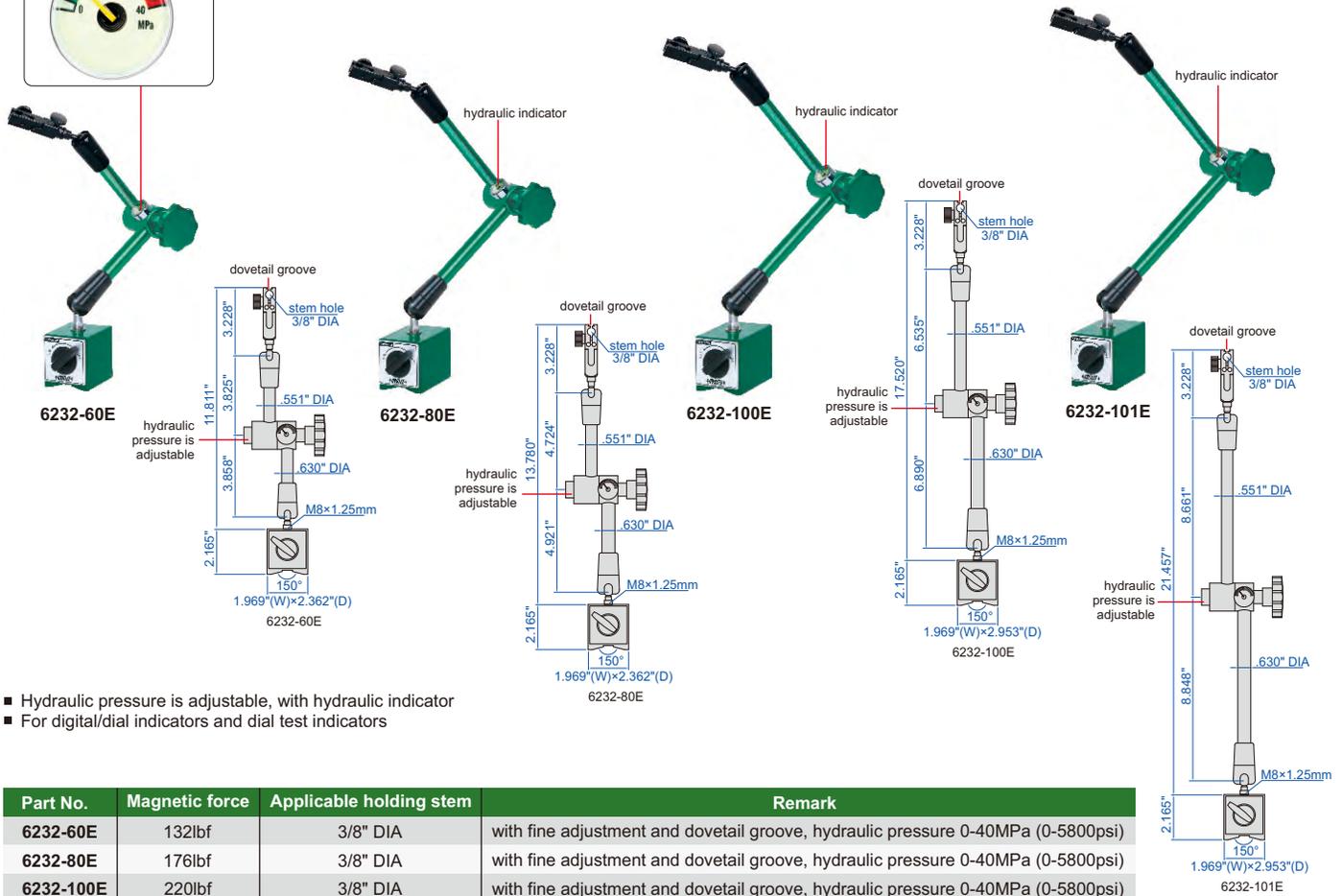
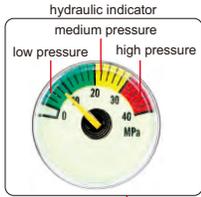
6229-100E: hydraulic pressure is adjustable, dovetail groove, stem hole 3/8" DIA, .551" DIA, .630" DIA, M8x1.25mm, 150°, 1.969"(W)x2.953"(D)

6229-101E: hydraulic pressure is adjustable, dovetail groove, stem hole 3/8" DIA, .551" DIA, .630" DIA, M8x1.25mm, 150°, 1.969"(W)x2.953"(D)

- 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

## HYDRAULIC UNIVERSAL MAGNETIC STANDS (WITH HYDRAULIC INDICATOR)

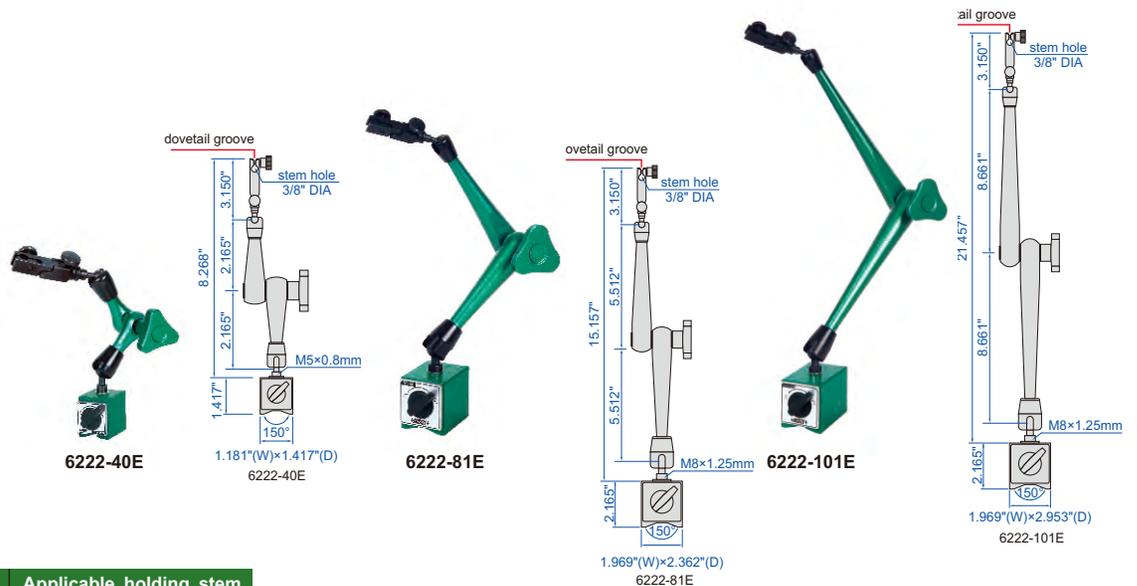


- Hydraulic pressure is adjustable, with hydraulic indicator
- For digital/dial indicators and dial test indicators

Part No.	Magnetic force	Applicable holding stem	Remark
6232-60E	132lbf	3/8" DIA	with fine adjustment and dovetail groove, hydraulic pressure 0-40MPa (0-5800psi)
6232-80E	176lbf	3/8" DIA	with fine adjustment and dovetail groove, hydraulic pressure 0-40MPa (0-5800psi)
6232-100E	220lbf	3/8" DIA	with fine adjustment and dovetail groove, hydraulic pressure 0-40MPa (0-5800psi)
6232-101E	220lbf	3/8" DIA	with fine adjustment and dovetail groove, hydraulic pressure 0-40MPa (0-5800psi)

## LARGE LOCKING FORCE MAGNETIC STANDS

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



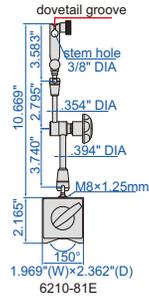
Part No.	Magnetic force	Applicable holding stem
6222-40E	88kgf	3/8" DIA
6222-81E	176lbf	3/8" DIA
6222-101E	220lbf	3/8" DIA

## UNIVERSAL MAGNETIC STANDS

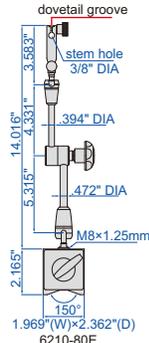
POPULAR MODEL



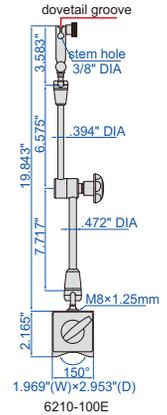
6210-81E



6210-80E



6210-100E



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

■ For digital/dial indicators and dial test indicators

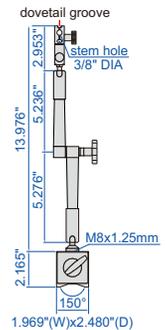
## UNIVERSAL MAGNETIC STAND

■ For digital/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



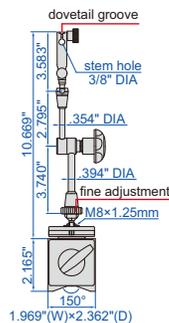
6208-80E



## MAGNETIC STAND WITH TWO FINE ADJUSTMENTS



6272-80E



- 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

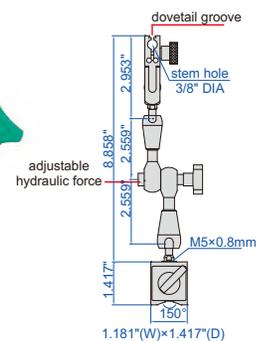
Part No.	Magnetic force
6272-80E	176lbf

## 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

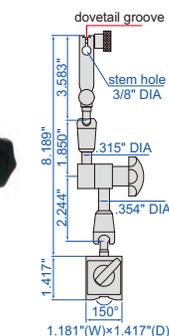
## MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

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



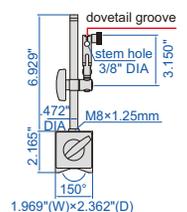
6224-40E



Part No.	Magnetic force
6224-40E	88lbf



6221-80E

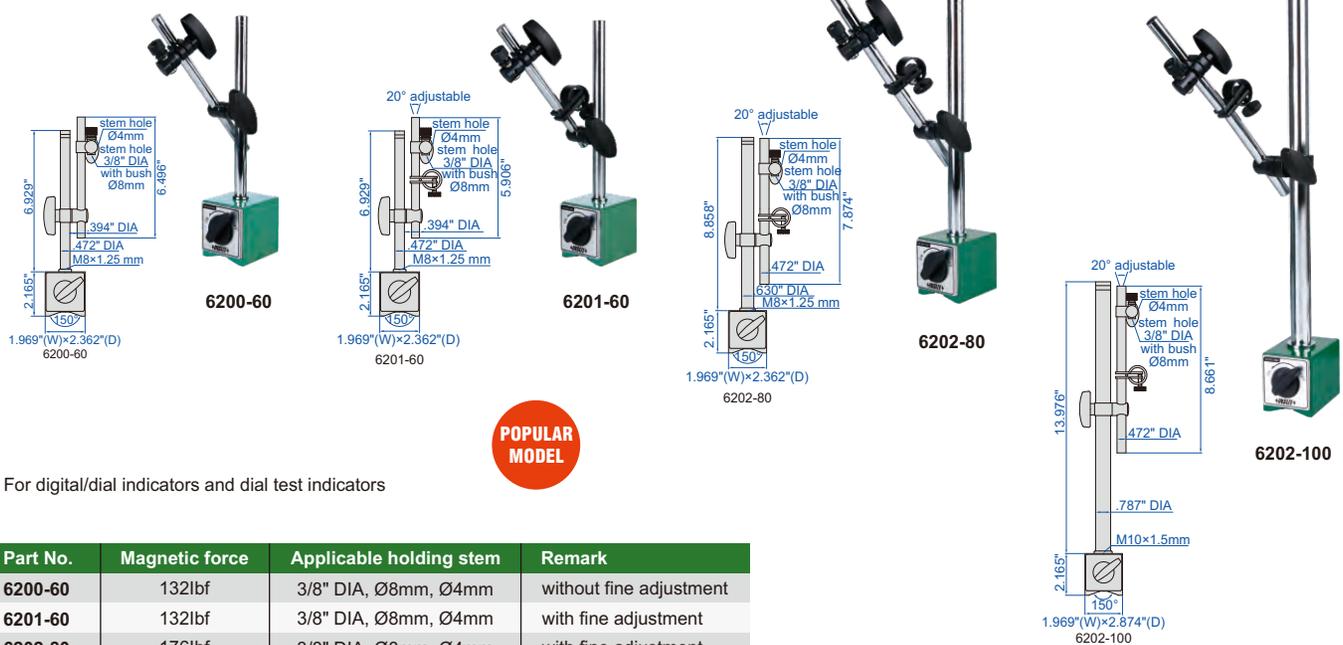


## MAGNETIC STAND (FOR .00005" DIAL AND TEST INDICATORS)

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

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

## MAGNETIC STANDS



- 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 UNEVEN SURFACE



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

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

## MAGNETIC STAND



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

Part No.	Magnetic force
6216-80E	176lbf

## MAGNETIC STAND

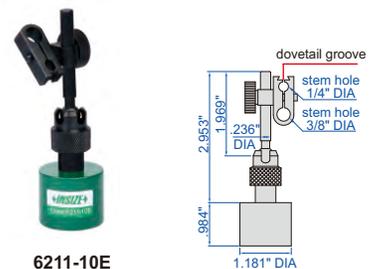


- For digital/dial indicators and dial test indicators
- With fine adjustment and dovetail groove

Part No.	Magnetic force	Applicable holding stem
6231-60E	132lbf	3/8" DIA

## MINI MAGNETIC STAND

**ATTENTION: FOR DIAL TEST INDICATORS ONLY**

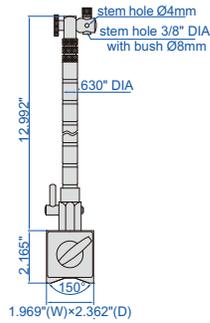


- For dial test indicators
- With dovetail groove

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

### FLEX ARM MAGNETIC STAND

**ATTENTION: FOR DIAL TEST INDICATORS ONLY**



6207-80A

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

Part No.	Magnetic force
6207-80A	176lbf

### MAGNETIC BASES



6212-80

6212-80

6212-100

6212-100

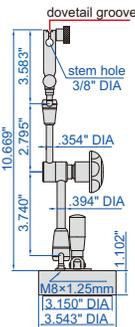
Part No.	Magnetic force
6212-80	176lbf
6212-100	220lbf

### VACUUM STAND

**ATTENTION: 4 HOURS CONTINUOUS WORKING**



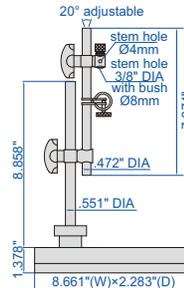
6217-BE



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

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

### UNIVERSAL STAND

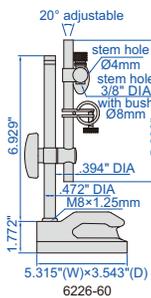


6214-A

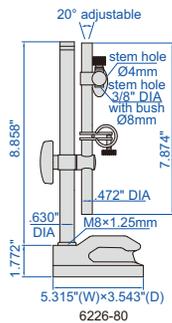
- For digital/dial indicators and dial test indicators
- With fine adjustment

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

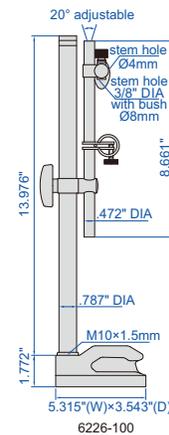
### DIAL INDICATOR STANDS (NON-MAGNETIC)



6226-60



6226-80



6226-100

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

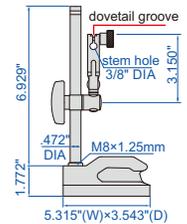
### DIAL INDICATOR STAND (FOR .00005" DIAL AND TEST INDICATORS)

- 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

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



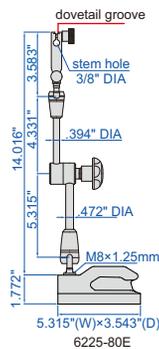
6230-60E



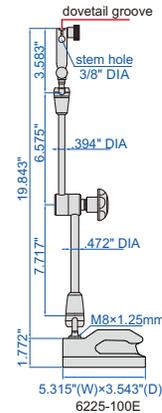
### UNIVERSAL DIAL INDICATOR STANDS (NON-MAGNETIC)

- 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



6225-80E



6225-100E

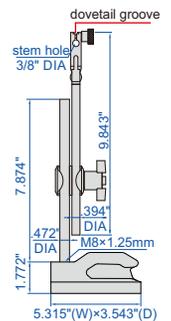
### DIAL INDICATOR STAND (NON-MAGNETIC)

- 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
6227-80E	with fine adjustment and dovetail groove



6227-80E



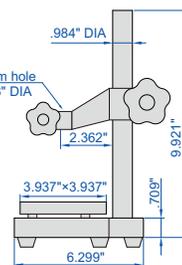
### DIAL INDICATOR STANDS

- 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"



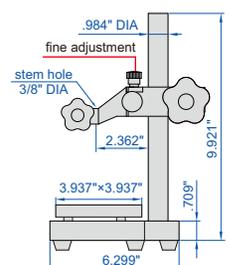
6876-150E



6876-150E



6876-150DE



6876-150DE

### GRANITE DIAL INDICATOR STANDS (BASIC TYPE)

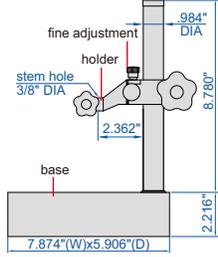
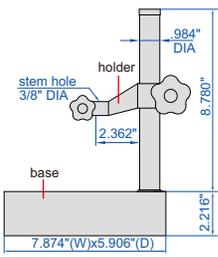
**POPULAR MODEL**



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"

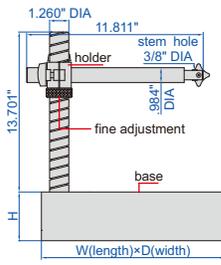
### GRANITE DIAL INDICATOR STANDS



6867-250E



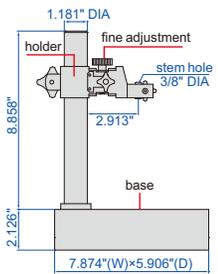
6867-400E



- 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

### GRANITE DIAL INDICATOR STAND

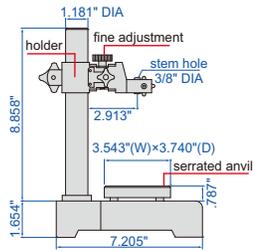


6866-150E

- 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

### 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

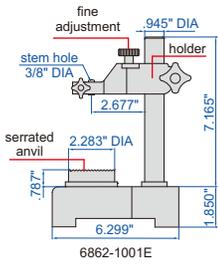
### DIAL INDICATOR STANDS

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

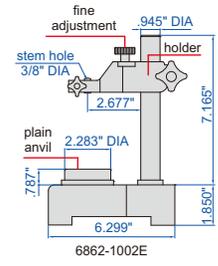
Part No.	Anvil
6862-1001E	steel (hardness HRC60±2), serrated, flatness 59µin
6862-1002E	steel (hardness HRC60±2), plain, flatness 59µin



6862-1001E



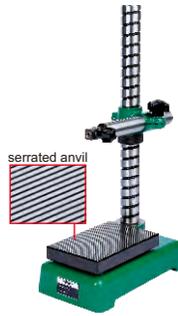
6862-1002E



## DIAL INDICATOR STANDS

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

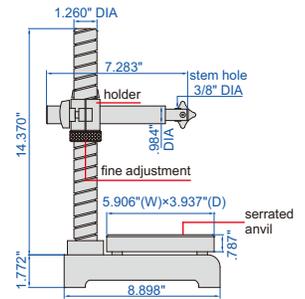
Part No.	Anvil
6864-250E	steel (hardness HRC60±2) serrated, flatness 59µin
6864-250TE	ceramic, serrated, flatness 59µin



6864-250E



6864-250TE



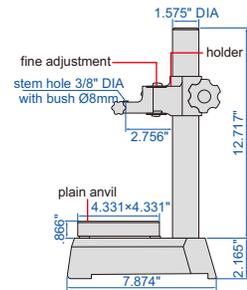
## DIAL INDICATOR STAND

- Vertical travel of holder: 9.843"
- Fine adjustment range .039"
- Supplied with dust cover

Part No.	Applicable holding stem	Anvil
6861-250	3/8" DIA, Ø8mm	ceramic, plain, flatness 59µin



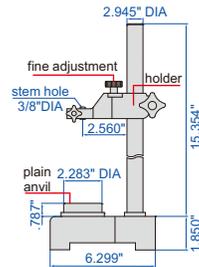
6861-250



## 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



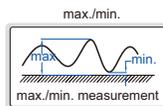
6865-300TE



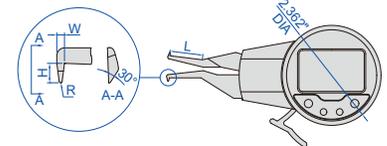
rigid construction, designed to make comparison height measurement (set zero with gauge block then measure height of workpiece) with dial indicators or digital indicators (variation of measuring force is high)

## DIGITAL INTERNAL CALIPER GAUGES

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

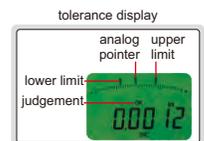


2121-15



DATA OUTPUT

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"

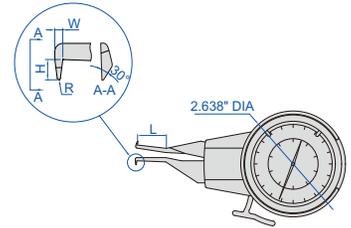


## INTERNAL DIAL CALIPER GAUGES

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



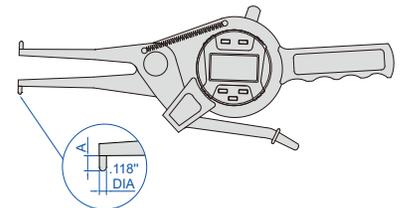
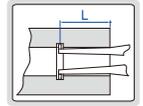
## DIGITAL INTERNAL CALIPER GAUGES

- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320°
- 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: wireless transmitter part no. 7315-55 (receiver is needed)



2151-35

DATA OUTPUT



Part No.	Range	Resolution	Accuracy	L	A
2151-35	.6-1.4"/15-35mm	.0005"/0.01mm	±.0016"	<1.969"	.118"
2151-55	1.4-2.2"/35-55mm	.0005"/0.01mm	±.0016"	<3.150"	.236"

## DIGITAL EXTERNAL CALIPER GAUGES

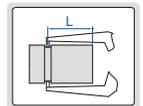
- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter part no. 7315-55 (receiver is needed)



2132-20

MEASURING RANGE CAN BE CUSTOMIZED MAXIMUM 10.23"

DATA OUTPUT



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"

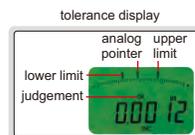
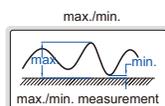
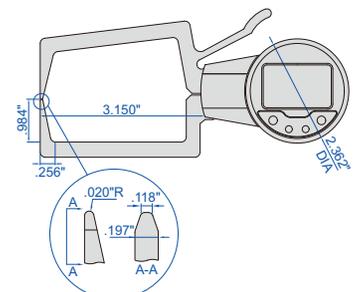
## DIGITAL EXTERNAL CALIPER GAUGE

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



2131-21

DATA OUTPUT



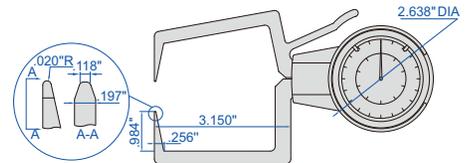
Part No.	Range
2131-21	0-.8"/0-20mm

## EXTERNAL DIAL CALIPER GAUGE

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



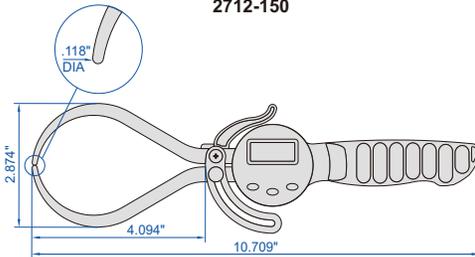
2333-E081



## DIGITAL EXTERNAL CALIPER GAUGES (ECONOMIC TYPE)



2712-150



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

Part no.	Range	Resolution	Accuracy	Repeatability
2712-150	0-6\"/>0-150mm	0.01\"/>0.1mm	±.02"	.01"

## HIGH PRECISION DIGITAL THICKNESS GAUGES

ATTENTION: RECHARGEABLE BATTERY, FOR 12 HOURS CONTINUOUS WORKING

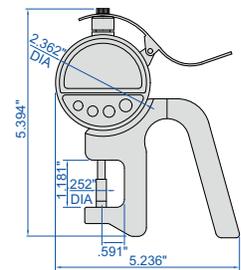
ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

DATA OUTPUT

MEASURING TIPS AND ANVILS CAN BE CUSTOM-MADE



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)

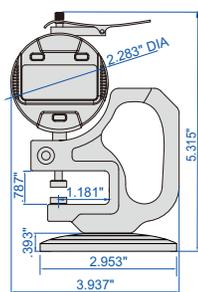
Part No.	Range	Resolution	Accuracy	Repeatability
2879-10	0-.4\"/>0-10mm	.00005\"/>0.001mm	±.0001"	.00005"
2879-101	0-.4\"/>0-10mm	.00002\"/>0.0005mm	±.00006"	.00002"

## DIGITAL THICKNESS GAUGES (WITH BASE)

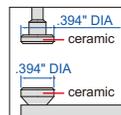
DATA OUTPUT



2673-10



- 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: wireless transmitter part no. 7315-50M (receiver is needed)



Part No.	Range	Resolution	Accuracy
2673-10	0-.4\"/>0-10mm	.0005\"/>0.01mm	±.001"
2673-101	0-.4\"/>0-10mm	.00005\"/>0.001mm	±.0002"

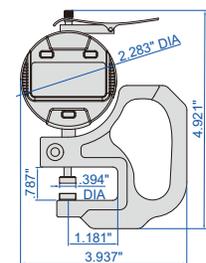
## DIGITAL THICKNESS GAUGES

DATA OUTPUT

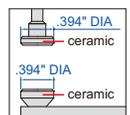
POPULAR MODEL



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: wireless transmitter part no. 7315-50M (receiver is needed)

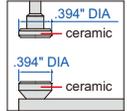
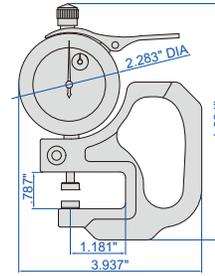


Part No.	Range	Resolution	Accuracy
2871-10	0-.4\"/>0-10mm	.0005\"/>0.01mm	±.001"
2871-101	0-.4\"/>0-10mm	.00005\"/>0.001mm	±.0002"

## THICKNESS GAUGE



2364-055



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

## DIGITAL THICKNESS GAUGES (WITH BASE)

DATA OUTPUT

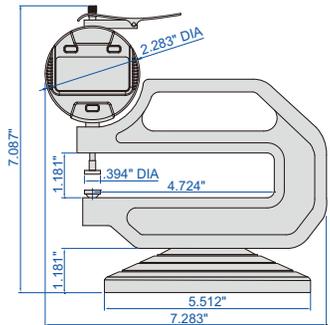
measuring tips and anvils can be custom-made



- 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: wireless transmitter part no. **7315-50M** (receiver is needed)



2674-10



Part No.	Range	Resolution	Accuracy
2674-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"
2674-101	0-.4"/0-10mm	.00005"/0.001mm	±.0004"

## DIGITAL THICKNESS GAUGES

DATA OUTPUT

MEASURING TIPS AND ANVILS CAN BE CUSTOM-MADE

measuring tips and anvils can be custom-made



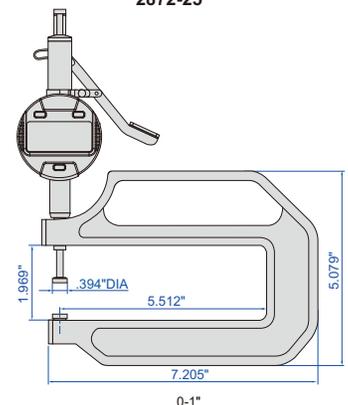
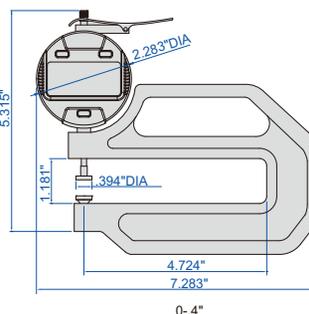
- Ceramic spindle tip and anvil
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter part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



2872-10



2872-25

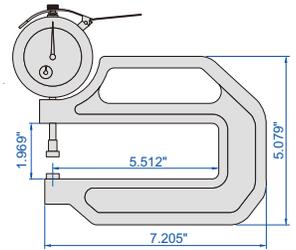
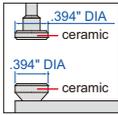


Part No.	Range	Resolution	Accuracy
2872-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"
2872-101	0-.4"/0-10mm	.00005"/0.001mm	±.0004"
2872-25	0-1"/0-25.4mm	.0005"/0.01mm	±.0015"

### THICKNESS GAUGE

MEASURING TIPS AND ANVILS CAN BE CUSTOM-MADE

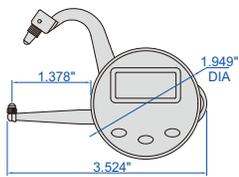
measuring tips and anvils can be custom-made



Part No.	Range	Graduation	Accuracy
2376-1E	0-1"	.0005"	±.0015"

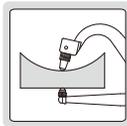
2376-1E

### DIGITAL THICKNESS GAUGE



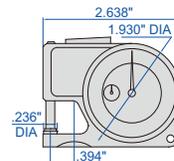
2710-25

- 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"

### THICKNESS GAUGE



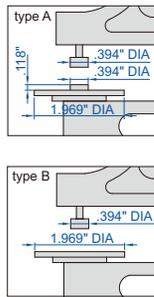
2363-055

- Stainless steel spindle tip and anvil

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

### DIGITAL LEATHER THICKNESS GAUGES

- Measure thickness of leather
- 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: wireless transmitter part no. 7315-50M (receiver is needed)

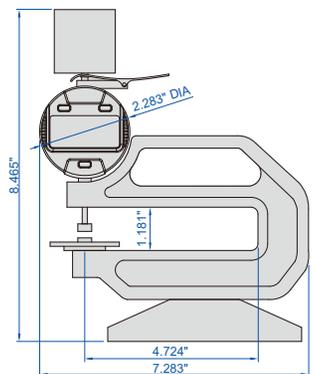


Part No.	Range	Resolution	Accuracy	Type
2262-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"	A
2262-10B	0-.4"/0-10mm	.0005"/0.01mm	±.001"	B



2262-10

DATA OUTPUT



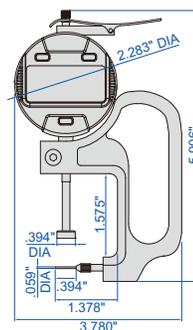
### DIGITAL TUBE THICKNESS GAUGES

- 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: wireless transmitter part no. 7315-50M (receiver is needed)

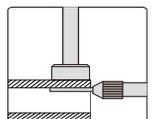
Part No.	Range	Resolution	Accuracy
2859-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"
2859-101	0-.4"/0-10mm	.00005"/0.001mm	±.0002"



2859-101



DATA OUTPUT

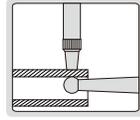


### DIGITAL TUBE THICKNESS GAUGE

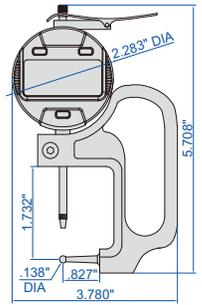
DATA OUTPUT

- 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: wireless transmitter part no. **7315-50M** (receiver is needed)

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



2876-10

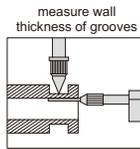


### DIGITAL TUBE THICKNESS GAUGE

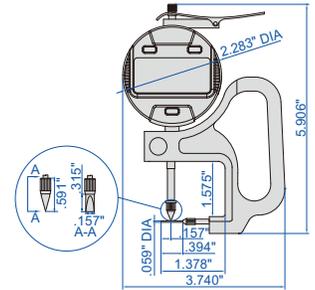
DATA OUTPUT

- 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: wireless transmitter part no. **7315-50M** (receiver is needed)

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



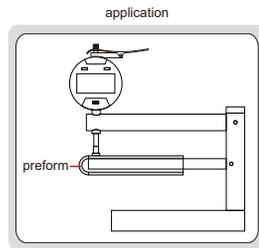
2873-10



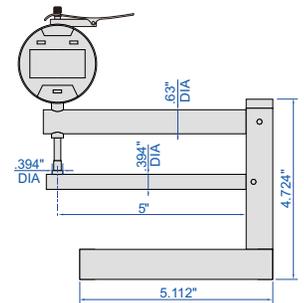
### PREFORM THICKNESS TESTER

DATA OUTPUT

- Measure thickness of preforms
- 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: wireless transmitter part no. **7315-50M** (receiver is needed)



2671-10



Part No.	Range	Resolution	Accuracy	Repeatability
2671-10	0-.4"/0-10mm	.0005"/0.01mm	±.001"	.0005"

### DIAL SNAP GAUGE (ECONOMIC TYPE)

IP54 WATERPROOF

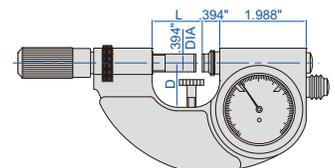
ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

- Quick measurement for mass production
- Dial indicator: range  $\pm 0.015"$ , 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

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



3334-1



## BLUETOOTH DIGITAL INDICATING SNAP GAUGES

**ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF**

**BUILT-IN BLUETOOTH**

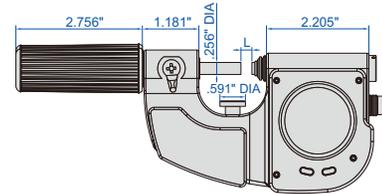
**ATTENTION: SETTING STANDARDS ARE NOT INCLUDED**

**IP54 WATERPROOF**

- Absolute encoder, the original data remains after power off
- Measuring stroke of anvil .039"
- Reading in digital and analog
- Button function: on/off, zero setting, mm/inch, tolerance, display setting, bluetooth, signal mode setting, data output
- Android and iPhone APP, USB type-C cable are included
- Carbide measuring faces
- Power: rechargeable Li-battery, for 20 hours continuous working (bluetooth transmission reduce working hours)
- Optional accessory: gauge blocks grade 0 (4112-A series), for zero setting



3509-25



Part No.	Range (L)	Resolution	Accuracy	Repeatability
3509-25	0-1"/0-25mm	.000005"/0.0001mm	.00004"	.000015"
3509-50	1-2"/25-50mm	.000005"/0.0001mm	.00004"	.000015"

### Data output

Data output with bluetooth (transmission distance is 33 ft)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single transmission
	virtual com port	data can be transmitted to Android and iPhone APP	real-time display, data can be transmitted and exported
Data output with USB cable (cable length 6 ft)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single transmission
	virtual com port	data can be transmitted to serial communication software	single transmission

warning in red or yellow when over tolerance



data output with bluetooth (included)



data output with USB cable (included)

data collection application (included) real-time display (continuous streaming) or single acquisition mode selectable

real-time display of multiple snap gauges (connected with maximum 7 snap gauges)

single snap gauge display interface

real-time data : (within tolerance in green, over upper tolerance in red, over lower tolerance in yellow)

graph

over upper tolerance in red background

over lower tolerance in yellow background

within tolerance in green background

clear data

export data (EXCEL/PDF/JPEG)

start/stop data transmission

## DIAL SNAP GAUGES

- 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")



INSPECTION  
CERTIFICATE

QUICK AND ACCURATE MEASUREMENT  
OF CYLINDRICAL WORKPIECES

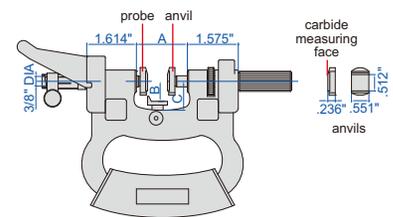
Part No.	Range	Parallelism of measuring faces	A	B	C
2186-25E*	0-1"	.00016"	1.654"	433-.709"	.787"
2186-50E*	1-2"	.00016"	2.717"	433-1.260"	1.614"
2186-75E*	2-3"	.00020"	3.701"	.669-1.614"	2.008"
2186-100E*	3-4"	.00024"	4.685"	1.220-2.165"	2.559"
2186-125E*	4-5"	.00024"	5.669"	1.654-2.756"	2.953"
2186-150E*	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 indicator  
is optional

2186-25E



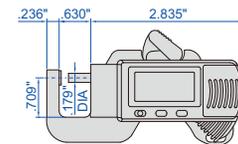
## DIGITAL SNAP GAUGE

ATTENTION: NO  
DATA OUTPUT

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



2166-12



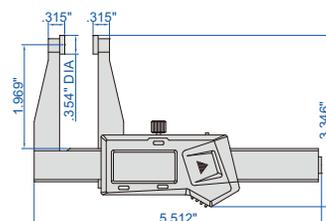
## DIGITAL SNAP GAUGE

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: wireless transmitter part no. 7315-25 (receiver is needed)

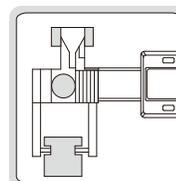


Part No.	Range	Accuracy	Resolution
1163-50A	0-2"/0-50mm	±.0015"	.0005"/0.01mm

## DIGITAL 3-PURPOSE SNAP GAUGE

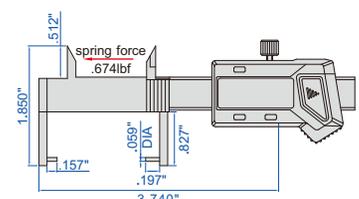
SUITABLE FOR  
JEWELLERY

ATTENTION:  
NO DATA OUTPUT



2164-25A

- Non waterproof
- Accuracy: ±.0015"
- Buttons: zero, inch/mm, on/off
- Battery LR44
- Made of stainless steel

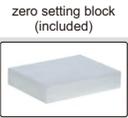


Part No.	Range	Resolution
2164-25A	0-1"/0-25mm	.0005"/0.01mm

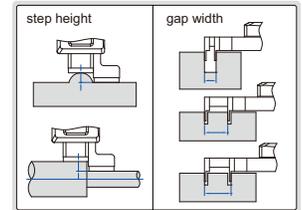
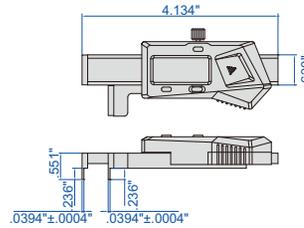
## STEP AND GAP GAUGE

DATA OUTPUT

- 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: wireless transmitter part no. **7315-22** (receiver is needed)

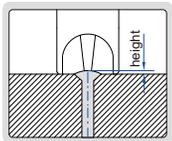


Part No.	Range	Accuracy	Resolution
2168-12	0-.5"/0-12.7mm	±.0015"	.0005"/0.01mm

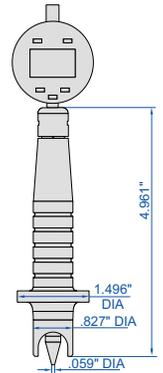


## DIGITAL FLUSHNESS GAUGE

DATA OUTPUT



- Measure the edge of fastener to base or highest point of fastener to base
- Carbide measuring face
- Measuring force: 1.8lbf-2.7lbf
- Digital indicator display can be rotated by 320°
- Digital indicator button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Digital indicator can keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter part no. **7315-51B** (receiver is needed)

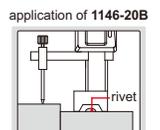
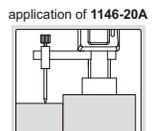
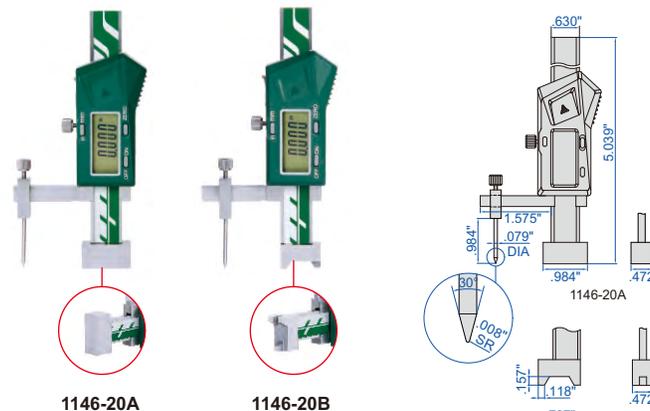


Part no.	Measuring range	Resolution	Accuracy	Repeatability
2936-51	±.2"	.00005"/0.001mm	.00020"	.00010"

## MINI DIGITAL HEIGHT GAUGES

DATA OUTPUT

- Non waterproof
- Measure height difference of two surfaces (**1146-20B** suitable for surfaces with barrier, such as rivet)
- Resolution .0005"/0.01mm
- Buttons: on/off, zero, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: wireless transmitter part no. **7315-25** (receiver is needed)



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

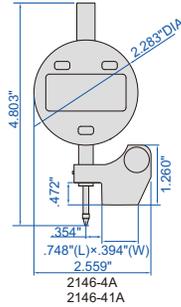
## DIGITAL HEIGHT GAUGES

### 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
- Digital indicator power:
  - 2146-4A/41A: CR2032 battery
  - 2146-4B/41B: CR1632 battery
- Automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter part no. 7315-50M (receiver is needed)



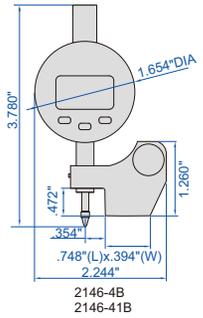
2146-4A



2146-4A  
2146-41A

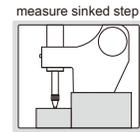


2146-4B



2146-4B  
2146-41B

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



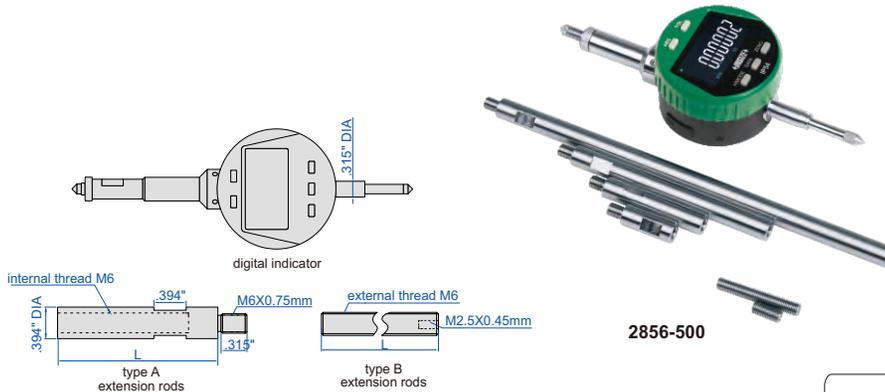
## BLUETOOTH DIGITAL CRANKSHAFT TESTER

ATTENTION: RECHARGEABLE BATTERY FOR 30 HOURS CONTINUOUS WORKING

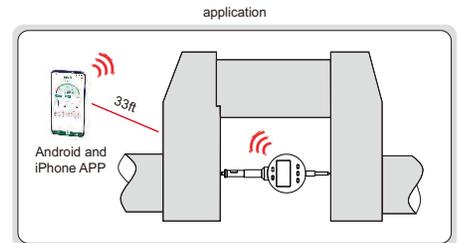
BUILT-IN BLUETOOTH

COLOR DISPLAY LARGE CHARACTERS WITH BACKLIGHT

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF



2856-500

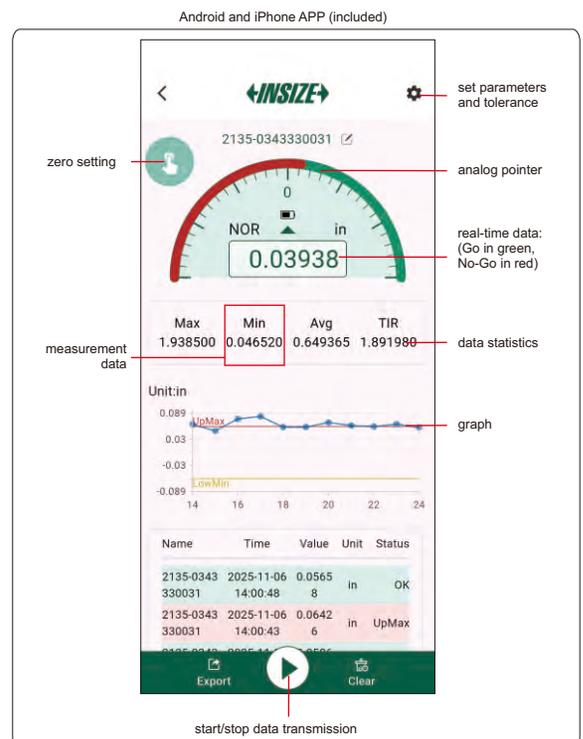


- To test crankshaft deflection
- Color display, large characters with backlight
- Absolute encoder, the original data remains after power off
- Automatic power off
- Display can be rotated by 270°
- Adjustable resolution .00002"/0.0005mm .00005"/0.001mm
- Button function: on/off, zero setting, data 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)

### extension rods

Type	L
A	.984"(25mm), 1.969"(50mm), 3.937"(100mm), 7.874"(200mm)
B	.512"(13mm), .984"(25mm), 1.496"(38mm)

Part No.	Range	Movable point stroke	Accuracy	Repeatability	Measuring force
2856-500	145-500mm (5.709"-19.685")	.118"	±.00020"	.00010"	5.85lbf



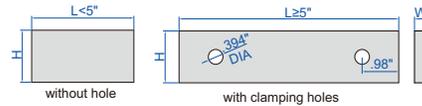
**STEEL INDIVIDUAL GAUGE BLOCKS**

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



4112-C3

- 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



Dimension:

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

Part No.	Size (L)	Part No.	Size (L)	Part No.	Size (L)	Part No.	Size (L)	Part No.	Size (L)
4112-CD1	.1"	4112-CD109	.109"	4112-CD127	.127"	4112-CD145	.145"	4112-CD8	.8"
4112-CD1001	.1001"	4112-CD11	.11"	4112-CD128	.128"	4112-CD146	.146"	4112-CD85	.85"
4112-CD1002	.1002"	4112-CD111	.111"	4112-CD129	.129"	4112-CD147	.147"	4112-CD9	.9"
4112-CD1003	.1003"	4112-CD112	.112"	4112-CD13	.13"	4112-CD148	.148"	4112-CD95	.95"
4112-CD1004	.1004"	4112-CD113	.113"	4112-CD131	.131"	4112-CD149	.149"	4112-C1	1"
4112-CD1005	.1005"	4112-CD114	.114"	4112-CD132	.132"	4112-CD15	.15"	4112-C2	2"
4112-CD1006	.1006"	4112-CD115	.115"	4112-CD133	.133"	4112-CD2	.2"	4112-C3	3"
4112-CD1007	.1007"	4112-CD116	.116"	4112-CD134	.134"	4112-CD25	.25"	4112-C4	4"
4112-CD1008	.1008"	4112-CD117	.117"	4112-CD135	.135"	4112-CD3	.3"	4112-C5	5"
4112-CD1009	.1009"	4112-CD118	.118"	4112-CD136	.136"	4112-CD35	.35"	4112-C6	6"
4112-CD101	.101"	4112-CD119	.119"	4112-CD137	.137"	4112-CD4	.4"	4112-C7	7"
4112-CD102	.102"	4112-CD12	.12"	4112-CD138	.138"	4112-CD45	.45"	4112-C8	8"
4112-CD103	.103"	4112-CD121	.121"	4112-CD139	.139"	4112-CD5	.5"	4112-C10	10"
4112-CD104	.104"	4112-CD122	.122"	4112-CD14	.14"	4112-CD55	.55"	4112-C12	12"
4112-CD105	.105"	4112-CD123	.123"	4112-CD141	.141"	4112-CD6	.6"	4112-C16	16"
4112-CD106	.106"	4112-CD124	.124"	4112-CD142	.142"	4112-CD65	.65"	4112-C20	20"
4112-CD107	.107"	4112-CD125	.125"	4112-CD143	.143"	4112-CD7	.7"		
4112-CD108	.108"	4112-CD126	.126"	4112-CD144	.144"	4112-CD75	.75"		

**STEEL GAUGE BLOCK SETS**

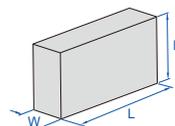


- Made of alloy steel
- Meet ASME B89.1.9
- Supplied with manufacturer inspection certificate



4102-81

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		1	4102-36	4102-136	4102-236
	.1001-.1009	.0001	9			
	.101-.109	.001	9			
	.11-.19	.01	9			
	.1-.5	.1	5			
	1		1			
81	.1001-.1009	.0001	9	4102-81	4102-181	4102-281
	.101-.149	.001	49			
	.05-.95	.05	19			
	1-4	1	4			



Dimension:

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

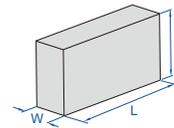
## CERAMIC GAUGE BLOCK SETS

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



4005-181

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



Dimension:

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

## 36 PIECES SPACE BLOCK SETS

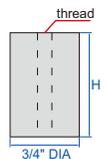
- Made of ball bearing steels
- Hardened and lapped, hardness HRC60-62
- 4 connecting screws included, can make any length desired



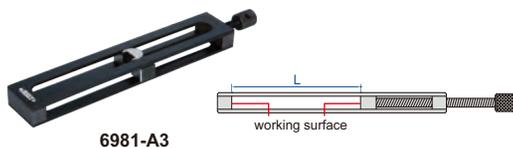
4007-361

Blocks per set	Space blocks included in set		
	H (inch)	Step (inch)	Quantity
36	.0625		1
	.050-.090	.01	5
	.100-.109	.001	10
	.110-.190	.01	9
	.125		1
	.200-.900	.1	8
	1.000		2

Part No.	Accuracy	Thread
4007-361	±.0001"	1/4"-28 UNF
4007-362	±.0001"	M6×1
4007-363	±.00005"	1/4"-28 UNF



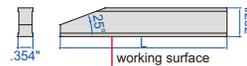
## GAUGE BLOCK ACCESSORIES (BASIC TYPE)



6981-A3



6981-C1



Part No.	Name	Clamping range (L)
6981-A1	holder	9/64-1 9/64"
6981-A2	holder	1 9/64-2"
6981-A3	holder	2-4"
6981-A4	holder	4-8"
6981-A5	holder	8-12"

Part No.	Name	Size	Remark
6981-C1	plain jaw	4"	made of steel, supplied in pair
6981-C2	plain jaw	6"	made of steel, supplied in pair

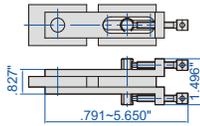
\*The actual clamping range should deduct the width of jaws



**GAUGE BLOCK HOLDER**



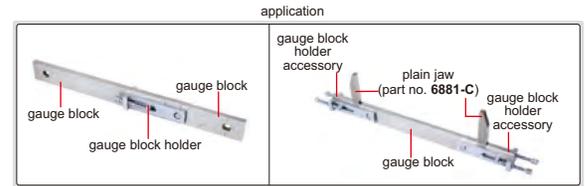
**Part No.**  
**6886-1**



- For gauge blocks over 4" with clamping holes
- Optional accessory: gauge block holder accessory, gauge block accessory (part no. 6881)

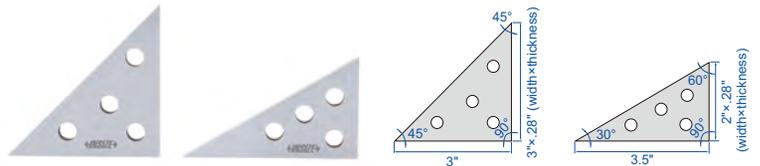
**GAUGE BLOCK HOLDER ACCESSORY**

**Part No.**  
**6886-A**



**ANGLE BLOCK SET**

- For angle set-up in tooling, production and inspection
- Accuracy of angle:  $\pm 9$  seconds
- Made of alloy steel
- Hardness HRC60 $\pm$ 2



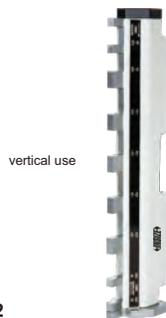
**6540-1**

Part No.	Angle plates included	Angle
6540-1	2	45°, 45°, 90°
		30°, 60°, 90°

**CALIPER/HEIGHT GAUGE CHECKERS**



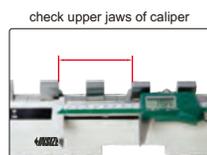
horizontal use



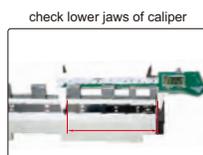
vertical use

**6884-E12**

- To check calipers and height gauges
- Constructed with steel gauge blocks



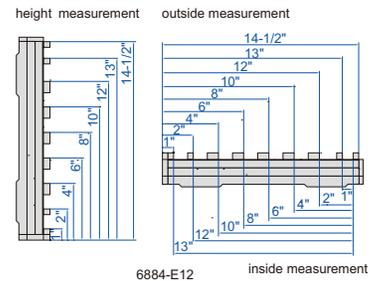
check upper jaws of caliper



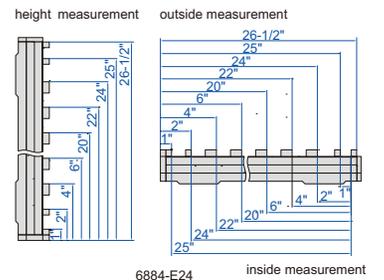
check lower jaws of caliper



check height gauge



6884-E12



6884-E24

Part No.	Size	Range of inside measurement	Range of outside measurement	Range of height measurement	Accuracy
6884-E12*	0-12"	1", 2", 4", 6", 8", 10", 12", 13"	1", 2", 4", 6", 8", 10", 12", 13", 26-1/2"	1", 2", 4", 6", 8", 10", 12", 13", 26-1/2"	$\pm 0.0012$ "
6884-E24*	0-24"	1", 2", 4", 6", 8", 10", 12", 14", 16", 18", 20", 22", 24", 25"	1", 2", 4", 6", 8", 10", 12", 14", 16", 18", 20", 22", 24", 25", 26-1/2"	1", 2", 4", 6", 8", 10", 12", 14", 16", 18", 20", 22", 24", 25", 26-1/2"	$\pm 0.0020$ "

\*Supplied with manufacturer inspection certificate

## PIN GAUGE SETS

- Class ZZ
- Made of stainless steel
- Hardness HRC60-62

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



4162-2161



## PIN GAUGE HANDLES (OPERATED WITH WRENCH)



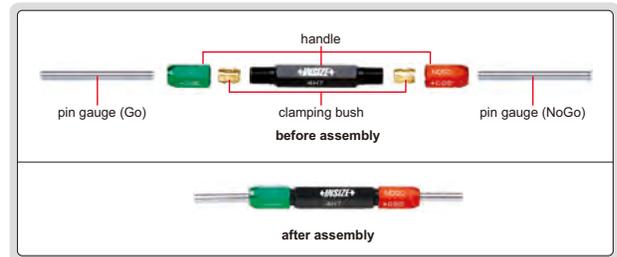
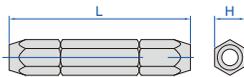
handle



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	Handle	Including		H	L
			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"

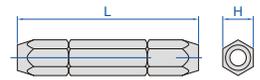
Part No.	Applicable pin gauge diameter	Handle	Including		H	L
			Clamping bush			
7341-7S	.341-.406"	1 pc	6 pairs (the clamping range are .341-.351", .351-.361", .361-.371", .371-.382", .382-.394", .394-.406")		.748"	3.583"
7341-8S	.406-.465"	1 pc	4 pairs (the clamping range are .406-.420", .420-.435", .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"

## PIN GAUGE HANDLES (OPERATED WITHOUT WRENCH)

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"



7342-M1



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

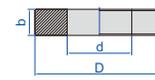
## SETTING RINGS

- 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

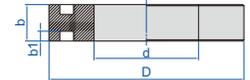


6313-0D8

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



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"

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"

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

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

## ADJUSTABLE SNAP GAUGES

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

Part No.	Range	L	A	B	E	F	H	d (DIA)
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"

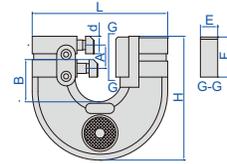


2187-19

FAST AND ACCURATE MEASUREMENT OF CYLINDERS



VIDEO



## CERAMIC MEASURING BALLS



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"

## DLC COATED THREAD RING GAUGES AND PLUG GAUGES



DLC coated GO ring gauge



DLC coated GO plug gauge

- The DLC coating has the following advantages:
  - High hardness, extremely wear resistance
  - Low friction coefficient
  - Corrosion resistance
- Plug gauges: GO is coated, NO-GO is not; Ring gauges: GO is coated, NO-GO is not
- The following thread ring gauges and plug gauges are available with DLC coating:
  - Metric fine thread ring gauges and plug gauges (4139, 4129 series);
  - Metric thread ring gauges and plug gauges (4130, 4120 series);
  - American standard thread ring gauges and plug gauges (4131, 4121 series)

### Part No. example:

Original part no.	DLC coating part no.
4120-12	4120-12-DLC
4130-4	4130-4-DLC

### DLC coating characteristics

Hardness	6000HV
Friction coefficient	0.15
Coating color	interference color

### Metric thread plug gauges

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6H
M1	0.25	4130-1-DLC
M1.2	0.25	4130-1D2-DLC
M1.4	0.3	4130-1D4-DLC
M1.6	0.35	4130-1D6-DLC
M2	0.4	4130-2-DLC
M2.5	0.45	4130-2D5-DLC
M3	0.5	4130-3-DLC

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6H
M3.5	0.6	4130-3D5-DLC
M4	0.7	4130-4-DLC
M5	0.8	4130-5-DLC
M6	1	4130-6-DLC
M8	1.25	4130-8-DLC
M10	1.5	4130-10-DLC
M12	1.75	4130-12-DLC

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6H
M14	2	4130-14-DLC
M16	2	4130-16-DLC
M18	2.5	4130-18-DLC
M20	2.5	4130-20-DLC
M22	2.5	4130-22-DLC
M24	3	4130-24-DLC

To be continued

Continued from previous page

**Metric thread ring gauges**

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6g
		GO
M2	0.4	4120-2-DLC
M3	0.5	4120-3-DLC
M4	0.7	4120-4-DLC
M5	0.8	4120-5-DLC
M6	1	4120-6-DLC

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6g
		GO
M8	1.25	4120-8-DLC
M10	1.5	4120-10-DLC
M12	1.75	4120-12-DLC
M14	2	4120-14-DLC
M16	2	4120-16-DLC

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6g
		GO
M18	2.5	4120-18-DLC
M20	2.5	4120-20-DLC
M22	2.5	4120-22-DLC
M24	3	4120-24-DLC

**Metric fine thread plug gauges**

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6H
		GO
M4	0.5	4139-4G-DLC
M5	0.5	4139-5G-DLC
M6	0.5	4139-6G-DLC
M6	0.75	4139-6L-DLC
M8	0.75	4139-8L-DLC
M8	1	4139-8P-DLC
M10	0.75	4139-10L-DLC
M10	1	4139-10P-DLC
M12	1	4139-12P-DLC
M12	1.25	4139-12Q-DLC
M12	1.5	4139-12R-DLC

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6H
		GO
M14	1	4139-14P-DLC
M14	1.25	4139-14Q-DLC
M14	1.5	4139-14R-DLC
M16	1	4139-16P-DLC
M16	1.25	4139-16Q-DLC
M16	1.5	4139-16R-DLC
M18	1	4139-18P-DLC
M18	1.25	4139-18Q-DLC
M18	1.5	4139-18R-DLC
M18	2	4139-18T-DLC
M20	1	4139-20P-DLC

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6H
		GO
M20	1.25	4139-20Q-DLC
M20	1.5	4139-20R-DLC
M20	2	4139-20T-DLC
M22	1	4139-22P-DLC
M22	1.25	4139-22Q-DLC
M22	1.5	4139-22R-DLC
M22	2	4139-22T-DLC
M24	1	4139-24P-DLC
M24	1.25	4139-24Q-DLC
M24	1.5	4139-24R-DLC
M24	2	4139-24T-DLC

**Metric fine thread ring gauges**

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6g
		GO
M4	0.5	4129-4G-DLC
M6	0.75	4129-6L-DLC
M8	1	4129-8P-DLC
M10	1	4129-10P-DLC
M10	1.25	4129-10Q-DLC
M12	1	4129-12P-DLC
M12	1.25	4129-12Q-DLC
M12	1.5	4129-12R-DLC

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6g
		GO
M14	1	4129-14P-DLC
M14	1.5	4129-14R-DLC
M16	1	4129-16P-DLC
M16	1.5	4129-16R-DLC
M18	1	4129-18P-DLC
M18	1.5	4129-18R-DLC
M18	2	4129-18T-DLC
M20	1	4129-20P-DLC

Size (mm)		Part No.
Nominal diameter	Pitch	Class 6g
		GO
M20	1.5	4129-20R-DLC
M20	2	4129-20T-DLC
M22	1	4129-22P-DLC
M22	1.5	4129-22R-DLC
M22	2	4129-22T-DLC
M24	1	4129-24P-DLC
M24	1.5	4129-24R-DLC
M24	2	4129-24T-DLC

**American standard thread plug gauges**

Size	Part No.
	Class 2B
No. 0-80UNF	4131-02-DLC
No. 1-72UNF	4131-12-DLC
No. 2-56UNC	4131-21-DLC
No. 4-40UNC	4131-41-DLC
No. 6-32UNC	4131-61-DLC
No. 8-32UNC	4131-81-DLC
No. 10-24UNC	4131-101-DLC
No. 10-32UNF	4131-102-DLC
1/4-20UNC	4131-1B1-DLC
1/4-28UNF	4131-1B2-DLC

Size	Part No.
	Class 2B
5/16-18UNC	4131-5D1-DLC
5/16-24UNF	4131-5D2-DLC
3/8-16UNC	4131-3C1-DLC
3/8-24UNF	4131-3C2-DLC
7/16-14UNC	4131-7D1-DLC
7/16-20UNF	4131-7D2-DLC
1/2-13UNC	4131-1A1-DLC
1/2-20UNF	4131-1A2-DLC
9/16-18UNF	4131-9D2-DLC
5/8-11UNC	4131-5C1-DLC

Size	Part No.
	Class 2B
5/8-18UNF	4131-5C2-DLC
3/4-10UNC	4131-3B1-DLC
3/4-16UNF	4131-3B2-DLC
7/8-9UNC	4131-7C1-DLC
7/8-14UNF	4131-7C2-DLC
1-8UNC	4131-2A1-DLC
1-12UNF	4131-2A2-DLC
1 1/16-12UN	4131-1E512-DLC
1 5/16-12UN	4131-5E512-DLC

**American standard thread ring gauges**

Size	Part No.
	Class 2A
	GO
No. 4-40UNC	4121-41-DLC
No. 6-32UNC	4121-61-DLC
No. 10-32UNF	4121-102-DLC
1/4-20UNC	4121-1B1-DLC
1/4-28UNF	4121-1B2-DLC
5/16-18UNC	4121-5D1-DLC
5/16-24UNF	4121-5D2-DLC
3/8-16UNC	4121-3C1-DLC

Size	Part No.
	Class 2A
	GO
3/8-24UNF	4121-3C2-DLC
7/16-14UNC	4121-7D1-DLC
7/16-20UNF	4121-7D2-DLC
1/2-13UNC	4121-1A1-DLC
1/2-20UNF	4121-1A2-DLC
9/16-18UNF	4121-9D2-DLC
5/8-11UNC	4121-5C1-DLC
5/8-18UNF	4121-5C2-DLC

Size	Part No.
	Class 2A
	GO
3/4-10UNC	4121-3B1-DLC
3/4-16UNF	4121-3B2-DLC
7/8-9UNC	4121-7C1-DLC
7/8-14UNF	4121-7C2-DLC
1-8UNC	4121-2A1-DLC
1-12UNF	4121-2A2-DLC
1-14UNS	4121-2A514-DLC

## METRIC THREAD PLUG GAUGES



4130-10

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

Part No.	Size (mm)
4130-2	M2x0.4
4130-2D2	M2.2x0.45
4130-2D5	M2.5x0.45
4130-3	M3x0.5
4130-3D5	M3.5x0.6
4130-4	M4x0.7
4130-5	M5x0.8
4130-6	M6x1
4130-7	M7x1
4130-8	M8x1.25
4130-9	M9x1.25

Part No.	Size (mm)
4130-10	M10x1.5
4130-11	M11x1.5
4130-12	M12x1.75
4130-14	M14x2
4130-16	M16x2
4130-18	M18x2.5
4130-20	M20x2.5
4130-22	M22x2.5
4130-24	M24x3
4130-27	M27x3
4130-30	M30x3.5

Part No.	Size (mm)
4130-39	M39x4
4130-42	M42x4.5
4130-45	M45x4.5
4130-48	M48x5
4130-52	M52x5
4130-56	M56x5.5
4130-60	M60x5.5
4130-33	M33x3.5
4130-36	M36x4

## METRIC THREAD RING GAUGES

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



4120-16



4120-16N

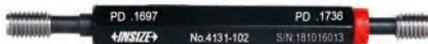


Part No. (GO)	Part No. (NOGO)	Size (mm)
4120-2	4120-2N	M2x0.4
4120-2D2	4120-2D2N	M2.2x0.45
4120-2D5	4120-2D5N	M2.5x0.45
4120-3	4120-3N	M3x0.5
4120-3D5	4120-3D5N	M3.5x0.6
4120-4	4120-4N	M4x0.7
4120-5	4120-5N	M5x0.8
4120-6	4120-6N	M6x1
4120-7	4120-7N	M7x1
4120-8	4120-8N	M8x1.25
4120-9	4120-9N	M9x1.25

Part No. (GO)	Part No. (NOGO)	Size (mm)
4120-10	4120-10N	M10x1.5
4120-11	4120-11N	M11x1.5
4120-12	4120-12N	M12x1.75
4120-14	4120-14N	M14x2
4120-16	4120-16N	M16x2
4120-18	4120-18N	M18x2.5
4120-20	4120-20N	M20x2.5
4120-22	4120-22N	M22x2.5
4120-24	4120-24N	M24x3
4120-27	4120-27N	M27x3
4120-30	4120-30N	M30x3.5

Part No. (GO)	Part No. (NOGO)	Size (mm)
4120-33	4120-33N	M33x3.5
4120-36	4120-36N	M36x4
4120-39	4120-39N	M39x4
4120-42	4120-42N	M42x4.5
4120-45	4120-45N	M45x4.5
4120-48	4120-48N	M48x5
4120-52	4120-52N	M52x5
4120-56	4120-56N	M56x5.5
4120-60	4120-60N	M60x5.5

## AMERICAN STANDARD THREAD PLUG GAUGES



4131-102

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

Part No.	Size
4131-41	4-40UNC
4131-61	6-32UNC
4131-81	8-32UNC
4131-102	10-32UNF
4131-1B1	1/4-20UNC
4131-1B2	1/4-28UNF

Part No.	Size
4131-5D1	5/16-18UNC
4131-5D2	5/16-24UNF
4131-3C1	3/8-16UNC
4131-3C2	3/8-24UNF
4131-7D2	7/16-20UNF
4131-1A1	1/2-13UNC

Part No.	Size
4131-1A2	1/2-20UNF
4131-9D2	9/16-18UNC
4131-5C1	5/8-11UNC
4131-5C2	5/8-18UNF
4131-3B1	3/4-10UNC
4131-3B2	3/4-16UNF

## AMERICAN STANDARD THREAD RING GAUGES



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



front



back



front



back

4121-1B1

4121-1B1N

Size	Part No. (GO)	Part No. (NOGO)
4-40UNC	4121-41	4121-41N
6-32UNC	4121-61	4121-61N
8-32UNC	4121-81	4121-81N
10-32UNF	4121-102	4121-102N
1/4-20UNC	4121-1B1	4121-1B1N
1/4-28UNF	4121-1B2	4121-1B2N

Size	Part No. (GO)	Part No. (NOGO)
5/16-18UNC	4121-5D1	4121-5D1N
5/16-24UNF	4121-5D2	4121-5D2N
3/8-16UNC	4121-3C1	4121-3C1N
3/8-24UNF	4121-3C2	4121-3C2N
7/16-20UNF	4121-7D2	4121-7D2N
1/2-13UNC	4121-1A1	4121-1A1N

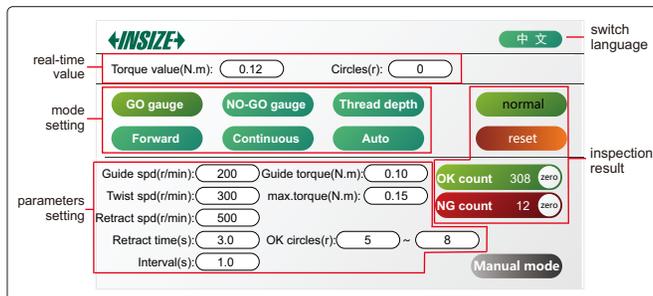
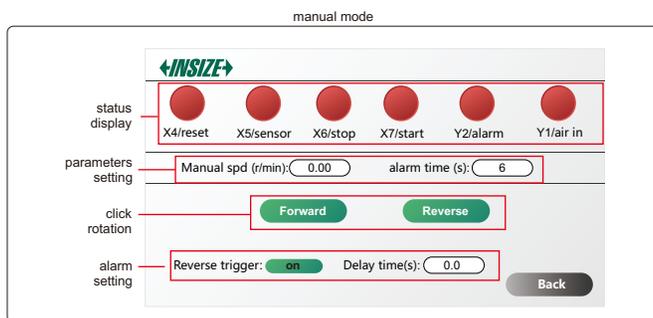
Size	Part No. (GO)	Part No. (NOGO)
1/2-20UNF	4121-12	4121-1A2
9/16-18UNF	4121-9D2	4121-9D2
5/8-11UNC	4121-5C1	4121-5C1
5/8-18UNF	4121-5C2	4121-5C2
3/4-10UNC	4121-3B1	4121-3B1
3/4-16UNF	4121-3B2	4121-3B2

## AUTOMATIC THREAD INSPECTION MACHINE PART NO. TCM



CUSTOM-MADE

- For inspection of GO, NO-GO and depth of threads
- Can be for repair of thread defects
- Real-time display of torque, circles, OK and NG counts
- If NG thread is detected, audible and visual alarm are activated and the motor is automatically reversed to exit the thread gauge
- Different thread gauges and workpiece fixtures can be replaced
- For different length of thread by adjusting the induction switch
- Thread gauges with DLC coating, excellent wear resistance
- Optional accessory: thread plug gauges, thread ring gauges, thread gauge fixtures, custom-made workpiece fixtures, foot switch (part no. TCM-01)



thread ring gauges (optional)



thread plug gauges (optional)



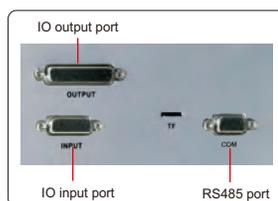
### SPECIFICATION

Measuring range	thread: M1~M30
Reprocessing range	thread: M1~M20
Torque range	guide torque: 0~1.27N.m, max. torque: 0~1.27N.m
Speed range	0~3000 r/min
Time range	retract time: 0.1~99s, interval: 0.1~99s
Power supply	110V, 50/60Hz
Rated power	400W
Net weight	29lb
Dimension	18×11×13"

## HANDHELD THREAD INSPECTION MACHINES



controller (included)



communication port (included)



CUSTOMIZED THREAD PLUG GAUGES ARE AVAILABLE

ATTENTION: TORQUE TESTERS ARE NEEDED FOR CALIBRATION

ATTENTION: SPEED SHOULD BE BELOW 100RPM FOR THE FINAL STAGE



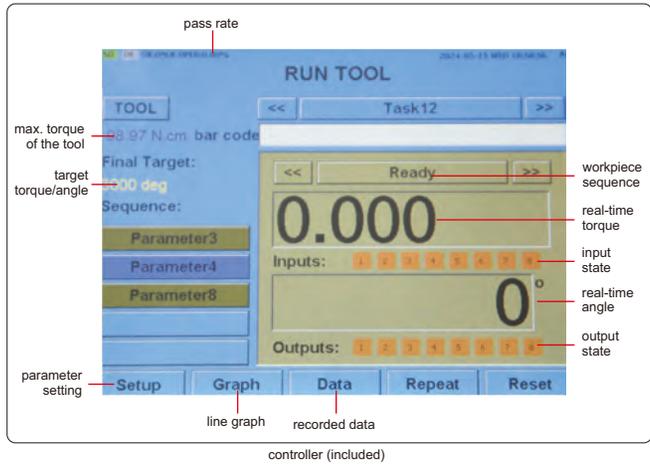
HES-TP01  
main body (included)

thread plug gauge (optional)  
part no. HES-TP-□□

- For inspection of left-hand and right-hand internal thread
- High precision torque+angle control
- Real-time display torque, OK counts, NG counts and pass rate
- If NG thread is detected, the alarm is activated and the corresponding NG parameter is displayed in red on the controller
- Provide programmable IO and RS485 communication port for process control and data transmission
- Thread plug gauges can be replaced with different sizes
- Thread gauges with DLC coating, excellent wear resistance
- Optional accessory: thread plug gauges, balance arm, torque tester

To be continued

Continued from previous page



balance arm (optional) part no. HES-E-X

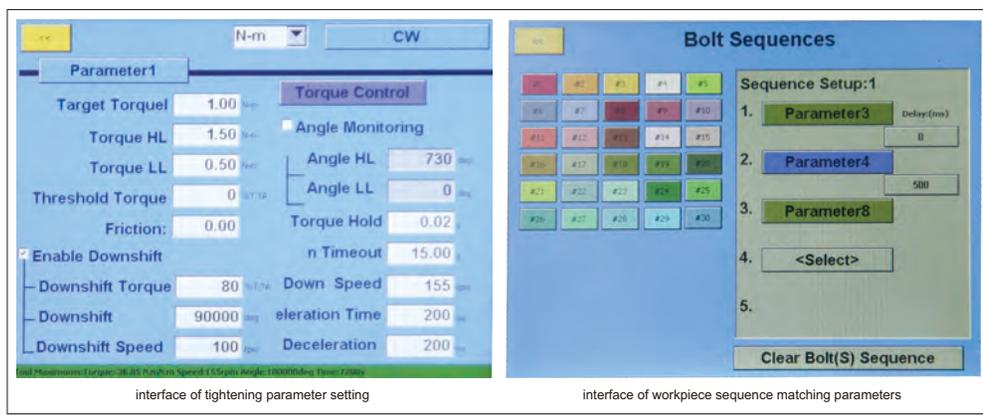
**THREAD PLUG GAUGE (Go)**

metric

Part No.	Size (Go)
HES-TP-4	M4×0.7-6H
HES-TP-5	M5×0.8-6H
HES-TP-6	M6×1-6H
HES-TP-7	M7×1-6H
HES-TP-8	M8×1.25-6H
HES-TP-10	M10×1.5-6H
HES-TP-12	M12×1.75-6H
HES-TP-14	M14×2-6H
HES-TP-16	M16×2-6H
HES-TP-18	M18×2.5-6H
HES-TP-20	M20×2.5-6H
HES-TP-22	M22×2.5-6H
HES-TP-24	M24×3-6H
HES-TP-27	M27×3-6H
HES-TP-30	M30×3.5-6H

metric fine

Part No.	Size (Go)
HES-TP-8P	M8×1-6H
HES-TP-10P	M10×1-6H
HES-TP-10QP	M10×1.25-6H
HES-TP-12P	M12×1-6H
HES-TP-12Q	M12×1.25-6H
HES-TP-12R	M12×1.5-6H
HES-TP-14P	M14×1-6H
HES-TP-14Q	M14×1.25-6H
HES-TP-14R	M14×1.5-6H
HES-TP-16P	M16×1-6H
HES-TP-16R	M16×1.5-6H
HES-TP-18P	M18×1-6H
HES-TP-18R	M18×1.5-6H
HES-TP-20P	M20×1-6H
HES-TP-20R	M20×1.5-6H
HES-TP-22P	M22×1-6H
HES-TP-22R	M22×1.5-6H
HES-TP-24P	M24×1-6H
HES-TP-24R	M24×1.5-6H
HES-TP-30R	M30×1.5-6H



interface of tightening parameter setting

interface of workpiece sequence matching parameters

**SPECIFICATION**

Part No.	HES-TP01	HES-TP02
Torque range	0.18~2.04lbf.in 0.02~0.23N.m	1.33~7.97lbf.in 0.15~0.90N.m
Motor power	DC40W	
Max. speed	5000rpm	1200rpm
Measuring range	internal thread: M4~M13	internal thread: M14~M30
Power supply	AC 85~264V, 47~63Hz	
Operation interface display	touch screen menu operation mode, 3 function buttons+3 LED indicators	
Torque accuracy	±5% at 30%~80% of maximum output torque, ±8% in other range	
Dimension	main body	8.43×2.54×1.50"      9.09×2.54×1.50"
	controller	5.96×7.31×8.70"
Net weight	main body	.88lb      1.10lb
	controller	7.7lb

**STANDARD DELIVERY**

Main body	1 pc
Controller	1 pc
USB transmission cable	1 pc

**OPTIONAL ACCESSORY**

Thread plug gauge (Go)	HES-TP-□□
Balance arm	HES-E-X
Torque tester	IST-HP1

## WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

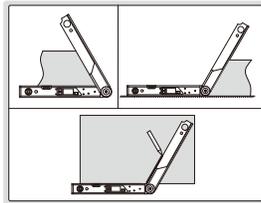
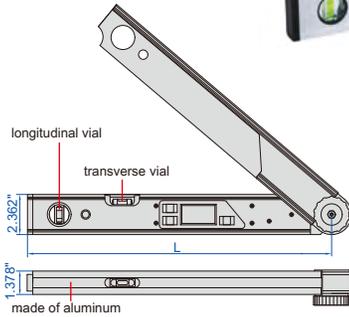
**AUTOMATIC BACKLIGHT**

**ABSOLUTE LEVEL**

**IP54 WATERPROOF**



2174-225



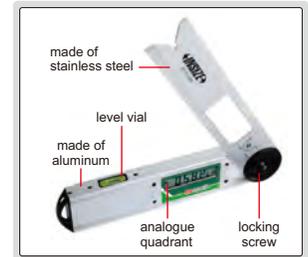
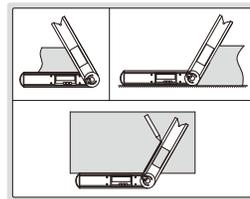
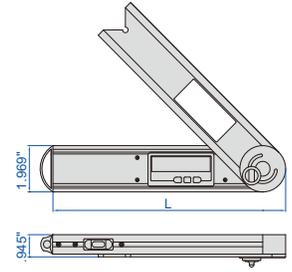
- Suitable for setting horizontal and vertical mitre angles of cutting machine
- Buttons: ON/OFF, HOLD/SUP, SPR/CNR/MTR/BVL
- IP54 dust/waterproof
- With transverse and longitudinal vials
- 2xAAA batteries
- Absolute level, zero setting is not needed when batteries are replaced
- Backlight turns off 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



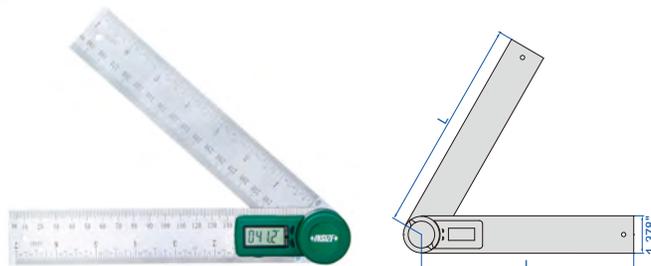
- Buttons: on/off, hold (keep the reading), zero, ABS (absolute and incremental measurement)
- Fix the locking screw at 4 positions for different measuring ranges: 0°~225°, -225°~0°, -45°~180°, -180°~45°
- Remove the locking screw for 360° range
- With level vial
- Battery CR2032, automatic power off

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

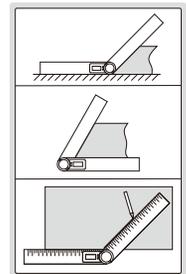
## DIGITAL PROTRACTORS

- 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

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



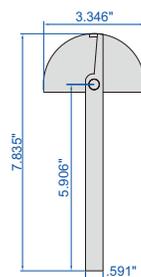
2176-200



## PROTRACTOR (ECONOMIC TYPE)



4780-85A



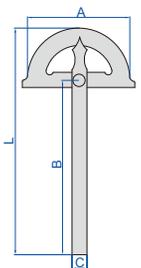
- Made of stainless steel
- With clamping screw

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

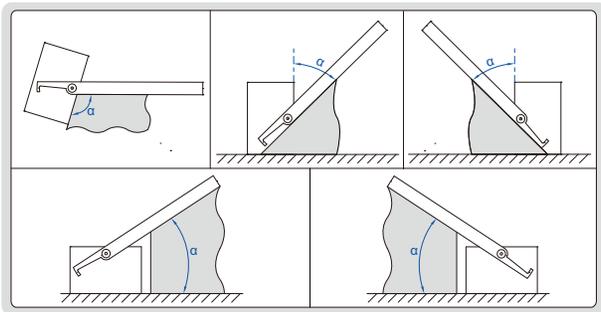
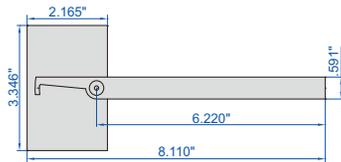
Part No.	Size (AxB)	Range	Accuracy	L	C
4799-180	3.1x4.7"	0-180°	±0.3°	6.614"	.433"
4799-1120	4.7x5.9"	0-180°	±0.3°	8.661"	.551"
4799-1150	5.9x7.9"	0-180°	±0.3°	11.220"	.630"
4799-1200	7.9x11.8"	0-180°	±0.3°	16.260"	.787"

### PROTRACTOR



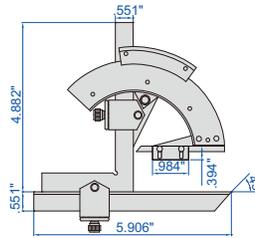
4781-85A

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



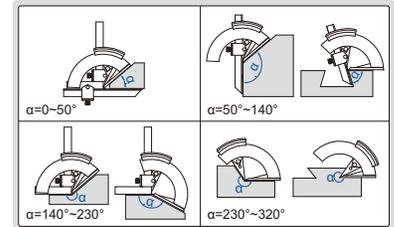
Part No.	Size	Range	Graduation	Accuracy
4781-85A	3.346x6.220"	0-180°	1°	±0.3°

### PROTRACTOR



2374-320

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



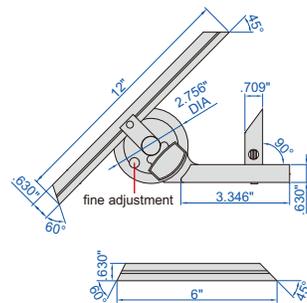
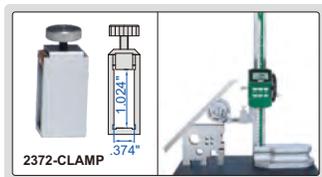
Part No.	Range	Accuracy
2374-320	0-320°	±2'

### UNIVERSAL PROTRACTOR



2372-360

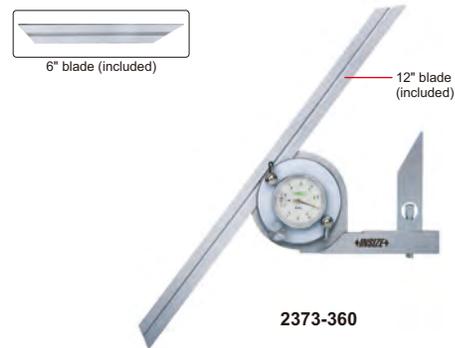
clamp for height gauges (optional)



- 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

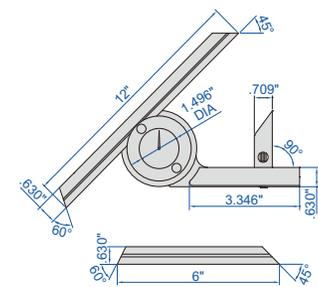
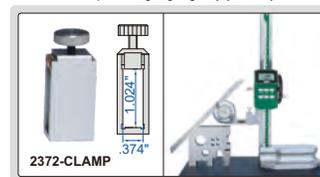
Part No.	Range	Graduation	Accuracy
2372-360	0-360°	5'	±5'

### DIAL PROTRACTOR



2373-360

clamp for height gauges (optional)



- Made of stainless steel
- Optional accessory: clamp (part no. 2372-CLAMP), suitable for height gauges 1156, 1150-300, 1351, 1250 and 1151

Part No.	Range	Graduation	Accuracy
2373-360	0-360°	5'	±5'

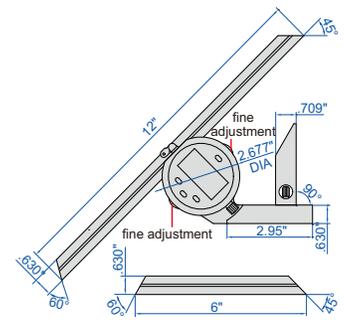
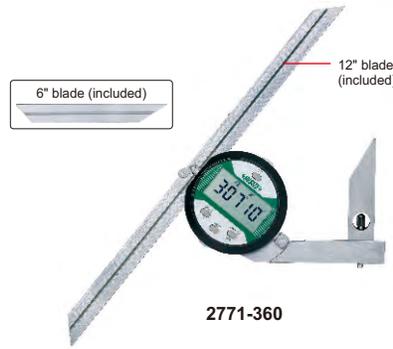
## DIGITAL PROTRACTOR

POPULAR MODEL

ABSOLUTE ZERO

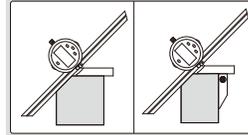
DATA OUTPUT

- 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, wireless transmitter part no. 7315-2771 (receiver is needed)



2771-360

square (optional)



clamp for height gauges (optional)



Square (for zero setting, optional)

2771-S90

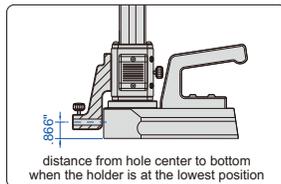
Part No.	Range	Resolution	Accuracy
2771-360	0-360°	1/0.01°	±5'

## PERPENDICULARITY TESTERS

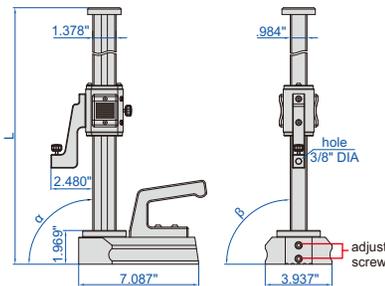


4770-300E

dial test indicator is optional



distance from hole center to bottom when the holder is at the lowest position



- Optional accessory: dial test indicators (graduation .0001")

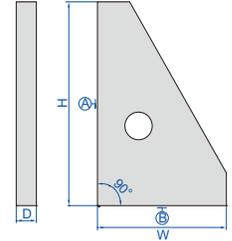
Part No.	Range (H)	Perpendicularity (α)	Side perpendicularity (β)	L
4770-300E	0-12"	.00012"	.00040"	18.110"
4770-600E	0-24"	.00020"	.00080"	29.921"

## GRANITE SQUARES

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



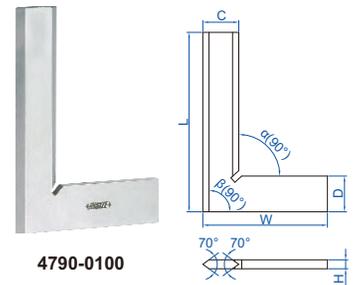
4141-250



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"

## 90° BEVELED EDGE SQUARES

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



4790-0100

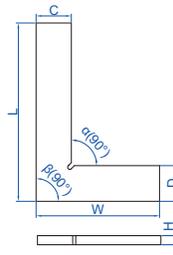
Part No.	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-050	2.0x1.6"	.00009"	.00010"	.512"	.512"	.157"
4790-075	3.0x2.0"	.00010"	.00011"	.591"	.591"	.157"
4790-0100	3.9x2.8"	.00011"	.00012"	.787"	.787"	.197"
4790-0150	5.9x3.9"	.00013"	.00014"	1.181"	1.181"	.236"
4790-0200	7.9x5.1"	.00015"	.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"

## 90° FLAT EDGE SQUARES

- Made of stainless steel



4791-1001A



Standard accuracy, not hardened

Part No.	Size (LxW)	Squareness		C	D	H
		Inside ( $\alpha$ )	Outside ( $\beta$ )			
4791-501A	2.0x1.6"	.00047"	.00051"	.472"	.472"	.197"
4791-1001A	3.9x2.8"	.00056"	.00060"	.787"	.787"	.197"
4791-1501A	5.9x3.9"	.00063"	.00071"	.984"	.984"	.197"
4791-2501A	9.8x6.5"	.00083"	.00091"	1.378"	1.378"	.276"
4791-4001A	15.7x9.8"	.001110"	.00118"	1.772"	1.772"	.354"
4791-6301A	24.8x15.7"	.00154"	.00165"	2.165"	2.165"	.354"

Low accuracy, not hardened

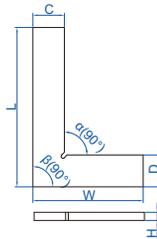
Part No.	Size (LxW)	Squareness		C	D	H
		Inside ( $\alpha$ )	Outside ( $\beta$ )			
4791-502	2.0x1.6"	.00095"	.00098"	.472"	.472"	.197"
4791-1002	3.9x2.8"	.00110"	.00118"	.787"	.787"	.197"
4791-1502	5.9x3.9"	.00130"	.00138"	.984"	.984"	.197"
4791-2502	9.8x6.5"	.00170"	.00177"	1.378"	1.378"	.276"
4791-4002	15.7x9.8"	.00220"	.00236"	1.772"	1.772"	.354"
4791-6302	24.8x15.7"	.00307"	.00327"	2.165"	2.165"	.354"

## MACHINIST SQUARES (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDENED



4796-150



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

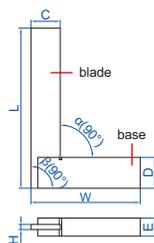
Part No.	Size (LxW)	Squareness		C	D	H
		Inside ( $\alpha$ )	Outside ( $\beta$ )			
4796-50	2.0x1.6"	.00095"	.00098"	.472"	.472"	.197"
4796-75	3.0x2.0"	.00102"	.00110"	.591"	.591"	.197"
4796-100	4.0x2.8"	.00110"	.00118"	.787"	.787"	.197"
4796-125	5.0x3.1"	.00118"	.00130"	.866"	.866"	.197"
4796-150	5.9x3.9"	.00130"	.00138"	.984"	.984"	.197"
4796-200	7.9x5.1"	.00146"	.00157"	1.181"	1.181"	.236"
4796-250	9.8x6.5"	.00165"	.00177"	1.378"	1.378"	.276"
4796-300	11.8x7.9"	.00181"	.00197"	1.575"	1.575"	.315"
4796-350	13.8x7.9"	.00200"	.00217"	1.496"	1.496"	.236"
4796-400	15.7x9.8"	.00220"	.00236"	1.772"	1.772"	.354"
4796-450	17.7x9.8"	.00228"	.00256"	1.496"	1.496"	.354"
4796-500	19.7x13.0"	.00256"	.00276"	1.969"	1.969"	.354"

## MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDENED



4707-100



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

Part No.	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
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"

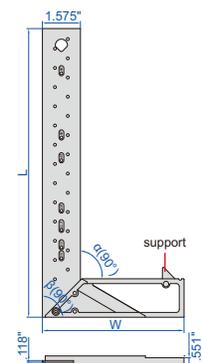
## TRY SQUARE

- 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 ( $\alpha$ )	Outside ( $\beta$ )
2280-300	11.8x5.9"	.020"	.020"



2280-300



### 45° SQUARES WITH WIDE BASE



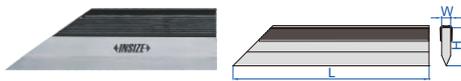
- Made of stainless steel, not hardened

4747-150

Part No.	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4747-150	5.9x3.9"	.00126"	.00138"	.787"	.787"	.197"	.787"
4747-200	7.9x5.1"	.00148"	.00157"	.984"	.984"	.197"	.984"

### STRAIGHT EDGES

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



4700-100

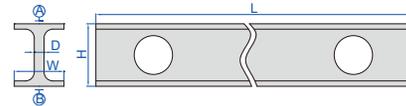
Part No.	Size (L)	Straightness	W	H
4700-100	3.9"	.00010"	.197"	.984"
4700-150	5.9"	.00010"	.236"	1.181"
4700-200	7.9"	.00011"	.236"	1.181"
4700-300	11.8"	.00013"	.315"	1.575"

### 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	Net 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

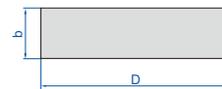
### OPTICAL FLATS

- Check flatness
- Single working face, the arrow indicates the working face

Part No.	b	D	Flatness
4191-45A	.472"	1.772" DIA	1 $\mu$ m
4191-60A	.591"	2.362" DIA	1 $\mu$ m



4191-45A



CAN BE CUSTOM-MADE



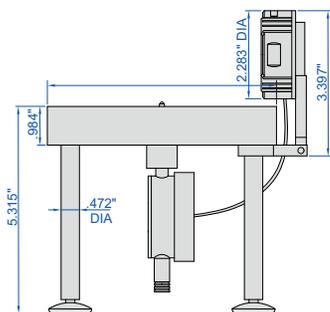
### FLATNESS MEASUREMENT STAND

GRANITE PLATE CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

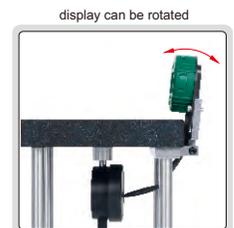


DATA OUTPUT

- Optional accessory: wireless transmitter part no. 7315-50M (receiver is needed)

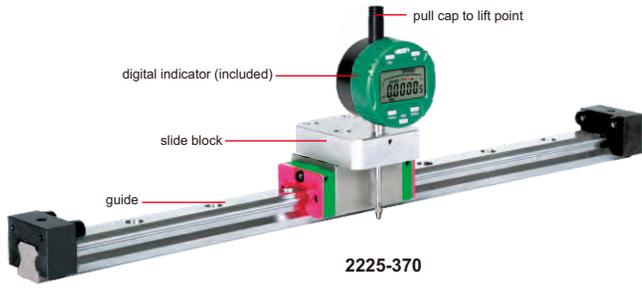


6852-150

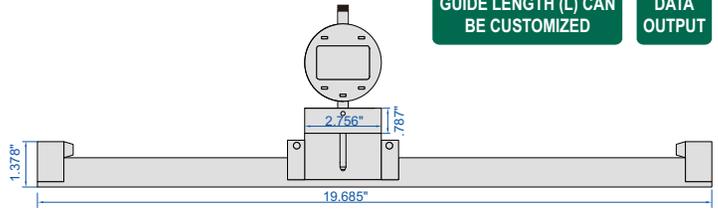


Part No.	Digital indicator resolution	Flatness measurement accuracy	Flatness of granite plate
6852-150	.00005"/0.001mm	79 $\mu$ m	79 $\mu$ m

## STRAIGHTNESS GAUGE



2225-370

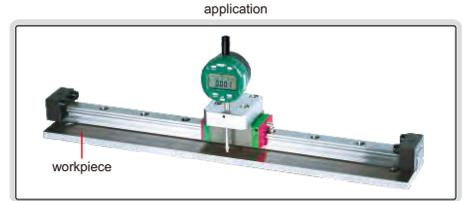


GUIDE LENGTH (L) CAN BE CUSTOMIZED

DATA OUTPUT

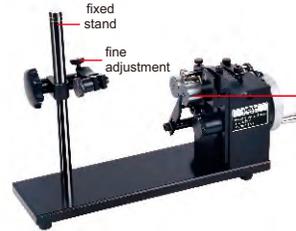
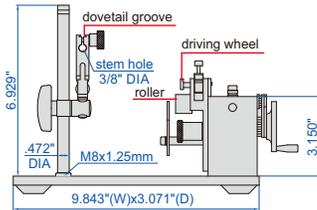
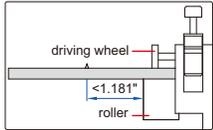
Part No.	Measuring range	Resolution	Straightness accuracy
2225-370	14.6"	.00005"/0.001mm	.0006"

- Measure straightness of workpieces
- Optional accessory: wireless transmitter part no. 7315-50M (receiver is needed)



## CONCENTRICITY GAUGES

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



Part No.	Accuracy	Applicable diameter
4789-1E	.00008"	.138" DIA~.984" DIA
4789-3E	.00008"	.039" DIA~.984" DIA

- Optional accessory: dial test indicator



## CONCENTRICITY GAUGE

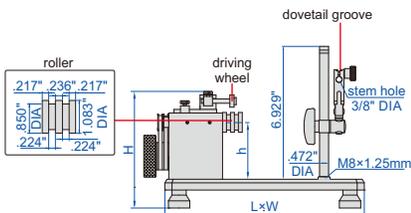
HIGH STABILITY, LONG WORKING LIFE



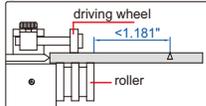
dial test indicator is optional



4725-45E



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



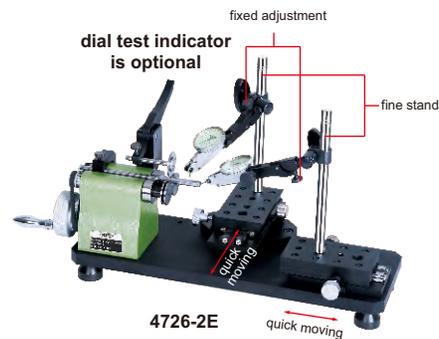
- With ball bearing, high stability, long working life
- Diameter range .118~1.772"
- Accuracy .00008"
- Optional accessory: dial test indicator

Part No.	Center height (h)	LxWxH	Net weight
4725-45E	3.150"	11.024x5.906x6.693"	13.23lb

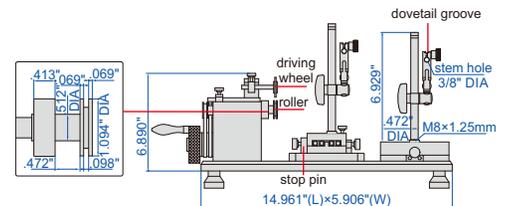
## CONCENTRICITY GAUGE

QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT

dial test indicator is optional



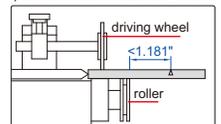
4726-2E



- With ball bearing, high stability, long working life
- Accuracy .00008"
- Optional accessory: dial test indicator

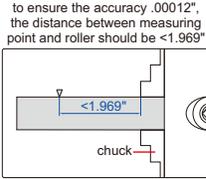
Part No.	Applicable diameter
4726-2E	.079" DIA~1.575" DIA

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



**CONCENTRICITY GAUGE**

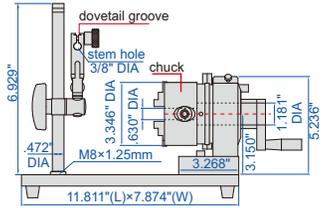
**ATTENTION: CALIBRATE BEFORE MEASUREMENT  
CALIBRATE WITH SETTING RING FOR TUBES  
CALIBRATE WITH CALIBRATION CYLINDER FOR CYLINDERS**



- Accuracy .00012"
- 1.969" DIA setting ring and 2.165" DIA calibration cylinder are included
- Optional accessory: dial test indicator



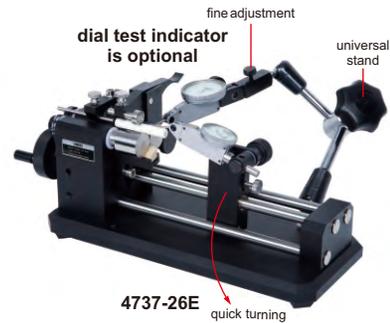
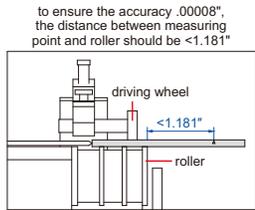
4786-1E



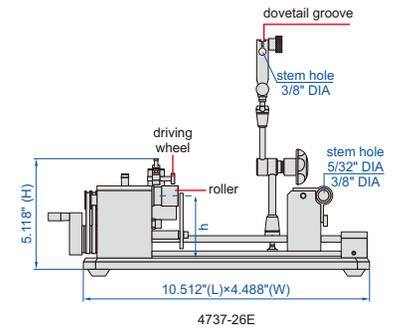
Part No.	Applicable inside diameter	Applicable outside diameter
4786-1E	.945" DIA~2.520" DIA	.079" DIA~2.756" DIA

**QUICK POSITIONING CONCENTRICITY GAUGES**

**QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT**

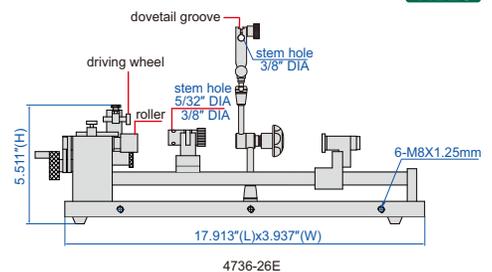
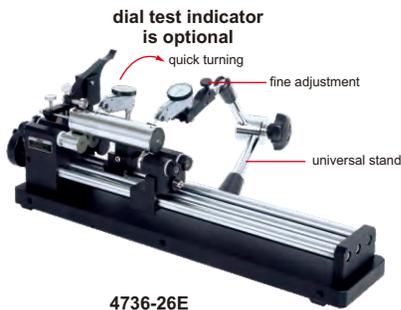


- Accuracy .00008"
- Quick positioning, suitable for mass measurement
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators



Part No.	Diameter range	Workpiece length	Center height (h)	LxWxH	Net weight	Remark
4737-25E	.118"-.981"	.591"-3.937"	2.756"	11.811"x4.724"x5.118"	6lb	fixed stand, good rigidity
4737-26E	.118"-.981"	.591"-3.937"	2.756"	11.811"x4.724"x5.118"	6lb	universal stand, convenient operation

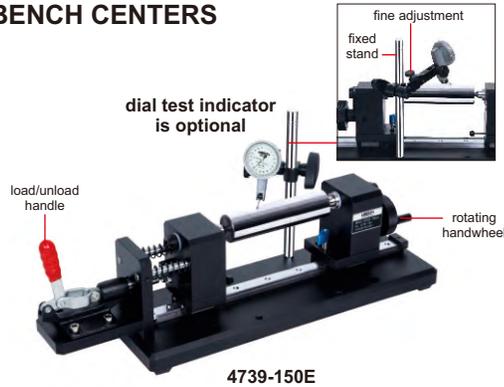
**CONCENTRICITY GAUGE**



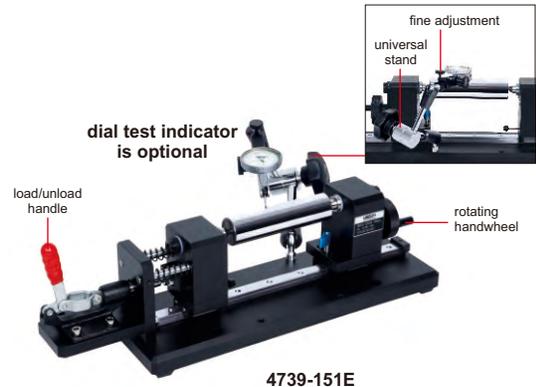
- Quick positioning, suitable for mass measurement
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators

Part No.	Diameter range	Workpiece length	Accuracy	LxWxH	Net weight
4736-26E	.118"-.981"	.591~12.007"	.00008"	17.913"x3.937"x5.511"	14lb

## BENCH CENTERS



4739-150E

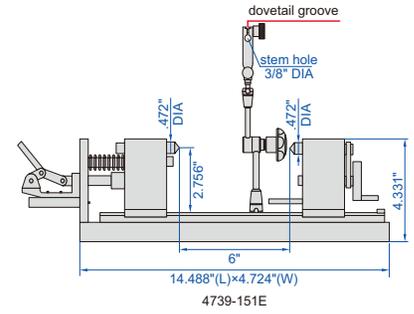


4739-151E

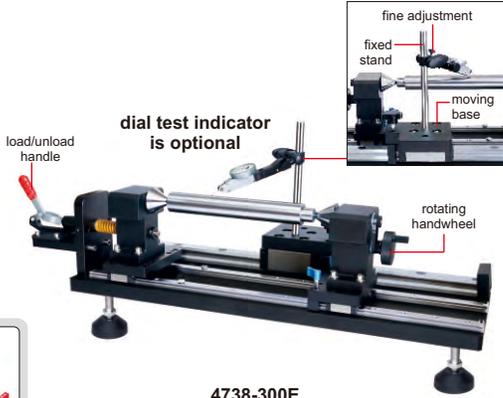


- Quick positioning, suitable for mass measurement
- Suitable for cylinders with outside diameter .118"~5.512" or inside diameter .039"~.472"
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators

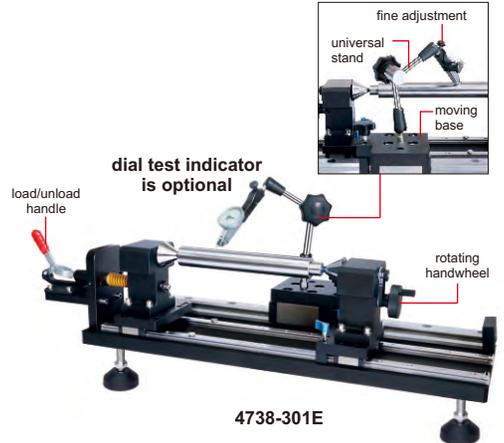
Part No.	Center height	Distance between two centers	Runout accuracy	Net weight	Load	Remark
4739-150E	2.756"	6"	.00008"	14lb	33lb	fixed stand, good rigidity
4739-151E	2.756"	6"	.00008"	14lb	33lb	universal stand, convenient operation



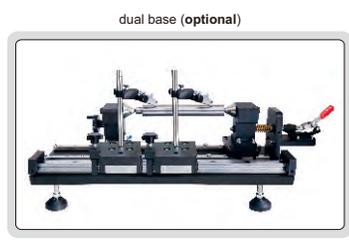
## BENCH CENTERS



4738-300E

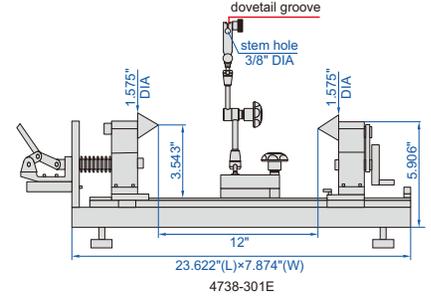


4738-301E



- 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	Net weight	Load	Remark
4738-300E	3.543"	12"	.00008"	33lb	44lb	fixed stand, good rigidity
4738-301E	3.543"	12"	.00008"	33lb	44lb	universal stand, convenient operation

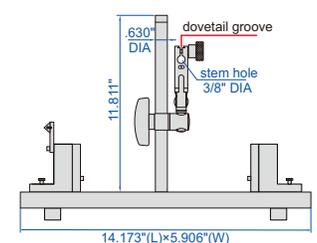


## BENCH CENTER

- Quick positioning, suitable for mass measurement
- Optional accessory: dial test indicators



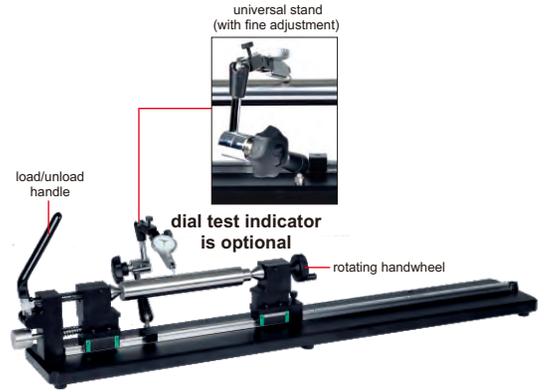
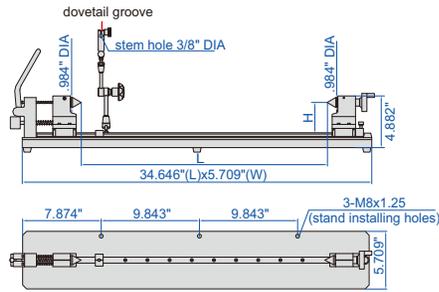
4741-40E



Part No.	Stem hole	Diameter range	Workpiece length	Accuracy
4741-40E	3/8" DIA	.118"~1.575" DIA	.6"~12" DIA	.00008"

### BENCH CENTER

- Quick positioning, suitable for mass measurement
- Suitable for cylinders with outside diameter .118"-4.724" or inside diameter .039"-.984"
- Fixed/universal stand can be optionally installed on request, up to 3
- Optional accessory: dial test indicators (part no. **2380-301**, **2381-301**, **2834-008**), fixed stand, universal stand



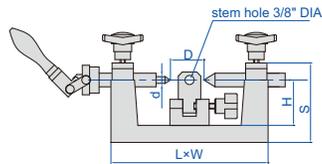
4744-601E

Part No.	Runout accuracy	Center height (H)	Distance between	Net weight	Load
4744-601E	.00012"	2.362"	23.622"	24lb	13lb

### MINI BENCH CENTER



4721-75AE



- Distance between two centers (D): 1.378"~3.937"
- Diameter of center (d) .236" DIA
- Taper of center: MT1

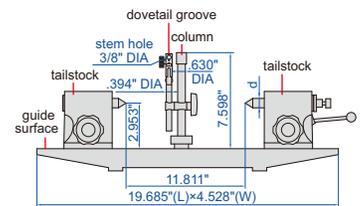
Part No.	Runout accuracy	Center height (H)	Size (LxWxS)	Net weight	Load
4721-75AE	.00008"	1.575"	6.890x4.685x2.756"	9.93lb	8.8lb

### BENCH CENTER (BASIC TYPE)



4742-300E

- Distance between two centers: 11.811"
- Hardened cast-iron guide surface
- Movable column



Part No.	Parallelism*	Runout accuracy	Center height	Diameter of center (d)	Load
4742-300E	.0008"	.00008"	2.953"	.630" DIA	33lb

\*Parallelism of two centers to the guide surface

### BENCH CENTERS

umbrella center (optional)



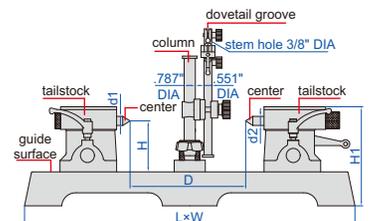
rotary center (optional)



- Movable column
- Optional accessory: umbrella center, rotary center



4788-D3E

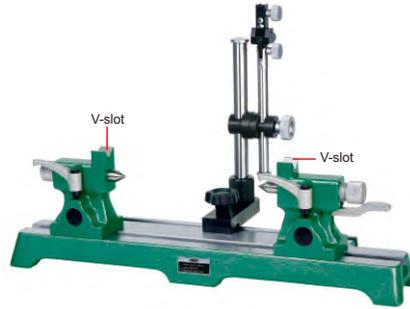


Part No.	Parallelism*	Runout accuracy	Center height (H)	Distance between two centers (D)	L	W	H1	Diameter of center (d1/d2)	Net weight	Load
4788-D3E	.0004"	.00012"	3.543"	11.811"	23.228"	7.677"	6.890"	.709" DIA/.984" DIA	79.4lb	55lb
4788-D4E	.0005"	.00012"	5.118"	15.748"	28.740"	8.071"	9.488"	1.181" DIA/1.181" DIA	150lb	132lb
4788-D6E	.0006"	.00012"	5.118"	23.622"	36.614"	8.661"	9.843"	1.181" DIA/1.181" DIA	200.8lb	132lb

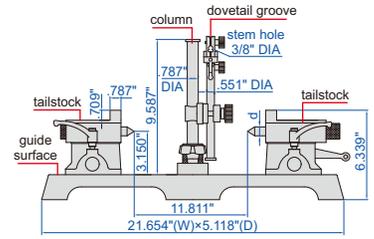
\*Parallelism of two centers to the guide surface

## BENCH CENTER

- 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



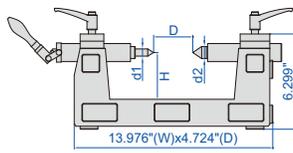
4782-300E



Part No.	Parallelism*	Diameter of center (d)	Load
4782-300E	.0004"	.630" DIA	55lb

\*Parallelism of two centers to the guide surface

## VERTICAL AND HORIZONTAL BENCH CENTER



- For vertical, side and horizontal use
- Distance between two centers (D): 7.874"
- Diameter of center (d1/d2) .630" DIA/.795" DIA



horizontal use



side use

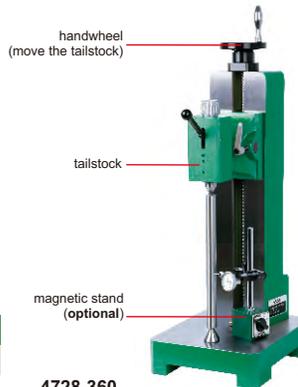


vertical use

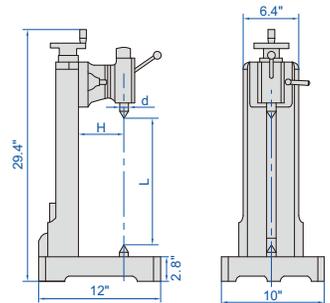
Part No.	Runout accuracy	Center height (H)	Net weight	Load
4722-200	.00008"	3.150"	48.4lb	55lb

## 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

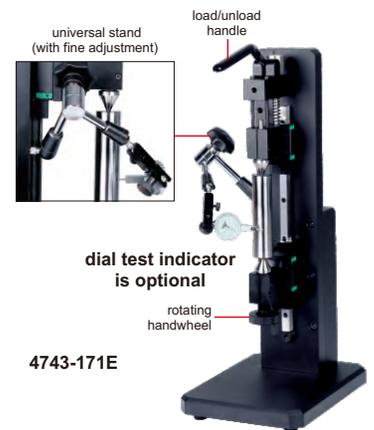
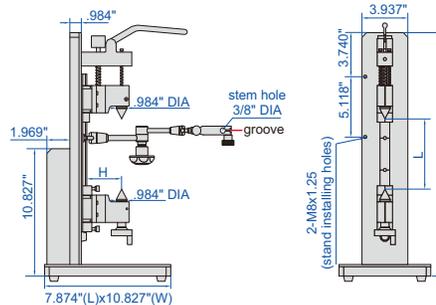


Part No.	Parallelism*	Taper of center	Net weight	Load
4728-360	.0004"	MT3	187lb	176lb

\*Parallelism of two centers to the guide surface

## VERTICAL BENCH CENTER

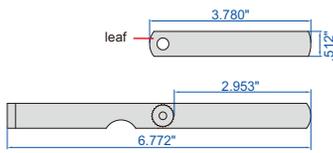
- Quick positioning, suitable for mass measurement
- Suitable for cylinders with outside diameter .118"-4.724" or inside diameter .039"-.984"
- Fixed/universal stand can be optionally installed on request, up to 2
- Optional accessory: dial test indicators (part no. 2380-301, 2381-301, 2834-008), fixed stand, universal stand



4743-171E

Part No.	Runout accuracy	Center height (H)	Distance between	Net weight	Load
4743-171E	.00008"	2.362"	6.693"	25lb	44lb

## 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

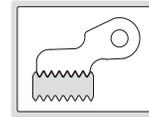
Thickness of leaves included	Accuracy	Thickness of leaves included	Accuracy
.010" (brass)	±.00039"	.016", .017"	±.00055"
.0015", .002"	±.0002"	.018", .019"	±.00059"
.0025", .003", .004", .005", .006", .007"	±.00028"	.020", .021"	±.00067"
.008", .009"	±.00035"	.022", .023"	±.00071"
.010", .011"	±.00039"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

## PITCH GAUGES (LOW ACCURACY)

- 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

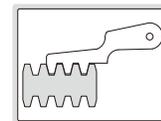
Part No.	Range	Pitch of leaves included	Quantity of leaves
4820-330	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30

## PITCH GAUGES



4824-12

- Check the pitch of screw thread
- Accuracy: ±.0028"
- Made of medium carbon steel



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

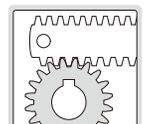
## GEAR TOOTH PITCH GAUGES

- Check the diametrical pitch of gear tooth
- Accuracy of pitch: ±.004"
- Made of hardened stainless steel

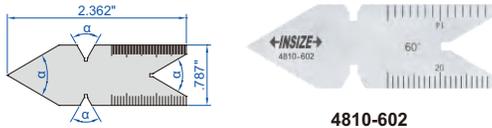
Part No.	Range (DP)	Pressure angle	Quantity of leaves
4860-15	2-5	14.5°	7
4860-25	2-5	20°	7
4860-180	6-80	14.5°	14
4860-280	6-80	20°	14



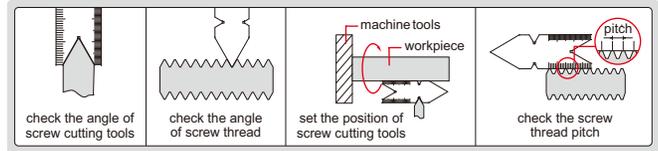
4860-180



## CENTER GAUGES



4810-602

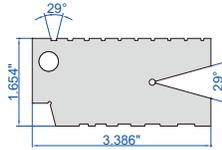


- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy:  $\pm 30$ min.
- Made of stainless steel

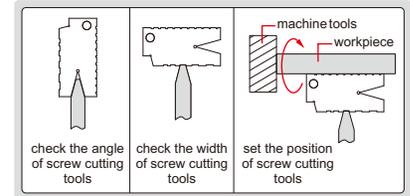
Part No.	Thread type	Angle ( $\alpha$ )	Graduation
4810-602	UNIFIED 60°	60°	14ths and 20ths on front side, 24ths and 32ths on back side
4810-601	METRIC 60°	60°	0.5mm and 1mm
4810-55	WHITWORTH 55°	55°	14ths and 20ths on front side, 24ths and 32ths on back side

## 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

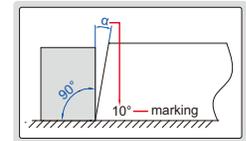
## ANGLE GAUGE

- Accuracy:  $\pm 30'$
- Quantity of leaves: 20
- To check complementary angles
- Made of stainless steel

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°

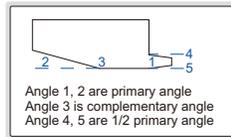


4806-20

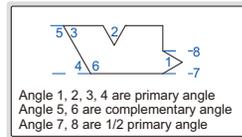


## ANGLE GAUGE SET

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



type A



type B

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

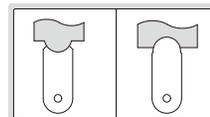


4807

Part No.	Quantity of leaves	Accuracy
4807	18	$\pm 10'$

## RADIUS GAUGES (LOW ACCURACY)

- Made of medium carbon steel



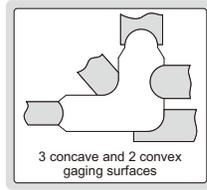
Part No.	Range	Radius of leaves included	Quantity of leaves (internal+external)
4801-15E	1/32"~1/4"	1/32", 3/64", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16", 13/64", 7/32", 15/64", 1/4"	15+15
4801-16E	17/64"~1/2"	17/64", 9/32", 19/64", 5/16", 21/64", 11/32", 23/64", 3/8", 25/64", 13/32",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



4801-15E

## RADIUS GAUGE SETS

- Each piece has 3 concave and 2 convex gaging surfaces
- Made of medium carbon steel
- Supply with handle



4804-26

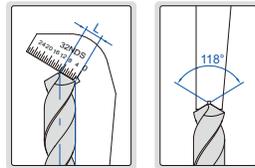
Part No.	Range	Radius of leaves included	Quantity of leaves	Handle
4804-25E	1/64"~1/2"	1/64", 1/32", 3/64", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16", 13/64", 7/32", 15/64", 1/4", 17/64", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 15/32", 1/2"	25	with
4804-26E	.010"~.5"	.010", .015", .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
4804-26	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

## DRILL POINT GAUGE

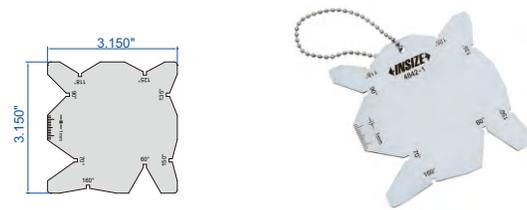


- For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
- Made of stainless steel

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

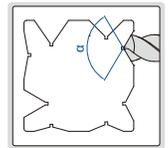


## DRILL ANGLE GAUGE



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

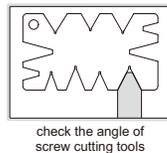
Part No.	Accuracy
4842-1	±0.5°



## ANGLE GAUGE

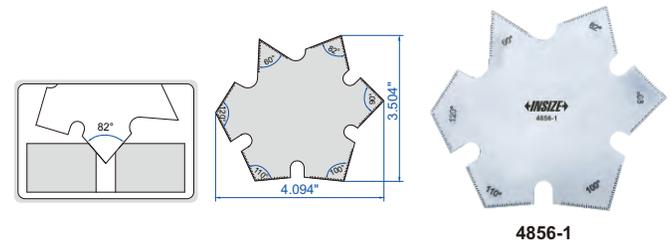


- Made of stainless steel



Part No.	Range	Accuracy
4854-1	29°, 30°, 40°, 45°, 50°, 55°, 60°	±10'

## ANGLE GAUGE OF COUNTERSUNK HOLES



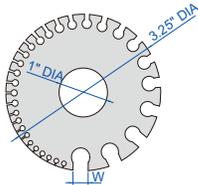
- For measurement of countersunk hole angles
- With graduation (graduation 1mm)
- Made of stainless steel

Part No.	Range	Accuracy
4856-1	60°, 82°, 90°, 100°, 110°, 120°	±0.5°

### AMERICAN STANDARD WIRE GAUGE



4808



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"

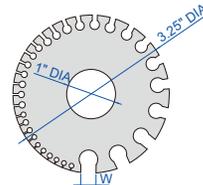
- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC50-57

Part No.	Range
4808	0~36 (.3249~.0050")

### U.S. STANDARD SHEET METAL GAUGE



4809



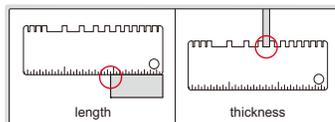
No.	W	No.	W
0	.3125"	18	.0500"
1	.2813"	19	.0438"
2	.2656"	20	.0375"
3	.2500"	21	.0344"
4	.2344"	22	.0313"
5	.2188"	23	.0281"
6	.2031"	24	.0250"
7	.1875"	25	.0219"
8	.1719"	26	.0188"
9	.1563"	27	.0172"
10	.1406"	28	.0156"
11	.1250"	29	.0141"
12	.1094"	30	.0125"
13	.0938"	31	.0109"
14	.0781"	32	.0102"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

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

Part No.	Range
4809	0~36 (.3125~.0070")

### THICKNESS GAUGE

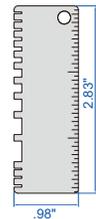
- Made of stainless steel



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

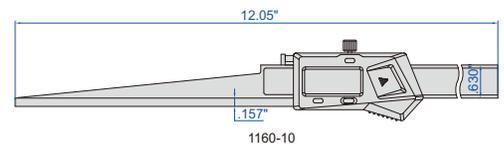
measure slot width



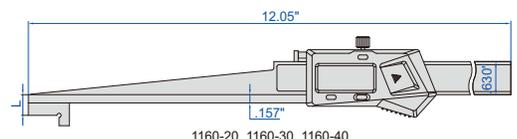
1160-10

- 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: wireless transmitter part no. 7315-22 (receiver is needed)

Part No.	Range	Accuracy	h
1160-10	.008-.394"/0.2-10mm	±.001"	—
1160-20	.394-.787"/10-20mm	±.002"	.394"
1160-30	.787-1.181"/20-30mm	±.002"	.787"
1160-40	1.181-1.575"/30-40mm	±.002"	1.181"



1160-10

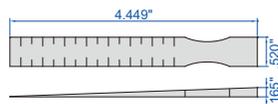


1160-20, 1160-30, 1160-40

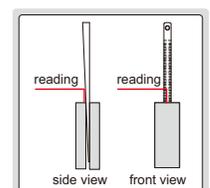
DATA OUTPUT

### 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**



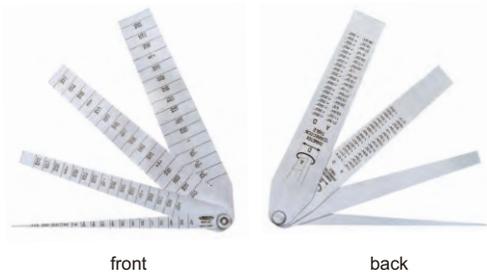
**4833-2E**

- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (except 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"

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".

**TAPER GAUGE SET**

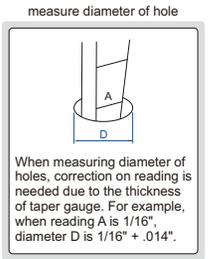
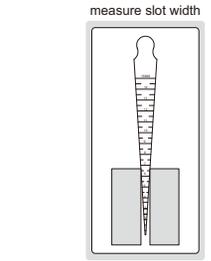


**4837-1E**



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

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



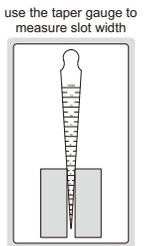
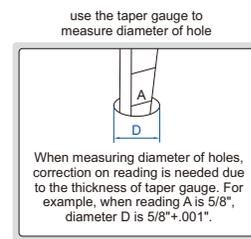
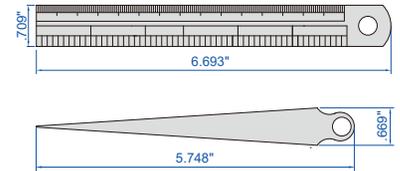
**TAPER GAUGE AND STEEL RULER SET**



**4829-1E**

- 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



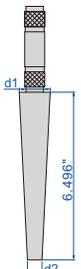
**TAPER BORE GAUGES**

- Graduation .005"
- Quick measurement of bore diameter
- Hardened steel, HRC50-58
- Satin chrome plated surface
- Aluminium oxidized 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"

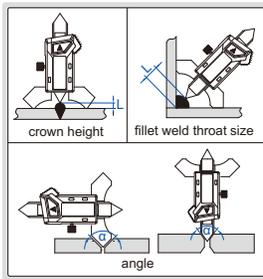


**4852-E15**

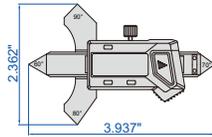


### DIGITAL WELDING GAUGE

**ATTENTION:  
NO DATA OUTPUT**



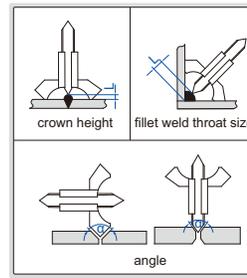
4831-20A



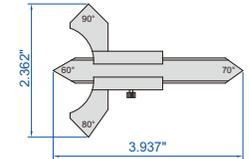
- Non waterproof
- Buttons: zero, inch/mm, on/off
- Battery LR44
- Made of stainless steel

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°

### WELDING GAGUE



4830-E



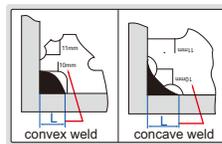
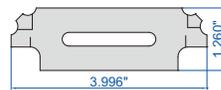
- Made of stainless steel
- Satin chrome plated reading surface

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°

### FILLET WELDING GAUGE



4836-2



- Accuracy: ±.02" (0.5mm)
- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel

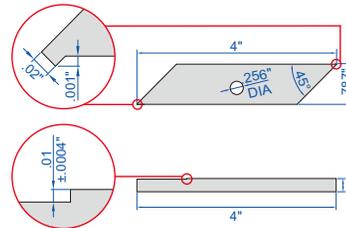
Part No.	Size
4836-2	1/8" (3.2mm), 3/16" (4.8mm), 1/4" (6.4mm), 5/16" (7.9mm), 3/8" (9.5mm), 7/16" (11.1mm), 1/2" (12.7mm), 5/8" (15.9mm), 3/4" (19.1mm), 7/8" (22.2mm), 1" (25.4mm)

### WELDING UNDERCUT GAUGE

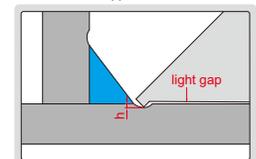


4849-1

calibration block (included)



application



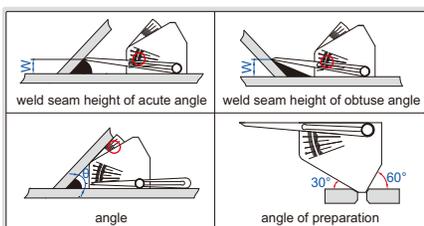
when there is a light gap,  $h < .01"$ ;  
when there is no light gap,  $h \geq .01"$

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

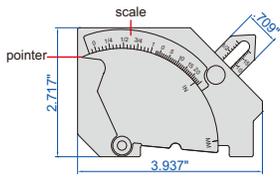
Part No.	Measurement	Range	Graduation	Accuracy
4846-1	weld seam height W	0-2"/0-50mm	.050"/2mm	±.025"
	angle $\theta$	30°~90°	2.5°	±1°
	60° angle	—	—	±0.5°

calculating card (included)



measure weld seam height W and angle  $\theta$ , calculate theoretical throat size  $t_e$  and leg height  $L_z$  according to W and  $\theta$

## WELDING GAUGE



front

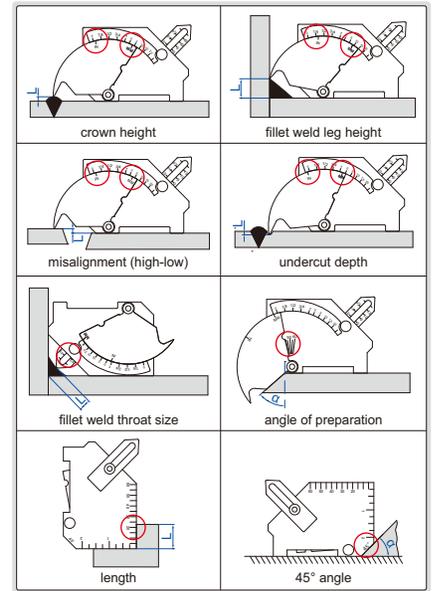
4835-1



back

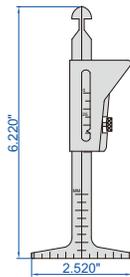
Part No.	Measurement	Range	Graduation	Accuracy
4835-1	crown height	0-1" (0-25mm)	1/16" (1mm)	±.02"
	fillet weld leg height	0-1" (0-25mm)	1/16" (1mm)	±.02"
	misalignment (high-low)	0-1" (0-25mm)	1/16" (1mm)	±.02"
	undercut depth	0-1/8" (0-2mm)	1/16" (1mm)	±.02"
	fillet weld throat size	0-3/4" (0-20mm)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

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



## PIPE WELDING GAUGE

- Made of stainless steel



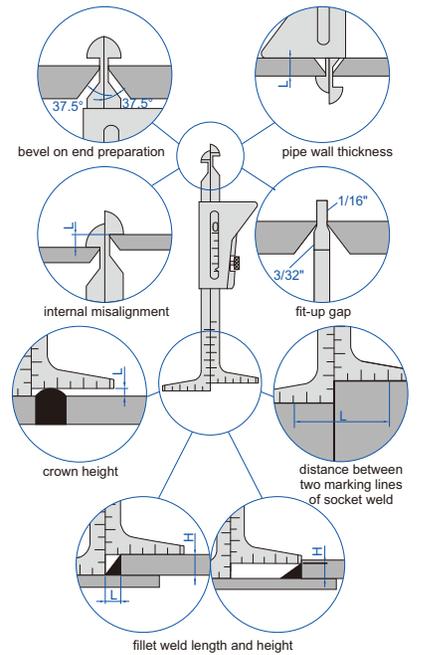
front

4839-1



back

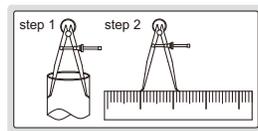
Part No.	Measurement	Range	Graduation	Accuracy
4839-1	bevel on end preparation	37.5°	—	±1°
	pipe wall thickness	0~1-3/4" (0-45mm)	1/16" (1mm)	±.02"
	internal misalignment	0~1-3/8" (0-35mm)	1/32" (1mm)	±.02"
	fit-up gap	1/16", 3/32"	—	±.004"
	crown height	0~1-3/8" (0-35mm)	1/32" (1mm)	±.02"
	distance 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"



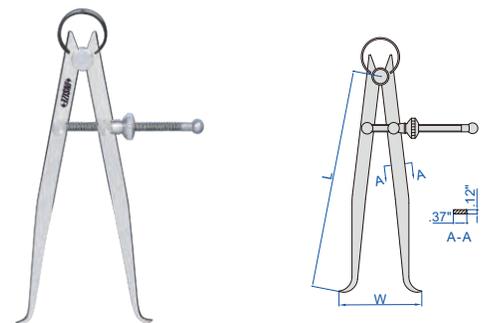
## INSIDE SPRING CALIPERS

- Made of carbon steel

Part No.	Size (L)	Range (W)
7261-150	6"	.79-6.69"
7261-200	8"	.87-8.66"
7261-250	10"	1.18-10.63"
7261-300	12"	1.18-12.60"

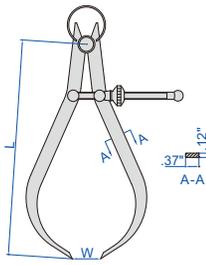


tips



7261-150

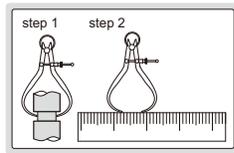
## OUTSIDE SPRING CALIPERS



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"

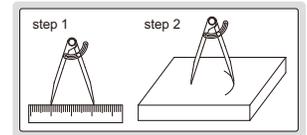
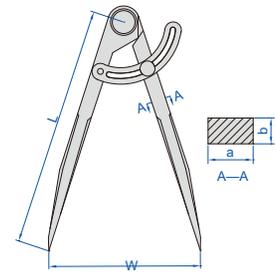


## DIVIDERS



7247-150

- Made of carbon steel
- Hardened points

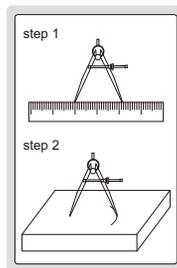


Part No.	Size (L)	Range (W)	a	b
7247-150	6"	0-5.51"	.33"	.28"
7247-200	8"	0-7.48"	.39"	.28"
7247-300	12"	0-11.42"	.47"	.28"

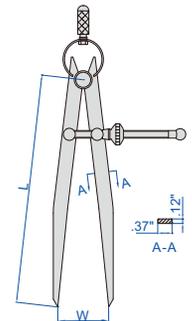
## SPRING DIVIDERS

- Made of carbon steel
- Hardened points

Part No.	Size (L)	Range (W)
7260-150	6"	0-5.91"
7260-200	8"	0-7.87"
7260-250	10"	0-9.84"
7260-300	12"	0-11.81"



7260-150



## BLUETOOTH DIGITAL MEASURING TAPES+LASER DISTANCE METERS

BUILT-IN BLUETOOTH

digital measuring tape



### 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"
	digital measurement units	ft, in, ft+in, m
	graduation units	ft, m
	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)	3.74×2.20×2.91"	
Net weight	.69lb	



9563-C40

- Data transmission to mobile APP
- Transmission distance is 32ft (no obstacles, no electromagnetic interference)
- Built-in bluetooth
- Automatic power off: laser 30s, main unit 180s
- Display with backlight
- Can work continuously for 5 hours
- Can store 50 groups of measurement data



VIDEO

bluetooth connect to phone (APP)



laser distance meter



## DIGITAL MEASURING TAPE PART NO. 9570-B5

### SPECIFICATION

Range	16ft/5m
Digital resolution	.001ft, 1/16", .001m
Digital measurement accuracy	±1mm
Blade graduation	1/16", 1mm
Blade graduation accuracy	±(0.5+D/5)mm, D: measured distance rounded to whole metres, when D < 1m, D takes to 1m
Blade width	3/4"
Horizontal stand-out	≥5.9ft
Measurement function	single size, area, volume
Operation temperature	32~104°F
Storage temperature	14~140°F
Power supply	built-in rechargeable lithium battery
Dimension (L×W×H)	3.58×2.20×2.91"
Net weight	.69lb



9570-B5

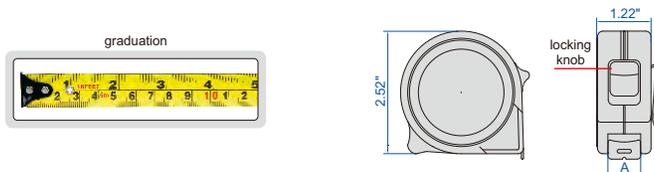
- Display with backlight
- Up to 5 hours of continuous use on one charge
- Can store 30 groups of measurement data

## MEASURING TAPE

EG II



7142-5

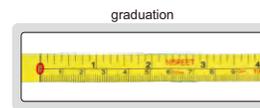
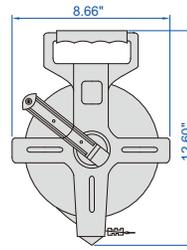


- Non-glare nylon coating tape, wear resistance
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU

Part No.	Range	Graduation	Width of tape A
7142-5	0-16ft/0-5m	1/16", 1mm	.75"

## LONG MEASURING TAPE

EG II



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"

## DIGITAL MEASURING WHEEL

BACKLIGHT

- Button function: on/off, m/ft, HOLD, reset, stake out, memory
- Nylon+glass fiber plastic frame, wear-resistant TPU tire
- Can store 99 groups of measurement data
- Three AAA batteries



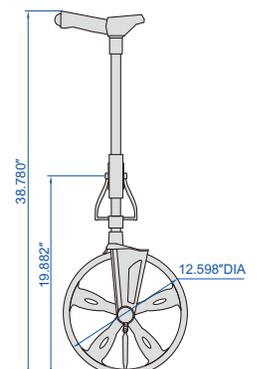
backpack (included)



after folding



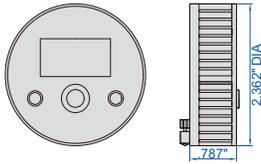
7171-D1



Part No.	Range	Resolution	Accuracy
7171-D1	0-9999.99ft/0-9999.99m	0.01ft/0.01m	±0.3%L (L is the measured length)
	10000.0-99999.9ft/10000.0-99999.9m	0.1ft/0.1m	
	100000-999999ft/100000-999999m	1ft/1m	

## DIGITAL MEASURING WHEEL

**IP40**  
WATERPROOF



7146-10

- IP40 dust/waterproof
- Measuring length of curve
- Four measurement modes: length, rectangle area, diameter of circle, cube
- Resolution .01ft/0.001m
- Button function: on/off, inch/mm, one or two sides set, measurement mode conversion, measurement
- Battery CR2032, automatic power off

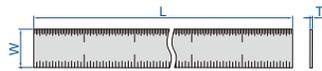
Part No.	Range	Accuracy
7146-10	0-32.8ft/0-10m	(±.3%L)ft (L is the measured length)

## RIGID RULERS



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

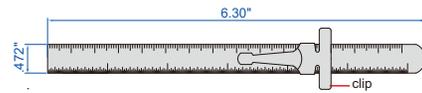


Part No.	Range (L)	Accuracy	W	T
7126-6	6"	±.007"	.748"	.039"
7126-12	12"	±.010"	.984"	.039"
7126-24	24"	±.017"	1.102"	.047"

## 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

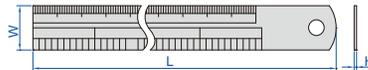
Part No.	Range	Graduation	Accuracy
7119-150	6"/150mm	1/64", 1mm	±.012"

## STEEL RULERS

**POPULAR MODEL**



7110-300



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	±.010"	20.866"	1.181"	.047"	metric graduation on front and inch graduation on back
7110-600	24"/600mm	±.017"	24.803"	1.181"	.047"	metric graduation on front and inch graduation on back
7110-1000	40"/1000mm	±.017"	40.945"	1.260"	.059"	metric graduation on front and inch graduation on back
7110-1200	48"/1200mm	±.025"	48.819"	1.378"	.071"	metric and inch graduation on front
7110-1500	60"/1500mm	±.025"	61.024"	1.496"	.071"	metric and inch graduation on front
7110-2000	80"/2000mm	±.031"	81.299"	1.575"	.079"	metric and inch graduation on front

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

### DIGITAL SCALES WITH MICROSCOPE

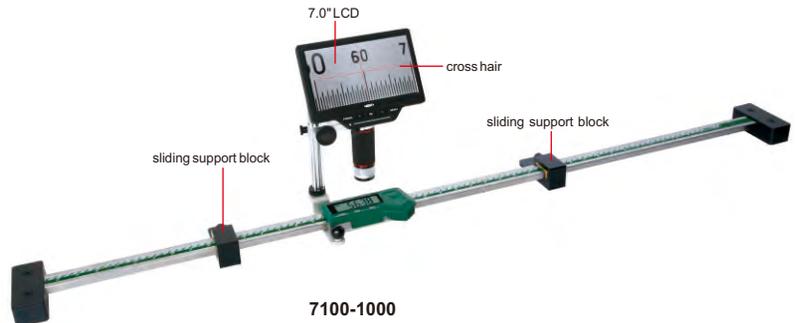
- Including microscope
- Optional accessory: wireless transmitter part no. 7315-22 (receiver is needed)

DATA OUTPUT

Part No.	Range	Accuracy	Total length	Remark
7100-500	18"/450mm	±.0020"	27.165"	without sliding support blocks
7100-1000	36"/900mm	±.0040"	48.819"	with sliding support blocks



7100-500



7100-1000

#### SPECIFICATION OF DIGITAL SCALE

Resolution	.0005"/0.01mm
Buttons	on/off, zero, inch/mm, ABS, data preset
Data output	Micro USB
Power supply	Battery CR2032

#### SPECIFICATION OF MICROSCOPE

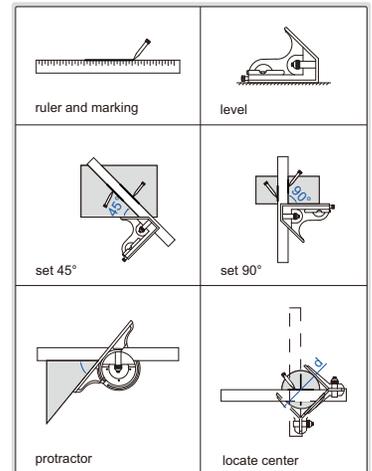
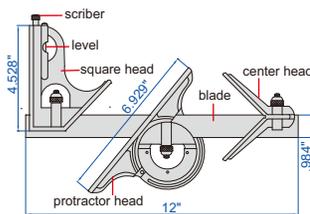
Display resolution	1024×600
Sensor	1/3" CMOS
Single pixel size	2μm×2μm
Magnification	1X~16X
Power supply	built-in lithium battery

### 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 rule (part no. 7113)



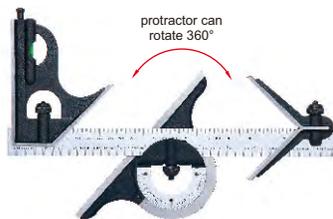
2278-180



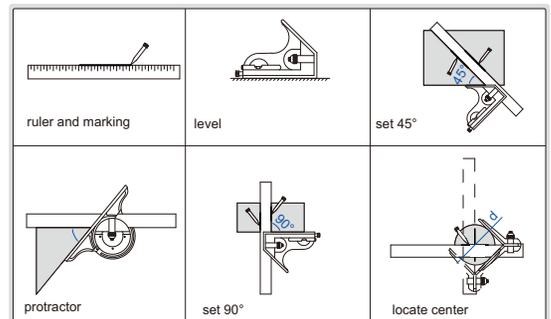
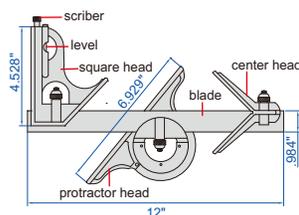
Part No.	Remark	Blade Range	Blade Graduation
2278-180	4-piece set	12"/300mm	1/32" and 0.5mm on front face, 1/64" and 1mm on back face
2278-180E	4-piece set	12"	1/8" and 1/16" on front face, 1/32" and 1/64" on back face

### 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 rule (part no. 7113)



2274-4

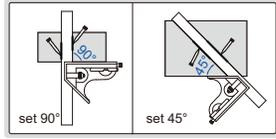
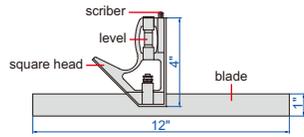


Part No.	Remark
2274-4	4-piece set

### COMBINATION SQUARE (ECONOMIC TYPE)



2276-300



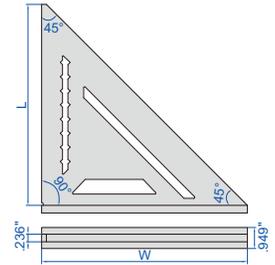
- Square head (made of zinc): to set the blade at 90° or 45° to an edge of a workpiece accuracy: ±0.5°
- Blade (made of stainless steel): range: 12"/300mm, graduation: 1/32" and 1mm on front face, 1/16" and 1mm on back face

**Part No.**  
**2276-300**

### PLASTIC ANGLE SQUARE



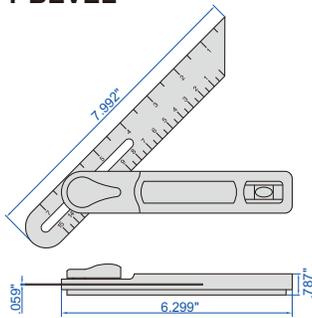
2282-180



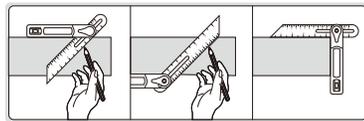
- Length range: 0-7", graduation: 1/8"
- Angel range: 0-90°, graduation: 1°

Part No.	Size (L×W)	Accuracy of angle
2282-180	7×7.3"	±0.3°

### T-BEVEL



2281-360



blade can rotate 360°



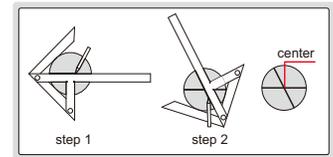
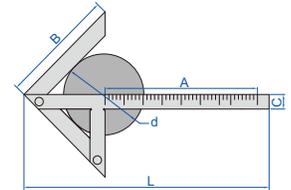
- Easy-to-read vial
- The blade can move and can be locked by the clamping screw
- Stainless steel blade
- Tough rubber handle
- Centimeter/inch graduations

Part No.	Angle mark	Accuracy of angle
2281-360	15°, 30°, 45°, 60°, 90°	±1°

### CENTER MARKING GAUGES



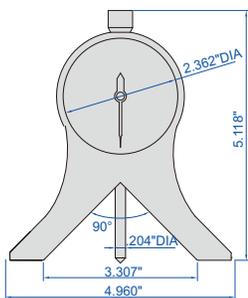
7205-100



- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

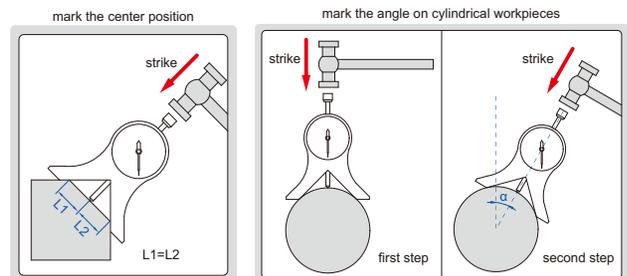
Part No.	Size (AxB)	Accuracy	Diameter of shafts (d)	C	L
7205-100	100x70mm	±0.15mm	.16-3.54" DIA	.472"	6.024"
7205-150	150x130mm	±0.15mm	.16-7.48" DIA	.591"	9.646"
7205-200	200x150mm	±0.15mm	.24"-8.66" DIA	.591"	12.205"
7205-300	300x180mm	±0.15mm	.24"-10.63" DIA	.787"	17.126"

### LOCATOR



2849-90A

- Mark the position when drilling, milling or welding, suitable for cylindrical and rectangular workpieces
- The punch hardness is HRC59-63



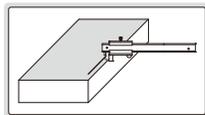
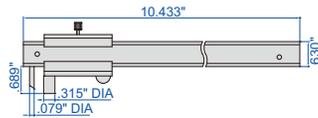
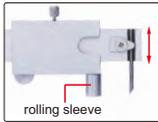
Part No.	Range	Graduation	Accuracy	Dial reading
2849-90A	4×90°	1°	±1°	0-90-0-90-0

### 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)

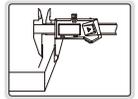
Part No.	Range	Graduation	Accuracy
7202-200A	0-8"/0-200mm	1/128", 0.1mm	±.004"

### DIGITAL SCRIBING CALIPER

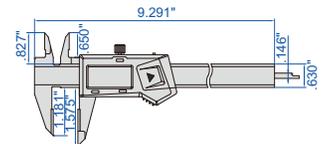


carbide measuring faces

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
- Made of stainless steel

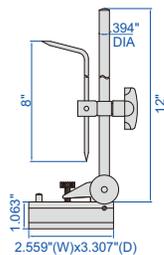


Part No.	Range	Resolution	Accuracy
1166-150A	0-6"/0-150mm	.0005"/0.01mm	±.0015"

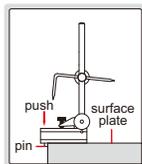
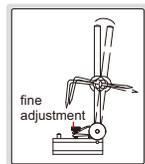
### HEIGHT SCRIBER



6990-300A



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



Part No.  
6990-300A

### PRECISION SCREWDRIVER SET PART NO. ISGF-0901



ISGF-0901



- 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

### SCRIBERS



7230

7231

7232

- 7230 and 7231 are nickel plated, 7232 is zinc-plated



Part No.	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip

### 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**)



Part No.

5022-E

5022-E

## 2-PIECE MEASURING TOOL SET

Includes:

- 1) Dial test indicator, range .03", graduation .0005" (part no. **2380-35**)
- 2) Magnetic stand



Part No.

5023-E

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 rule, 6"/150mm (part no. **7110-150**)



Part No.

5003-1

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 rule, 6"/150mm (part no. **7110-150**)



Part No.

5003-1E

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) 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**)



Part No.

5052-E

5052-E

## 8-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, graduation .00005"/0.001mm (part no. **3109-25E**)
- 3) Dial test indicator, range .03", graduation .0005" (part no. **2380-35**)
- 4) Magnetic stand (part no. **6201-60**)
- 5) Parallel/square set, 3x2x1" (part no. **6531-5**)
- 6) Steel ruler, 6"/150mm (part no. **7110-150**)
- 7) Depth base attachment (part no. **6140**)
- 8) Zero setting bar for depth base attachment



Part No.

5081-E

5081-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**)



Part No.

5091-E

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 rule, 6"/150mm (part no. 7110-150)
- 12) Depth base attachment (part no. 6140)
- 13) Zero setting bar for depth base attachment

Part No.  
5013-E



5013-E

### 14-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) Combination square set, range 0-180°, 4-piece set (part no. 2278-180E)
- 13) Depth base attachment (part no. 6140)
- 14) Zero setting bar for depth base attachment

Part No.  
5016-E



5016-E

### 15-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) Dial test indicator, range .03", graduation .001" (part no. 2380-31)
- 5) Magnetic stand (part no. 6201-60)
- 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) Combination square set, range 0-180°, 4-piece set (part no. 2278-180E)
- 13) Edge finder (part no. 6567-1E)
- 14) Depth base attachment (part no. 6140)
- 15) Zero setting bar for depth base attachment

Part No.  
5015-E



5015-E

### GRANITE SURFACE PLATES

- 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



ADDITIONAL CUSTOM SIZES UP TO 6.5' AVAILABLE ON REQUEST

#### Physical characteristics of granite

Shore hardness	94HS
Flexural strength	28MPa
Compressive strength	236MPa
Elastic modulus	9.88×10 <sup>4</sup> MPa
Poisson's ratio	0.33
Volume density	3000kg/m <sup>3</sup>
Water absorption rate	0.05%
Linear expansion coefficient	6×10 <sup>-6</sup> /°C

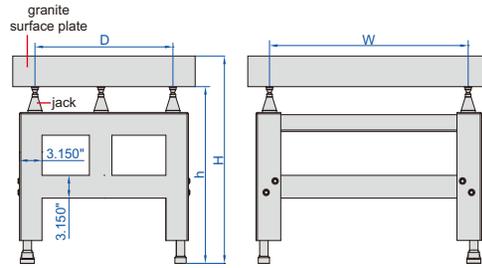
Part No.	Size (WxLxH)	Flatness	Net weight (lb)	Max. load (lb)
6900-A11*	12x18x3"	.00012"	32	110
6900-A12*	18x24x3"	.00013"	64	143
6900-A23*	24x36x4"	.00015"	170	440
6900-A34*	36x48x6"	.00018"	510	1102



\*Supplied with manufacturer inspection certificate

## 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

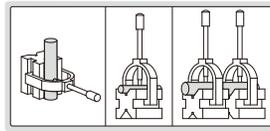
Part No.	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)
6902-64A	12x18x3" (part no. 6900-A11)	13.858"	8.819"	30.512"-31.496"	27.362"-28.346"
6902-85A	18x24x3" (part no. 6900-A12)	17.638"	11.024"	30.512"-31.496"	26.575"-27.559"
6902-106A	24x36x4" (part no. 6900-A23)	22.047"	13.858"	29.724"-30.709"	24.213"-25.197"

### High stands

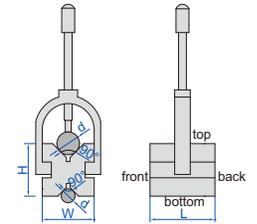
Part No.	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)
6902-64H	12x18x3" (part no. 6900-A11)	13.858"	8.819"	39.370-40.354"	36.220-37.205"
6902-85H	18x24x3" (part no. 6900-A12)	17.638"	11.024"	39.370-40.354"	35.433-36.417"
6902-106H	24x36x4" (part no. 6900-A23)	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"

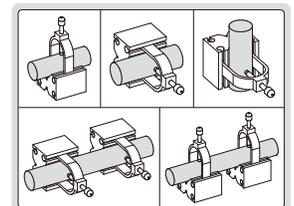
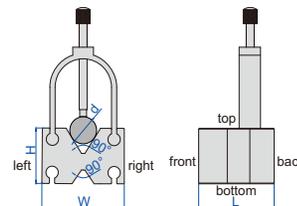
## V-BLOCK SETS

SIDE LIE-DOWN USE IS POSSIBLE

- 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



6803-1



Part No.	Size (LxWxH)	Range of shafts (d)	Parallelism of both V grooves to top, bottom, left, right sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
6803-1	2.2x2.4x1.6"	.16-1.38" DIA	.00020"	.00020"	.00020"
6803-2	2.6x2.8x1.8"	.16-1.85" DIA	.00020"	.00020"	.00020"

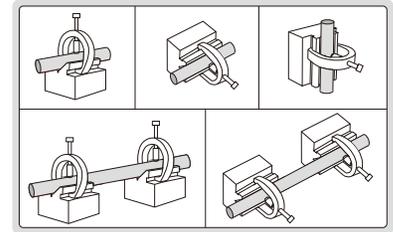
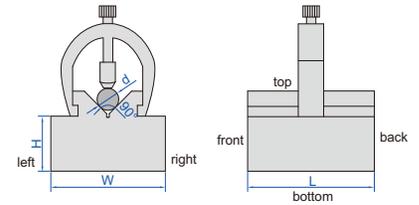
## V-BLOCK SET

**SIDE LIE-DOWN USE IS POSSIBLE**

- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- Applicable for cylinder with diameter (d) .12-.79" DIA



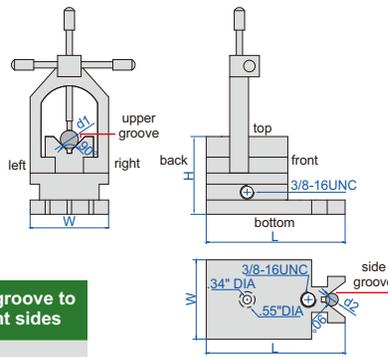
6806-20



Part No.	Size (LxWxH)	Parallelism of V groove to bottom, left, right sides	Squareness of V groove to front and back sides	Height difference of a matched pair
6806-20	2.8x2.5x1.2"	197µin	197µin	197µin

## 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



the adjustable screw can support the block and prevent tilting



side groove is for shouldered studs and pins

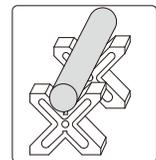
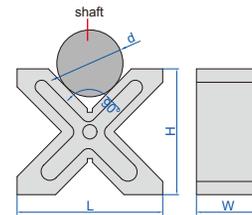
Part No.	Size (LxWxH)	Parallelism of upper groove to bottom, left and right sides
6804-1	3.5"x1.9"x1.9"	.0002"

## V-BLOCK SETS (ECONOMIC TYPE)

- For positioning cylindrical workpieces
- Two V-blocks per set
- Each V-block has four 90° V-grooves
- Cast iron, hardness HB170-240



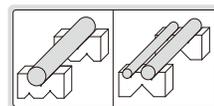
6805-2



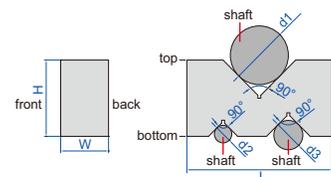
Part No.	Size (LxHxW)	Range of shafts (d)	Parallelism of four V grooves to all sides	Height difference of a matched pair
6805-1	5.906x5.118x2.953"	.315-4.724" DIA	.0010"	.0012"
6805-2	7.874x6.693x3.543"	.472-7.087" DIA	.0010"	.0012"

## V-BLOCK SETS

- Two V-blocks per set
- Made of hardened tool steel



6887-3

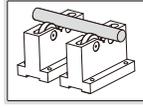


Part No.	Size (LxWxH)	Range of shafts (d1)	Range of shafts (d2)	Range of shafts (d3)
6887-1	2.0x.7x.9"	.12-1.26" DIA	.12-.63" DIA	.12-.87" DIA
6887-2	3.0x.9x1.4"	.12-1.97" DIA	.12-.79" DIA	.12-1.26" DIA
6887-3	3.9x1.3x2.0"	.12-2.68" DIA	.12-1.02" DIA	.12-1.57" DIA
6887-4	4.9x1.7x2.7"	.12-3.43" DIA	.12-1.34" DIA	.12-1.97" DIA

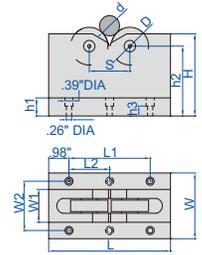
Part No.	Parallelism of three V grooves to top and bottom sides	Height difference of a matched pair
6887-1	.0002"	.0002"
6887-2	.0002"	.0002"
6887-3	.0002"	.0002"
6887-4	.0002"	.0002"

## 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

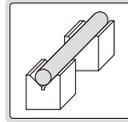


Part No.	Size (LxWxH)	Part no. of bearings	Diameter of bearings (D)	Range of shafts (d)	Load capacity
6888-1	5.9x2.4x3.9"	16004 ZZ	1.65"DIA	.98-2.76" DIA	1100lb
6888-2	5.9x3.1x3.9"	6303 ZZ	1.85"DIA	.20-2.17" DIA	2200lb
6888-3	9.1x3.9x5.9"	6306 ZZ	2.83"DIA	2.76-7.87" DIA	2200lb

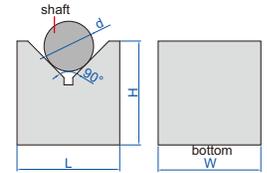
Part No.	W1	W2	h1	h2	h3	L1	L2	S
6888-1	.87"	1.73"	.79"	3.35"	.47"	3.94"	-	2.36"
6888-2	1.57"	2.36"	.87"	3.35"	.47"	3.94"	-	1.97"
6888-3	2.36"	3.15"	1.18"	4.88"	.79"	7.09"	3.54"	4.72"

## GRANITE V-BLOCK SETS

- Two V-blocks per set



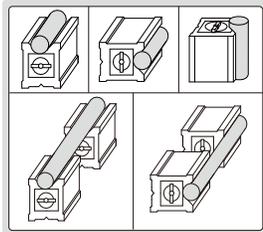
6897-1



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"	.24-2.75" DIA	.00016"	.00020"
6897-2	3.9x2.0x2.8"	.24-3.31" DIA	.00016"	.00020"

## MAGNETIC V-BLOCKS

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



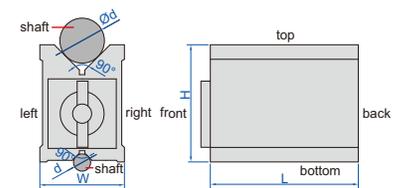
- Hold cylindrical workpieces for inspection and machining
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surface, otherwise the magnetic force will be reduced



6801-1202



6801-2



### Individual

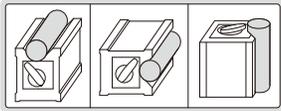
Part No.	Size (LxWxH)	Range of shafts (d)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side
6801-1201	3.1x2.8x3.7"	.24-2.64" DIA	141lbf	.00040"	.00040"
6801-1202	3.9x2.8x3.7"	.24-2.64" DIA	176lbf	.00040"	.00040"
6801-1203	4.7x2.8x3.7"	.24-2.64"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

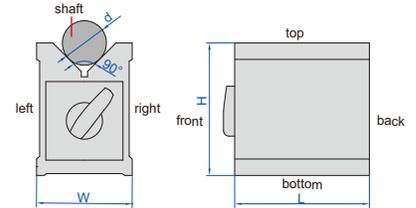
**ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES, OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED**



- 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



**ATTENTION: NOT HARDENED**

Part No.	Size (LxWxH)	Range of shafts (d)	Magnetic force
6890-702	2.8x2.4x2.9"	.24-1.73" DIA	123lbf

**MAGNETIC V-BLOCKS (ADVANCED TYPE)**

**STRONG MAGNETIC FORCE    HIGH PRECISION    HARDENED SURFACES**

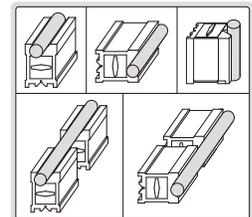
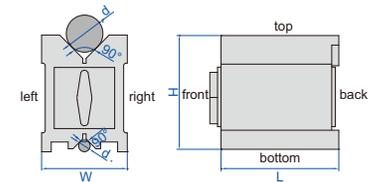
- Hardened, high accuracy, strong magnetic force, for grinding, light milling, drilling and inspection of round and square jobs
- All working surfaces are hardened to HRC60±2
- Magnetic force on top, bottom and two V grooves
- V groove on the top for large shafts
- V groove on the bottom for small shafts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



6889-11



6889-1



**Individual**

Part No.	Size (LxWxH)	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	3.0x2.2x3.0"	.20-1.57"DIA	187lbf	.00020"	.00020"
6889-33	5.9x3.0x3.9"	.20-2.76"DIA	419lbf	.00024"	.00024"

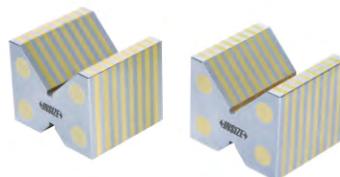
**Matched pair**

Part No.	Size (LxWxH)	Range of shafts (d)	Magnetic force	Parallelism of V grooves to top, bottom, left, right sides	Squareness of V grooves to back side	Height difference of a matched pair
6889-1	3.0x2.2x3.0"	.20-1.57"DIA	187lbf	.0002"	.0002"	.0002"
6889-2	3.9x2.8x3.7"	.20-2.56"DIA	330lbf	.0002"	.0002"	.0002"

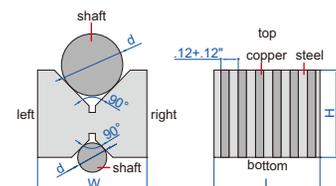
**MAGNETIC INDUCTION V-BLOCK SET**

**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
- Non-magnetic copper 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

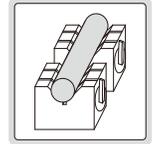
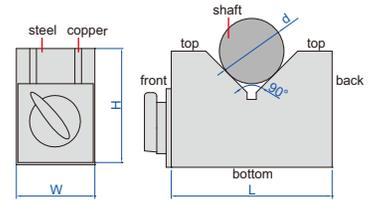
- Hold cylindrical workpieces for inspection, not suitable for machining due to low magnetic force
- Two V-blocks per set
- Hardness HRB70



6891-1

ATTENTION: LOW MAGNETIC FORCE

ATTENTION: NO HARDENED SURFACE, DO NOT ROTATE WORKPIECES ON V-BLOCKS



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"

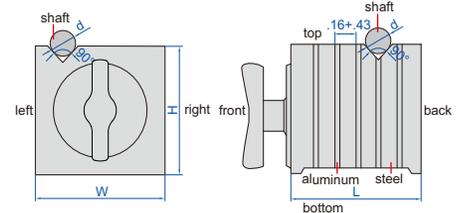
## MAGNETIC SQUARE WITH V GROOVE

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 (LxWxH)	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	3.9x3.9x3.9"	66lbf	55lbf	110lbf	66lbf	.2-1.2"

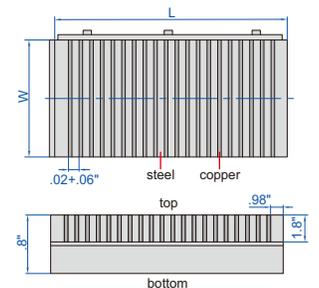
## PERMANENT MAGNETIC CHUCK

- The magnetic pole arrangement is dense and can hold thin and small workpieces



6537-400

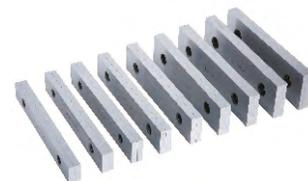
ATTENTION: NOT HARDENED



Part No.	Table size (LxW)	Magnetic force	Pole pitch	Parallelism of top to bottom
6537-400	15.7x7.9"	113lbf/sq.in	.02+.06"	.0008"/12"

## PARALLEL SETS

- Parallelism between top and bottom .0003"
- Height difference of a matched pair .0003"
- Hardened HRC55-62
- With two holes in each parallel



6532-9

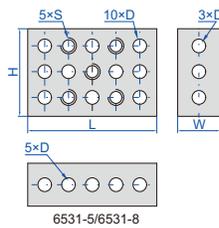
Part No.	Quantity	Length (L)	Thickness (W)	Height (H)
6532-10	10 pairs	6"	1/8"	1/2, 5/8, 3/4, 7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2, 1-5/8"
6532-9	9 pairs	6"	1/4"	3/4, 7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2, 1-5/8, 1-3/4"

### 1-2-3/2-4-6 BLOCKS

screws and wrench are included



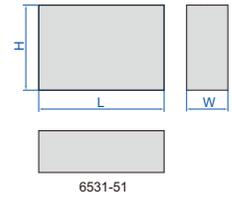
6531-5



6531-5/6531-8



6531-51



6531-51

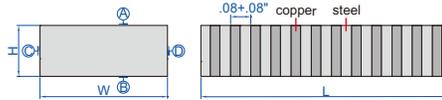
- Pairs of matched blocks for positioning and set-up
- Hardness HRC60±2

Part No.	Size (L×H×W)	Size accuracy	Squareness	Parallelism	Height difference of a matched pair	S	D	Hole numbers
6531-5	3×2×1"	±.0002"	.0002"/1"	.0002"	.0002"	3/8-16UNC	.35" DIA	23 holes
6531-8	6×4×2"	±.0003"	.0003"/1"	.0003"	.0004"	5/8-11UNC	.63" DIA	23 holes
6531-51	3×2×1"	±.0002"	.0002"/1"	.0002"	.0002"	none	none	no holes

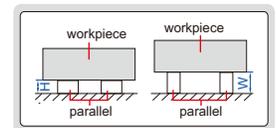
### MAGNETIC INDUCTION PARALLEL SET

**ATTENTION:  
NOT HARDENED**

- To be used on magnetic chucks
- Two parallels per set
- Hardness HRB70
- Non-magnetic copper strips



6879-1



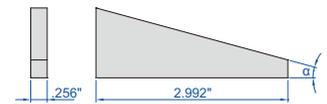
Part No.	Size (L×W×H)	Pole pitch	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
6879-1	3.9×2×1"	.08+.08"	.0004"	.0004"	.0004"

### ANGLE PLATE SETS

- Accuracy: ±20 seconds
- For angle set-up in tooling, production and inspection
- Hardness HRC52



4006-12

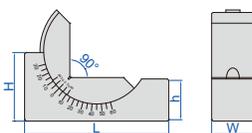


Part No.	Angle plates included	Angle α
4006-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°
4006-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°

### ADJUSTABLE ANGLE BLOCKS



6535-30



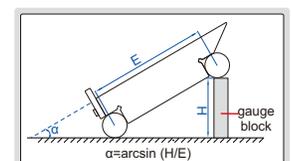
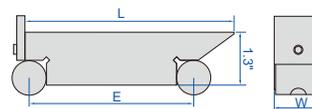
- Made of hardened tool steel
- With locking screw
- Accuracy of angle: 15 minutes

Part No.	Size (L×W×H)	h	Adjustable angle	Graduation of angle
6535-25	3.0×1.0×1.3"	.98"	15°~0°~60°	10 minutes
6535-30	4.0×1.2×1.9"	1.18"	15°~0°~60°	10 minutes

### SINE BAR



4158-5



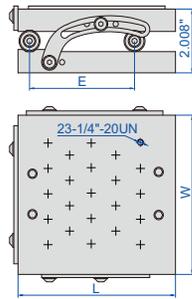
- Made of alloy tool steel

Part No.	Roller distance (E)	Table size (L×W)	Accuracy of α at 30°
4158-5	5"	6.2×1.2"	±5"

### SINE TABLE



6527-5



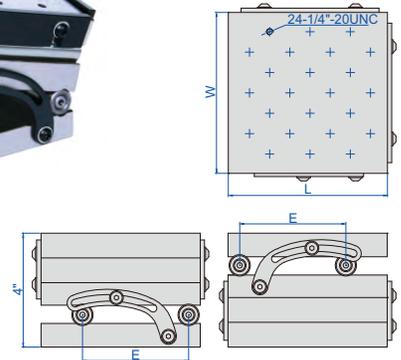
- Accuracy of angle:  $\pm 15$  seconds
- Made of alloy tool steel
- Hardness HRC55-60

Part No.	Roller distance (E)	Table size (L×W)	Adjustable angle
6527-5	5"	6×6"	0-60°

### COMPOUND SINE TABLE



6536-5

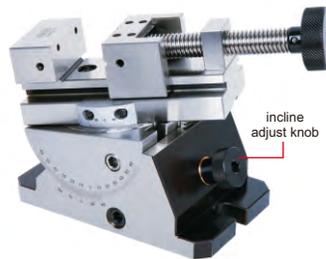


- Accuracy of angle:  $\pm 15$  seconds
- Made of alloy tool steel
- Hardness HRC58-60

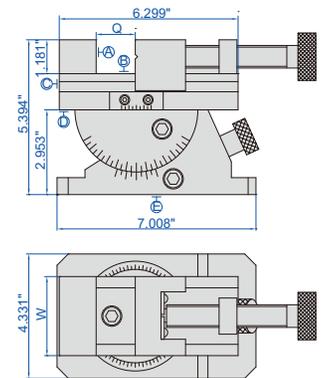
Part No.	Roller distance (E)	Table size (L×W)	Adjustable angle
6536-5	5"	6×6"	0-60°

### 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



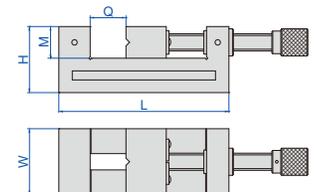
Part No.	Jaw opening (Q)	Jaw width (W)
6521-80	0-3.1"	2.756"

### PRECISION VISES

- Parallelism .0002"/4"
- Squareness .0002"/4"
- Made of alloy steel
- Hardness HRC58-60



6520-87



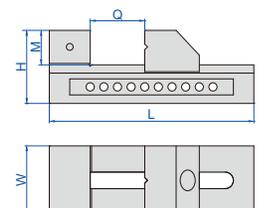
Part No.	Jaw opening (Q)	Jaw width (W)	L	H	M
6520-67	0-2.6"	1.969"	5.906"	1.969"	.984"
6520-87	0-3.4"	2.480"	7.283"	2.480"	1.260"
6520-102	0-4.0"	2.874"	8.071"	2.756"	1.378"

### 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
6526-65	0-3.9"	3.150"	7.677"	3.150"	1.575"
6526-100	0-4.9"	3.465"	9.055"	3.150"	1.575"

## BLUETOOTH ELECTRONIC LEVEL PART NO. 4952-150

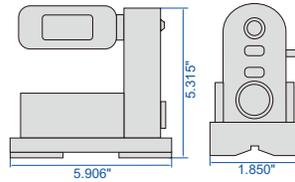


- Measures straightness, parallelism and flatness
- Built-in bluetooth, transmission distance is 98ft (under the condition of no obstruction and no electromagnetic interference)
- The LCD display can be rotated for easy observation in different directions
- Designed with handle for easy access
- Supplied with measuring and analysis software

### SPECIFICATION

Resolution (adjustable)	0.01mm/m (2")	0.001mm/m (0.2")
Range	±5mm/m (±1000")	±.5mm/m (±100")
Accuracy	±(0.01+2%A) *	±(0.001+2%A) *
Repeatability	0.01mm/m (2")	0.001mm/m (0.2")
Response time	<3s	<10s
Power supply	1×21700 Li-ion battery, for 50h continuous working	
Net weight	4lb	

\*A is the absolute measured value, for example A=0.1mm/m, the resolution is 0.001mm/m, the accuracy is 0.003mm/m

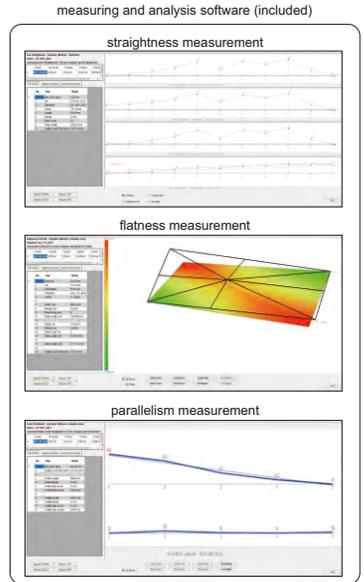


### STANDARD DELIVERY

Main unit	1 pc
Remote controller	1 pc
Receiver	1 pc
Measurement software	1 set
Charger	1 pc
21700 Li-ion battery	4 pcs

### OPTIONAL ACCESSORY

300mm (12") bridge plate	4952-01
200mm (8") bridge plate	4952-02
500mm (20") bridge plate	4952-03



4×21700 batteries and charger (included)



remote control (included)



receiver (included)

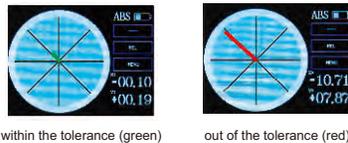


300mm (12") bridge plate (optional)



## DIGITAL LEVEL PART NO. ISE-2DT

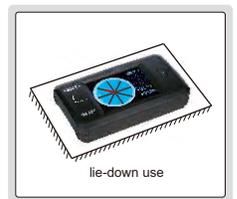
- Color LCD, touch panel
- X-Y axis measurement
- Set the tolerance and the display is shown in different colors



- To show the incline with line or bubble



DATA OUTPUT



charging and data output



the bottom has 4 thread mounting holes

### SPECIFICATION

Measuring range	±30°
Resolution	0.1°, 0.01°, 0.1mm/m (=0.01in/ft)
Accuracy	±0.03° (range 0~3°) ±0.05° (range >3°)
Power supply	rechargeable battery
Dimension	4.53×2.60×.98"
Net weight	.49lb

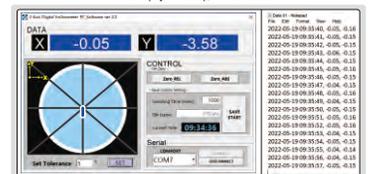
### STANDARD DELIVERY

Main unit	1 pc
USB cable	1 pc

### OPTIONAL ACCESSORY

Software	ISE-2DT-SOFTWARE
----------	------------------

PC software (optional), send data to txt



## DUAI AXIS DIGITAL LEVEL AND GYRO ANGLE METER

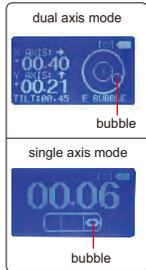
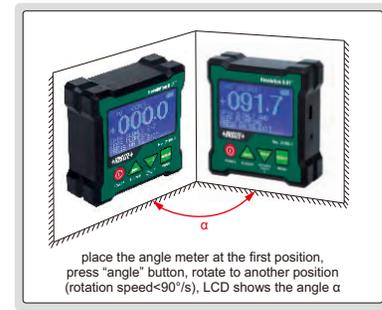
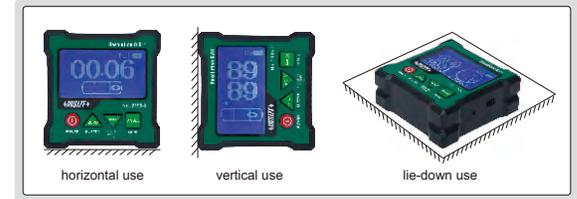
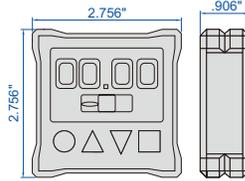
- AUDIBLE ALARM WHEN OUT OF LIMIT
- DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP
- BACKLIGHT
- ATTENTION: HARD PLASTIC CASE
- DATA OUTPUT



M4 threaded holes on the back for fixing



2199-1



- 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 ( $^{\circ}$ , mm/m, %), MENU
- Rechargeable Li-ion battery 3.7V, operation time is 40 hours
- Automatic power off in 30 minutes
- Data output
- 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 interference)

Part No.	Range	Resolution	Accuracy
2199-1	single axis level: $4 \times 90^{\circ}$ dual axis level: $\pm 40^{\circ}$	0.01 $^{\circ}$	at $0^{\circ}$ and $20^{\circ}$ : $\pm 0.05^{\circ}$ at $20^{\circ}$ and $70^{\circ}$ : $\pm 0.15^{\circ}$ at $70^{\circ}$ and $90^{\circ}$ : $\pm 0.05^{\circ}$
	gyro angle meter: $360^{\circ}$	0.1 $^{\circ}$	$\pm 0.5^{\circ}$

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

**dual axis mode**

real-time data (display in green when within tolerance and display in red when out of tolerance)

send data clear data

single transmission

graph

red background (out of tolerance)

green background (within tolerance)

**single axis mode**

single axis and dual axis automatic switching

select continuous or single transmission mode and set tolerance

## DIGITAL LEVEL AND SLOPE METER

**IP67**  
WATERPROOF

**ABSOLUTE LEVEL**

**BACKLIGHT**

**BUZZER ALARM**  
AT 0° AND 90°

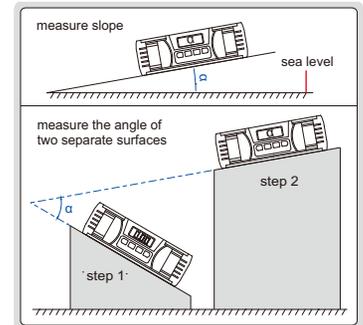
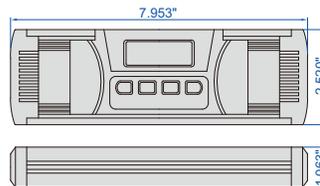
**WORKING TEMPERATURE**  
23°F~122°F



2175-360

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

Part No.	Range	Resolution	Accuracy
2175-360	0-360° (90°x4)	0.05° (=.00625in/ft)	at 0°: ±0.05°; at others: ±0.1°



## DIGITAL LEVEL AND SLOPE METER

**IP54**  
WATERPROOF

**ABSOLUTE LEVEL**

**BACKLIGHT**



**BUZZER ALARM**  
AT 0° AND 90°

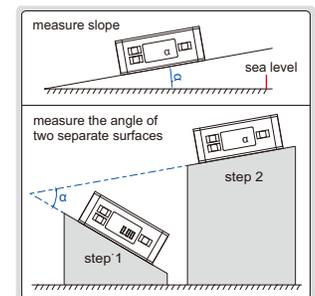
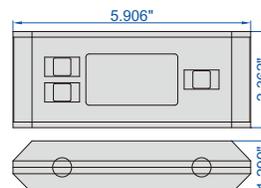
**WORKING TEMPERATURE**  
23°F~122°F



2179-360

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

Part No.	Range	Resolution	Accuracy
2179-360	0~360° (90°x4)	0.05° (=.00625in/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**

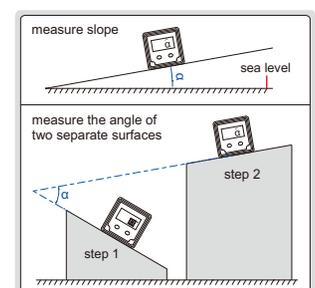
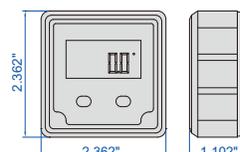
**MAGNETIC BOTTOM**



2170-1

- Used as level and slope meter
- Aluminum frame
- Magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 minutes after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, absolute and incremental measurement
- One AAA battery
- Automatic power off in 5 minutes

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

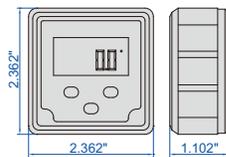
DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP

WORKING TEMPERATURE 23°F~122°F

BACKLIGHT

ABSOLUTE LEVEL

MAGNETIC BOTTOM



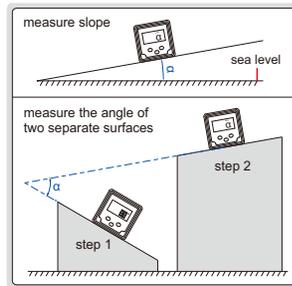
2198-2

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

- select continuous or single transmission mode and set tolerance
- real-time data (display in green when within tolerance and display in red when out of tolerance)
- send data
- single transmission
- clear data
- graph
- green background (within tolerance)
- red background (out of tolerance)

time	mode	angle	alarm
03-10 16:53:21	ABS	-55.6	LowMax
03-10 16:53:19	ABS	-27.8	None
03-10 16:53:18	ABS	11.2	None
03-10 16:53:14	ABS	84.2	UpMax
03-10 16:53:13	ABS	10.6	UpMax
03-10 16:53:11	ABS	-91.9	LowMax
03-10 16:48:10	ABS	-8	LowMax

- 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



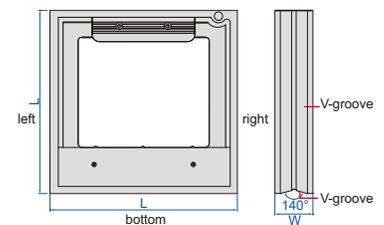
Part No.	Range	Resolution	Accuracy
2198-2	4x90°	0.1° (=0.021in/ft)	at 0° and 90°: ±0.1°; at others: ±0.2°

## FRAME LEVELS

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



4902-8



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°)

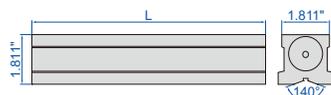
## BLOCK LEVELS

POPULAR MODEL



4901-8

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



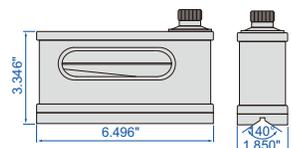
Part No.	Length (L)	Sensitivity
4901-6	6"	.00024in/ft (=0.001°)
4901-8	8"	.00024in/ft (=0.001°)
4901-12	12"	.00024in/ft (=0.001°)

## IMAGING LEVEL



4956-10

- V-groove on bottom for shafts .394"DIA~1.339"DIA



Part No.	Range	Graduation	Length
4956-10	0-10mm/m	0.01mm/m	6.496"

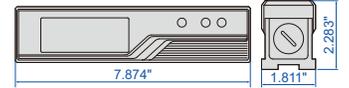
## BUILT-IN BLUETOOTH BLOCK LEVEL

COLOR DISPLAY  
LARGE CHARACTERS WITH BACKLIGHT

BUILT-IN  
BLUETOOTH



4953-200



- Button function: on/off, data hold, reading flips over, unit conversion ( $^{\circ}$ , mm/m)
- Analog bubbles can show tilt trends in X-axis and Y-axis
- Built-in Bluetooth, transmission distance is 33ft (under the condition of no obstruction and no electromagnetic interference)
- Android and iPhone APP are included
- Powered by 3×AAA batteries
- Automatic power off

Part No.	Range	Resolution	Accuracy	Repeatability	Response time	Net weight
4953-200	$\pm 0.5\text{mm/m}$ ( $\pm 0.028^{\circ}$ )	0.01mm/m (0.001 $^{\circ}$ )	$\pm 0.02\text{mm/m}$	0.01mm/m	<3s	3.2lb

Android and iPhone APP (included)

real-time data from multiple block levels (up to 7 simultaneously connected)

transmission interface for single block level

select continuous or single transmission mode and set tolerance

Y-axis analog bubble

X-axis analog bubble

analog bubble

real-time date (display in green when within tolerance and display in red when out of tolerance)

X-axis measurement graph

red background (out of tolerance)

green background (within tolerance)

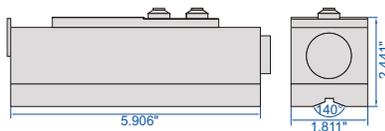
export formats (Excel/PDF/JPEG)

start/stop data transmission

clear data

## ELECTRONIC BLOCK LEVEL

COLOR DISPLAY  
WITH BACKLIGHT



4950-1

- Button function: power switch, zero, data save, absolute/reference measurement
- Can save and display 8 sets of data
- V-groove on bottom for shafts (shafts diameter dia. .55~2.95")
- With transverse vial
- Power: a 21700 rechargeable Li-ion battery, for 60h continuous working

2×21700 and charger are included



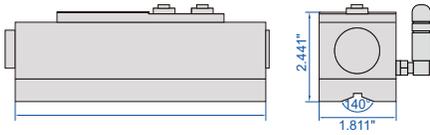
Part No.	Range	Resolution	Accuracy	Repeatability	Response time
4950-1	$\pm 10\text{mm/m}$ ( $\pm 0.573^{\circ}$ )	0.01mm/m (0.001 $^{\circ}$ )	$\pm (0.01+2\%A)^*$	0.01mm/m	<3s

\*A is the standard value, for example A=1mm/m, the accuracy is 0.03mm/m

## BUILT-IN BLUETOOTH BLOCK LEVEL

COLOR DISPLAY WITH BACKLIGHT

BUILT-IN BLUETOOTH



- Button function: power switch, zero, data save, absolute/reference measurement
- Can save and display 8 sets of data
- V-groove on bottom for shafts (shafts diameter dia. .55~2.95")
- With transverse vial
- Built-in Bluetooth, transmission distance is 50 meters (under the condition of no obstruction and no electromagnetic interference)
- Android and iPhone APP are included
- Power: a 21700 rechargeable Li-ion battery, for 40h continuous working

2x21700 and charger are included



transverse vial  
power switch



4951-1

Part No.	Range	Resolution	Accuracy	Repeatability	Response time
4951-1	±10mm/m (±0.573°)	0.01mm/m (0.001°)	±(0.01+2%A)*	0.01mm/m	<3s

\*A is the absolute measured value, for example A=1mm/m, the accuracy is 0.03mm/m

Android and iPhone APP (included)

can connect up to 7 pcs level simultaneously (real time data display)

transmission interface for single level

select manual or automatic data transmission and set tolerance

real-time data

absolute/reference measurement

bubble

graph

red background

green background (within tolerance)

export format (Excel/PDF/JPEG)

start/stop data transmission

## DIGITAL LEVEL AND SLOPE METERS

ABSOLUTE LEVEL

BACKLIGHT

WORKING TEMPERATURE 32°F ~ 122°F



both angle and slope are displayed

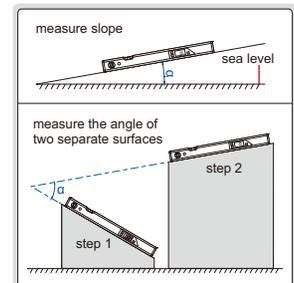
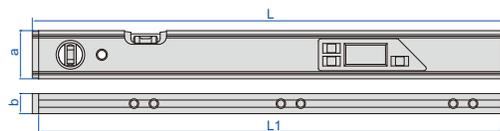


4910-400



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°x4)	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°x4)	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 (=0.60in/ft)

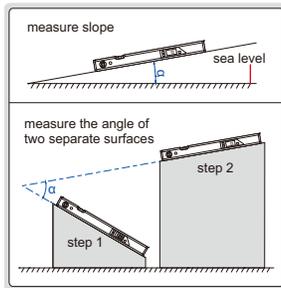
## BUILT-IN BLUETOOTH DIGITAL LEVEL AND SLOPE METER

WORKING TEMPERATURE  
32°F~122°F

ABSOLUTE  
LEVEL

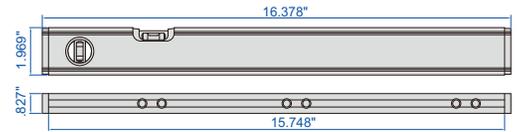
BACKLIGHT

BUILT-IN  
BLUETOOTH

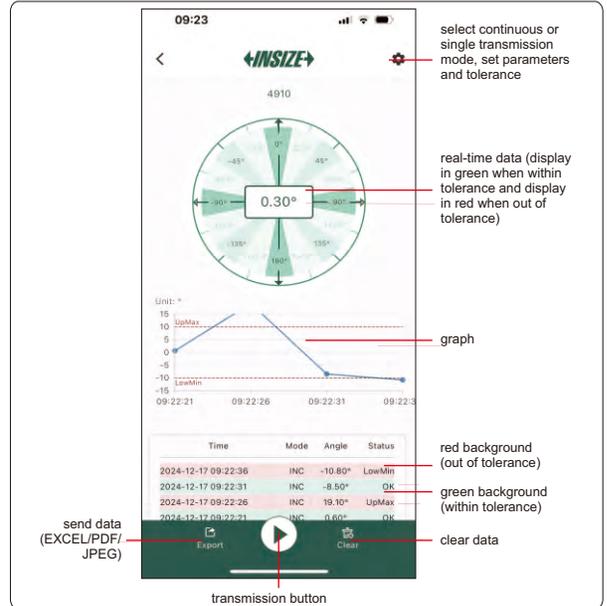


4910-400WL

- 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, unit (mm/m, %, in/ft), backlight
- The display flips over when the bottom faces up
- Built-in Bluetooth, transmission distance is 33ft (under the condition of no obstruction and no electromagnetic interference)
- Android and iPhone APP are included
- Two AAA batteries
- Automatic power off



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



Part No.	Range	Resolution	Accuracy	Remark
4910-400WL	0~360° (90°x4)	angle: 0.1°	±0.2°	both angle and slope are displayed (slope is calculated by angle)

\*mm/m (=0.12in/ft)=tan(°)×1000, for example: 0.3°=tan(0.3)×1000=5mm/m (=0.60in/ft)

## HANDY LEVEL

LIFETIME  
WARRANTY VIALS

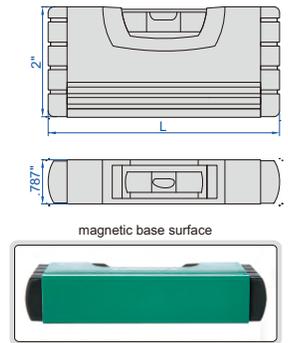
MAGNETIC  
BASE

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



4912-100

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



## HANDY LEVELS

LIFETIME  
WARRANTY VIALS

MAGNETIC  
BASE

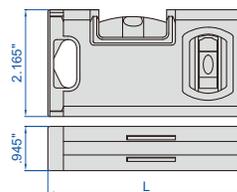
- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: 5°F~131°F



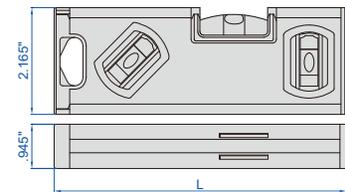
4922-100



4922-150



2 vials



3 vials

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

### CASTING ALUMINUM LEVEL

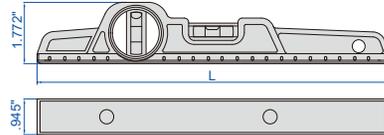
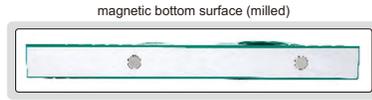
**LIFETIME WARRANTY VIALS**   **MAGNETIC BASE**

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



4913-250

packaging



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

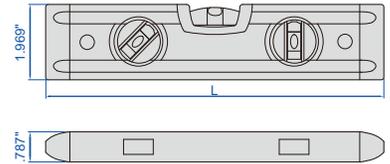
### ALUMINUM LEVEL

**LIFETIME WARRANTY VIALS**   **MAGNETIC BASE**

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



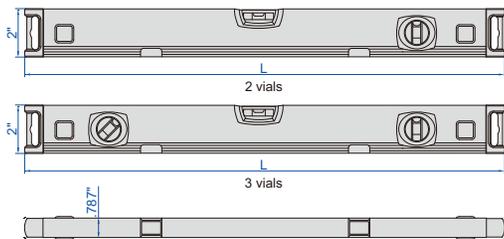
4921-230



Part No.	Size (L)	Accuracy
4921-230	9"	.006in/ft

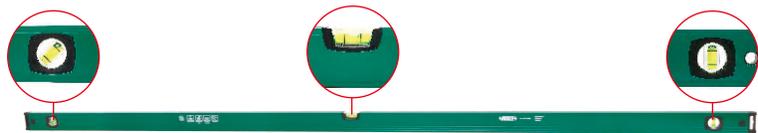
### ALUMINUM LEVELS

**LIFETIME WARRANTY VIALS**   **MAGNETIC BASE**



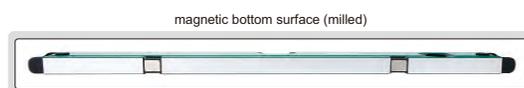
4914-600

- 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



## ALUMINUM LEVELS

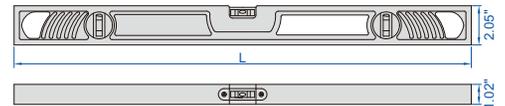
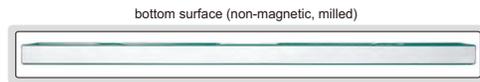
LIFETIME WARRANTY VIALS

- 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



4911-600

Part No.	Length (L)
4911-600	24"
4911-800	32"



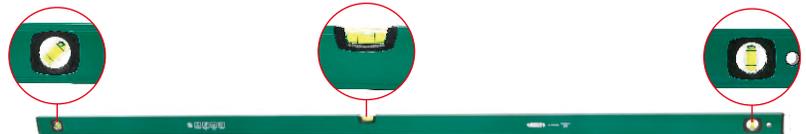
## ALUMINUM LEVELS (BASIC TYPE)

LIFETIME WARRANTY VIALS

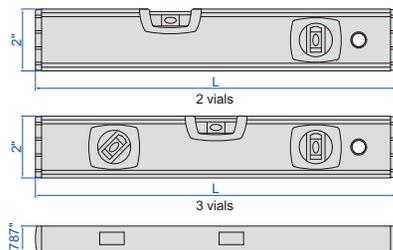
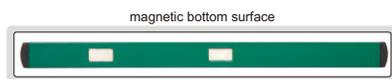
MAGNETIC BASE



4918-300



4918-2000



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

- Accuracy .012in/ft
- Shock-proof and UV-proof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: 5°F~131°F

## LEVEL BUBBLES

NO NEED TO SET ZERO BEFORE USE



4955-3

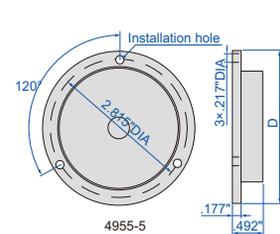
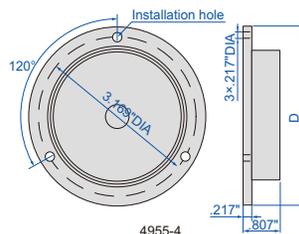
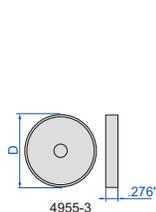


4955-4



4955-5

- No need to set zero before use



Part No.	Range	Graduation	Accuracy	Working temperature	Base diameter (D)	Base type
4955-3	0-3°	1°	±0.2°	-4°F~122°F	1.181\"DIA	stainless steel, without mouting hole
4955-4	0-4°	1°	±0.2°	-4°F~104°F	3.543\"DIA	aluminum alloy, with mouting holes
4955-5	0-5°	2°	±0.4°	-4°F~122°F	3.150\"DIA	aluminum alloy, with mouting holes

## CROSS-LINE LASER LEVEL PART NO. 4917-30

**IP54**  
WATERPROOF

AUDIBLE AND VISUAL  
ALARM WHEN OUT OF  $\pm 3^\circ$



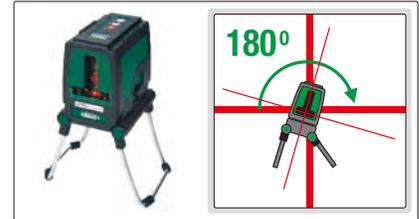
outdoor detector (optional)



stand (included with outdoor detector)



folding legs for angle and height adjustment



- Red horizontal and vertical cross laser lines
- Self-leveling within  $\pm 3^\circ$ , self-leveling time within 4s, audible and visual alarm when out of  $\pm 3^\circ$
- Folding legs for angle and height adjustment
- Outdoor use with the detector (part no. 4917-DETECTOR)

### SPECIFICATION

Laser line width	.079 $\pm$ .02"/16.4ft
Laser type	630~660nm, class II, <1mW
Beam angle	120 $\pm$ 0.5°
Self-leveling range	$\pm 3^\circ$
Working distance	indoor: 98.4ft, outdoor: 164ft with detector (optional)
Accuracy	.0024"/ft
Operation temperature	14~104°F
Power supply	3 $\times$ AA batteries, for 3 hours working
Dimension	3.94 $\times$ 3.23 $\times$ 4.09"
Net weight	1.38lb

### STANDARD DELIVERY

Main unit	1 pc
1/4" to 5/8" tripod adaptor	1 pc
Battery (AA)	3 pcs



VIDEO



application examples

### OPTIONAL ACCESSORY

Outdoor detector	4917-DETECTOR
------------------	---------------

### OUTDOOR DETECTOR (OPTIONAL)

Detecting distance	horizontal 3~164ft, vertical 3~98ft
Detecting accuracy	high accuracy $\pm 0.06"$ , low accuracy $\pm 0.1"$
Power supply	9V battery
Dimension	6.61 $\times$ 2.28 $\times$ 1.18"
Net weight	0.31lb (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  $\pm 5^\circ$

application examples



horizontal leveling

vertical leveling

working with detector

- Applicable fields: construction, decoration, pipeline and equipment installation
- Green laser beam rotates 360° horizontally or vertically
- Self-leveling range  $\pm 5^\circ$  on both X and Y planes
- Alarm when inclination is out of  $\pm 5^\circ$
- $\pm 5^\circ$  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	$\pm 5^\circ$	
Horizontal/vertical beam accuracy	$\pm 0.0001"/1"$	
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: $\pm 5^\circ$ , Y axis: $\pm 5^\circ$	
Operation temperature	-4~122°F	
Maximum remote control distance	65ft	
Power supply	remote controller	2 $\times$ 1.5V AAA batteries
	main unit	NI-MH batteries or 4 $\times$ 1.5V C batteries
	detector	1 $\times$ 9V battery
Dimension	8.27 $\times$ 8.27 $\times$ 8.39"	
Net weight	5.51lb	



detector (included)



remote controller (included)



bracket for C battery (included)



VIDEO



beam finder glasses (included)

### STANDARD DELIVERY

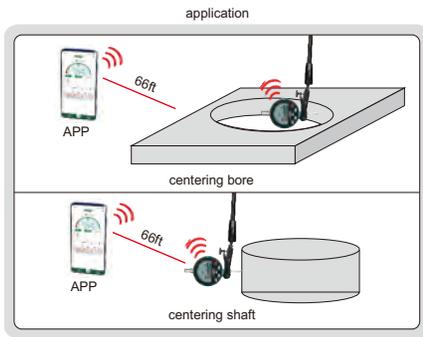
Main unit (including NI-MH batteries)	1 pc
C battery and bracket	1 set
Detector	1 pc
Remote controller	1 pc
Beam finder glasses	1 pc
Laser target	1 pc
Power adapter	1 pc
AAA battery	2 pcs
9V battery	1 pc
Tripod	1 pc



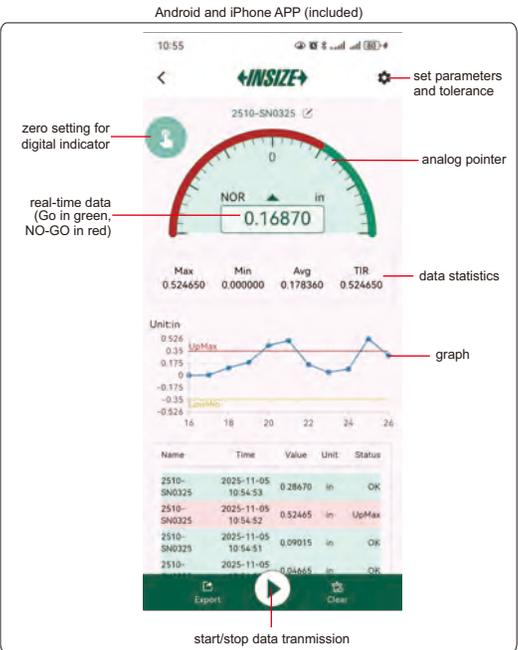
tripod (included)

## BLUETOOTH DIGITAL CENTERING INDICATOR

BUILT-IN  
BLUETOOTH



- Centering bores and shafts when installed on machine tools
- The APP features real-time data display and zero setting for digital indicator
- Android and iPhone APP are included
- Built-in bluetooth, transmission distance is 66ft (under the condition of no obstruction and no electromagnetic interference)
- Button function: on/off, zero, data preset, tolerance Go and No-Go display, inch/metric conversion, measuring direction change, max./min./TIR measurement, absolute/incremental measurement, bluetooth on/off
- Power: rechargeable Li-battery



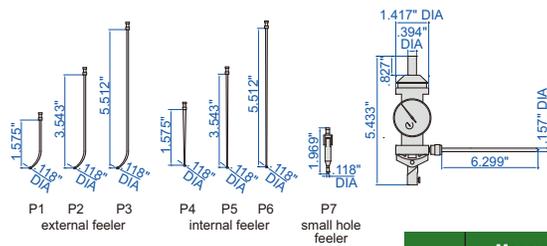
Part No.	Digital indicator stroke	Digital indicator resolution	Accuracy
2851-10E	.5"/12.7mm	.00005"/0.001mm	±.00015"

## CENTERING INDICATOR

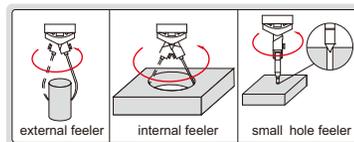
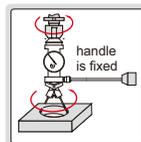
POPULAR  
MODEL



2385-3



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



Part No.

2385-3

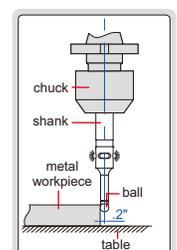
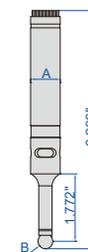
Feeler	Measuring diameter	Accuracy
P1	0-2.362" DIA	.00060"
P2	0-6.299" DIA	.00080"
P3	0-9.843" DIA	.00120"
P4	.126-3.150" DIA	.00060"
P5	.126-7.087" DIA	.00076"
P6	.126-11.024" DIA	.00120"
P7	0-.110" DIA	.00060"

## ELECTRONIC EDGE FINDER

- Accuracy .0002"
- The shank is electrically conducted to the metal workpiece through the chuck and table, the LED lights up and the beeper sounds, when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball



6566-3E

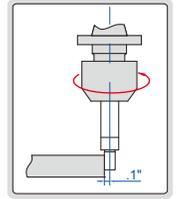
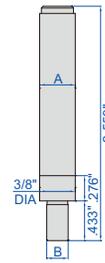


Part No.	Shank (A)	Contact ball (B)	Beeper	Battery
6566-3E	3/4" DIA	.4" DIA	with	23A, 12Vx1 pc

## 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"

## 3D TESTER

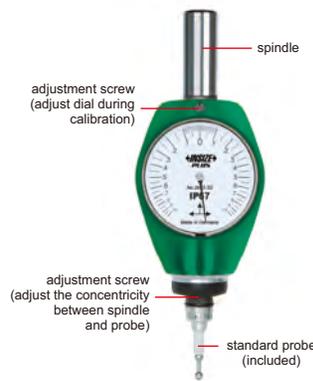
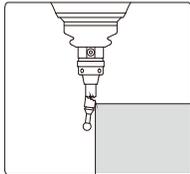
**INSIZE PLUS**

**ATTENTION: WHEN USING STANDARD PROBE, READING SHOWS MOVEMENT VALUE OF PROBE. WHEN USING EXTENDED PROBE, READING DOES NOT SHOW MOVEMENT VALUE OF PROBE**

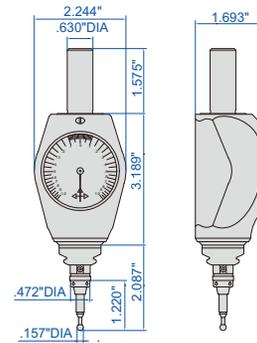
**IP67 WATERPROOF**

**SHOCK PROOF**

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

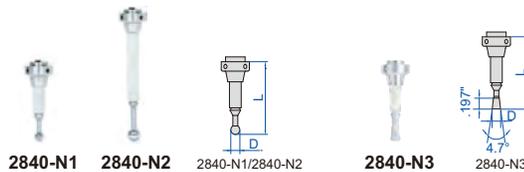


2840-3D



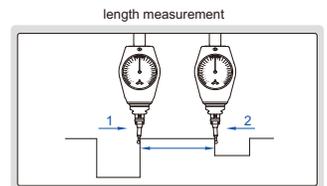
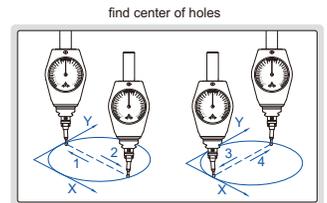
- Shockproof, IP67 dust/waterproof
- Mainly used for milling machines and CNC machine tools
  1. determine coordinate point on workpieces
  2. find center of holes
  3. adjust and position workpieces
- Can be used to measure length and depth
- When using standard probe, reading shows movement value of probe, for example, if probe moves 0.05mm (.002"), reading changes 0.05mm (.002") (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

Part No.	Range	Graduation	Repeatability at zero (one direction)	X, Y, Z range
2840-3D	±1.0mm	0.01mm	±0.01mm	6mm

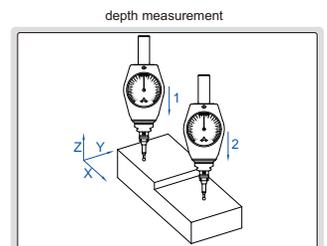
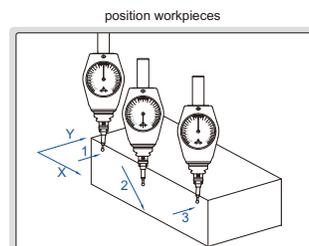
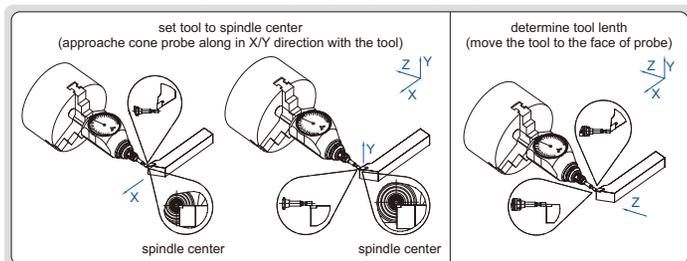


### PROBE (optional)

Part No.	Description	L	D	Remark
2840-N1	standard probe	1.220"	.157"DIA	reading shows movement value of probe
2840-N2	extended probe	2.228"	.236"DIA	reading does not show movement value of probe
2840-N3	cone probe	1.220"	.165"DIA	position turning tools in the lathe



### position turning tools (cone probe is optional)



## DIGITAL 3D TESTER

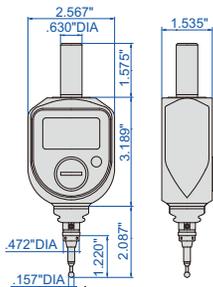
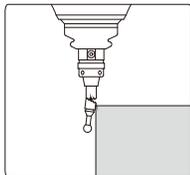
**INSIZE PLUS**



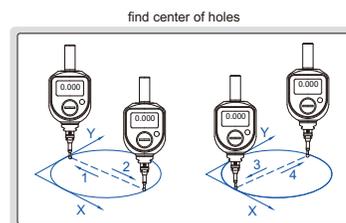
**IP65**  
WATERPROOF

**SHOCK**  
PROOF

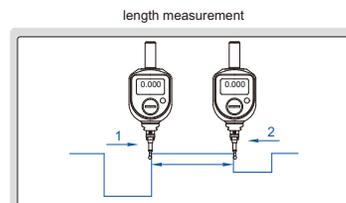
if the probe is pressed too much, the probe breaks at the breaking point, in order to prevent damage of the main body



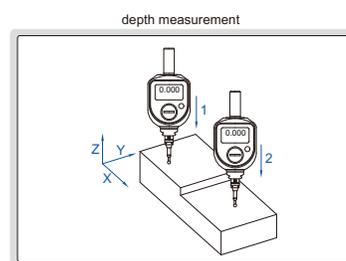
2846-3D



find center of holes



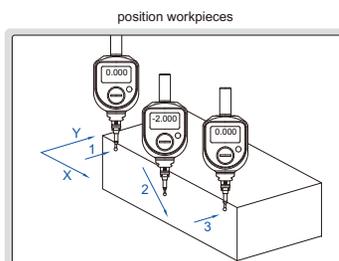
length measurement



depth measurement

adjustment screw (adjust the concentricity between spindle and probe)

probe (included)



position workpieces

- Shockproof, IP65 dust/waterproof
- Mainly used for milling machines and CNC machine tools
  - determine coordinate point on workpieces
  - find center of holes
  - adjust and position workpieces
- Can be used to measure length and depth
- Reading shows movement value of probe. for example, if probe moves 0.01mm(.0004"), reading changes 0.01mm(.0004")
- Large working range on three axes (X, Y, Z), which avoids damage of probes due to collision by mistake
- Optional accessory: probe (part no. 2840-N1, 2840-N2, 2840-N3)

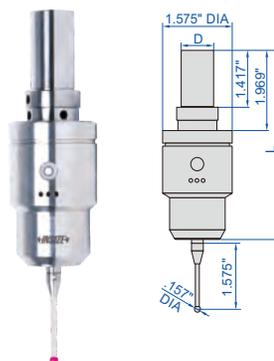
Part No.	Range	Resolution	Repeatability at zero (one direction)	X, Y, Z range
2846-3D	±2mm	0.005mm	±0.005mm	6mm

## TRIGGER-TYPE 3D PROBE (AUDIBLE AND VISUAL ALARM) PART NO. 9410

**IP67**  
WATERPROOF



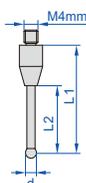
- Suitable for all kinds of machining centers, CNC boring machines, milling machines, drilling and tapping centers
- Suitable for workpiece detection of various solid materials
- Manually set the workpiece coordinates and machining reference points before CNC machining process
- In the process of CNC 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



application

### SPECIFICATION

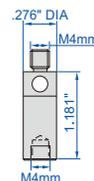
Probe length (L)	4.547"
Shank diameter (D)	.787"
Trigger direction	±X, ±Y, +Z
Directional trigger protection stroke	X-Y: ±12°, Z: +.197"
Arbitrary one-way repeated trigger accuracy	≤.00004"
Trigger force in X-Y direction (with standard styli)	.067~.135lbf
Trigger force in Z direction	.899lbf
Dust/waterproof	IP67
Type-C charging cable	59"
Signal extension cord (provide signals to CNC)	39"



type-C charging cable (included)



signal extension cord (included)



### EXTENSION ROD (OPTIONAL)

Part No.	Material
9410-R1	ceramic

### STYLI (OPTIONAL)

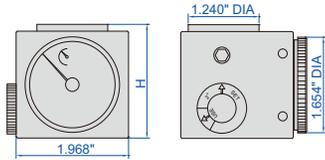
Part No.	L1	L2	d	Material of rod*	Material of ball
9410-P1	.709"	.512"	.157"	stainless steel	ruby
9410-P2	.709"	.531"	.197"	stainless steel	ruby
9410-P3	.728"	.512"	.118"	stainless steel	ruby
9410-P4	.748"	.315"	.079"	carbide	ruby
9410-P5	.768"	.157"	.039"	carbide	ruby
9410-P6	1.969"	1.575"	.079"	carbide	ruby
9410-P7	1.969"	1.339"	.197"	ceramic	ruby
9410-P8	3.937"	3.386"	.236"	ceramic	ruby

\* For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break

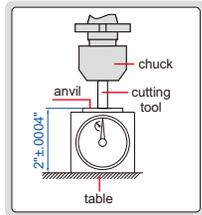
### ZERO SETTER



2397-25A



- Magnetic base

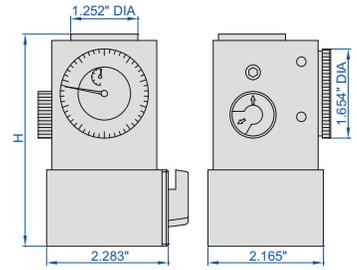


Part No.	Height (H)	Graduation	Accuracy	Test force
2397-25A	2"	.0005"	±.0004"	2lbf (at 2")

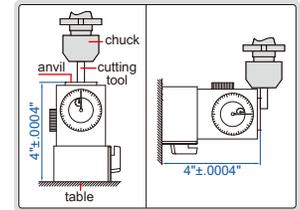
### ZERO SETTER



2394-45A



- Magnetic base with on-off switch



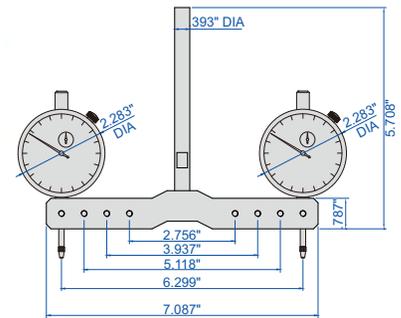
Part No.	Height (H)	Graduation	Accuracy	Test force
2394-45A	4"	.0005"	±.0004"	2lbf (at 4")

### VERTICAL MILLING MACHINE PERPENDICULARITY MEASURING GAUGE

- Used to detect and adjust the perpendicularity between the spindle and worktable of a vertical milling machine



2257-10E



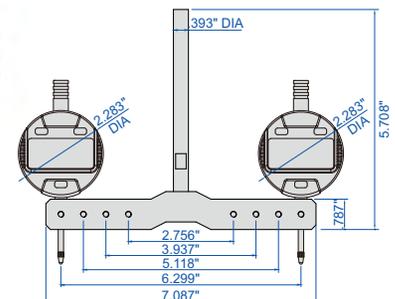
Part No.	Indicator	Accuracy
2257-10E	dial indicator, part no. 2307-105, range: 1", graduation .0005"	.0002"

### VERTICAL MILLING MACHINE PERPENDICULARITY MEASURING GAUGE

- Used to detect and adjust the perpendicularity between the spindle and worktable of a vertical milling machine



2258-101E

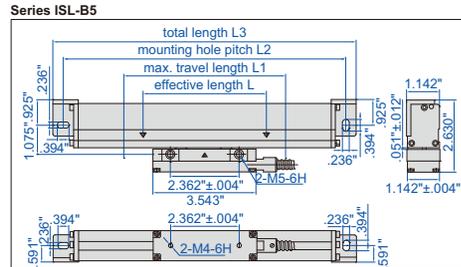
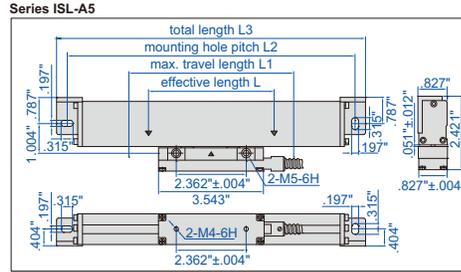


Part No.	Indicator	Accuracy
2258-101E	digital indicator, part no. 2112-101E, range .5"/12.7mm, resolution .00005"/0.001mm	.00015"

## LINEAR SCALES (TTL SIGNAL)



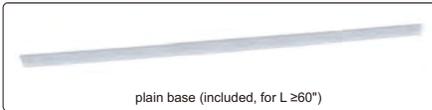
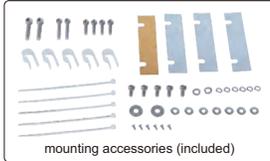
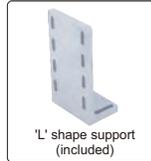
ISL-A5-300



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

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

- 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)



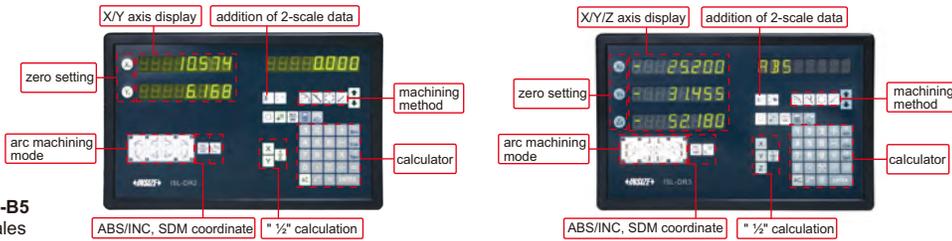
### SPECIFICATION

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")
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



ISL-DR2

ISL-DR3

- For ISL-A5, ISL-B5 series linear scales



### 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"	
Net 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 READOUT PART NO. ISL-LCD7



- 7.57 inch LCD display
- Language: English, Simplified Chinese, Traditional Chinese
- Can be connected with ISL-A5, ISL-B5 series linear scales

### SPECIFICATION

Application	three-axis: X/Y/Z
Scale input ports	3
Resolution	.000002", .000005", .00001", .00002", .00005", .0001", .0002", .0005", .001", .002"
Function	X/Y/Z addition of 3-scale data, linearity error compensation, smoothing, RS232C interface unit, BCD code out, zero setting, preset, resolution setting, counting direction setting, inch/mm conversion, ABS/INC conversion, expansion/contraction coefficient setting, "1/2" calculation, detecting RI, bolt-hole circle machining, ramp circle machining, circular arc machining, oblique surface machining, automatic edge finding, discharge machining
Dimension	50.8×22.4×65.4"
Net weight	2.8lb



### 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



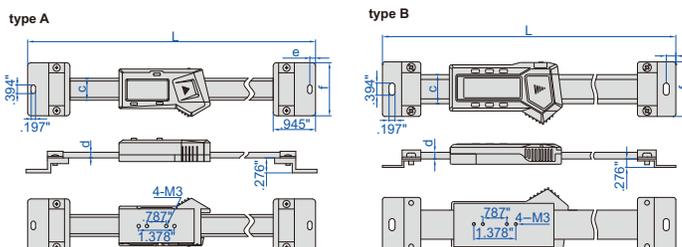
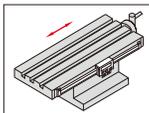
7101-300A



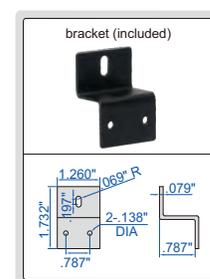
7101-400A

- 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

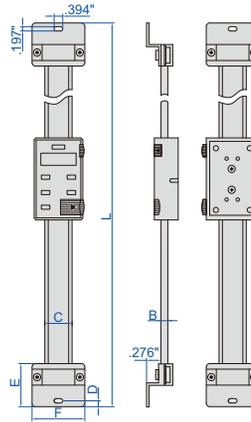
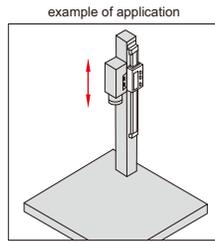
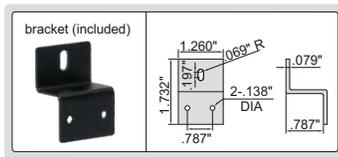
example of application



Part No.	Range	Type	Accuracy	L	c	d	e	f	Wireless transmitter (optional)
7101-100A	4"/100mm	A	±.0010"	8.465"	.630"	.157"	.236"	1.417"	7315-25 (receiver is needed)
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)
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"	



### DIGITAL VERTICAL SCALES



DATA OUTPUT



7102-300

- 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)

Part No.	Range	Accuracy	B	C	D	E	F	L
7102-150	6"/150mm	±.0015"	.157"	.787"	.236"	.945"	1.575"	11.654"
7102-300	12"/300mm	±.0015"	.157"	.787"	.236"	.945"	1.575"	17.520"
7102-500	20"/500mm	±.0020"	.217"	.945"	.315"	1.260"	1.772"	26.969"

### SURFACE PROFILE MEASURING MACHINE PART NO. SPM-1000-U



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



vise (included)



stage (included)



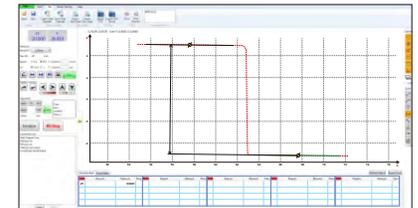
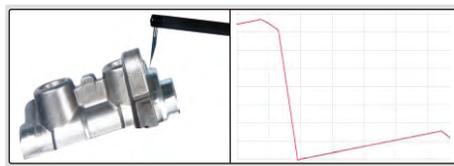
standard balls (included)



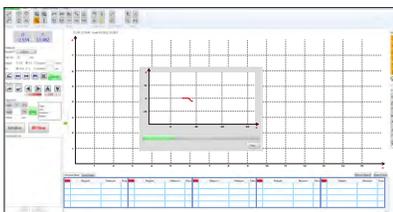
standard shaft (included)



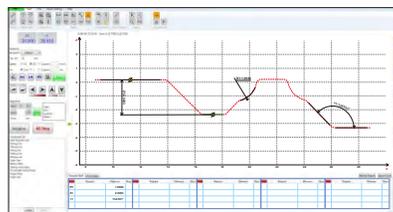
standard blocks (included)



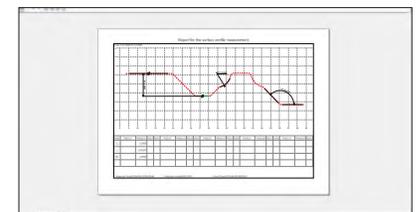
calibration



contour scanning



dimension measurement



data output

To be continued

Continued from previous page

**SPECIFICATION**

X axis measuring range	5.51"
X axis resolution	3.94µin
X axis straightness	19.69µin/3.94"
X axis moving speed	.004~.39"/s
Z axis measuring range	±.79"
Z axis resolution	1.97µin
Z axis moving speed	.02~.39"/s
Linear accuracy	±(59+ 50H )µin, H is measuring height in inch
Angular measuring accuracy	±2'
Arc measuring accuracy	±(79+125R)µin, R is .079~.39" standard ball
Radius of probe tip	.001"
Moving direction	backward
Measuring force	.025~.035ozf
Measuring unit	mm/inch
Traceable angle	72° (upward), 87° (downward)
Drive mode	motor
Travel of Z axis	16.93"
Dimension (L×W×H)	47.24×27.56×70.08"
Power supply	110±5%V, 50Hz
Net weight	705.48lb

**STANDARD DELIVERY**

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

**OPTIONAL ACCESSORY**

Tilting frame	SPM-1000-TILTING
Probe	refer to details

**SPECIFICATION OF PROBES**

<p><b>chisel stylus</b></p> <p>part no. <b>SPM-1000-T01</b> (H=1.26", included)  part no. <b>SPM-1000-T02</b> (H=1.89", optional)  part no. <b>SPM-1000-T03</b> (H=2.68", optional)</p>	<p><b>cone stylus</b></p> <p>part no. <b>SPM-1000-Z01</b> (H=1.26", optional)  part no. <b>SPM-1000-Z02</b> (H=1.89", optional)  part no. <b>SPM-1000-Z03</b> (H=2.68", optional)</p>	<p><b>ball stylus</b></p> <p>part no. <b>SPM-1000-R01</b> (H=1.26", optional)  part no. <b>SPM-1000-R02</b> (H=1.89", optional)  part no. <b>SPM-1000-R03</b> (H=2.68", optional)</p>
<p>standard arm, part no. <b>SPM-1000-SP</b> (included), stylus is not included</p>	<p>probe for small holes, part no. <b>SPM-1000-SBP</b> (optional), stylus is included</p> <p>measure the contour of holes with diameter&gt;.31" DIA</p>	
<p>transverse probe, part no. <b>SPM-1000-LP</b> (optional), stylus is included</p> <p>measure the contour of holes in radial direction</p>		

# 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



CAN BE OPERATED BY  
MOBILE PHONES OR COMPUTERS

DATA  
OUTPUT

BLUETOOTH



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)

operate roughness tester by mobile phones

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

operate roughness tester by computers

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

probe cover (included)

put the small workpieces directly under the probe for measurement

adjustable stand (included)



screen display

Roughness  
Ra= 60.44 μin  
Rz= 362.50 μin  
Rq= 77.00 μin

measurement result

Rmr analysis

roughness profile

software flash disk (included)



bluetooth printer (optional)



heavy duty test stand (optional)

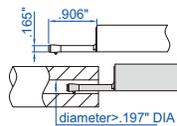


light duty test stand (optional)

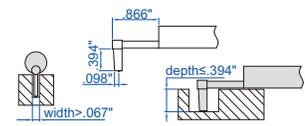


optional probes

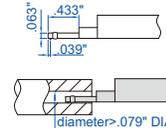
standard probe, 196μin/90° (included), part no. ISR-C002-PROBE



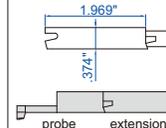
deep groove probe, 196μin/90° (optional), part no. ISR-C002-DGP



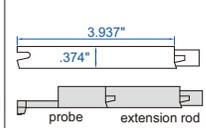
tiny hole probe, 196μin/90° (optional), part no. ISR-C002-SBP



extension rod (optional), part no. ISR-C002-ER



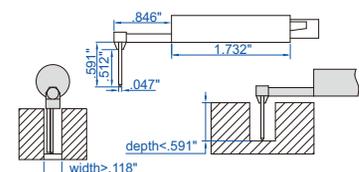
extension rod (optional), part no. ISR-C002-ER100



transverse rod (optional), part no. ISR-C002-TR



deep groove probe, 196μin/90° (optional), part no. ISR-C002-DGP1



## 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)	
Resolution (Ra)	.01μin	
Accuracy	±10%	
Standard probe (ISR-C002-PROBE)	type	inductive
	stylus radius/angle	196μin/90°
	stylus material	diamond
Measuring force	.01ozf	
Measuring unit	μm/μin	
Cut off	.01/.03/.1"	
Number of cut-off	1 to 5	
Moving speed	.02"/s, .04"/s	
Memory	100 measurement results	
Output	bluetooth and USB	
Power	built-in rechargeable battery	
Dimension (L×W×H)	5.55×2.16×1.57"	
Net 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

Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1
Extension rod	ISR-C002-ER
Extension rod	ISR-C002-ER100
Transverse rod	ISR-C002-TR
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

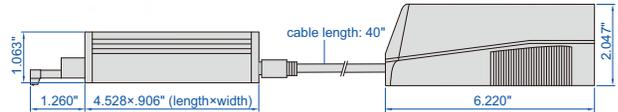


VIDEO

POPULAR MODEL

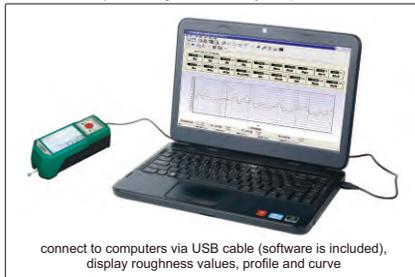
**ROUGHNESS TESTER (SEPARABLE TYPE)  
PART NO. ISR-C300**

- DATA OUTPUT
- BLUETOOTH
- TOUCH SCREEN
- CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS



- Roughness tester can be operated by mobile phones or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 36 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

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, display roughness values, profile and curve

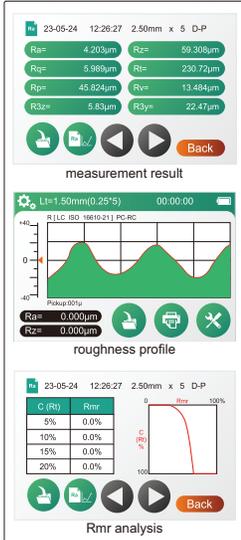
bluetooth printer (optional)



software flash disk (included)

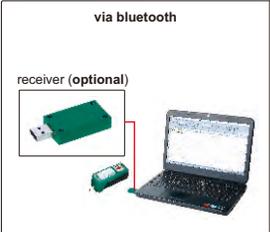


roughness tester screen display

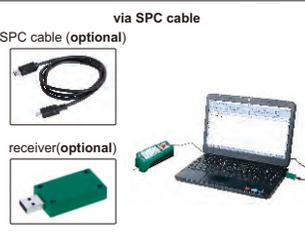


connect to a computer via Bluetooth or a SPC cable using an optional Bluetooth receiver (ISR-C300-RECEIVER) to send data to Excel

via bluetooth



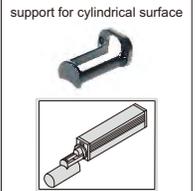
via SPC cable



probe and main unit can be combined together



probe support (optional)



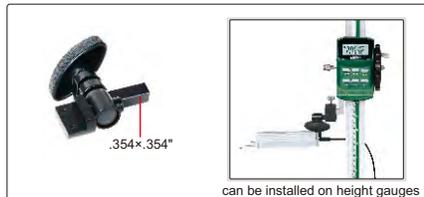
adjustable stand (included)



magnetic stand adapter (included)



height gauge adapter (optional)



support for flat surface



**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

optional probes

<p>small hole probe, 196µin/90° (optional), part no. <b>ISR-C002-PROBE</b></p>	<p>extension rod (optional), part no. <b>ISR-C002-ER</b></p>	<p>extension rod (optional), part no. <b>ISR-C002-ER100</b></p>	<p>tiny hole probe, 196µin/90° (optional), part no. <b>ISR-C002-SBP</b></p>
<p>standard probe, 196µin/90°, part no. <b>ISR-C300-PROBE</b></p>	<p>deep groove probe, 196µin/90° (optional), part no. <b>ISR-C002-DGP</b></p>	<p>deep groove probe, 196µin/90° (optional), part no. <b>ISR-C002-DGP1</b></p>	<p>transverse rod (optional), part no. <b>ISR-C002-TR</b></p>

need to be delivered with roughness tester, recommended for use above Ra 3.9µin

recommended for use with height gauges or stands

To be continued

Continued from previous page

**SPECIFICATION**

Measuring force	.01ozf
Stylus radius/angle	196µin/90°
Parameters	Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz(JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax, R5p, R5v, R10z, Rpt, Rvt, Ry5, tp1, tp2, Rmrc1, Rmrc2, Rpkx, Rvkx, Ramax, Rzmax
Probe type	inductive
Stylus material	diamond
Range	X axis .689" Z axis 15748µin (-7874µin~7874µin)
Accuracy	±10%
Resolution (Ra)	.01µin
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	USB and bluetooth*
Power	built-in rechargeable battery
Dimension (L×W×H)	6.22×2.52×2.05"
Net weight	.89lb

\*Bluetooth optional receiver needed: part no. **ISR-C300-RECEIVER**

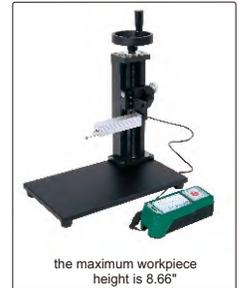
**STANDARD DELIVERY**

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

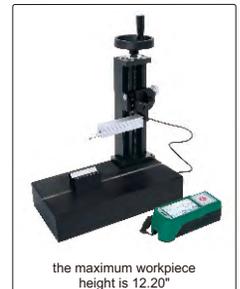
**OPTIONAL ACCESSORY**

Standard probe	ISR-C300-PROBE
Standard probe	ISR-C301-PROBE
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
Extension rod	ISR-C002-ER
Extension rod	ISR-C002-ER100
Transverse rod	ISR-C002-TR
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1
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

light duty test stand (optional)



heavy duty test stand (optional)

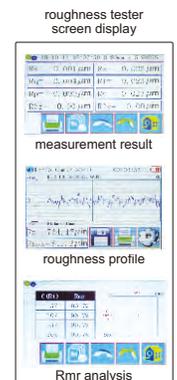
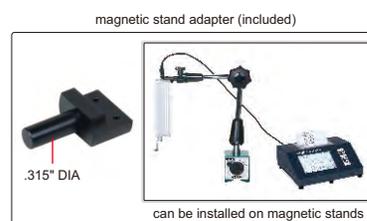
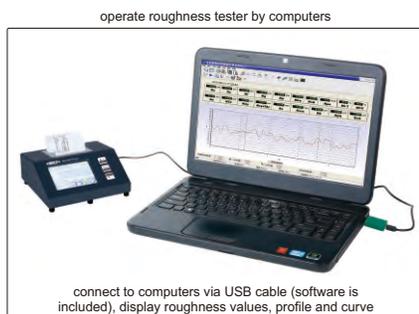
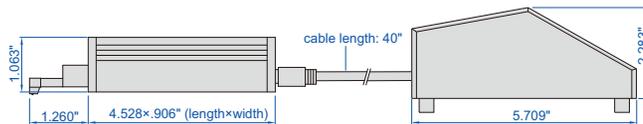


**ROUGHNESS TESTER  
PART NO. ISR-T120**

CAN BE OPERATED BY  
MOBILE PHONES OR COMPUTERS

TOUCH SCREEN DATA OUTPUT BLUETOOTH

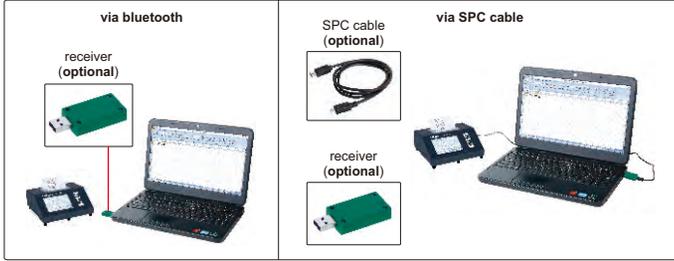
- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Built-in printer can print measurement results and graphics
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display 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



To be continued

Continued from previous page

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

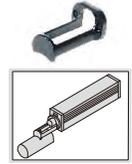


height gauge adapter (optional)

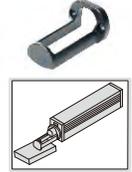


**NOTE:** Please check whether the adapter can fit your height gauges. When using **INSIZE** height gauges, please use the dial test indicator holder of height gauges

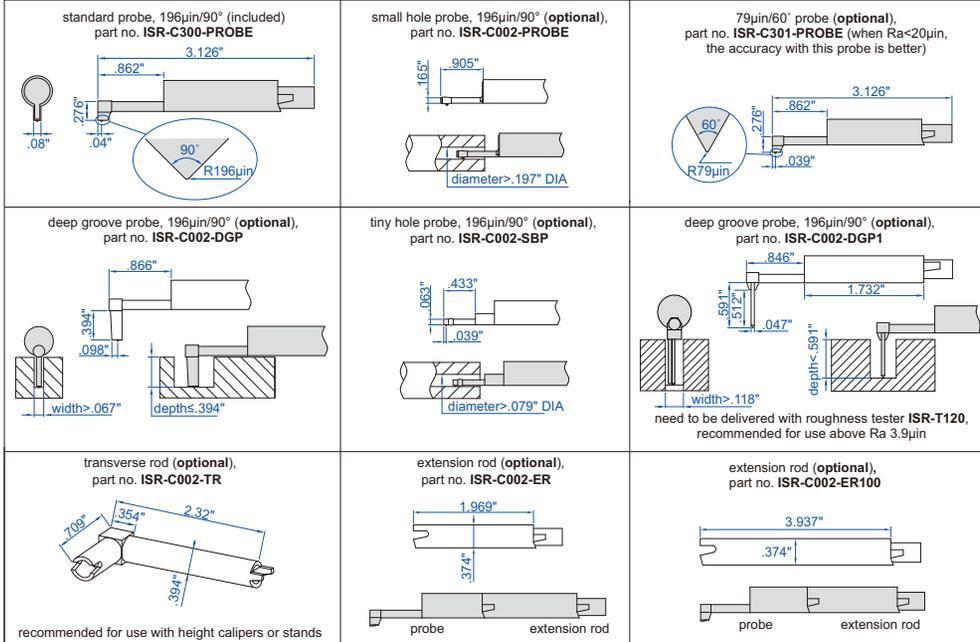
probe support (optional)  
support for cylindrical surface



support for flat surface



**optional probes**



heavy duty test stand (optional)



light duty test stand (optional)



**SPECIFICATION**

<b>Parameters</b>		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
<b>Range</b>	<b>X axis</b>	.689"
	<b>Z axis</b>	25197µin (-12598µin~12598µin)
<b>Accuracy</b>		±10%
<b>Resolution (Ra)</b>		.01µin
<b>Probe</b>	<b>type</b>	inductive
	<b>stylus radius/angle</b>	196µin/90°
	<b>stylus material</b>	diamond
<b>Measuring force</b>		.01ozf
<b>Measuring unit</b>		µm/µin
<b>Cut off</b>		.01/.03/.1"
<b>Number of cut-offs</b>		1~5
<b>Traverse speed</b>		.005"/s, .02"/s, .04"/s
<b>Memory</b>		100 measurement results
<b>Output</b>		bluetooth and USB
<b>Power</b>		built-in rechargeable battery
<b>Dimension (L×W×H)</b>		6.10×5.71×2.28"
<b>Net weight</b>		2.20lb

**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

**OPTIONAL ACCESSORY**

Extension rod	ISR-C002-ER
Extension rod	ISR-C002-ER100
Transverse rod	ISR-C002-TR
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
79µin/60° probe	ISR-C301-PROBE
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

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

ATTENTION: THIS ROUGHNESS TESTER IS NOT SUITABLE FOR ROUGH TURNING, MILLING AND PLANING WORKPIECES



fixture for small shafts (optional)



application

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

### STANDARD DELIVERY

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



calibration block (included)

### SPECIFICATION

Parameters*	Ra, Rz, Rq, Rt	
Range	Ra, Rq: 2~590 $\mu\text{in}$ Rz, Rt: 4~1968 $\mu\text{in}$	
Resolution (Ra)	.01 $\mu\text{in}$	
Accuracy	$\pm 10\%$	
Probe	type	piezoelectric
	stylus radius/angle	393 $\mu\text{in}/90^\circ$
	stylus material	diamond
Measuring force	.012ozf	
Measuring unit	$\mu\text{in}/\mu\text{m}$	
Cut off	.01/.03/.1"	
Evaluation length	.05" for cut off .01"	
	.15" for cut off .03"	
	.2" for cut off .1"	
Moving speed	.03"/s	
Power	built-in rechargeable battery	
Dimension (L×W×H)	4.17×2.75×.94"	
Net 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



- 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, 8 $\mu\text{in}$	22.1, 40, 63 $\mu\text{in}$	3 pcs
	0.05, 0.1, 0.2 $\mu\text{m}$	0.55, 1, 1.6 $\mu\text{m}$	
Reaming	16, 32, 63 $\mu\text{in}$	120, 240, 400 $\mu\text{in}$	3 pcs
	0.4, 0.8, 1.6 $\mu\text{m}$	3, 6, 10 $\mu\text{m}$	
Plain grinding	2, 4, 8, 16, 32, 63 $\mu\text{in}$	22.1, 40, 63, 120, 240, 400 $\mu\text{in}$	6 pcs
	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 $\mu\text{m}$	0.55, 1, 1.6, 3, 6, 10 $\mu\text{m}$	
Horizontal milling	16, 32, 63, 125, 250, 500 $\mu\text{in}$	100, 160, 320, 640, 1280, 2000 $\mu\text{in}$	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	2.5, 4, 8, 16, 32, 50 $\mu\text{m}$	
Vertical milling	16, 32, 63, 125, 250, 500 $\mu\text{in}$	100, 160, 320, 640, 1280, 2000 $\mu\text{in}$	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	2.5, 4, 8, 16, 32, 50 $\mu\text{m}$	
Turning	16, 32, 63, 125, 250, 500 $\mu\text{in}$	100, 160, 320, 640, 1280, 2000 $\mu\text{in}$	6 pcs
	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	2.5, 4, 8, 16, 32, 50 $\mu\text{m}$	

\*The actual value is the value to be calibrated.

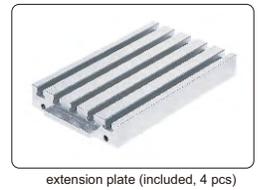
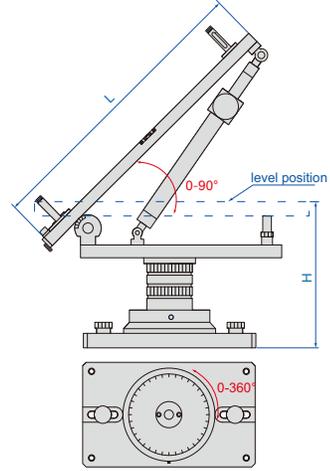
### GAUGE BLOCK STAND FOR CMM



- Made of aluminum
- Used with gauge blocks to calibrate CMM
- Optional accessory: gauge blocks (4112 and 4106 series)

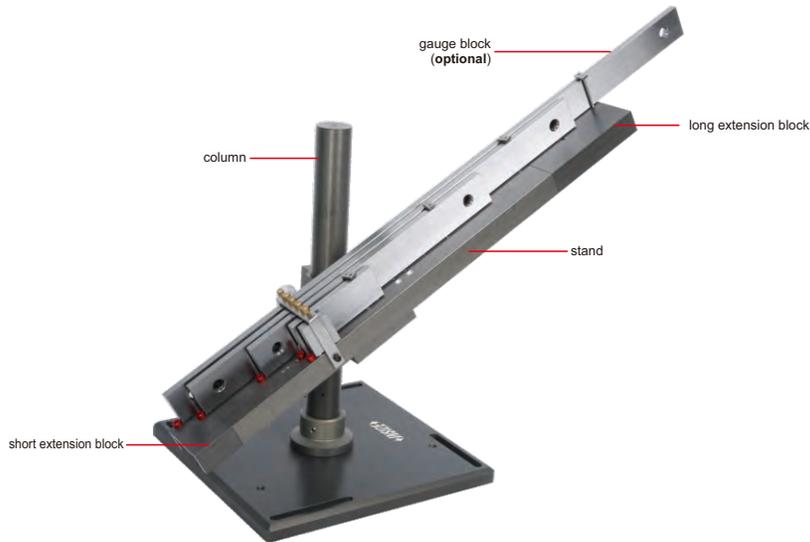


6885-1000

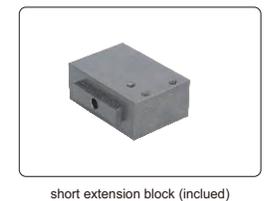
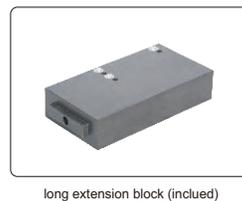
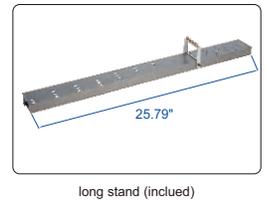
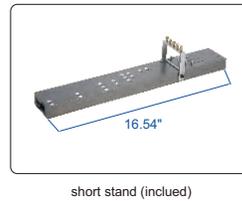


Part No.	Length (L)	Height (H)
6885-1000	19.685", 23.622", 25.591", 27.559", 29.528", 31.496", 33.465", 35.433", 39.370"	9.252", 13.976", 18.701"

### GAUGE BLOCK STAND FOR CMM (BASIC TYPE) PART NO. 7398-1000



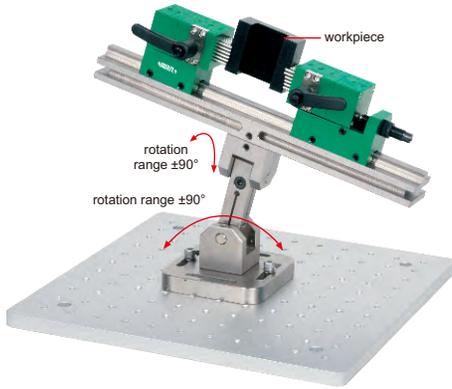
- Made of aluminum
- Used in conjunction with a gauge block to calibrate and compensate for CMM errors
- Minimum height for CMM: 15.75"
- Angle adjustment range (0~90)°
- Optional accessory: gauge blocks (4112 and 4106 series)



Part No.	Applicable block length	Column height
7398-1000	1.18", 3.94", 4.92", 5.91", 6.89", 7.87", 9.85", 11.81", 15.75", 19.69", 29.62", 27.56", 31.50", 35.43", 39.37"	17.71"

**JIGS FOR CMM (ANVIL .10" DIA)**

CAN BE CUSTOMIZED



ISY-200



ISY-200-3



ISY-200-5

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"

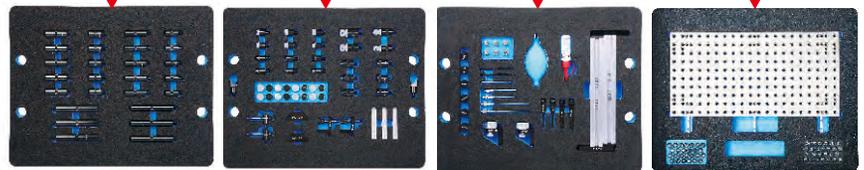
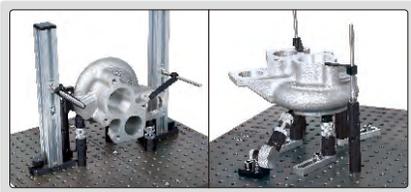
Part No.	Product	Size	Hole size
ISY-200-3	base plate	11.81×11.81×.47"	M8mm

Part No.	Product	Size
ISY-200-5	two-way adjustable stand	4.33×4.33×5.30"

**158-PIECE JIG SET FOR CMM  
PART NO. ISY-100**



application examples



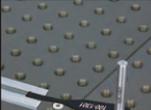
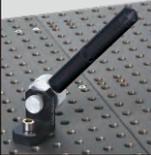
ISY-100

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	—

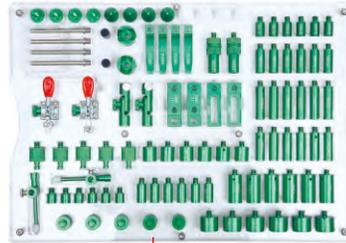
\*Letter A-Z, number 0~25

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	
		ISY-100-27056	2	
support head 	ISY-100-27058	2	nylon	
	support head 	ISY-100-27066	2	
ISY-100-27068		2	nylon	
support head 	ISY-100-27076	2	aluminum	
	ISY-100-27078	2	nylon	

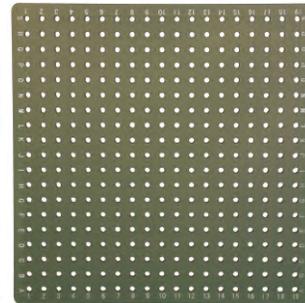
99-PIECE JIG SET FOR CMM  
PART NO. ISY-600



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: M8×1.25mm	1

# PROFILE PROJECTOR PART NO. ISP-Z3015-U



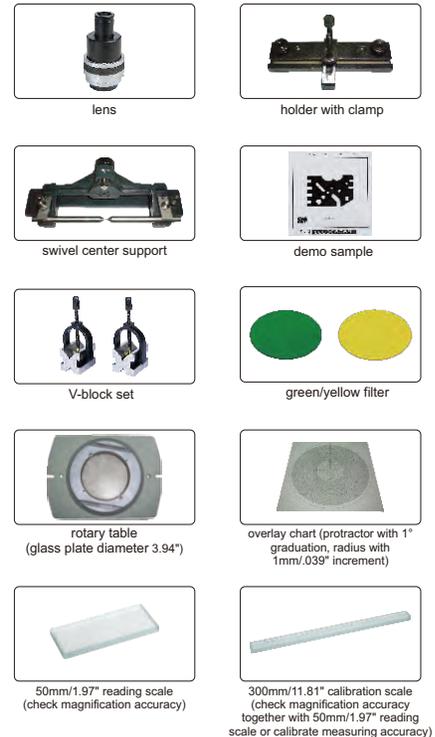
## SPECIFICATION

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"
	Z (focus) travel range	accuracy: (157.5+40L)μin L is the measuring length in inch
max. load capacity	3.54"	
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable
		surface illumination: 24V/150W halogen lamp
Data processing unit	display	X-Y stage travel, screen rotation
	output	RS232C
	function	measure coordinate of point
		measure coordinate of line
		measure center coordinate, radius of circle with three points
		measure distance between two objects
		measure angle with four points or two lines
		set origin of coordinate
		coordinate transform
		set midpoint of coordinate
Power supply	110V, 50/60Hz	
Dimension (L×W×H)	21.65×30.31×43.31"	
Net weight	297lb	

## OPTIONAL ACCESSORY

20X lens with half-reflection mirror and oblique illuminator mirror	ISP-A1000-LENS20X
50X lens with half-reflection mirror	ISP-A1000-LENS50X
100X lens with half-reflection mirror	ISP-A1000-LENS100X
Rotary table	ISP-A1000-TABLE
Overlay chart	ISP-A1000-CHART
Holder with clamp	ISP-A1000-HOLDER
Swivel center support	ISP-A1000-SUPPORT
V-block set	6896-12
1.97"/50mm reading scale	ISP-A1000-SCALE50
11.81"/300mm calibration scale	ISP-A1000-RULE
Green filter	ISP-A1000-GR-FILTER
Yellow filter	ISP-A1000-YE-FILTER
Demo sample	ISP-A1000-DEMO

## OPTIONAL ACCESSORY



## 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
Blue filter	1 pc

## QUICK MEASUREMENT SYSTEM (WITHOUT STITCHING) PART NO. QMS-A110-U

NOTE: NOT SUITABLE FOR SMALL SIZES SUCH AS THREADS, CHAMFERS, ETC



- 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

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 (electric)
	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"	
Net 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

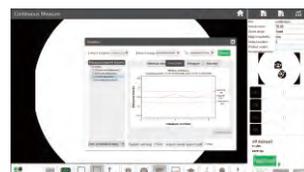
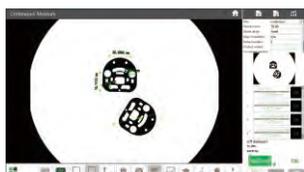
Main unit	1 pc
Computer	1 pc
Software	1 pc
Data transmission function	1 pc

### OPTIONAL ACCESSORY

Coaxial light illumination	QMS-23-A3 (must be installed in factory)
CAD import function of software	QMS-23-C1
Foot-switch	QMS-43-FS1
11.6" LCD	QMS-23-B1 (must be installed in factory)
Glass calibration plate	QMS-CALIBRATION
MES transmission function	QMS-23-E1

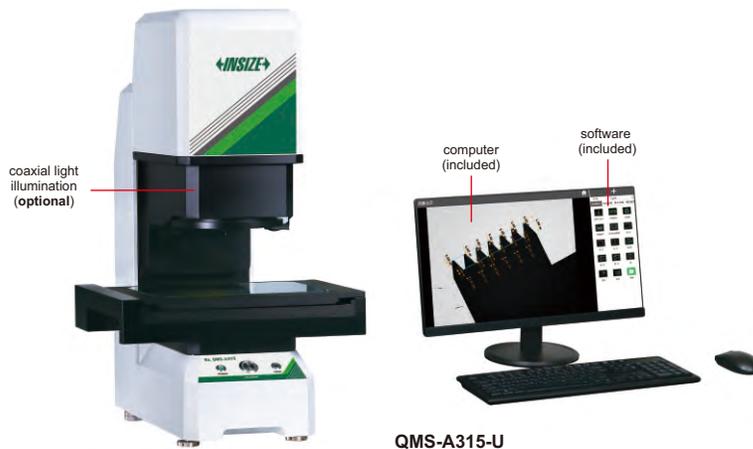
### Software (included)

- 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) PART NO. QMS-A315-U

SMALL VIEW FIELD SUITABLE FOR MEASURING  
SMALL SIZES SUCH AS THREADS AND CHAMFER



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

### SPECIFICATION

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
	with stitching	±(200+20L)µin ③
Repeatability	without stitching	±.00004" ②
	with stitching	±.00002"
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 (electric)
	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"	
Net weight	132lb	



### STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Software	1 pc
Data transmission function	1 pc

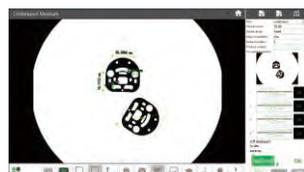
### OPTIONAL ACCESSORY

Coaxial light illumination	QMS-23-A3 (must be installed in factory)
CAD import function of software	QMS-23-C1
Foot-switch	QMS-43-FS1
11.6" LCD	QMS-23-B1 (must be installed in factory)
Glass calibration plate	QMS-CALIBRATION
MES transmission function	QMS-23-E1
Laser sensor	QMS-43-SJ1 (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.



## ONLINE/OFFLINE QUICK MEASUREMENT SYSTEM PART NO. VIM-L40

TELECENTRIC SYSTEM WITH  
LARGE DEPTH OF FIELD

ONLINE/OFFLINE  
DIMENSION MEASUREMENT

- Low-distortion system assures the accuracy throughout the field of view
- The dual telecentric optical system ensures sharp edges without losing accuracy even for misaligned targets
- Easy to use measurement tools for simplifi setup



### SPECIFICATION

Distance between transmitter and receiver		7.087"	
Measurement range	view field	high precision measurement area	1.575" DIA
		full measurement area	1.024" DIA
	depth of field	high precision measurement area	.394"
		full measurement area	.787"
Illumination		InGaN green LED	
Measurement accuracy *	high precision measurement area		±78.74µin
	full measurement area		±118.11µin
Repeatability		±39.37µin	
Dust/waterproof		IP64	
Environment requirement		temperature: 32~113°F, relative humidity: less than 85%	
Shell material		aluminium	
Net weight		4.81lb	

\* The optimum temperature is 68°F±1.8°F

### STANDARD DELIVERY

Main unit	1 pc
Industrial computer	1 pc
Dongle	1 pc

### OPTIONAL ACCESSORY

Monitor	VIM-L-SCREEN
Rotary table	VIM-L-RT

### SOFTWARE (INCLUDED)



### APPLICATION

- Automatically measure widths, pitch, arc, angles at the same time, simple and efficient



## MANUAL VISION MEASURING SYSTEMS (STANDARD TYPE)

INSPECTION  
CERTIFICATE



basic probe set (optional), includes .039" DIA, .079" DIA, .118" DIA styli, .984" DIA calibration ball, measuring accuracy is .0004"



includes .079" DIA/Ø2mm and .118" DIA/Ø3mm styli, .984" DIA/Ø25mm 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



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



ISD-V250A

To be continued

Continued from previous page

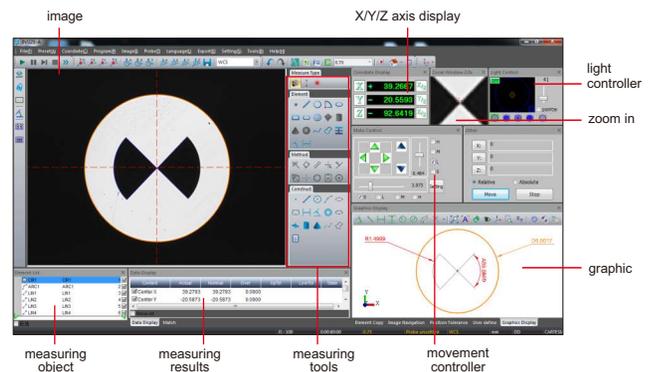
**SPECIFICATION**

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, 1.5M pixel		
Illumination	surface and contour with adjustable LED		
Max. height of workpiece	6"		
Max. weight of workpiece	44lb		
Operation system	Windows 10/11		
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"
Net weight	220lb	264lb	308lb

**OPTIONAL ACCESSORY**

0.5X auxiliary objective	part no. <b>ISD-V-OB05X</b> working distance: 6.89" magnification: 14.5~92X (on 21.5" monitor)
2X auxiliary objective	part no. <b>ISD-V-OB2X</b> working distance: 1.42" magnification: 58~368X (on 21.5" monitor)
Standard probe set (RENISHAW)	part no. <b>ISD-V-PROBE</b> includes .079" DIA/Ø2mm and .118" DIA /Ø3mm styli, .984" DIA/Ø25mm calibration ball
Basic probe set	part no. <b>ISD-V-PROBE1</b> includes .039" DIA/Ø1mm, .079" DIA/Ø2mm and .118" DIA /Ø3mm styli, .984" DIA/Ø25mm calibration ball
Vision measuring system with coaxial light lens (with computer)	part No. <b>ISD-V150ACL, ISD-V250ACL, ISD-V300ACL</b>
Office software	part No. <b>7313-OFFICE</b>

**SOFTWARE (INCLUDED)**



**CNC VISION MEASURING SYSTEMS (STANDARD TYPE)**

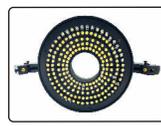


MOTORIZED ZOOM LENS IS OPTIONAL



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

lens with built-in coaxial light (included)



programmable segmented ring light (included)



computer is included

ISD-V220CNCA-U

controller

To be continued

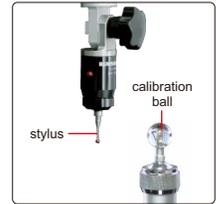
Continued from previous page

**SPECIFICATION**

<b>Part No. (manual zoom lens)</b>	<b>ISD-V220CNCA-U</b>	<b>ISD-V270CNCA-U</b>	<b>ISD-V370CNCA-U</b>
<b>Measuring range (X×Y×Z)</b>	8.66×4.72×5.90"	10.63×6.69×5.90"	14.57×10.63×5.90"
<b>Stage size</b>	17.72×11.02"	19.69×12.99"	23.86×18.35"
<b>Glass stage size</b>	12.05×7.72"	13.78×9.84"	17.72×13.78"
<b>Resolution of X/Y/Z axis</b>	.00002"		
<b>Accuracy of X/Y axis</b>	≤(98.4+10L)μin (L is the measuring length in inch)		≤(137.8+10L)μin (L is the measuring length in inch)
<b>Repeatability of X/Y axis</b>	.00008"		
<b>Objective</b>	0.7X~4.5X (zoom)		
<b>Working distance</b>	3.62"		
<b>Magnification</b>	33.0X~208.6X (with manual zoom lens, on 24" monitor)		
	31.9X~188.7X (with motorized zoom lens, on 24" monitor)		
<b>Camera</b>	giga-bit network camera		
<b>Illumination</b>	<b>surface</b>	coaxial light, programmable segmented ring light	
	<b>contour</b>	adjustable LED	
<b>View field (diagonal length)</b>	.06~.43"		
<b>Max. height of workpiece</b>	5.90"		
<b>Max. weight of workpiece</b>	66lb		
<b>Operation system</b>	Windows 7/8/10		
<b>Drive method</b>	automatic		
<b>Power supply</b>	110V, 50/60Hz		
<b>Dimension (L×W×H)</b>	29.92×23.62×35.43"	29.92×23.62×35.43"	38.19×26.38×37.01"
<b>Net weight</b>	322lb	370lb	586lb



software flash disk (included)



probe (optional), includes .079" DIA/Ø2mm and .118" DIA/Ø3mm styli, .984" DIA/Ø25mm calibration ball, measuring accuracy is .0004"



laser probe (optional) measuring accuracy is .0002"

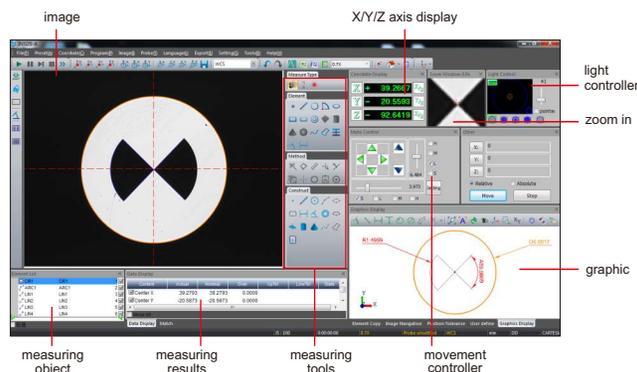
**STANDARD DELIVERY**

<b>Main unit</b>	1 pc
<b>Software</b>	1 pc
<b>Computer</b>	1 pc
<b>24" display</b>	1 pc
<b>Len with coaxial light</b>	1 pc
<b>Controller</b>	1 pc
<b>Calibration glass chart</b>	1 pc
<b>Laser positioner</b>	1 pc
<b>Clay</b>	1 pc
<b>Anti-dust cover</b>	1 pc

**OPTIONAL ACCESSORY**

<b>0.5X auxiliary objective</b>	part No. <b>ISD-V-OB05X</b> 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)
<b>2X auxiliary objective</b>	part No. <b>ISD-V-OB2X</b> 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)
<b>Probe</b>	part No. <b>ISD-V-PROBE</b> includes .079" DIA/Ø2mm and .118" DIA/Ø3mm styli, .984" DIA/Ø25mm calibration ball
<b>Laser probe</b>	part No. <b>ISD-V-LASER</b>
<b>Office software</b>	part No. <b>7313-OFFICE</b>

**SOFTWARE (INCLUDED)**



# HIGH-DEFINITION MANUAL VISION MEASURING SYSTEMS



- High-definition image
- Large view field
- 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



ISD-H210

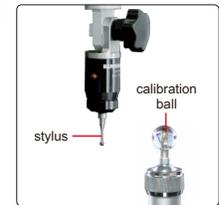
computer is included

### 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



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



probe (optional), includes .079" DIA/Ø2mm and .118" DIA/Ø3mm styli, .984" DIA/Ø25mm calibration ball, measuring accuracy is .0004"

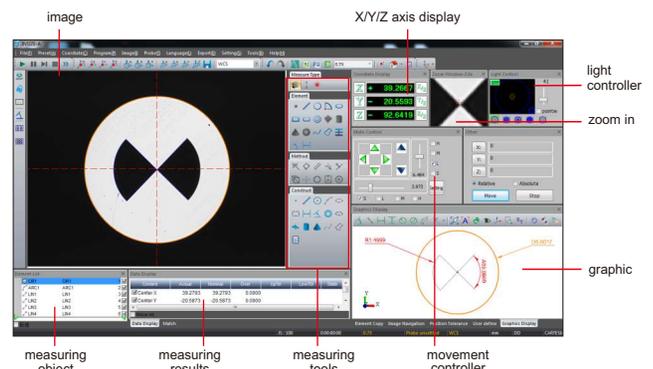
### SPECIFICATION

Part No.	ISD-H210	ISD-H320	ISD-H430
Measuring range (X×Y×Z)	8×4×6"	12×8×6"	16×12×6"
Stage size	15.91×8.98"	19.69×12.99"	23.86×18.35"
Glass stage size	10.24×6.30"	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		
Repeatability of X/Y axis	.00008"		
Objective	0.58X~7.5X (zoom)		
View field (diagonal length)	.06~.55"		
Working distance	3.23"		
Magnification	27.4X~351X (on 24" monitor)		
Camera	giga-bit network camera		
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	110~240V, 50/60Hz		
Dimension (L×W×H)	21.26×22.05×33.46"	29.92×23.62×35.43"	38.19×26.38×37.01"
Net weight	243lb	309lb	529lb

### OPTIONAL ACCESSORY

0.5X auxiliary objective	part no. ISD-H-OB05X working distance: 6.10" magnification: 13.7~175.5X (on 24" monitor)
2X auxiliary objective	part no. ISD-H-OB2X working distance: 1.36" magnification: 54.8~702X (on 24" monitor)
Probe	part no. ISD-V-PROBE includes .079" DIA/Ø2mm and .118" DIA/Ø3mm styli, .984" DIA/Ø25mm calibration ball
Vision measuring system with coaxial light lens	part no. ISD-H210CL, ISD-H320CL, ISD-H430CL
Office software	part no. 7313-OFFICE

### SOFTWARE (INCLUDED)



# CNC VISION MEASURING SYSTEM (ADVANCED TYPE) PART NO. ISD-K322-U

HIGH-RESOLUTION  
AUTO ZOOM LENS

NAVIGATION  
CAMERA

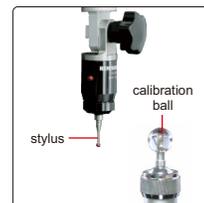
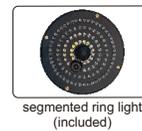
INSPECTION  
CERTIFICATE



- Motorized zoom objective
- Granite body, high accuracy and stability
- Panasonic servo control motor, with precise positioning performance in high-speed movement
- RSF brand linear scales

## SPECIFICATION

Measuring range (X×Y×Z)	11.81×7.87×7.87"	
Stage size	24.41×14.96"	
Glass stage size	14.17×10.23"	
Resolution of X/Y/Z axis	19.68μm	
Accuracy of X/Y axis	≤(78.7+5L)μm (L is the measuring length in inch)	
Repeatability	78.74μm	
Objective	0.6X~8.0X (13.3:1 continuous zoom ratio)	
Working distance	3.26"	
View field (diagonal length)	.03~.42"	
Magnification	27X~356X (on 23.8" monitor)	
Camera	1/1.2" color CCD, 2.3M pixel	
Max. height of workpiece	5.31"	
Illumination	surface	coaxial light, three-ring eight-zone adjustable ring light
	contour	adjustable LED light
Operation system	Windows 10/11	
Max. weight of workpiece	77lb	
Drive method	automatic	
Environmental requirement	temperature: 68°F±9°F, relative humidity: 20%~80%, vibration: <.00007oz, less than 15Hz	
Power supply	110V, 60Hz, 1500W	
Dimension (L×W×H)	24.41×30.71×68.90"	
Net weight	771lb	



probe (optional), includes .039" DIA/Ø1mm and .079" DIA/Ø2mm styli, .787" DIA/Ø20mm calibration ball, measuring accuracy is .0002"



## STANDARD DELIVERY

Main unit	1 pc
Dongle	1 pc
Software	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Desk	1 pc
Clay	1 pc
Anti-dust cover	1 pc

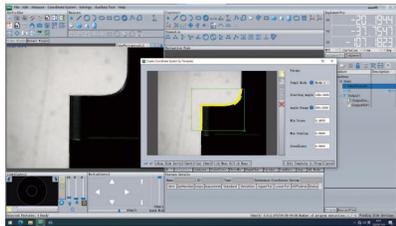
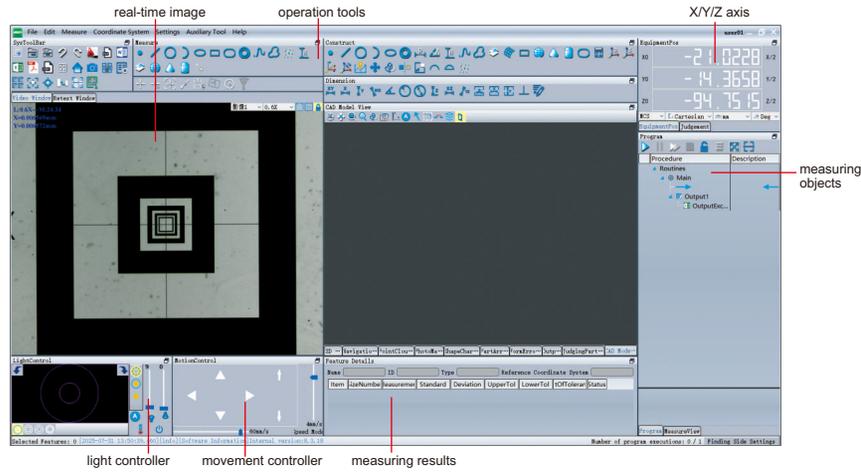
## OPTIONAL ACCESSORY

0.5X auxiliary objective	part no. <b>ISD-K-OB05X</b> , working distance: 6.89" magnification: 13.5~178X (on 23.8" monitor)
2X auxiliary objective	part no. <b>ISD-K-OB2X</b> , working distance: 1.42" magnification: 54~712X (on 23.8" monitor)
Spectral confocal sensor	part No. <b>ISD-K-SCS</b> (must be installed in factory)
Laser probe	part no. <b>ISD-K-LASER</b> (must be installed in factory)
Probe	part no. <b>ISD-K-PROBE</b> , includes .039" DIA styli and .079" DIA styli, .787" DIA calibration ball
Line laser sensor	part no. <b>ISD-K-LINE</b> (must be installed in factory)
Line profile software	part no. <b>ISD-K-LP</b>
Gear software	part no. <b>ISD-K-GEAR</b>
Thread software	part no. <b>ISD-K-THREAD</b>
Stitching software	part no. <b>ISD-K-STITCHING</b>
Office software	part no. <b>7313-OFFICE</b>

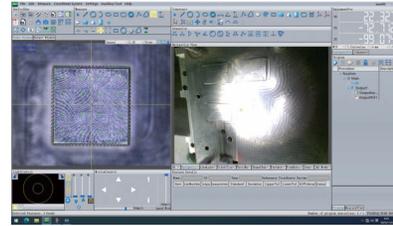
To be continued

Continued from previous page

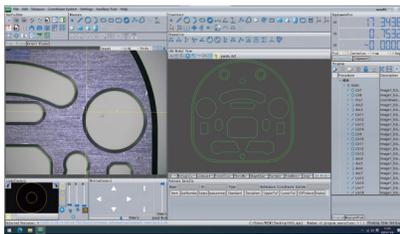
**SOFTWARE (INCLUDED)**



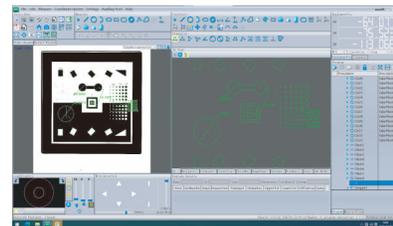
template assisted positioning function (included), when the program runs repeatedly, as long as the positioning feature appears within the field of view, automatic measurement will be performed



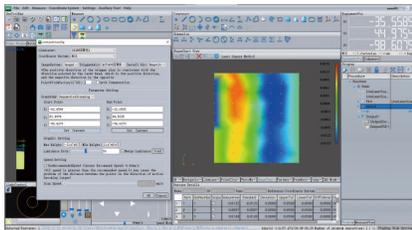
multi point autofocus function (included), a single autofocus operation acquires height information of multi points, enabling efficient height measurement and flatness measurement



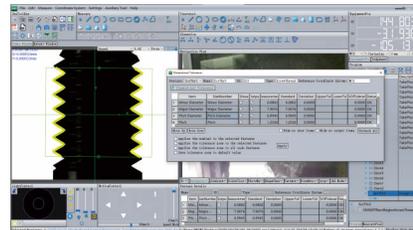
CAD import programming function (included), import CAD drawings for quick programming



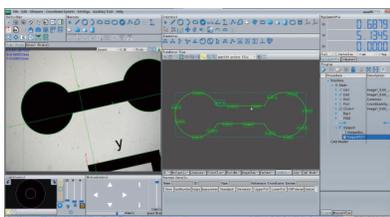
stitching software (optional), stitching measurement for workpieces out of the field of view



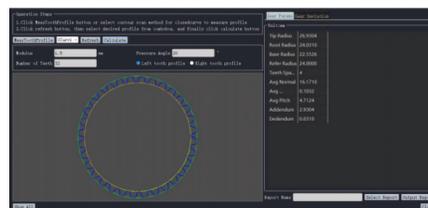
line laser sensor (optional), high measurement efficiency, capturing all point data along a line segment in a single scan



thread software (optional), capture thread images, extract features through edge detection and contour fitting algorithms, and calculate parameters



line profile software (optional), import the theoretical profile model and calculate the profile measurement results



gear software (optional), non-contact measurement technology based on optical imaging for detecting critical dimensions of gears

# CNC VISION MEASURING SYSTEM (ADVANCED TYPE) PART NO. ISD-Q762-U

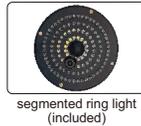
INSPECTION  
CERTIFICATE

HIGH-RESOLUTION  
AUTO ZOOM LENS

NAVIGATION  
CAMERA



- Motorized zoom objective
- Granite body, high accuracy and stability
- Panasonic servo control motor, with precise positioning performance in high-speed movement
- RSF brand linear scales



### SPECIFICATION

Measuring range (X×Y×Z)	23.62×27.56×7.87"	
Glass stage size	29.92×34.25"	
Resolution of X/Y/Z axis	19.68μin	
Accuracy of X/Y axis	≤(98.4+5L)μin (L is the measuring length in inch)	
Repeatability	78.74μin	
Objective	0.6X~8.0X (13.3: 1 continuous zoom ratio)	
Working distance	3.26"	
View field (diagonal length)	.03~.42"	
Magnification	27X~356X (on 23.8" monitor)	
Camera	2/3" color CCD, 5M pixel	
Max. height of workpiece	5.31"	
Illumination	surface	coaxial light, three-ring eight-zone adjustable ring light
	contour	adjustable LED light
Operation system	Windows 10/11	
Max. weight of workpiece	77lb	
Drive method	automatic	
Environmental requirement	temperature: 68°F±9°F, relative humidity: 20%~80%, vibration: <.00007oz, less than 15Hz	
Power supply	110V, 60Hz, 2250W	
Dimension (L×W×H)	62.99×47.64×70.08"	
Net weight	2645.5lb	



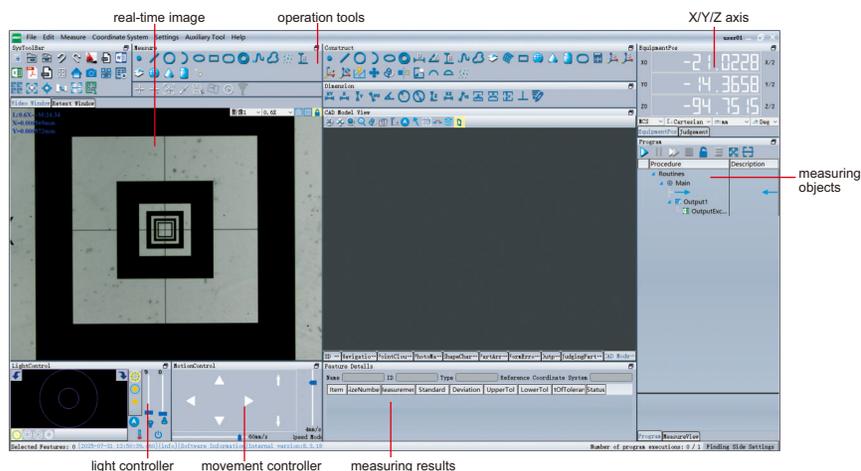
### STANDARD DELIVERY

Main unit	1 pc
Dongle	1 pc
Software	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Desk	1 pc
Clay	1 pc

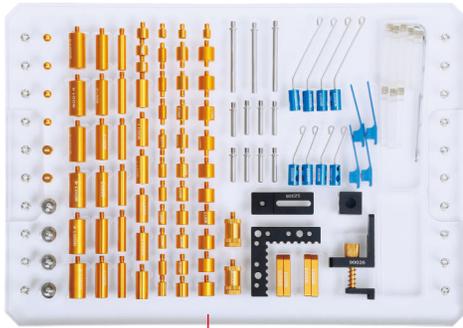
### OPTIONAL ACCESSORY

0.5X auxiliary objective	part no. ISD-K-OB05X, working distance: 6.89" magnification: 13.5~178X (on 23.8" monitor)
2X auxiliary objective	part no. ISD-K-OB2X, working distance: 1.42" magnification: 54~712X (on 23.8" monitor)
Spectral confocal sensor	part no. ISD-K-SCS (must be installed in factory)
Laser probe	part no. ISD-K-LASER (must be installed in factory)
Probe	part no. ISD-K-PROBE, includes .039" DIA styli and .079" DIA styli, .787" DIA calibration ball
Office software	part no. 7313-OFFICE

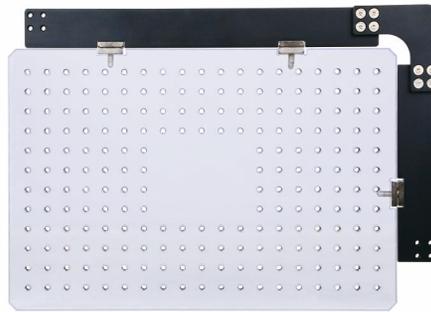
### SOFTWARE (INCLUDED)



# 113-PIECE JIG SET FOR VISION MEASURING SYSTEMS PART NO. ISY-700

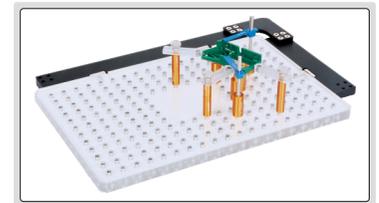


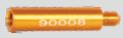
acrylic tray (included)



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×.236"	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

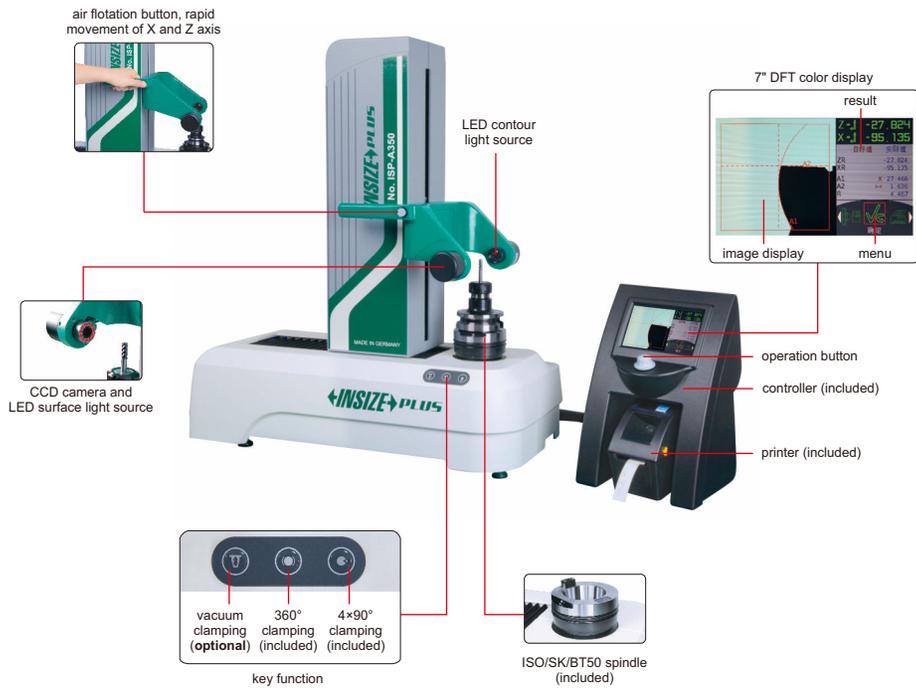
# TOOL PRESETTER PART NO. ISP-A350

**INSIZE PLUS**

CHECK, PRESET AND MEASURE  
CUTTING TOOLS

AUTOMATIC RECOGNITION  
OF CUTTING EDGE SHAPES

DATA  
OUTPUT



- Check, preset and measure cutting tools
- Telecentric lens CCD camera system
- Use Bosch or Festo pneumatic components, THK guide ways and HEIDENHAIN scales
- Built-in 104 cutting edge shapes, automatic recognition
- Measuring modes: absolute, relative and incremental measurement
- Measuring radius, angle, concentricity, axial runout, etc.
- Storage of 1000 tool parameters
- View, print and export measurement results



attach the printed label on the tool



ISO/SK/BT50 to HSK63 A/C/E, HSK80 B/D/F converter (optional)



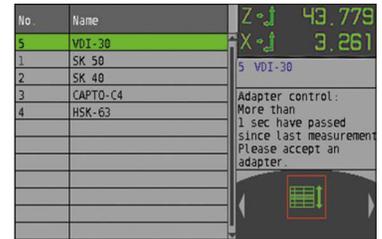
ISO/SK/BT50 to ISO/SK/BT40 converter (optional)

## SPECIFICATION

Maximum tool diameter (X axis)	12.60"	
Maximum tool height (Z axis)	13.75"	
Repeatability	X axis	.00008"
	Z axis	.00008"
X/Z axis resolution	.00004"	
Camera	color CCD	
Image processing accuracy	.00004"	
Magnification	12X	
View field	.28×.28"	
Illumination	adjustable LED light	
Spindle	ISO/SK/BT50 (concentricity .00008')	
Data output	USB, RS232	
Working air pressure	87~116psi (0.6~0.8MPa)	
Environmental requirement	temperature:	41~95°F
	relative humidity:	10%~95%
Power supply	100~240V, 50/60Hz	
Dimension (L×W×H)	47.24×15.75×34.25"	
Net weight	176lb	



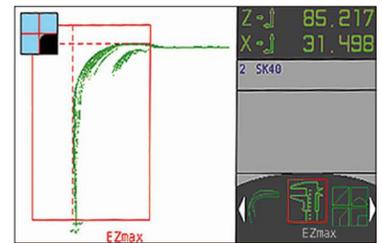
automatic recognition of cutting edge shapes



can store 99 sets of converter parameters and automatically prompt to check the zero position at fixed time



check cutting edge wear



scan and measure the maximum profile of the cutting tool

## STANDARD DELIVERY

Main unit	1 pc
Controller	1 pc
ISO/SK/BT50 spindle (including 360° clamping and 4×90° clamping)	1 pc
Printer	1 pc
Printer label paper	1 pc

## OPTIONAL ACCESSORY

ISO/SK/BT50 to ISO/SK/BT40 converter	ISP-A350-C1
ISO/SK/BT50 to ISO/SK/BT30 converter	ISP-A350-C5
ISO/SK/BT50 to HSK63 A/C/E, HSK80 B/D/F converter	ISP-A350-C2
ISO/SK/BT50 to HSK50 A/C/E, HSK63 B/D/F converter	ISP-A350-C3
ISO/SK/BT50 to HSK40 A/C/E, HSK50 B/D/F converter	ISP-A350-C4
ISO/SK/BT50 to HSK32 A/C/E, HSK40 B/D/F converter	ISP-A350-C6
Spindle vacuum clamping	ISP-A350-VC
Printer label paper	ISP-A350-TAB

## TOOL PRESETTER (BASIC TYPE) PART NO. TLP-300H



standard rod (included)

BT50/BT40 converter (optional)

BT50/BT30 converter (optional)

- Absolute linear scales, zero setting is not needed after power on and off



### 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)	23.62×14.37×27.17"
Net 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

## TOOL PRESETTER PART NO. TLP-A100

VACUUM CLAMPING

- Vacuum clamping function
- Measurement of cutting tools runout with precision dial indicator
- Measurement of cutting tools length with height gauge
- Conveniently adjust settings for close-toothed cutting tools, boring cutting tools, etc.



### SPECIFICATION

Max. tool diameter	6.3" DIA
Max. tool height	11.81"
Spindle	BT50
Spindle accuracy	.0002"
Working air pressure	58~87psi (0.4~0.6MPa)
Dimension (L×W×H)	16.73"×8.66"×8.86"
Net weight	82.67lb

### STANDARD DELIVERY

Main unit	1 pc
BT50 spindle	1 pc
Pressure regulating valve	1 pc
Cleaning rod	1 pc
Air ducts	1 pc

### OPTIONAL ACCESSORY

BT40 spindle	TLP-A100-S1
BT30 spindle	TLP-A100-S2



pressure regulating valve (included)

# LARGE DEPTH OF FIELD 3D MEASURING MICROSCOPE

## PART NO. 5324-K210

ROTATABLE  
WORKTABLE

ROTATABLE OBSERVATION  
STEREOSCOPIC 3D IMAGING

AUTO FOCUS

PLANE MEASUREMENT AND  
PROFILE HEIGHT MEASUREMENT



- Auto focus camera
- Built-in motor, automatic focus stacking
- PDF report can be exported
- Fast generation of large depth of field images
- Plane measurement and profile height measurement
- Built-in software without computer, operated by mouse and keyboard

### SPECIFICATION

Stand	vertical stand
Magnification	100X-750X
Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
View field	.023×.012~.177×.098"
Working distance	1.18~1.57"
Plane measuring accuracy	±.0003"
Output	HDMI/LAN
Power supply	power adapter
Dimension (L×W×H)	22.44×11.81×16.93"
Net weight	22.04lb

### STANDARD DELIVERY

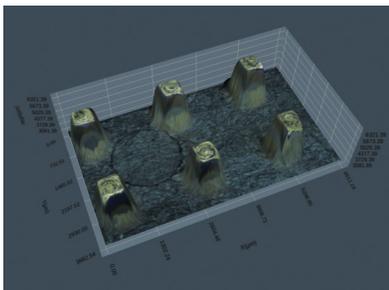
Main unit	1 pc
Galibration block	1 set
Mouse	1 pc
Keyboard	1 pc
16G USB flash disk	1 pc
Display	1 pc
Glass calibration rule	1 set
Power adapter	2 pcs
Stand	1 pc

### PROFILE HEIGHT MEASUREMENT ACCURACY

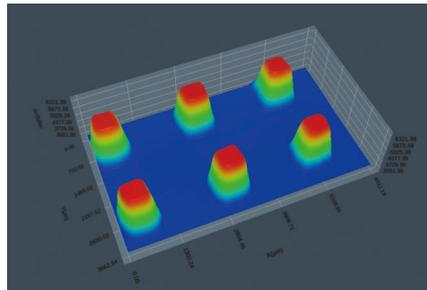
Objective magnification	Measuring range	Measuring accuracy
1.5X	.078"	±.0008"
2X	.047"	±.0004"
2.5X	.031"	±.0004"
3X	.023"	±.00023"
3.5X	.015"	±.0002"
4X	.012"	±.0002"
4.5X	.010"	±.0002"
5X	.008"	±.00012"

\* Measurement of profile height at 0.75X and 1X is not recommended

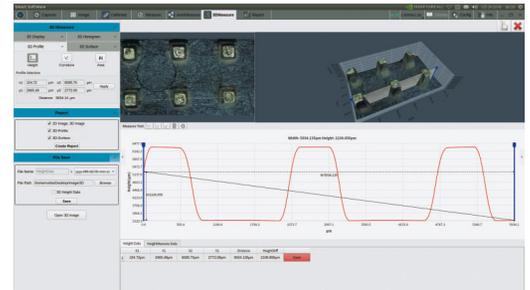
### SOFTWARE (INCLUDED)



constructing stereoscopic 3D imaging that can be dragged and rotated for viewing



the chromagram height clearly shows the difference in three-dimensional height



fast measurement of profile height difference

# AUTO FOCUS DIGITAL MICROSCOPE (LARGE VIEW FIELD)

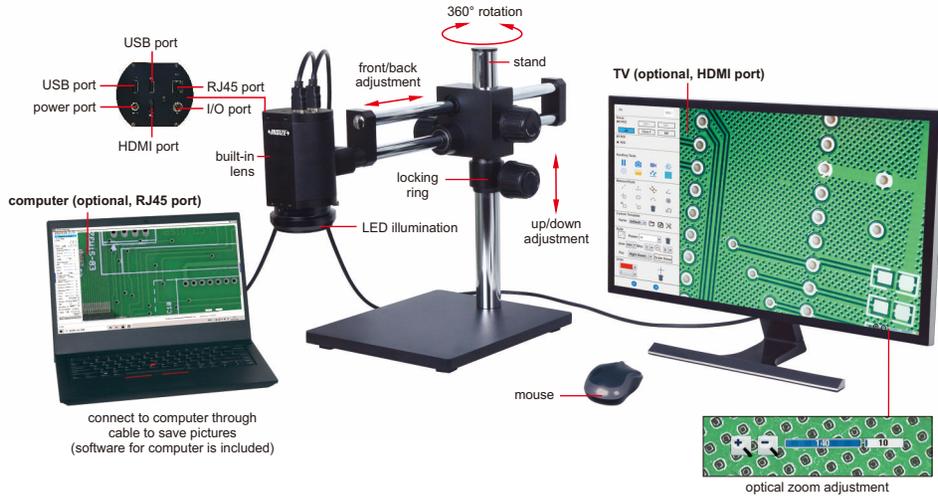


CAN BE CONNECTED TO PC AND TV AT THE SAME TIME

TAKE PICTURES AND VIDEOS

MEASUREMENT

AUTO FOCUS



- 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)

## 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: 30fps
Power supply	power adapter
Dimension (L×W×H)	19.69×11.02×16.14"
Net weight	37.48lb

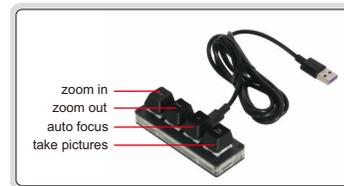
## STANDARD DELIVERY

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

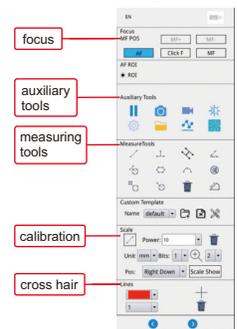
## OPTIONAL ACCESSORY

28" 4K TV	5302-AF-TV28
32" 4K TV	5302-AF-TV32
Computer	5302-AF-COMPUTER
Controller	5302-AF-CONTROLLER

controller (optional, for TV)



## TV SOFTWARE (INCLUDED)



## 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"

## MEASURING ACCURACY

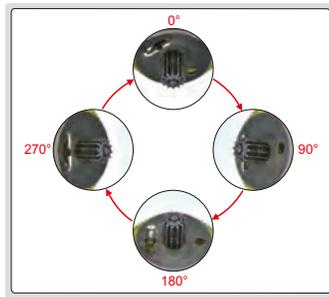
Optical magnification	Measuring accuracy
2X	±.004"
4X	±.004"
6X	±.002"
8X	±.001"
14X	±.001"

## MOTORIZED 3D ROTATION MICROSCOPE PART NO. 5301-D400

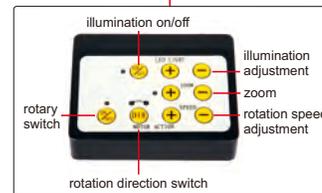
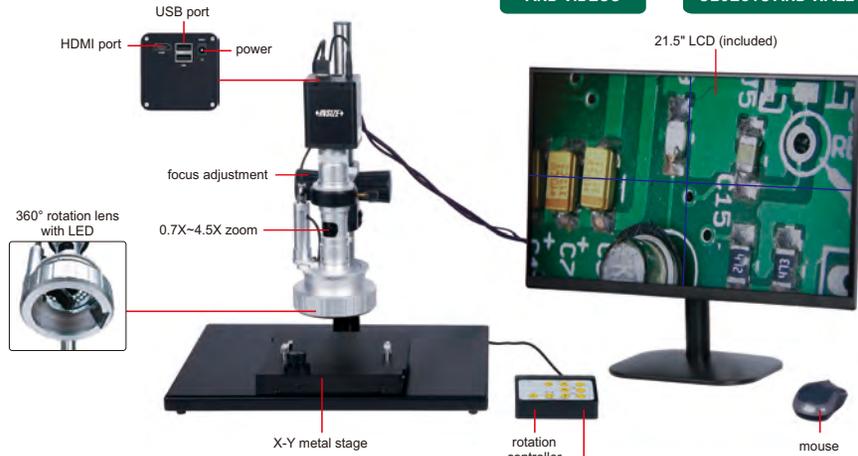
TAKE PICTURES  
AND VIDEOS

SUITABLE TO CHECK CONVEX  
OBJECTS AND WALL OF HOLE

- 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



360° rotation observation

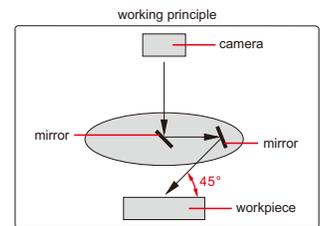


### SPECIFICATION

Magnification	15X~100X
View field	.16×.10~1.10×.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	110/220V, 50/60Hz
Dimension (L×W×H)	22.44×11.81×16.93"
Net weight	14.44lb

### STANDARD DELIVERY

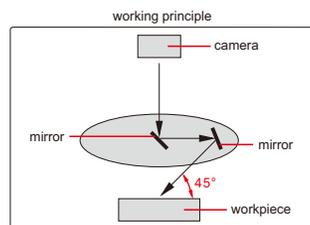
Main unit	1 pc
Rotation controller	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs



## MANUAL 3D ROTATION MICROSCOPE PART NO. 5313-S407

SUITABLE TO CHECK CONVEX  
OBJECTS AND WALL OF HOLES

TAKE PICTURES  
AND VIDEOS

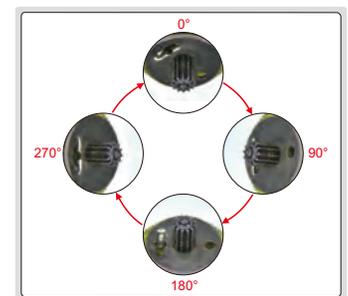


### SPECIFICATION

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"
Net 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)

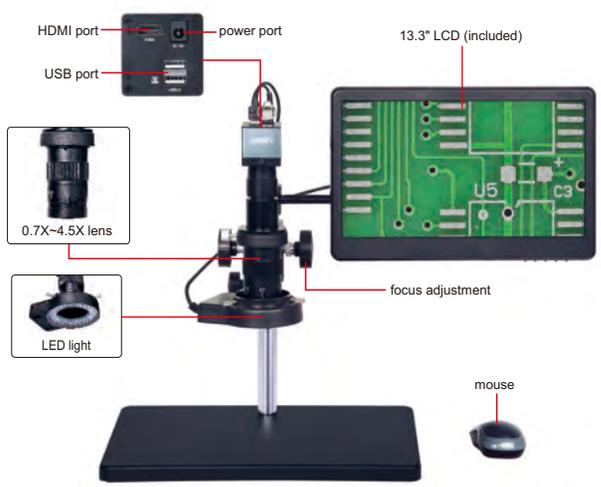
## PART NO. 5318-MD60

BUILT-IN SOFTWARE  
WITHOUT COMPUTER

MEASUREMENT

TAKE  
PICTURES

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



### SPECIFICATION

Magnification	12.5X~80X
Sensor	1/2" 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"
Net weight	9.92lb

### 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×.08"
2X (optional)	magnification	25~160X
	view field	.46×.25~.07×.04"

### 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

### OPTIONAL ACCESSORY

0.5X auxiliary objective	5318-OB05X
2X auxiliary objective	5318-OB2X

### MEASURING SOFTWARE (INCLUDED)



## DIGITAL MEASURING MICROSCOPE

TAKE PICTURES

MEASUREMENT

BUILT-IN SOFTWARE WITHOUT COMPUTER



16G USB flash disk (included)



calibration plate (included)



2X auxiliary objective (optional)



0.5X camera adapter (included)



1X camera adapter (optional)



1X auxiliary objective (included)

- 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

### 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"
Net weight	14.44lb

### MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

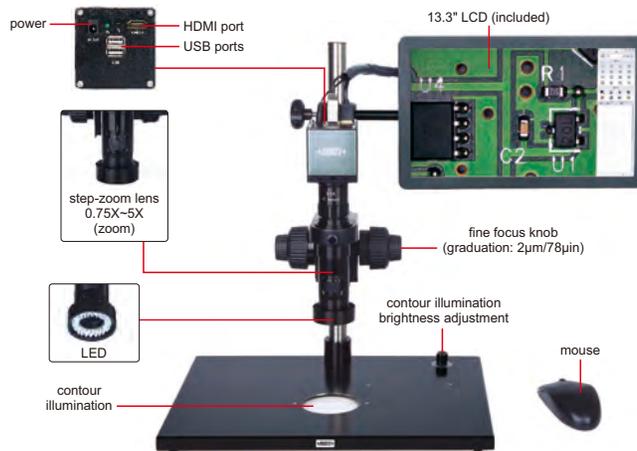
Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	15~100X	30~200X
	focus distance	2.76±.08"	2.76±.08"
	view filed	.63×.43~.1×.06"	.31×.21"~.05×.03"
2X (optional)	magnification	30~200X	60~400X
	focus distance	1.14±.08"	1.14±.08"
	view field	.31×.21~.05×.03"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

### 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



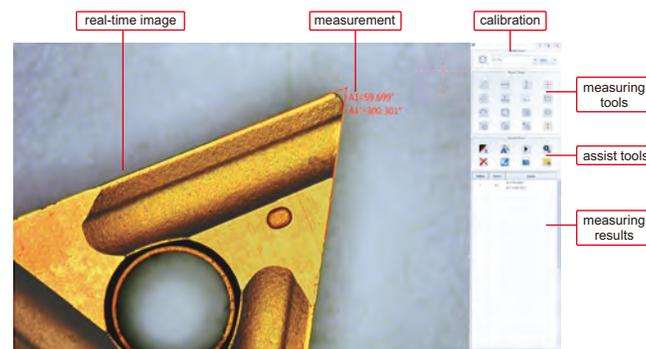
ISM-DL301 (with contour illumination)



### 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"

### SOFTWARE (INCLUDED)

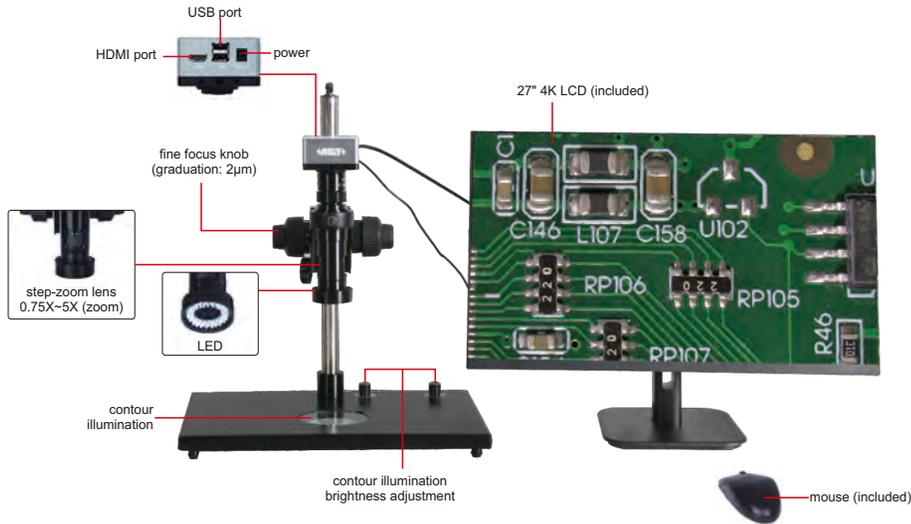


# 4K DIGITAL MEASURING MICROSCOPE PART NO. 5310-DL401

MEASUREMENT

BUILT-IN SOFTWARE  
WITHOUT COMPUTER

TAKE  
PICTURES



- 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



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)



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	32X~210X (on 27" LCD)
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"
Net weight	14.33lb

## STANDARD DELIVERY

Main unit	1 pc
LCD	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	1 pc

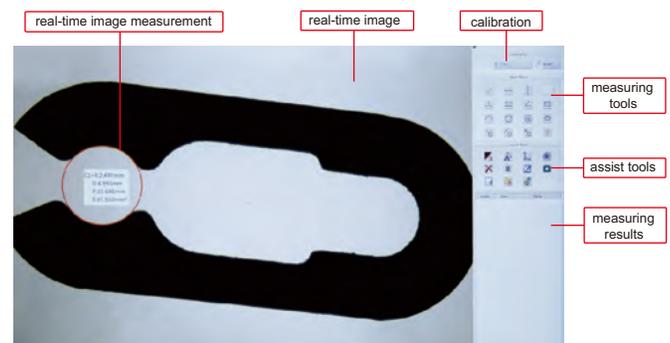
## OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 2.91×2.36")	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

## MAGNIFICATION, VIEW FIELD AND MEASURING ACCURACY

Objective magnification	Image magnification	View field	Measuring accuracy
0.75X	32X	1.60×.41"	±.00020"
1X	42X	.45×.31"	±.00020"
1.5X	63X	.31×.20"	±.00020"
2X	84X	.23×.15"	±.00020"
2.5X	105X	.19×.11"	±.00016"
3X	126X	.15×.10"	±.00016"
3.5X	147X	.12×.09"	±.00016"
4X	168X	.11×.08"	±.00012"
4.5X	189X	.11×.07"	±.00012"
5X	210X	.08×.06"	±.00012"

## SOFTWARE (INCLUDED)



## FLEXIBLE ARM AUTO FOCUS DIGITAL MICROSCOPES

IMAGE STICHING

IMAGE TRANSMISSION



AUTO FOCUS

FOCUS STACKING



16G USB flash disk (included)



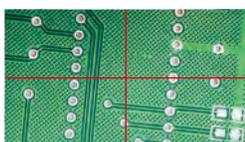
calibration plate (included)



0.5X camera adapter (included)

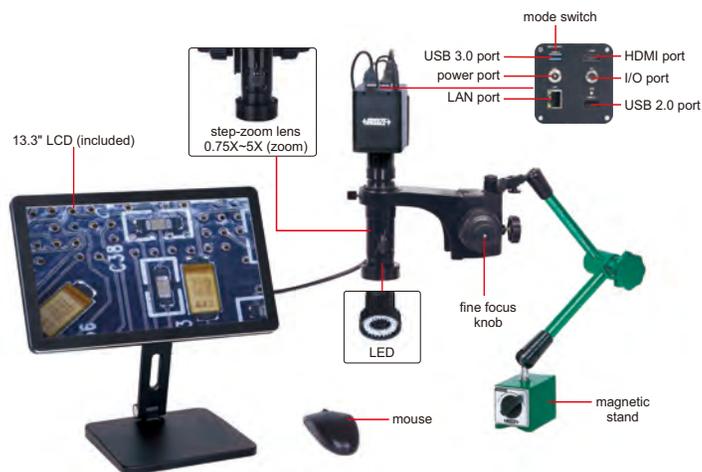


1X auxiliary objective (included)

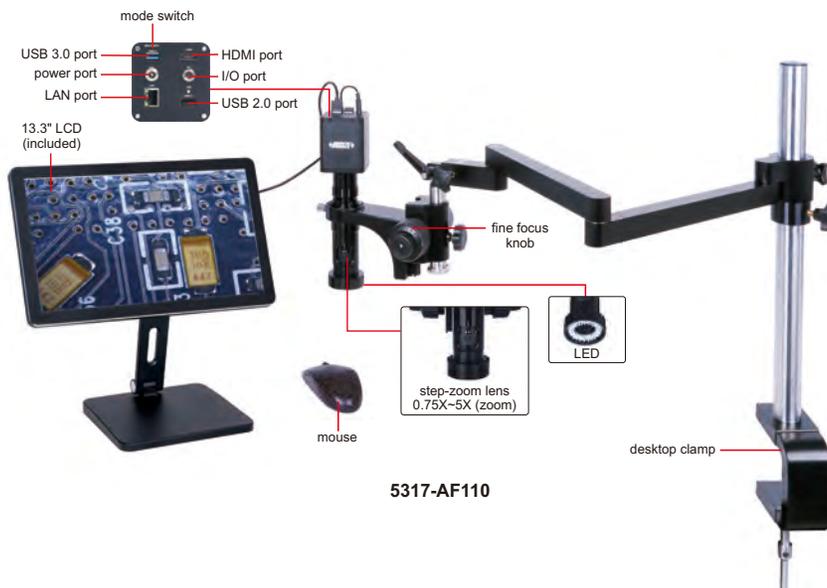


display cross hair (blue/green/red/yellow/black/brown colors)

- 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
- Can switch between monitor mode and computer mode



5317-AF109



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"
Net weight	12.34lb	18.74lb

### STANDARD DELIVERY

Main unit	1 pc
LCD	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"

### 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"

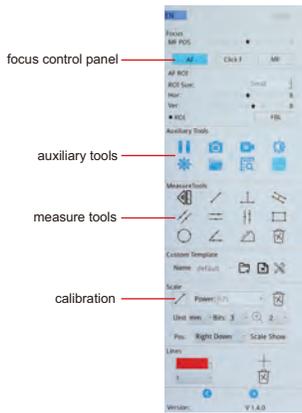
### OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
Auxiliary objective	refer to details

To be continued

Continued from previous page

**SOFTWARE FOR LCD (INCLUDED)**



**MEASURING SOFTWARE (INCLUDED)**



**DIGITAL MEASURING MICROSCOPE (STANDARD TYPE)  
PART NO. 5307-ID100A**



**BUILT-IN SOFTWARE  
WITHOUT COMPUTER**

**ELECTRONIC MAGNIFICATION  
FEEDBACK LENS**

- 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



**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"
Net weight	11.46lb

**STANDARD DELIVERY**

Main unit	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc

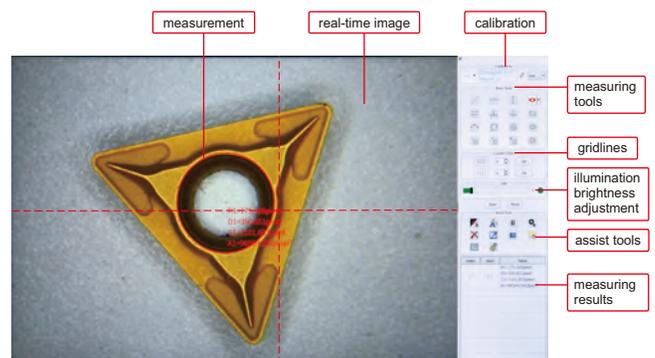
**OPTIONAL ACCESSORY**

0.75X auxiliary objective	5307-ID100A-OB075X
2X auxiliary objective	5307-ID100A-OB2X

**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"

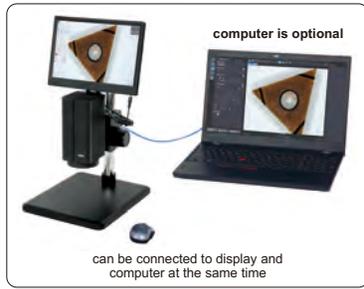
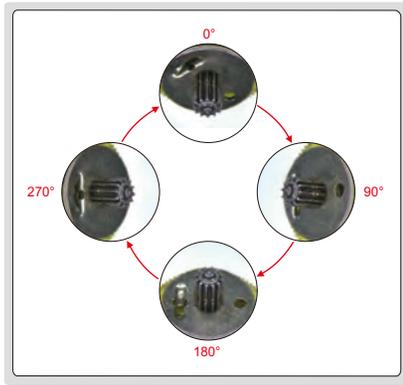
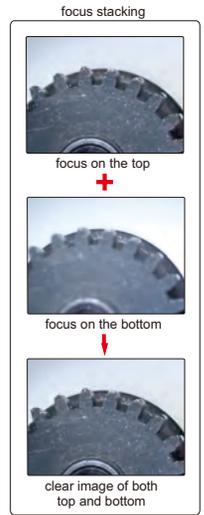
**SOFTWARE (INCLUDED)**



**MOTORIZED ZOOM MICROSCOPE (BASIC TYPE)  
PART NO. 5325-VM100**

- POPULAR MODEL
- DISPLAY ACTUAL MAGNIFICATION
- PROGRAMMABLE SEGMENTED RING LIGHT

- Built-in software without computer
- Can be connected to display and computer at the same time
- Motorized zoom objective
- Display actual magnification
- Programmable segmented ring light
- Take pictures and videos



**SPECIFICATION**

Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Magnification	10~68.5X
Measuring accuracy	±.001"
Max. workpiece height	9.65"
Frame rate	60fps
Output	USB/LAN/HDMI
Power supply	power adapter
Dimension (L×W×H)	10.28×12.60×18.90"
Net weight	11.24lb

**Shortcut Keyboard Function**

- Take picture: take a picture and save it
- Video: record a video
- Freeze: the image can be frozen
- Zoom+: increase the magnification
- Zoom-: reduce the magnification
- Mirror: image horizontal flip over
- Flip: image vertical flip over
- Zoom 1, 2, 3, 4: save the current magnification
- Brightness+: increase the brightness of the light
- Brightness-: reduce the brightness of the light

**STANDARD DELIVERY**

Main unit	1 pc
Glass calibration ruler	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Network cable	1 pc
Shortcut keyboard	1 pc

**MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (on 11.6 inch LCD)**

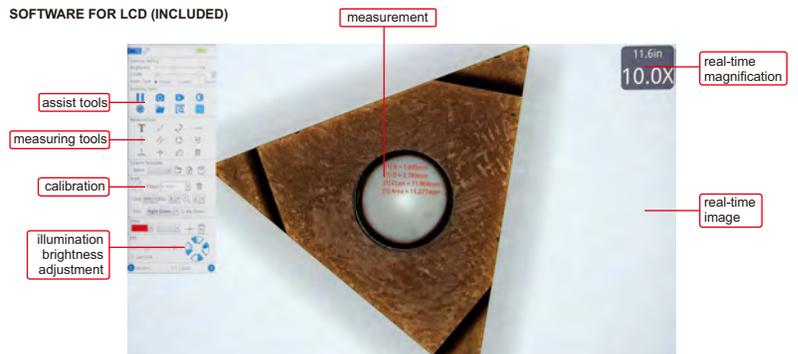
Specification	Objective	
	0.5X (optional)	1X (included)
Magnification	5~34.2X	10~68.5X
Focus distance	7.28"	3.74"
View field	.29×.17~2.09×1.23"	.15×.08~1.04×.61"

**OPTIONAL ACCESSORY**

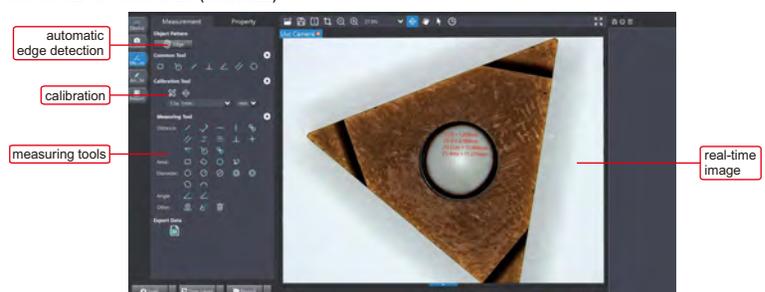
0.5X auxiliary objective *	5325-VM100-OB05X
3D lens	5325-VM100-3D

\* Measurement is not recommended with 0.5X auxiliary objective

**SOFTWARE FOR LCD (INCLUDED)**

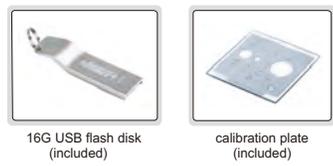


**SOFTWARE FOR COMPUTER (INCLUDED)**

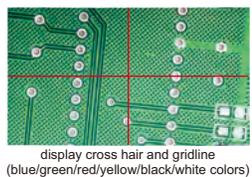


# AUTO FOCUS DIGITAL MICROSCOPE (ADVANCED TYPE) PART NO. 5319-AF290

- 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)



21.5" LCD (included)  
camera and lens (built-in)  
LED  
mouse



- 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 (included)

**Shortcut keyboard function**

- 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

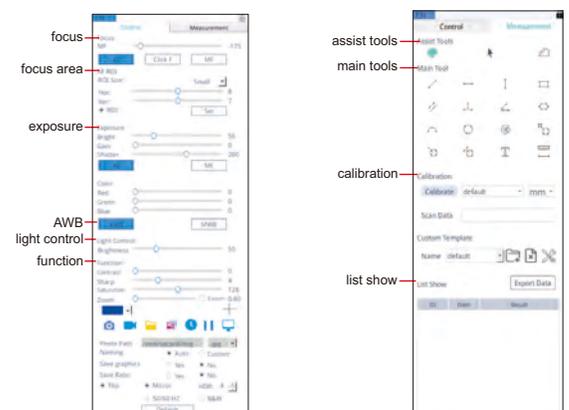
### SPECIFICATION

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)	23.62×11.02×15.35"
Net weight	14.33lb

### 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

### SOFTWARE (INCLUDED)



### FOCUS DISTANCE AND VIEW FIELD

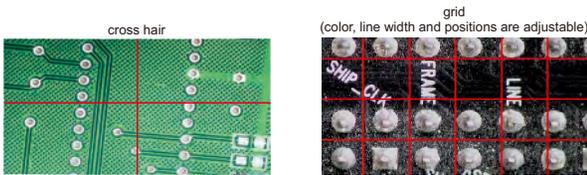
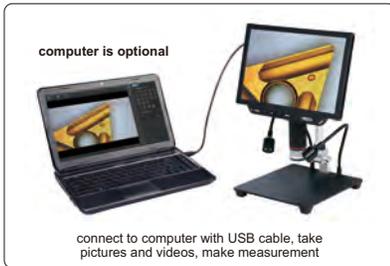
Optical magnification*	0.8X	1X	2X	3X	4X	4.76X
Focus distance	3.46~5.24"	3.46~5.24"	3.86~4.84"	4.05~4.52"	4.25~4.37"	4.25~4.37"
View field	.76×.43~.62×.34"	.59×.32~.50×.28"	.28×.15~.26×.15"	.19×.10~.17×.09"	.14×.08~.13×.07"	.12×.06~.11×.06"

\*The optical zoom lens can be arbitrarily zoomed between 0.8X and 4.76X

**MINI DIGITAL MICROSCOPE (ECONOMIC TYPE)**  
**PART NO. 5311-M710**

TAKE PICTURES AND VIDEOS

BUILT-IN LITHIUM BATTERY



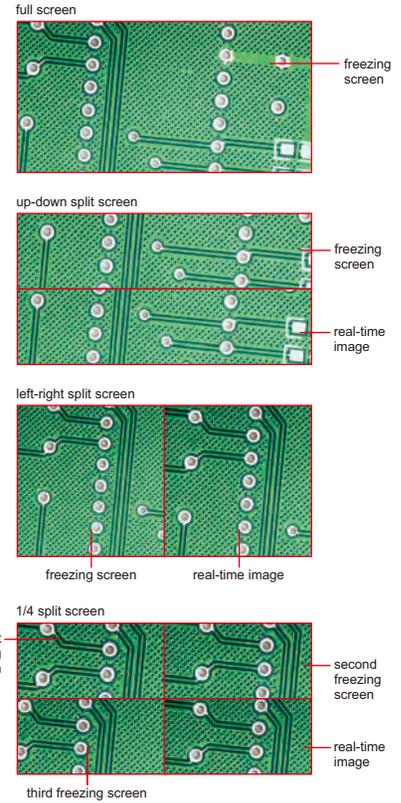
**SPECIFICATION**

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"
Net 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 ruler	1 pc
Power adapter	1 pc

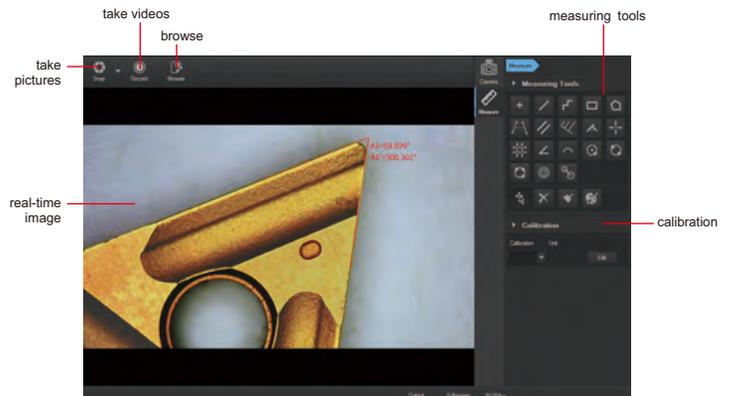
**Screen freezing:**



**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 line and first parallel line
- distance between 2 lines
- arc
- double cross line
- center distance of concentric circle
- radius of a 3-point circle
- area of a rectangle
- straight line length
- point-line distance
- distance between parallel lines
- radius of a circle
- angle
- area of a polygon
- center distance of 2 circles
- cross line
- continuous line length
- radius of a 2-point circle



## DIGITAL MEASURING MICROSCOPES (ECONOMIC TYPE)



universal stand (included in ISM-PM200SB)



software flash disk (included)

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

ISM-PM200SA  
computer is optional

### SPECIFICATION

Part No.	ISM-PM200SA	ISM-PM200SB
Magnification	10X~200X	10X~200X
Stand	standard	universal
Pixel	2M (resolution: 1920×1080)	
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"	1.18"
100X	.55"	.19×.14"	.59"
150X	.55"	.13×.10"	.39"
200X	.75"	.09×.07"	.31"

### STANDARD DELIVERY

Main unit	1 pc
USB flash disk	1 pc

### OPTIONAL ACCESSORY

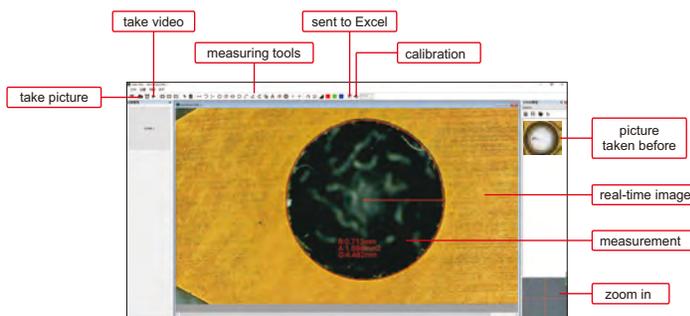
Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE

filter (optional)



### SOFTWARE

- **Language:** English, Japanese, Ukrainian, German, French, Italian, Spanish, Chinese
- **Operation system:** Windows 7/8/XP/Vista

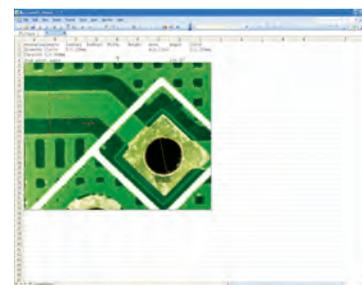


### Measuring tools:

- 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

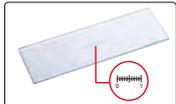
### Data is sent to Excel:



# WIFI DIGITAL MEASURING MICROSCOPE (ECONOMIC TYPE) PART NO. ISM-WF200



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



glass calibration ruler (graduation 0.1mm/.004", 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

### SPECIFICATION

Magnification	10X-200X
Pixel	1.3M (resolution: 1280x1024)
Illumination	built-in adjustable LED
Power supply	built-in rechargeable battery

### STANDARD DELIVERY

Microscope	1 pc
Focus support ring for 80X/150X	1 pc
Focus support ring for 60X/200X	1 pc
Glass calibration ruler (graduation .004"/0.1mm)	1 pc
Plastic calibration ruler (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



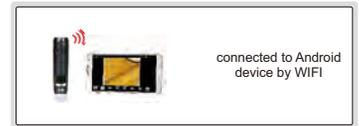
stand (part no. ISM-PM-STAND, optional)



filter (optional)



connected to iPad by WIFI



connected to Android device by WIFI



connected to computer by WIFI

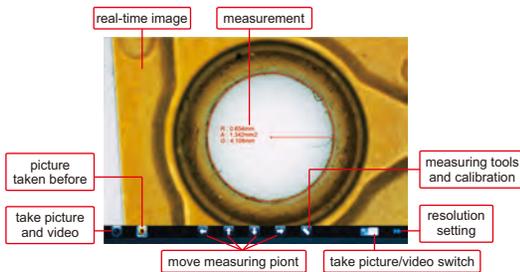


connected to computer by USB cable

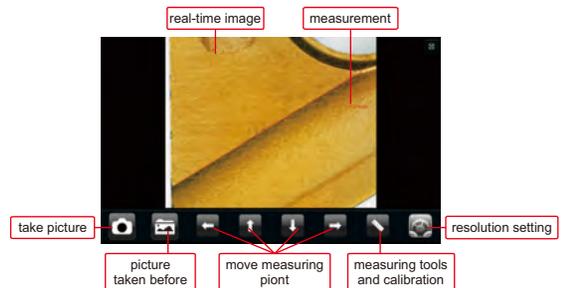
### MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

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

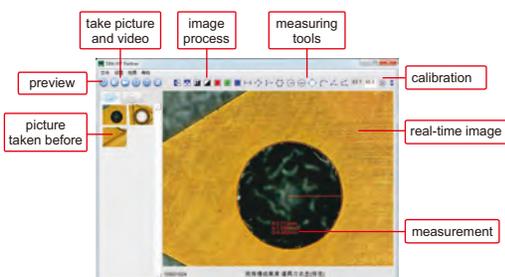
### 1 Software ISM-PAD (for iPad by WIFI)



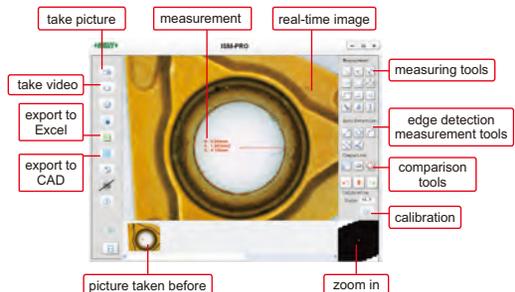
### 2 Software ISM-APK (for Android devices by WIFI)



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



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



## LOW-MAGNIFICATION HIGH-DEFINITION STEREO MICROSCOPES

**INSIZE PLUS**



**ISM-VR200**



**ISM-VR300**



**ISM-VR400**

application



dentistry

jewelry and jade

electronic components



universal stand can rotate up and down and left and right

- Eyepiece-less design is ergonomic and reduces eye and body fatigue
- 3D stereoscopic imaging effect, enhanced hand-eye coordination, true depth of field

### SPECIFICATION

Part No.	ISM-VR200	ISM-VR300	ISM-VR400
Stand type	crescent stand	square stand	universal stand
Objective	4X	4X	4X
Focus distance	3.78"	3.78"	3.78"
View filed	1.08" DIA	1.08" DIA	1.08" DIA
Dimension (L×W×H)	19.69×15.98×20.98"	9.84×15.98×20.98"	9.45×17.87×23.82"
Net weight	12.8lb	15.2lb	11.7lb

### STANDARD DELIVERY

Main unit	1 pc
Objective	1 pc
Light source power adapter	1 pc
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

8X objective	ISM-VR-OB8X
--------------	-------------

ZOOM STEREO MICROSCOPES (STANDARD TYPE)



ISM-ZS50



LED ring light (optional)

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"	
Net weight	10.80lb	

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X*
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (graduation 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

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

## ZOOM STEREO MICROSCOPE (BASIC TYPE) PART NO. ISM-ZS30



### 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"
Net 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



LED ring light (optional)



### OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS30-OB05X *
	0.63X	ISM-ZS30-OB06X *
	0.75X	ISM-ZS30-OB07X *
Eyepiece	2X	ISM-ZS30-OB2X
	10X dividing eyepiece (graduation .004"/0.1mm)	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)



### 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"
Net weight	4.63lb

### STANDARD DELIVERY

Main unit	1 pc
10X eyepieces	1 pair
0.8X objective	1 pc
Anti-dust cover	1 pc



5305-ZS90



LED ring light (optional)

### 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

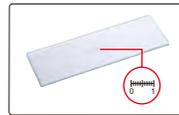
# DIGITAL CAMERA FOR MICROSCOPES PART NO. ISM-CM63

ATTENTION: ADAPTERS ARE NEEDED  
ACCORDING TO MICROSCOPES

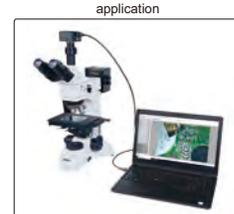


C-mount port

- 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 ruler (included,  
graduation .004"/0.1mm)



application

adapter 0.75X (optional)



software (included)

selectable resolution

measurement items

real time gray calibration

histogram  
(quantify the distribution of color and brightness)

black balance  
(reduce color difference)

flat field correction  
(reduce brightness difference)

dark field correction  
(reduce thermal noise)

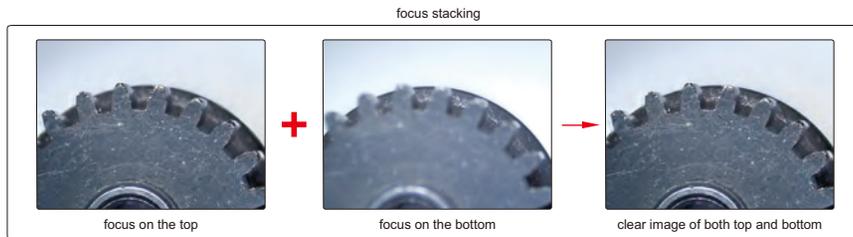
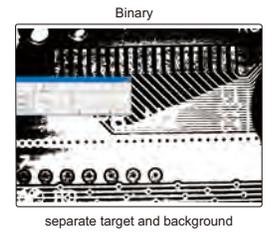
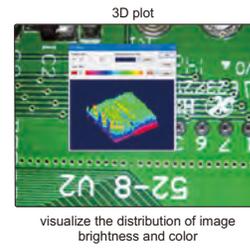
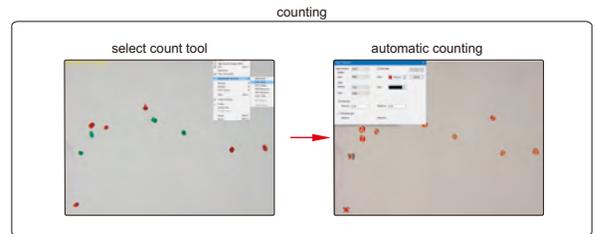
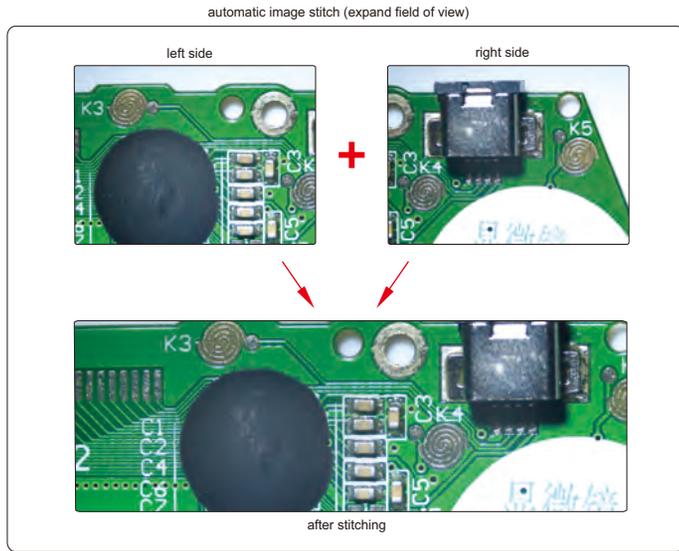
The software can control image completely, including measurement, image stitch, extend focus depth, image gray processing, RGB histogram observation, image color sampling, 3D plot(3D representation of image intensity), image exposure, white balance, black balance, image bit depth, flat field correction and dark field correction, etc.

### Measurement tools:

- |   |   |  |
|---|---|--|
| measure length of line or distance between two points | measure axis lengths, girth and area of ellipse | measure diameter, length, perimeter angle of arc |
| measure rectangle                                     | calibration                                     | measure area of polygon                          |
| measure angle   | measure distance between two parallel lines     | measure center distance between two circles      |
| measure radius, girth and area of circle              | measure width and diameter of ring              | measure length of open curve                     |

To be continued

Continued from previous page



### 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
Net weight	.88lb

### STANDAER DELIVERY

Camera (USB cable included)	1 pc
Glass calibration ruler (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

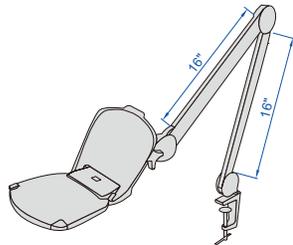
- Four steps brightness adjustment
- LED illumination, working life 20000h
- Resin lens

#### SPECIFICATION

Magnification	1.75X
Dioptr	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

#### SPECIFICATION

Part No.	7520-320D	7521-3D
Magnification	two magnification 1.75X/6X	1.75X
Dioptr	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

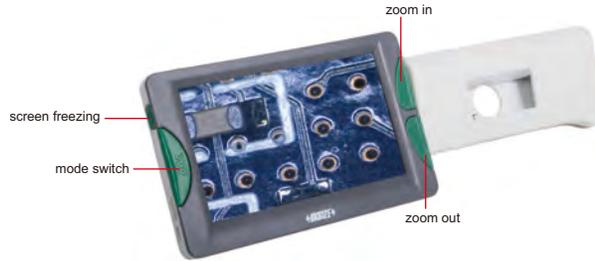
#### SPECIFICATION

Magnification	2.25X
Dioptr	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



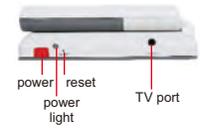
after the handle is folded, the magnifier can be directly placed on the object for observation



side and back



illumination lens illumination



power reset power light TV port



screen freezing type-C port



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)
Net weight	.46lb

### STANDARD DELIVERY

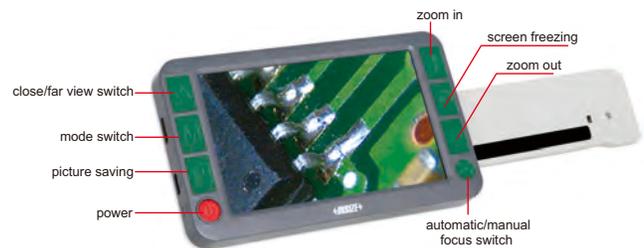
Main unit	1 pc
Video output cable	1 pc
USB charging cable	1 pc
Power adapter	1 pc

## DIGITAL MAGNIFIER PART NO. 7526-D5

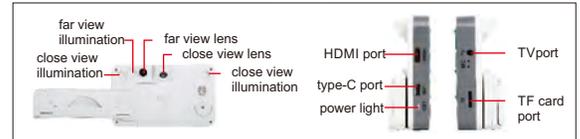


VIDEO

- 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

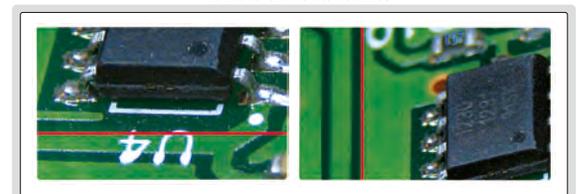


side and back



far view illumination far view lens close view illumination close view lens HDMI port TV port type-C port power light TF card port

horizontal and vertical red lines



after the handle is folded, the magnifier can be directly placed on the object for observation

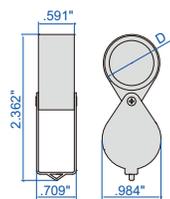


Screen size	5"
Screen resolution	800x480
Magnification	2X-32X
Close view pixel	8M
Far view pixel	8M
Focus	manual/automatic
Color mode (26 modes)	color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on 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)
Net weight	.61lb

### STANDARD DELIVERY

Main unit	1 pc
HDMI cable	1 pc
Video output cable	1 pc
USB charging cable	1 pc
Power adapter	1 pc

### FOLDING MAGNIFIER



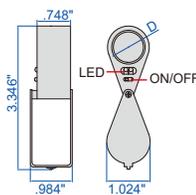
7511-8



- 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)

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



### FOLDING MAGNIFIER WITH ILLUMINATION

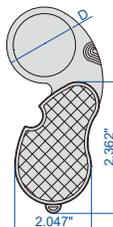


7514-1

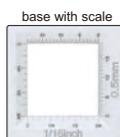


- Resin lens
- Powered by 2xCR1620 batteries (included)
- LED lights up automatically when opened

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



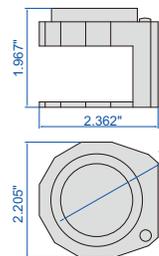
### MAGNIFIER WITH ILLUMINATION



7524-10

- Glass lens
- Powered by 3xAG7 batteries
- 3 pcs LED and 3 pcs UV
- Base with scale, graduation: 1/16", 0.5mm

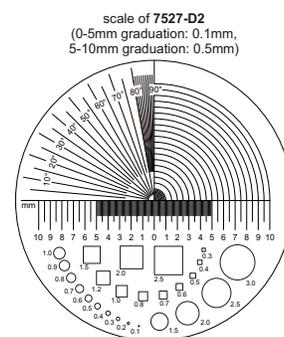
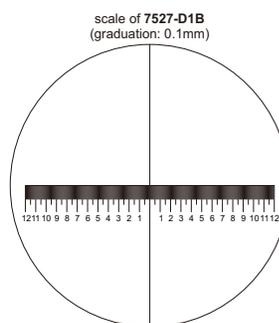
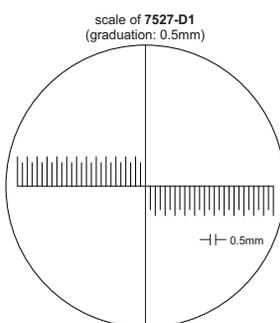
Part No.	Magnification	Lens diameter (D)
7524-10	10X	1.181 DIA



### MEASURING MAGNIFIERS (WITH ILLUMINATION)

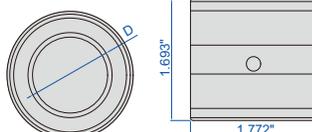


7527-D1



- Base with scale
- With 5 white LED and 5 UV LED
- Charging port: Type-C
- Work for 1.5h after fully charged

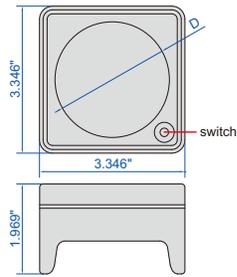
Part No.	Magnification	Lens diameter (D)
7527-D1	10X	1.181" DIA
7527-D2	10X	1.181" DIA
7527-D1B	10X	1.181" DIA



### 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

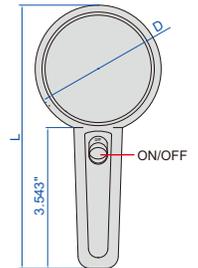


7513-4



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

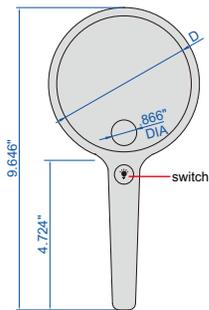
Part No.	Magnification	Lens diameter (D)	L
7513-2	2X	2.953" DIA	6.693"
7513-4	4X	1.969" DIA	5.709"



### MAGNIFIER WITH ILLUMINATION



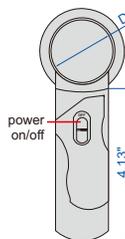
7529-24



- 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



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

Part No.	Magnification	Lens number	Magnification	Lens diameter (D)
7522-610	6X	2 pcs	6X	1.97" DIA
			10X	1.46" DIA

### MAGNIFICATION GLASSES

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



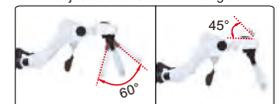
7523-3D5



interchangeable lenses



adjustable lens and LED angle



head band (included)



2 pcs LED



adjustable holder angle



moveable lens for focus



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

**THREE WAYS MAGNIFIER WITH ILLUMINATION**

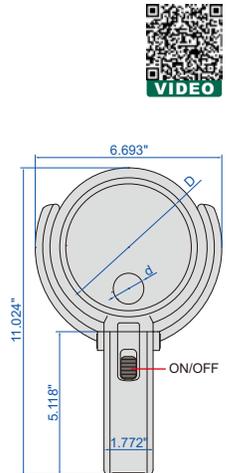


- Resin lens
- Powered by 2xAA batteries (included) or power adapter (110~240V, 50~60Hz)

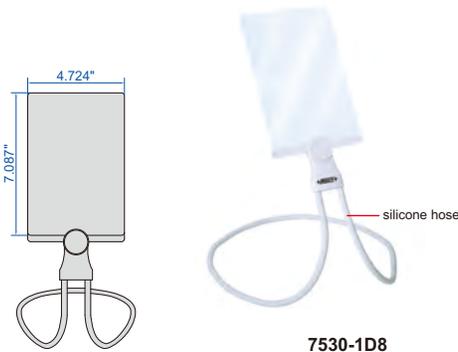
Part No.	Magnification	Lens diameter (D/d)
7512-1	2X/4X	4.724" DIA/1.102" DIA



7512-1



**MAGNIFIER**



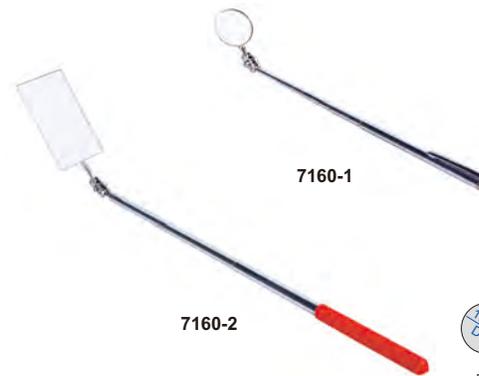
7530-1D8



- Resin lens
- Silicone hose can be shaped according to needs
- Can be used on table or hanging around neck

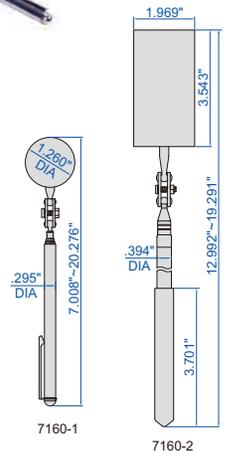
Part No.	Magnification	Lens size
7530-1D8	1.8X	7.087x4.724"

**TELESCOPING INSPECTION MIRRORS**



7160-1

7160-2



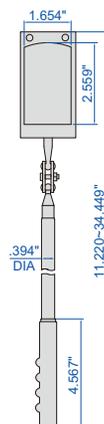
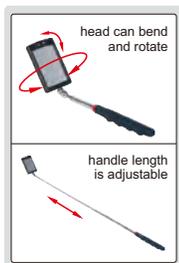
- Inspect hidden areas
- Rotation of the mirror: 360°
- Length of handle is adjustable, handle is made of stainless steel

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



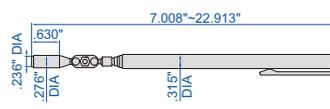
- Inspect hidden areas
- Head can bend and rotate
- Telescoping handle, made of stainless steel
- With two CR2032 batteries

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"

## 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



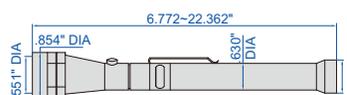
7163-1



head can bend, handle length is extendible



handle is closed



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



WiFi real-time image transmission

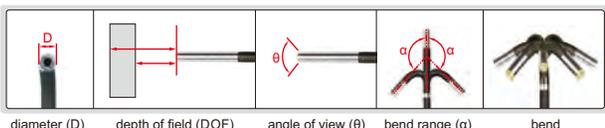


VIDEO

tungsten wire weaved cable length: 60"



ISV-K6015



diameter (D) depth of field (DOF) angle of view (θ) bend range (α) bend

### 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)		
Net weight	2.205lb		



ISV-K-CLAMP (optional)



changeable lens cable



ISV-K-MAGNET (optional)



ISV-K-HOOK (optional)

### 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

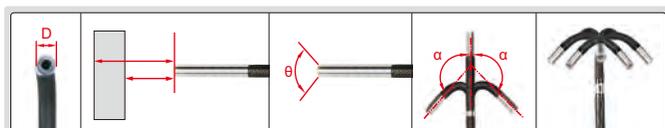
## VIDEOSCOPE (BASIC TYPE)



POPULAR MODEL

TUNGSTEN WIRE WEAVED CABLE  
BREAK AND WEAR RESISTANCE

IP67  
WATERPROOF



diameter (D)    depth of field (DOF)    angle of view ( $\theta$ )    bend range ( $\alpha$ )    bend in 4 directions

### SPECIFICATION

<b>Part No.</b>		<b>ISV-J6010</b>
<b>Lens</b>	diameter (D)	.236" DIA
	pixel	1M
	resolution	1280×720
	depth of field	.394"~∞
	bending direction	four directions
	bending range ( $\alpha$ )	±160°
	angle of view ( $\theta$ )	120°
	illumination	front LED
	lens	sapphire glass lens
	dust/waterproof	IP67
<b>bend control</b>		manual joystick
<b>Cable</b>	length	40"
	type	wire weaved cable
<b>Main unit</b>	display	5" HD screen (resolution: 1920×1080)
	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)
<b>Net weight</b>		2.205lb



ISV-J6010

### STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
AC/DC adapter	1 pc

WIFI real-time image transmission



### 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

## MOBILE PHONE VIDEOSCOPE PART NO. ISV-P6

- For Android and IOS mobile phones

### SPECIFICATION

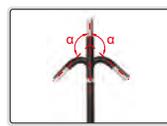
Diameter of lens (D)	.24"±.008" DIA
Length of cable	40"
Resolution	960×720, 1280×720 (switchable)
Depth of field	.79"~∞
Angle of view ( $\theta$ )	100°
Bending range ( $\alpha$ )	0~180°
Illumination	LED with 3 levels control
Cable type	wear resistant
Interface	USB, type-C
Mobile phone system	Android, IOS
Power supply	rechargeable battery (for 2 hours working)
Dimension (L×W×H)	7.68×2.24×4.13"
Net 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



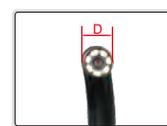
the clamping range of mobile phone bracket L=2.20-3.74"



bending of lens up to 180°



angle of view



lens with LED



bend in any direction

## VIDEOSCOPE (BASIC TYPE) PART NO. ISV-E40



**IP67**  
WATERPROOF

MEMORY CABLE CAN  
BE FIXED AT ANY SHAPE



45° mirror (included)

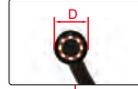


hook (included)



magnet pick up (included)

lens with 8 pcs LED  
adjustable illumination



memory  
cable



### 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"	
Net 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



cable can be wrapped  
around the main unit



hook (included)



magnet pick up (included)

lens  
(adjustable  
illumination)

memory cable  
length: 40"



**IP67**  
WATERPROOF



### 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"	
Net 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%

## PEN TYPE ELECTROMAGNETIC ULTRASONIC THICKNESS GAUGE

COUPLING AGENT IS NOT REQUIRED

MEASUREMENT THROUGH COATING AND RUST LAYER

WORK AT MAXIMUM 600°C

WITH A AND B SCAN



normal temperature probe (included)

EMU-A100

- Measurement without ultrasonic coupling agent, for workpieces with surface temperatures less than 600°C (depending on the probes)
- Compact size, easy to carry, comes with waveform display and full-function keyboard, easy to adjust the measurement parameters
- Non-contact measurement of rough, corroded surfaces without sanding
- Storage of 10000 data and 100 files
- Highly intelligent functions such as alarm for exceeding upper and lower limits, automatic zero calibration, automatic identification of probes, etc.
- Automatic power off
- Suitable for inspection of workpieces of various shapes, such as pipes, small tubes, elbows, etc.



high temperature probe (optional)



calibration block (included)

### SPECIFICATION

Part No.	EMU-A100
Data output	USB
Measuring range	refer to the specification of probes
Resolution	.001"
Accuracy	±.002" (H≤.394") ±(.002"+H/1000)" (.394"≤H<3.937") ±H/333" (H≥3.937") H is measuring thickness in inch
Working gap (the distance between the probe and the measured object)	≤.04"
Gain	automatic and manual gain
Material velocity	.0394~.3937 inch/μs
Measurement frequency	2 times/second 10 times/second fast measurement mode
Measuring mode	auto mode, manual mode
Display	LED, 800×268
Storage	10000 data stored in 100 files
Power supply	5V rechargeable lithium battery, 6 hours working time
Operation temperature	-14°F~662°F
Dimension	7.09×1.38×1.34"
Net weight	.66lb



A-Scan



B-Scan

### STANDARD DELIVERY

Main unit	1 pc
Normal temperature probe	1 pc
Calibration block (.31")	1 pc
USB cable	1 pc

### OPTIONAL ACCESSORY

High temperature probe	EMU-B100-T02
------------------------	--------------

### SPECIFICATION OF PROBES

Part No.	Magnet	Measuring range	Diameter (d)	Working temperature	Applications
EMU-B100-T01 (included)	permanent magnet	.06"~5.90"	.78" DIA	14~248°F	general use, mainly used for fine crystal materials, such as mild steel, aluminum
EMU-B100-T02 (optional)	permanent magnet	.06"~11.81"	.98" DIA	14~1112°F	high temperature environment, mainly used for ferromagnetic fine crystal materials, such as mild steel

# ULTRASONIC THICKNESS GAUGE (ADVANCED TYPE) PART NO. ISU-800D

PENETRATE COATING AND MEASURE  
THE THICKNESS OF SUBSTRATE

BLUETOOTH

REAL-TIME TEMPERATURE  
COMPENSATION

DATA  
OUTPUT



- Real-time temperature compensation eliminates the error caused by temperature variation
- Support both single element transducers and dual element transducers
- Measure the thickness of substrate through coating
- Measuring mode: standard mode (dual element transducer: P-E mode, single element transducer: I-E mode), penetrate coating mode (dual element transducer: I-E mode, single element transducer: E-E mode or auto mode)
- Measure method: single point, scanning, deviation
- Set upper and lower limits for alarm when out-of-tolerance
- Single point and 2 points calibration
- Keyboard lock function avoids parameter setting change caused by unintended press during measurement
- Memory 1000 measurement values
- Data can be transferred to PC by Bluetooth connection or Mini-USB cable



delay block  
ISU-S15-P06-CB  
(optional)



delay block  
ISU-S15-P06-CB1  
(optional)



transducer  
ISU-S2M-P14  
(optional)

transducer  
ISU-G5M-P10  
(optional)



transducer  
ISU-G5M-P08  
(optional)

transducer  
ISU-G7M-P06  
(optional)



transducer  
ISU-G2M-P12  
(optional)

transducer  
ISU-H3M-P12  
(optional)

### SPECIFICATION

Measuring range	refer to the specification of transducers
Resolution	.001"/.0001"
Accuracy	refer to the specification of transducers
Data output	bluetooth and USB
Velocity	1~19999m/s
Power supply	3.7V rechargeable lithium battery
Dimension	6.2×3.1×1.5"
Net weight	.57lb

### STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-S15-P06	1 pc
Power adaptor	1 pc
USB cable	1 pc
Couplant	1 bottle

### OPTIONAL ACCESSORY

Transducer	refer to the specification of transducers
Couplant (for ISU-H3M-P12)	ISU-HT5-COULPLANT
Thermal printer (with cable)	ISU-800D-PRINTER

### SPECIFICATION OF TRANSDUCERS (ON STEEL)

Part No.	Type	Frequency	Diameter (d)	Measuring range	Minimum size of pipes (diameter × wall thickness)	Accuracy	Applicable temperature	Application
ISU-S15-P06 (Included)	single element	15MHZ	.31" DIA	I-E: .04~1.10" E-E: .01~.55"	.39×.06" .59×.01"	±.001"/.3%H* (take the larger one)	14~140°F	high precision or thin workpieces
ISU-S15-P06-CB (optional) **	-	-	.20" DIA	I-E: .04~.39" E-E: .01~.20"	.39×.05" .59×.01"			high precision or irregular surface
ISU-S15-P06-CB1 (optional) **	-	-	.31" DIA	I-E: .04~1.5" E-E: .01~.75"	-			high precision or thick workpieces
ISU-S2M-P14 (optional)	single element	2MHZ	.75" DIA	I-E: 1.18~78.74" E-E: 1.18~39.37"	-	±.5%H*	14~590°F	ultra-thick workpieces
ISU-G5M-P10 (optional)	dual element	5MHZ	.51" DIA	.03~11.81"	.98×.12"	±.002" (range: <.4") ±H/333* (range: ≥.4")	14~140°F	normal workpieces
ISU-G5M-P08 (optional)	dual element	5MHZ	.43" DIA	.03~8.86"	.79×.05"			curved surface and normal workpieces
ISU-G7M-P06 (optional)	dual element	7.5MHZ	.35" DIA	.03~1.94"	.59×.05"			curved surface and small workpieces
ISU-G2M-P12 (optional)	dual element	2MHZ	.67" DIA	.12~27.56"	1.18×.16"	±.002"/0.5%H* (take the larger one)		castings and thick workpieces
ISU-H3M-P12 (optional)	dual element	3MHZ	.59" DIA	.08~7.87"	.98×.12"	±.002"/0.5%H* (take the larger one)	14~590°F	workpieces with high temperature

\* H is the measured thickness in inch

\*\* Delay blockers, suitable for transducer ISU-S15-P06

# ULTRASONIC THICKNESS GAUGE PART NO. ISU-250C



**INSPECTION  
CERTIFICATE**

**DATA  
OUTPUT**

- 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	4.57×2.52×1.06"
Net weight	.49lb



### 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



transducer ISU-T13 (optional)



transducer ISU-T12 (optional)



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)

### OPTIONAL ACCESSORY

Transducer	ISU-T04, ISU-T06, ISU-T12, ISU-T13
Couplant (for ISU-T13)	ISU-HT5-COULPLANT

### 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

## ULTRASONIC THICKNESS GAUGE PART NO. ISU-200D



POPULAR  
MODEL

- With zero calibration and two-point calibration function, can automatically correct the system error
- Measure method: single point, scanning, deviation
- Measures steel, cast iron, aluminum, copper, plastics, ceramics, glass, fiberglass, etc
- Set upper and lower limits for alarm when out-of-tolerance
- Memory 500 measurement values



### SPECIFICATION

Measuring range	refer to the specification of transducers
Resolution	.001"
Accuracy	±.002" (H<.4") ±0.5%H (H≥3.937") H is the thickness to be measured in inch
Velocity	39"~393"/s
Measuring frequency	4 times/second
Operation temperature of main unit	-4~122°F
Output	USB
Measuring unit	inch/mm
Power supply	3×1.5V AAA batteries
Dimension	5.90×2.76×1.18"
Net weight	.40lb

### OPTIONAL ACCESSORY

Transducer	refer to the specification of transducers
Couplant (for ISU-200D-HT5)	ISU-HT5-COUPPLANT
Thermal printer (with cable)	ISU-200D-PRINTER



### STANDARD DELIVERY

Main unit	1 pc
Transducer (ISU-200D-N05)	1 pc
Battery (AA)	3 pcs
USB cable	1 pc
Couplant	1 bottle

### 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-200D-N05 (included)	5.0MHz	.51" DIA	.031~11.81"	.98×.12"	-14~140°F	general use
ISU-200D-N02 (optional)	2.0MHz	.67" DIA	.12~15.75"	1.18×.16"	-14~140°F	for casting steel
ISU-200D-N07 (optional)	7.5MHz	.35" DIA	.030~1.97"	.59×.05"	-14~140°F	for thin material
ISU-200D-W05 (optional)	5.0MHz	.43" DIA	.031~8.86"	.79×.05"	-14~140°F	for wall thickness
ISU-200D-HT5 (optional)	3.0MHz	.59" DIA	.079~7.89"	.98×.12"	-14~590°F	for high temperature

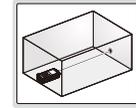
## LASER DISTANCE METERS

POPULAR MODEL

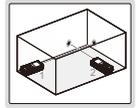


9561-50B

- Large display with backlight
- Unit: m, ft, in, ft+in
- Distance, area, volume and height measurement
- Continuous measuring mode to track maximum and minimum value
- Memory of 30 measurement values
- Automatic power off: laser 30s, main unit 180s



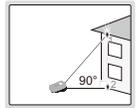
distance measurement



area measurement



volume measurement



height measurement

### SPECIFICATION

Part No.	9561-50B	9561-70B
Measuring range	8"~164ft	8"~229ft
Resolution	0.001m, .001ft, 1/16"	
Accuracy	$\pm(.12+D/1666)''$ 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"	
Net weight	.21lb	

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

## MINI LASER DISTANCE METER PART NO. 9565-E40

BUILT-IN BLUETOOTH



- Built-in bluetooth, transmission distance is 32ft (no obstacles, no electromagnetic interference)
- Display with backlight
- Unit: m, ft, in, ft+in
- Distance, area, volume and height measurement
- Automatic power off: laser 30s, main unit 180s



bluetooth connect to phone (APP)

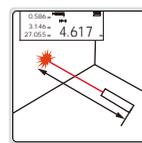


### SPECIFICATION

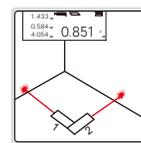
Measuring range	.65~131ft
Resolution	.001ft, 1/16", .001m
Accuracy	$\pm(.12+D/1666)''$ , D: measured distance, unit: ft
Laser type	red laser, 24.80~26.38μm, class II, <1mW
Charging interface	USB (type-C)
Dimension	7.09×1.10×1.57"
Net weight	.12lb

### STANDARD DELIVERY

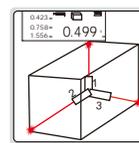
Main unit	1 pc
USB charging cable	1 pc



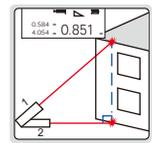
distance measurement



area measurement



volume measurement



height measurement

## AUTO LEVEL PART NO. TSB-A30



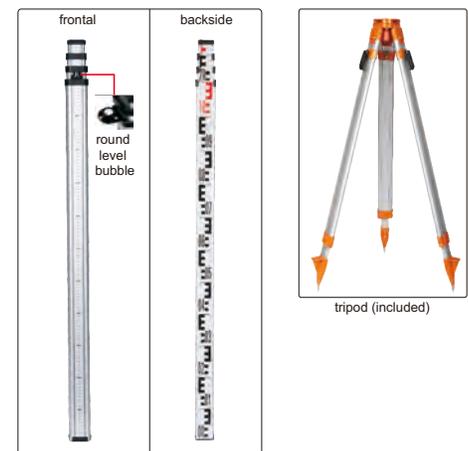
- Widely used in surveying and mapping engineering, construction engineering and many other precise measurement fields
- Formed hanging wires and magnetic dampers are adopted
- High anti-interference ability, adaptable to complex environments

### SPECIFICATION

Standard deviation of round trip leveling measurement per kilometer	using indium steel ruler	.059"
	using a tower ruler	.098"
Telescope magnification		30X
Field of view		1° 30'
Shortest visible distance		23.62"
Stadia multiplication constant		100
Stadia addition constant		0
The working range of the compensator		±10'
Setting accuracy		±0.5"
Round level bubble accuracy		8'/.079"
Angle disk graduation value		1°/1gon
Dimension (L×W×H)		8.50×5.04×5.43"
Net weight		3.42lb

### STANDARD DELIVERY

Main unit	1 pc
Tripod	1 pc



TSB-A30-4M tower ruler (optional)

### TOWER RULER (OPTIONAL)

Part No.	TSB-A30-4M	TSB-A30-5M
Measuring range	157.48"	196.85"
Resolution	.039"	
Full scale accuracy	±.118"	
Precision per decimeter	±.039"	
Precision per centimeter	±.039"	

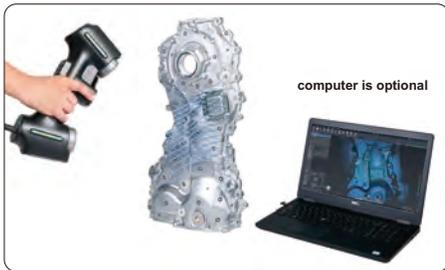
## HANDHELD 3D SCANNER PART NO. LSM-L340



- Three scanning modes to suit different situations
- AI algorithm module, greatly improve the scanning effect
- Highly efficient scanning with ultra-fast measuring speeds
- Metrology-grade measuring accuracy
- Optional photogrammetry function

To be continued

Continued from previous page



high-speed scanning: 26 cross blue laser lines



deep hole scanning: 1 blue laser line



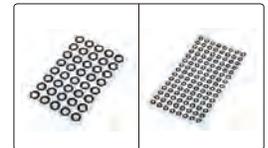
precision scanning: 7 parallel blue laser lines

**SPECIFICATION**

Scanning mode	high-speed scanning	26 cross blue laser lines
	precision scanning	7 parallel blue laser lines
	deep hole scanning	1 blue laser line
Maximum scanning speed	5400000 measurements/s	
Volume accuracy	0.015mm+0.035mm/m (standard configuration) 0.015mm+0.025mm/m (required optional photogrammetric rulers)	
Laser class	CLASS II (eye-safe)	
Maximum resolution	0.01mm	
Depth of field	21.6"	
Reference distance	11.8" (high-speed scanning, deep hole scanning), 7.9" (precision scanning)	
Maximum scanning field	25.6×21.6"	
Output format	stl, ply, txt, asc	
Operation temperature	14~104°F	
Interface	USB3.0	
Power supply	100~240V, 50/60Hz	
Dimension (L×W×H)	13.2×5.5×2.8"	



calibration plate (included)



R3mm and R1.5mm marks (included)

**STANDARD DELIVERY**

Main unit	1 pc
Scanning software	1 pc
R1.5mm mark	1000 pcs
R3.0mm mark	4000 pcs
Calibration plate	1 pc

**OPTIONAL ACCESSORY**

3D measuring software	CMM-CEM-PI
Photogrammetric rulers	LSM-L340-RULER
Computer	customized according to measuring requirements



photogrammetric rulers (optional)

**SCANNING SOFTWARE (INCLUDED)**

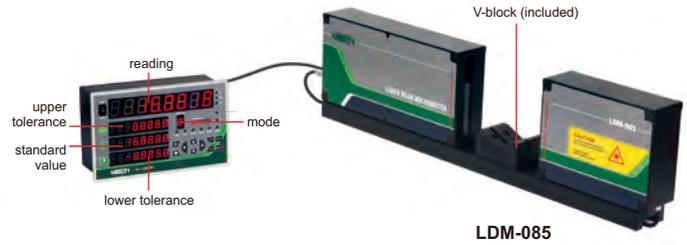
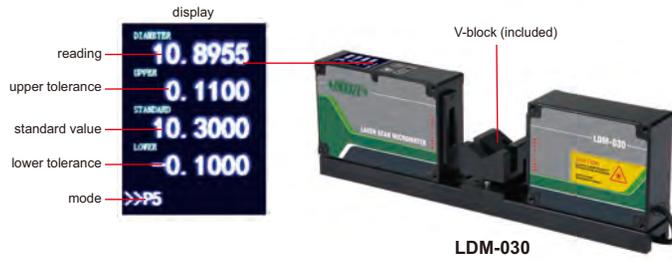
image-guided calibration

point cloud meshing

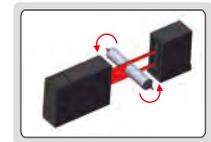
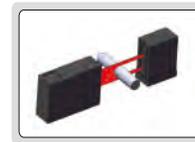
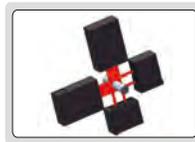
invalid area removal

scanning splicing

# LASER SCAN MICROMETERS (ADVANCED TYPE)

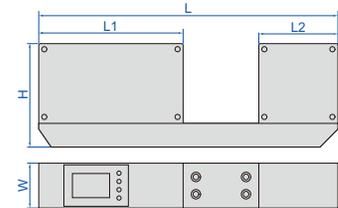


- Measure outer diameter, ellipticity, run-out, maximum diameter of tools, etc.
- Can be used for transparent or non transparent workpieces
- Tolerance measurement
- Online or offline measurement
- Connected with computer, PLC, control box



## SPECIFICATION

Part No.	LDM-030	LDM-065	LDM-085
Measuring range	.004~1.18"	.02~2.5"	.04~3.35"
Accuracy (at 77°F)	±(.00002+.01%D)", D is measuring diameter in inch		±.00024"
Small-range accuracy* (calibration position ±.16", at 77°F)	±.00004"		±.00008"
Repeatability (at 77°F)	±(.00001"+.005%D)", D is measuring diameter in inch		.00012"
Resolution	.00001"/.0001"/.001"/.01" selectable		
Laser wave length	25.59μm		
Measuring speed	800times/s		
Operation temperature	32~122°F		
Operation humidity	35~85% without condensation		
Output	dual channel RS485, network port		
Alarm output	24V, 1A		
Power supply	DC24V, 2A		
Dimension (L×W×H)	14.76×1.81×4.72"	19.49×1.81×6.14"	23.94×2.36×6.38"
Net weight	11.02lb	17.64lb	22.04lb



## Dimension

Part No.	LDM-030	LDM-065	LDM-085
L	14.76"	19.37"	23.94"
W	1.81"	1.81"	2.36"
H	4.72"	6.14"	6.38"
L1	5.91"	7.09"	10.94"
L2	4.53"	5.98"	7.01"

\*The calibration position is set according to the customer's requirements before pre-factory

main interface

historical curve

parameter setting

data enquiry

connect to control box (optional)

7302-LDM (optional)

computer is optional

stand (optional)

keyboard signal, can be transmitted to Excel

## STANDARD DELIVERY

Main unit	1 pc
V-block	1 pc
AC/DC adapter	1 pc
RS485 cable	1 pc

## OPTIONAL ACCESSORY

Data output cable (keyboard format)	7302-LDM
Stand	LDM-V1
Calibration gauge	custom made
Control box	custom made
Computer software	custom made



# AUTOMATIC LASER SCAN MICROMETER PART NO. LDM-AT01-U

CUSTOMIZED ACCORDING TO WORKPIECES



clamping workpieces by V-type bench center



clamping workpieces by center-type bench center



- Motorised rotation with adjustable speed
- Auto-moving laser scan micrometer
- Measure the outer diameter, roundness and runout of workpieces at multiple sections

## 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 77°F		±(.00002+.01%D)", D is measuring diameter in inch	
Repeatability at 77°F		(.00001+.005%D)", D is measuring diameter in inch	
Runout accuracy at 77°F		≤.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"	
Net weight		110.23lb	



center-type bench center (included)



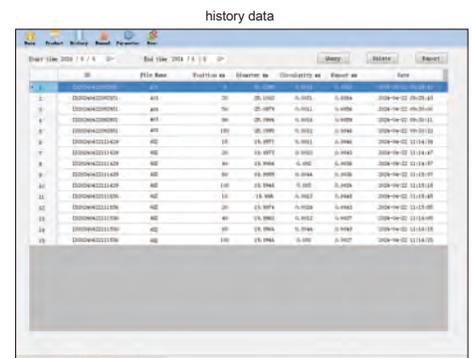
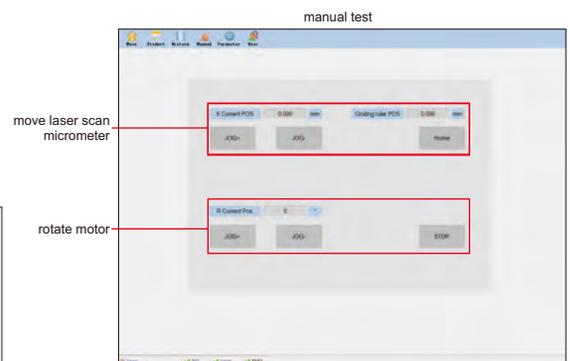
V-type bench center (included)

## 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

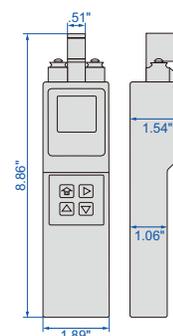


## HANDHOLD LASER SCAN MICROMETER PART NO. LDM-H02

- Measure the outside diameter of cables, pipes and wires
- For transparent or non transparent workpieces
- Unit: mm, inch, mil,  $\mu\text{m}$
- Compact and portable, the reading can be displayed vertically or horizontally

### SPECIFICATION

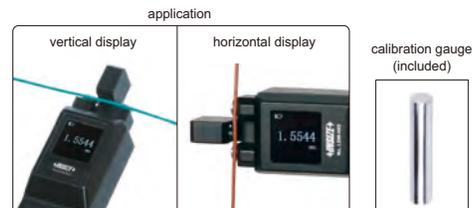
Measuring range	.0008~.0787"
Resolution	.001"/.0001"/.00001" selectable
Accuracy (at 77°F)	$\pm 0.00002$ "
Repeatability (at 77°F)	.00001"
Laser wave length	25.59 $\mu\text{m}$
Measuring speed	800 times/s
Operation temperature	32~122°F
Operation humidity	35~85%RH without condensation
Power supply	built-in 7.4V rechargeable battery
Net weight	1.09lb



VIDEO

### STANDARD DELIVERY

Main unit	1 pc
Calibration gauge	3 pcs (0.10 $\pm$ 0.001mm, 0.30 $\pm$ 0.001mm, 0.80 $\pm$ 0.001mm)
AC/DC adapter	1 pc



## AIR GAUGE DISPLAYS



DATA  
OUTPUT

- Can store 10 measuring programs, and the programs can be switched quickly
- Data storage and query function



air filter (optional)



pressure regulating valve (optional)



foot switch (optional)

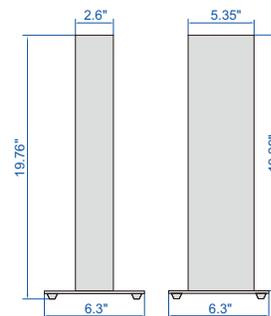


RS232 cable (optional)



9408-QD100-U

9408-QA101-U



### SPECIFICATION

Part No.	9408-QD100-U (without beep and light alarm)	9408-QA101-U (with beep and light alarm)		
LED quantity	101 pcs			
LED color	red, orange, green			
LED height	10"			
Range, resolution and accuracy	range ( $\mu\text{m}$ )	resolution ( $\mu\text{m}$ )		accuracy ( $\mu\text{m}$ )
		LED	display	
	10	0.1	0.1	0.2
	20	0.2	0.1	0.4
50	0.5	0.1	1	
100	1	0.2	3	
Unit	mm, inch			
Air supply	dry and clean, 58~101.5 psi			
Data interface	RS232, USB			
Operation temperature	temperature	32~113°F		
	humidity	$\leq 85\%$		
Power supply	AC100~240V, 50/60Hz			
Dimension (L×W×H)	6.3×6.3×19.29"			
Net weight	6.17lb			

### STANDARD DELIVERY

Main unit	1 pc
-----------	------

### OPTIONAL ACCESSORY

RS232 cable	9408-CB
Foot switch	9408-FS (must be installed in factory)
Data output cable (keyboard format)	7302-9408
Wireless transmitter (receiver is needed)	7315-9408
Air filter	9401-FILTER-A
Pressure regulating valve	9404-PRV

**MOTORIZED DIGITAL ROCKWELL HARDNESS TESTER (DOLPHIN-NOSE TYPE)  
PART NO. HDT-DM290-U**



FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

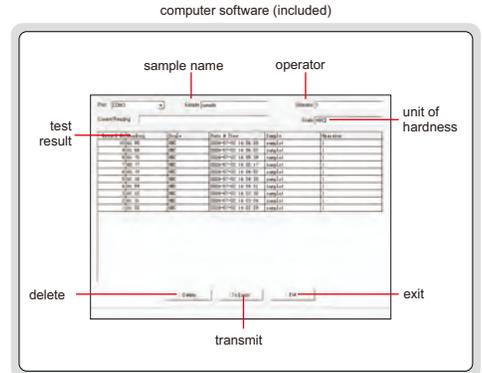
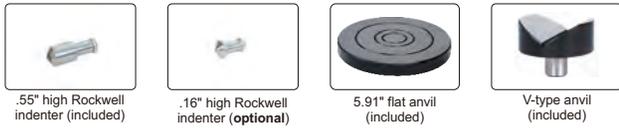
TOUCH SCREEN



- 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 Superficial Rockwell scales
- Convertible to various hardness standards such as HB, HV, HLD, HK and tensile strength
- 250 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

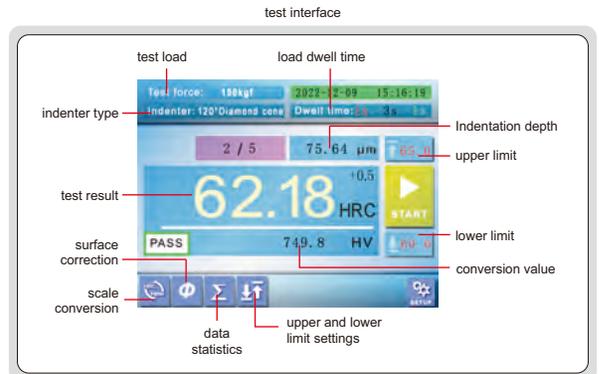


HDT-DM290-U



**SPECIFICATION**

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	0.01HR	
Max. workpiece height	11.42"	
Max. testing width	8.66"	
Max. bore depth	5.12"	
Min. testing inner diameter	1.38"	
Power supply	110V, 50/60HZ	
Dimension	27.56×11.42×34.65"	
Net weight	187lb	



**STANDARD DELIVERY**

Main unit	1 pc
.55" high diamond Rockwell indenter (HDT-DM-14MM)	1 pc
1/16" DIA carbide ball indenter (HDT-DM-BALL)	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
.16" high diamond Rockwell indenter *	HDT-DM-4MM
3.54" flat anvil	HDT-DM290-FA
9.06" flat anvil	HDT-DM290-FB
Integrated printer (require pre-installation)	HDT-DM290-PT

\* The minimum testing inner diameter is .98" DIA

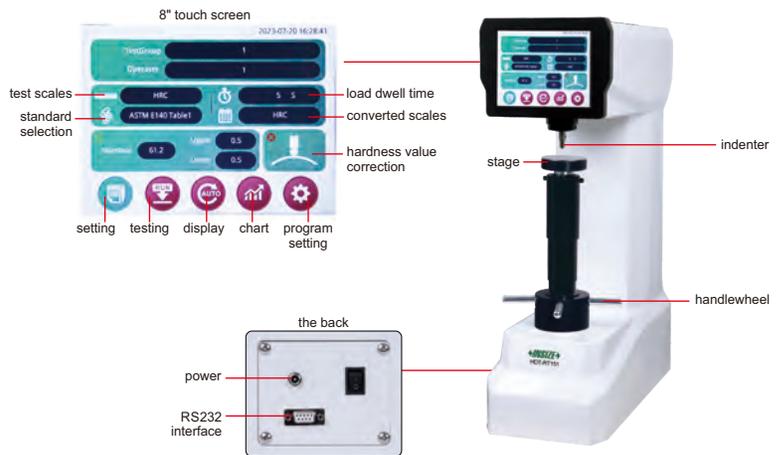
# MOTORIZED DIGITAL ROCKWELL HARDNESS TESTER PART NO. HDT-RT151

TOUCH  
SCREEN

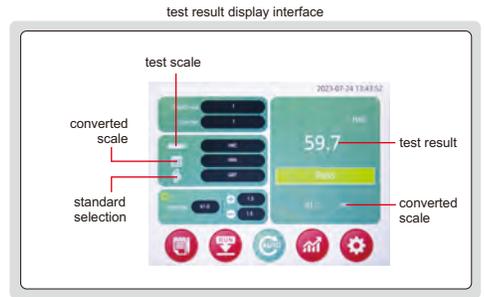
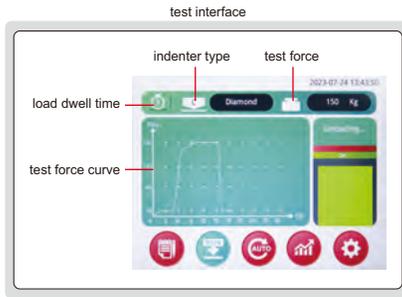
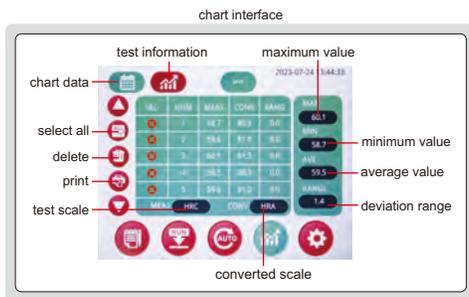
FORCE LOADING BY ELECTRIC  
MOTOR (WITHOUT WEIGHTS)

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



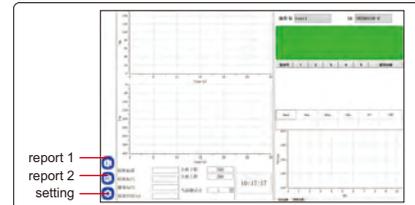
## SPECIFICATION

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"	
Net weight	154lb	

## 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 HRB88~100	1 pc
Hardness test block HRA80~90	1 pc
Printer	1 pc
Software	1 pc
Anti-dust cover	1 pc

## computer software (included)



## 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 HR30N55~73	HDT-B-HR30N2
Hardness test block HR30T73~82	HDT-B-HR30T
1/2" DIA carbide ball indenter	HDT-RT15-INDENTER1
1/4" DIA carbide ball indenter	HDT-RT15-INDENTER2
1/8" DIA carbide ball indenter	HDT-RT15-INDENTER3

# AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER PART NO. HDT-ST300



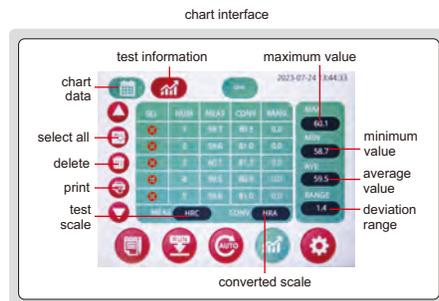
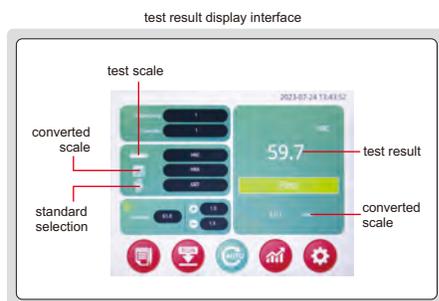
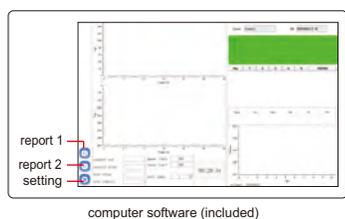
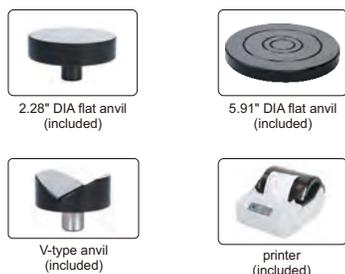
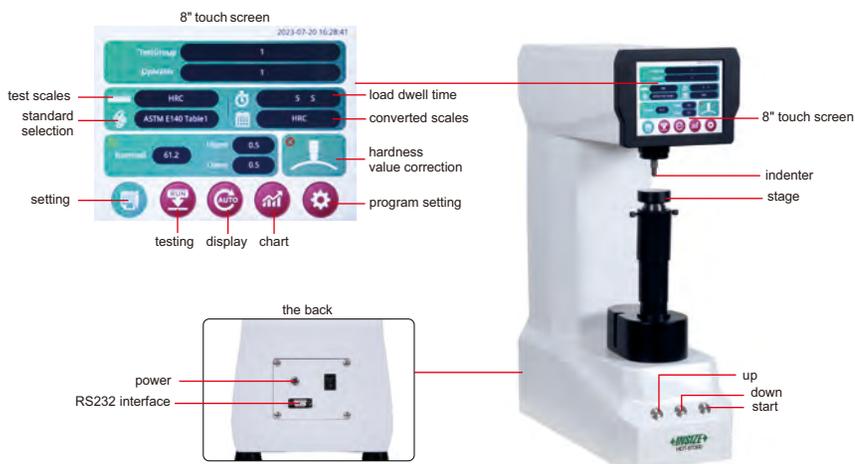
LARGE RANGE

AUTOMATIC LIFTING/LOADING/UNLOADING

TOUCH SCREEN



- Comply with the test standards of GB/T 230, ISO 6508, ASTM E18, JIS Z2245
- Implement the scale conversion standards such as ISO, ASTM, and GB
- 8 inch touch screen for operation and display
- Capable of testing 15 Rockwell hardness scales and surface Rockwell scales
- The main unit can independently store 500 groups of data, and the data will not be lost in case of power failure
- With correction function, the hardness value can be corrected based on the size of the cylinders



## SPECIFICATION

<b>Measurement range</b>		20~95HRA, 10~100HRB, 10~70HRC
<b>Hardness scale</b>	with indenter included	HRA, HRB, HRC, HRD, HRF, HRG
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
<b>Preliminary test force</b>		98N/10kgf for Rockwell
<b>Test force</b>		588N (60kg), 980N (100kg), 1471N (150kg)
<b>Stage elevation</b>		automatic up, down and return
<b>Load control</b>		automatic (initial test force, main test force loading/holding/unloading)
<b>Load dwell time</b>		2~60 second
<b>Resolution</b>		0.1HR
<b>Max. workpiece height</b>		9.01"
<b>Max. testing width</b>		6.69"
<b>Power supply</b>		100~240V, 50/60HZ
<b>Dimension</b>		18.70×7.87×27.56"
<b>Net weight</b>		154.32lb

## STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Diamond indenter</b>	1 pc
<b>1/16" DIA carbide ball indenter</b>	1 pc
<b>5.91" DIA flat anvil</b>	1 pc
<b>2.28" DIA flat anvil</b>	1 pc
<b>V-type anvil</b>	1 pc
<b>Hardness test block HRC20~30</b>	1 pc
<b>Hardness test block HRC40~50</b>	1 pc
<b>Hardness test block HRC60~70</b>	1 pc
<b>Hardness test block HRBW80~100</b>	1 pc
<b>Hardness test block HRA80~90</b>	1 pc
<b>Software</b>	1 pc
<b>Printer</b>	1 pc
<b>Anti-dust cover</b>	1 pc

## OPTIONAL ACCESSORY

<b>Hardness test block HRC20~30</b>	<b>HDT-B-HRC1</b>
<b>Hardness test block HRC35~55</b>	<b>HDT-B-HRC2</b>
<b>Hardness test block HRC60~70</b>	<b>HDT-B-HRC3</b>
<b>Hardness test block HRB88~100</b>	<b>HDT-B-HRB</b>
<b>Hardness test block HRA80~84</b>	<b>HDT-B-HRA</b>
<b>Hardness test block HR15N78~88</b>	<b>HDT-B-HR15N2</b>
<b>Hardness test block HR30N55~73</b>	<b>HDT-B-HR30N2</b>
<b>Hardness test block HR30T73~82</b>	<b>HDT-B-HR30T</b>
<b>1/2" DIA carbide ball indenter</b>	<b>HDT-RT15-INDENTER1</b>
<b>1/4" DIA carbide ball indenter</b>	<b>HDT-RT15-INDENTER2</b>
<b>1/8" DIA carbide ball indenter</b>	<b>HDT-RT15-INDENTER3</b>

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

INSPECTION  
CERTIFICATE



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"
Net weight	154lb

### STANDARD DELIVERY

Main unit	1 pc
2.28" flat anvil	1 pc
5.91" flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
1/16" DIA steel ball indenter	1 pc
1/16" DIA steel ball	5 pcs
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



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)

# 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



camera and measuring software (optional)



- Touch screen color LCD display
- Data storage and average value calculation
- Automatic switch between the indenter and objective lens
- According to ISO 6507

### 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	1µm/0.03µm
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"
Net 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
Measuring system (manual)*	HDT-CM-SW
Measuring system (automatic)*	HDT-CM-AW
Desk	HDT-DESK

\*Measuring system includes camera and measuring software

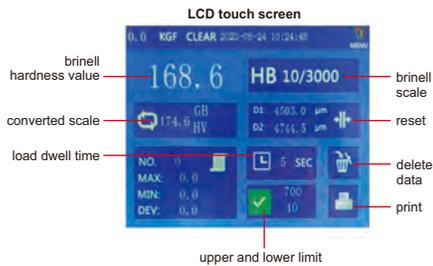
# MOTORIZED DIGITAL BRINELL HARDNESS TESTER (STANDARD TYPE) PART NO. HDT-MB710-U



**TOUCH SCREEN**

**FORCE LOADING BY ELECTRIC MOTOR (WITHUOT WEIGHT)**

**INSPECTION CERTIFICATE**



- 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

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	3.94μin/0.1μm
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"	
Net weight	287lb	

## 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□□□

# MOTORIZED DIGITAL ROCKWELL/BRINELL/VICKERS HARDNESS TESTER

## PART NO. HDT-BRV330-U

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

TOUCH SCREEN

INSPECTION CERTIFICATE



- 5.6" color touch LCD display
- Electronic closed-loop control of the applied test force, easy to use, stable display value
- Total of 21 measurement scales, including Brinell, Rockwell and Vickers test method
- Convertible to various hardness standards such as HB, HV, HRC, HK, etc.
- Two types of internal and external illumination are available, and different illumination is used according to the size of the indentation to make the indentation clearer
- Average, maximum and minimum value statistic are available
- Data storage and query function, can be printed out by the printer
- According to ISO 6506, ISO 6507, ISO 6508, ASTM E-10, ASTM E-18, ASTM E-92



### SPECIFICATION

Type	Brinell	Rockwell	Vickers
Test force	306.5N (31.25kg), 612.9N (62.5kg), 1226N (125kg), 1839N (187.5kg), 980.8N (100kg), 2451.6N (250kg)	588N (60kg), 980N (100kg), 1471N (150kg)	29.42N (3kg), 49.03N (5kg), 98.07N (10kg), 196.1N (20kg), 294.2N (30kg), 490.3N (50kg), 980.7N (100kg)
Hardness scale	HBW2.5/31.25, HBW2.5/62.5, HBW2.5/187.5, HBW5/62.5, HBW5/125, HBW5/250, HBW10/100, HBW10/250	HRA, HRB, HRC, HRD, HRF, HRG	HV3, HV5, HV10, HV20, HV30, HV50, HV100
Conversion scale	HRA, HRB, HRC, HRD, HRF, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HB, HV, HK		
Range	5-650HBW	20-88HRA, 20-100HRB, 20-70HRC	10-2900HV
Stage lifting	manual		
Load control	automatic (load/dwell/unload)		
Eyepiece	15X		
Objective	2.5X (included, for Brinell), 5X (included, for Vickers), 10X (optional, for Vickers)		
Resolution	0.1HB	0.1HR	0.1HV
Load dwell time	0-99 seconds, can be set		
Max. testing width	6.30"		
Max. workpiece height	6.50"	7.09"	6.50"
Power supply	110V, 50/60Hz		
Dimension	21.65×9.25×28.35"		
Net weight	176lb		

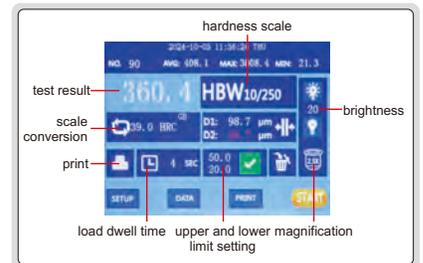
### STANDARD DELIVERY

Main unit	1 pc
Diamond Rockwell indenter	1 pc
Diamond Vickers indenter	1 pc
.098" DIA ball indenter	1 pc
.197" DIA ball indenter	1 pc
1/16" DIA carbide ball indenter	1 pc
5.91" DIA flat anvil	1 pc
2.36" DIA flat anvil	1 pc
V-type anvil	1 pc
Skateboard stage	1 pc
Internal lighting bulb	1 pc
External lighting bulb	1 pc
Hardness test block HRC20-30	1 pc
Hardness test block HRC60-70	1 pc
Hardness test block HRB85-100	1 pc
Hardness test block HBW2.5/187.5	1 pc
Hardness test block HV30	1 pc
Anti-dust cover	1 pc

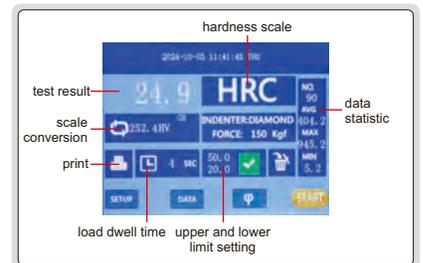
### OPTIONAL ACCESSORY

10X objective	HDT-OB-10
.394" DIA ball indenter	HDT-BRV-INDENTER10
Hardness test block 20-30HRC	HDT-B-HRC1
Hardness test block 35-55HRC	HDT-B-HRC2
Hardness test block 60-70HRC	HDT-B-HRC3
Hardness test block 88-100HRB	HDT-B-HRB
Hardness test block 80-84HRA	HDT-B-HRA
Hardness test block 400-500HBW2.5/187.5	HDT-B-HB25A4
Hardness test block 400-500HV5	HDT-B-HV5D

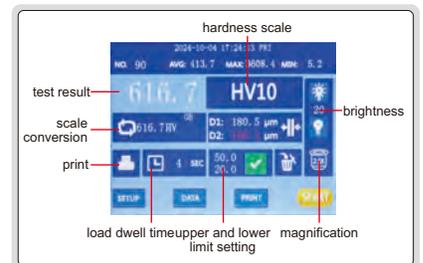
Brinell measurement interface



Rockwell measurement interface



Vickers measurement interface



# ULTRASONIC HARDNESS TESTER

## PART NO. 9646-300

INSPECTION  
CERTIFICATE

POPULAR  
MODEL

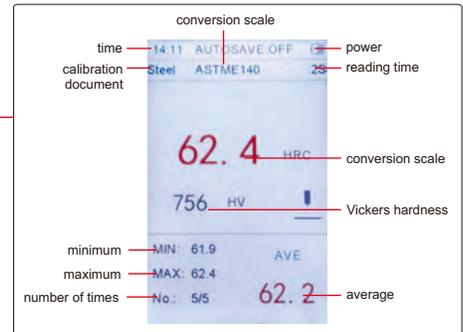


SMALL TEST  
INDENTATION

ATTENTION: HARDNESS BLOCKS  
FOR CALIBRATION ARE OPTIONAL

ATTENTION: NEED TO CONFIRM IF THE  
WORKPIECES ARE SUITABLE BEFORE PURCHASE

- 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

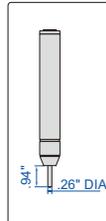


Applications:

- Hardness measurement of flange edges and gear root stampings, gears and gear grooves with surface hardening of lamina, taper sections
- Hardness measurement of shafts and thin-walled pipes and container
- Hardness measurement of thin plating, wheels, turbine rotors and welded parts
- Measurement of the depth of a certain diameter deep holes, dents of the larger curvature and convex marks, irregular planes
- Covering the majority of hardness measurement of industrial production of ferrous metals, non-ferrous metals and their alloys



stand (optional), suitable for measuring small workpieces, fast and stable



long probe (optional)

STANDARD DELIVERY

Main unit	1 pc
19.6N manual probe	1 pc
Charger	1 pc
USB cable	1 pc
Ultrasonic hardness test block	1 pc

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
9.8N manual long probe	9646-300-10L
19.6N manual long probe	9646-300-20L
29.4N manual long probe	9646-300-30L
49N manual long probe	9646-300-50L
98N manual long probe	9646-300-98L
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 200~300HV2	HDT-B-HV2U8
Hardness test block 400~500HV2	HDT-B-HV2U9
Hardness test block 700~750HV2	HDT-B-HV2U10
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
Stand	9646-300-STAND

SPECIFICATION

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 material: multi-point calibration
Operation 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
Net weight	1.19lb

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 requirement

\* If the weight or thickness of workpieces is less than required, the workpieces should be fixed or coupled on solid support

\*\* For large test force, it is recommended to use the probe with a stand

Note: when replacing optional probes, a multi-point calibration with more than three calibration blocks must be performed before use

## PORTABLE LEEB HARDNESS TESTER WITH WIRELESS PROBE PART NO. HDT-WP201



- 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 ( $\sigma$ )
- 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



hardness test block D (included)



small support ring (included)



bluetooth printer (optional)

### SPECIFICATION

Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HSD/1 $\sigma$ b
Accuracy	$\pm 6$ HLD (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/ $\sigma$ b (rm) 255-2180N/mm <sup>2</sup>
Power supply	2xAA batteries
Dimension	5.31×3.03×1.26"
Net weight	.53lb



large font display

statistics display

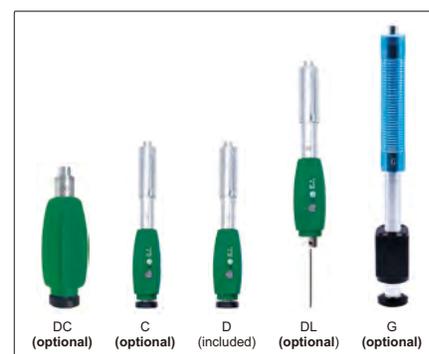
### STANDARD DELIVERY

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-HLD2
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 other 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)	80 $\mu$ m	16 $\mu$ m	80 $\mu$ m	80 $\mu$ m	280 $\mu$ m
Minimum weight of workpiece	direct measurement	11.02lb	3.31lb	11.02lb	33.08lb
	on solid support	5.51lb	1.10lb	4.41lb	11.02lb
	coupled on plate	.11-4.41lb	0.04lb	.11-4.41lb	.22lb
Minimum thickness of workpiece	.12"	.04"	.12"	.12"	.39"

# PORTABLE LEEB HARDNESS TESTER (BASIC TYPE) PART NO. HDT-LP200

INSIZE  
INSPECTION  
CERTIFICATE

POPULAR  
MODEL



- Can change probes
- Dual-coil probe for high accuracy
- Universal testing angle, no need to set impact direction
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRB), Shore (HSD) and tensile strength ( $\sigma_b$ )
- Dual value display, shows both Leeb and converted hardness
- Large LCD display with backlight
- Can choose large font display and statistics display
- Automatically calculate maximum, minimum and average value
- Save 300 data
- Operation temperature: 14°F~113°F
- According to ASTM A956, GB/T 17394

### SPECIFICATION

Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HRA/0.1HSD/1 $\sigma_b$
Accuracy	$\pm 6$ HLD (when HLD=800)
Measuring range	HL 170-960/HRC 17-70/HRB 13-109/HRA 7-89/HB 20-655/ HV 80-940/HSD 32-99.5/ $\sigma_b$ (m) 255-2639N/mm <sup>2</sup>
Power supply	2xAA batteries
Dimension	5.31×3.03×1.26"
Net weight	.53lb



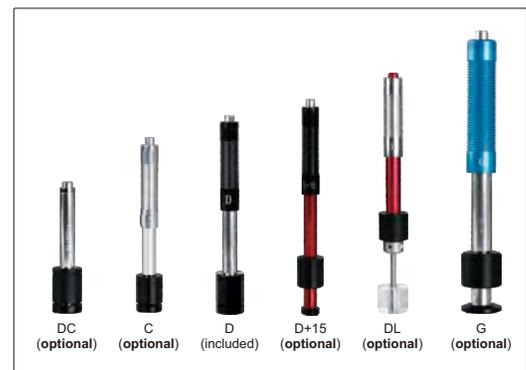
### STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
Impact device D	1 pc
Software and USB cable	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

### APPLICABLE WORKPIECE

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

# PEN-TYPE LEEB HARDNESS TESTER (ADVANCED TYPE) PART NO. HDT-L410

**DATA OUTPUT**   **HIGH ACCURACY**   **DL PROBE IS OPTIONAL**

**INSPECTION CERTIFICATE**



wireless printer (optional)



hardness test block D (included)



small support ring (included)



VIDEO

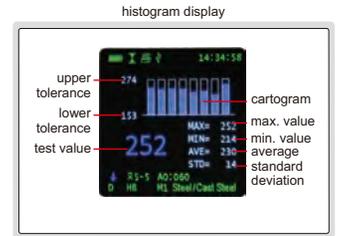
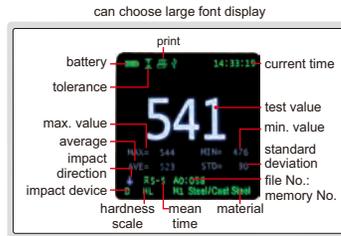
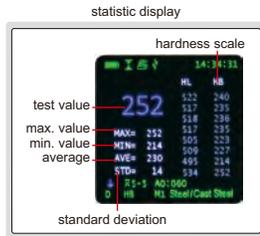
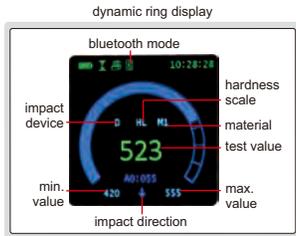


software flash disk (included)



- 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

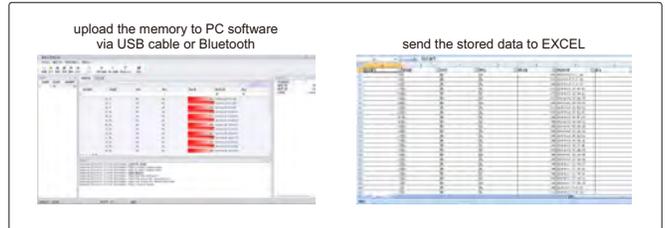
DL probe can be installed (optional)



### SPECIFICATION

<b>Resolution</b>	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM	
<b>Accuracy</b>	±4HLD (when HLD=800)	
<b>Output</b>	USB and bluetooth	
<b>Applicable workpiece</b>	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
<b>Power supply</b>	built-in 3.7V rechargeable battery	
<b>Dimension</b>	5.83×1.73×.87"	
<b>Net weight</b>	.25lb	

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



### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Hardness test block D</b>	1 pc
<b>Small support ring</b>	1 pc
<b>Cleaning brush</b>	1 pc
<b>AC/DC adapter</b>	1 pc
<b>Software flash disk and USB cable</b>	1 pc

### OPTIONAL ACCESSORY

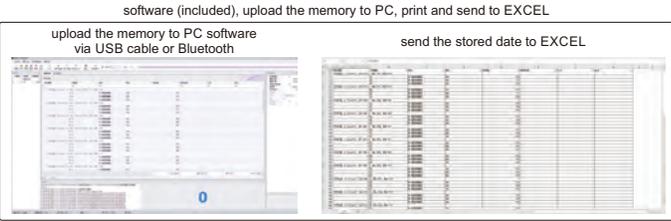
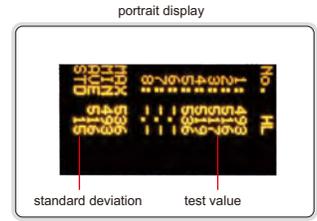
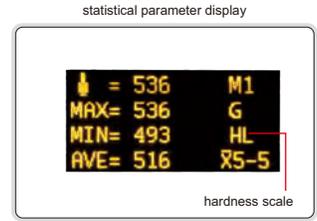
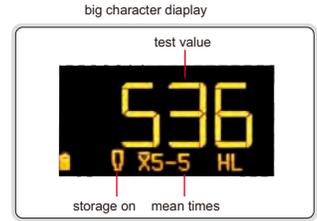
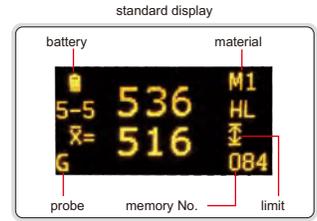
<b>Printer</b>	HDT-L410-PRINTER
<b>Support rings</b>	ISH-PH-SP9
<b>Hardness test block D</b>	HDT-B-HLD3
<b>DL probe</b>	HDT-L410-DL

## PEN-TYPE LEEB HARDNESS TESTER (TYPE G) PART NO. HDT-LG210

BUILT-IN  
BLUETOOTH

INSPECTION  
CERTIFICATE

- Impact device G is included
- High contrast OLED display
- No need to set the testing direction
- Based on Leeb(HLG), converted to Rockwell (HRB), Brinell (HB).
- Dual value display, shows both Leeb and other conversion values
- Built-in wireless bluetooth, connected to PC software via USB or Bluetooth
- Connected with printer via Bluetooth
- Stores 31 files (100 test data points per files), supports Excel export
- According to ASTM A956



### SPECIFICATION

Accuracy	±6HLG
Probe	Type G
Converted scales	HLG, HRB, HB
Range	300-750HLG, 47-100HRB, 90-650HB
Resolution	1HLG, 0.1HRB, 1HB
Materials	steel/cast steel, lamellar iron, nodular iron
Output	Bluetooth and USB
Working environment	-40°F-158°F
Power supply	Li-ion rechargeable battery
Dimension(L×W×H)	9.96×1.49×1.89"
Net weight	.628lb

### STANDARD DELIVERY

Main unit	1 pc
Hardness test block (HLG)	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

### OPTIONAL ACCESSORY

Printer	ISH-LP200-PRINTER
Hardness test block 460-540HLG	HDT-B-HLG1
Hardness test block 550-630HLG	HDT-B-HLG2

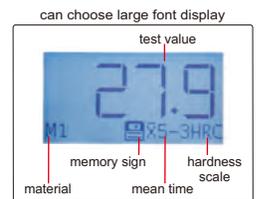
## PEN-TYPE LEEB HARDNESS TESTER (BASIC TYPE) PART NO. HDT-L411

- 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

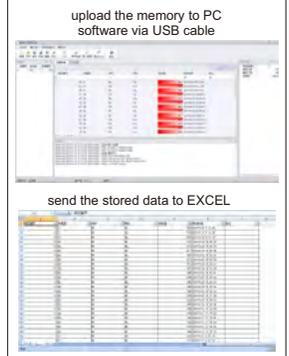


INSPECTION  
CERTIFICATE

DATA  
OUTPUT



software (included), upload the memory to PC, print and send 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 170-960, 7-89HRA, 13-109HRB, 17-70HRC, 20-655HB, 32-99.5HS, 80-940HV, 255-2639N/mm <sup>2</sup>	
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"	
Net weight	.23lb	



small support ring (included)



hardness test block D (included)



software flash disk (included)

### STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Cleaning brush	1 pc
AAA battery	1 pc
Small support ring	1 pc
Software flash disk and USB cable	1 pc

### OPTIONAL ACCESSORY

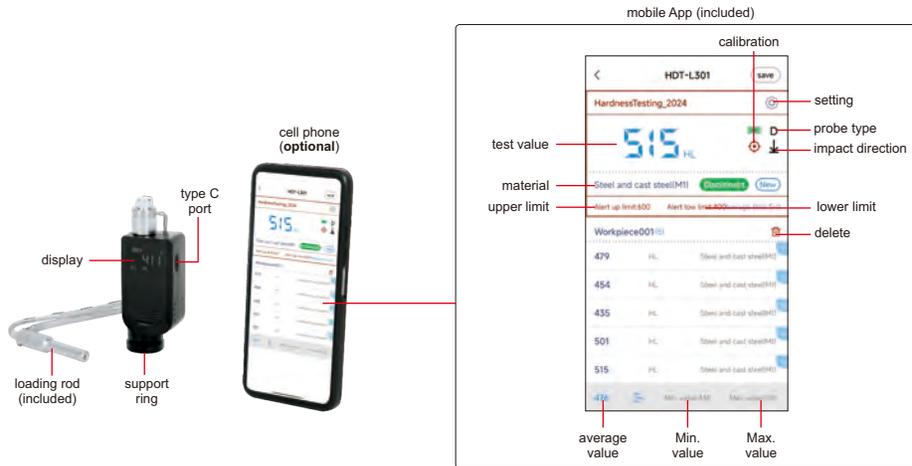
Support rings	ISH-PH-SP9
Hardness test block D	HDT-B-HLD3

# MINI LEEB HARDNESS TESTER PART NO. HDT-L301

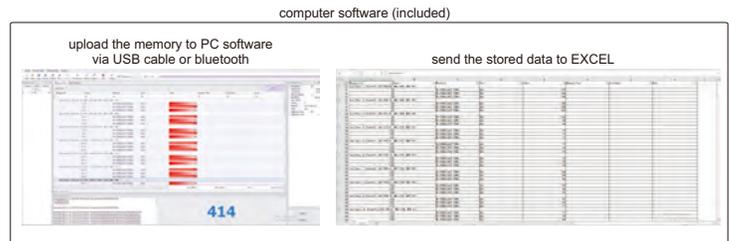
INSPECTION  
CERTIFICATE

BUILT-IN  
BLUETOOTH

DATA  
OUTPUT

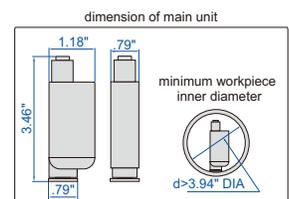


- One-handed operation is possible, making test easier and faster
- Suitable for testing hardness in small space
- All directions test, do not need to set impact direction
- The hardness value can be displayed on hardness tester and the cell phone App at the same time. It can also be connected by computer
- Automatic shutdown
- Support unlimited storage and sharing of test reports
- According to DIN 50156, EN ISO 16859, ASTM A956 standards



## SPECIFICATION

Accuracy	±6HLD (when HLD=800)			
Impact device	D			
Hardness scale	HLD, HRA, HRB, HRC, HB, HS, HV, MPa			
Measurement range	170-960HLD, 7-88.5HRA, 1.2-140HRB, 1-74HRC, 18-1027HB, 3.9-112HS, 42-1220HV, 89-3300MPa			
Resolution	1HV, 0.1HRA, 0.1HRB, 0.1HRC, 1HB, 0.1HS, 1MPa			
Applicable material	1. steel/cast steel 5. nodular cast iron 9. copper	2. alloy tool steel 6. cast aluminium 10. forged steel	3. stainless steel 7. brass	4. grey cast iron 8. bronze
Output	USB and bluetooth			
Operation temperature	-4°F~113°F			
Power supply	3.7V Li-ion rechargeable battery			
Dimension	3.46×1.18×0.79"			
Net weight	.10lb			



## STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Support ring	1 pc
Cleaning brush	1 pc
Loading rod	1 pc
Software and USB cable	1 pc

## PORTABLE ROCKWELL HARDNESS TESTER PART NO. ISHR-P151



flat anvil (included)



V-type anvil (included)



anvil extension for thin workpieces (included)



- According to ISO 6508, ASTM E18

### SPECIFICATION

<b>Hardness scale</b>	HRA, HRB, HRC, HRD, HRF, HRG
<b>Preliminary test force</b>	10kg
<b>Test force</b>	60kg, 100kg, 150kg
<b>Load control</b>	manual
<b>Min. reading</b>	1HR
<b>Max. workpiece thickness</b>	.98"
<b>Max. testing depth</b>	.98" (from the center of indenter to the main body)
<b>Dimension</b>	9.45×2.76×6.30"
<b>Net weight (with base)</b>	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 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
<b>Application</b>	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
<b>Thickness requirement of flat workpiece</b>	.024~.23"	.024~.51"	.024~.31"	.024~.23"	.024~.23"	.024~.23"
<b>Internal diameter requirement of tube workpiece</b>	>.39" DIA	>.39" DIA	>.39" DIA	>.39" DIA	>.39" DIA	>.39" DIA
<b>Wall thickness requirement of tube workpiece</b>	.024~.23"	.24~.51" (internal diameter .39~.91" DIA) .024~.23" (internal diameter >.91" DIA)	.024~.31"	.024~.23"	.024~.23"	.024~.23"
<b>Hardness range</b>	0~20HW					
<b>Min. reading</b>	1HW					
<b>Accuracy</b>	±0.5HW (at 5~17HW)					
<b>Dimension</b>	8.07×1.18×3.74"					
<b>Net weight</b>	1.10lb					

## DIGITAL SHORE DUROMETERS



- 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 (optional)

### 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"	
Net weight	.37lb	

### 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

\*Use **ISH-DSD** when measuring result is higher than 90HA  
Use **ISH-DSA** when measuring result is lower than 20HD

## TEST STAND FOR DIGITAL SHORE DUROMETERS 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
- Net weight block A (included) is for **ISH-DSA**, weight block D (optional) is 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"
Net 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

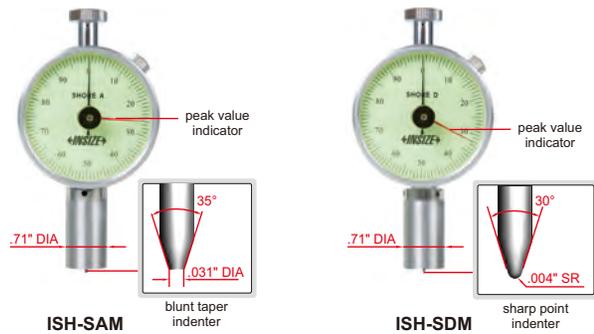
- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Optional accessory: test stand **ISH-STAC** and **ISH-STD**



### 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	4.53x2.36x.98"	
Net 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**



## 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

durometer is optional



## DIGITAL ULTRASONIC FLAW DETECTOR (BASIC TYPE) PART NO. UFD-T680

- The all-aluminum metal shell is strong and durable, and the electromagnetic shielding performance is very good
- Tempered glass panel, extremely hard, wear-resistant and scratch-resistant
- Full-digital multi-color high resolution (640x480 pixels) TFT LCD display
- 4 operation interface styles can be selected according to the environment
- Real-time screenshots of all pages and flaw detection reports, and save them as BMP pictures to U disk
- Export the flaw detection report as a PDF file
- Unique Fn multifunction key design
- There is no limit of the number and duration of video recording through U disk
- Memory of 500 channel files to store calibration setups and probe parameter
- Memory of 1000 wave report files to store A-Scan wave and settings
- Two fully independent gates offer a range of measurement options for signal height or distance using peak triggering
- Can choose to set the incoming wave alarm or lost wave alarm, accompanied by LED light display
- Selectable frequency ranges (automatically set by the instrument) to match probe for optimum performance
- The unique automatic gain adjustment and gain scanning function make flaw detection fast and accurate



To be continued

Continued from previous page

### FUNCTIONS

<b>Flaw detection standard</b>	built-in common flaw detection standards, direct call, convenient and fast
<b>Auto calibration</b>	automatic calibration of probe zero offset, probe angle (K value) and material velocity
<b>Peak hold</b>	compare frozen peak waveforms to live A-Scans to easily interpret test result
<b>Flaw locating</b>	live display sound-path, projection (surface distance), depth, amplitude
<b>Flaw discrimination</b>	automatic flaw sizing using AVG or DAC, speeds reporting of defect acceptance or rejection
<b>Flaw sizing</b>	the equivalent dB value of defects or equivalent size of defects are displayed in real time
<b>Curved surface correction</b>	used for flaw detection of curved workpiece, it can display the circumferential position of defects in real time
<b>DAC/AVG</b>	the curve is automatically generated, and the sampling points can be compensated and corrected. The curve automatically floats with the gain, automatically expands with the detection distance, and automatically moves with the delay time. It can display the AVG curve of any aperture
<b>AWS D1.1</b>	choosing this standard can reduce manual calculations and improve detection efficiency
<b>Weld diagram</b>	support V type, T type, L type and other weld types, acoustic path navigation real-time display, weld and defect location real-time display, scaling, easy to locate defects
<b>Automatic rating</b>	select different AWS standards, automatically calculate the rating of defects and display
<b>Crack height</b>	the crack height is measured and calculated automatically by the diffracted wave at the end
<b>Gate magnify</b>	spreading of the gate range over the entire screen width
<b>Continuous record</b>	video recording and playback
<b>Echo coding</b>	display 1~9 echo display area in different colors, used to analyze the defect position
<b>Scan freeze</b>	display freeze holds waveform and test distance data
<b>Peak mark</b>	capture and mark the peak in real time
<b>B scan</b>	intuitively display the defect shape of the workpiece and the detection result is more intuitive

### SPECIFICATION

<b>Measuring range</b>	0~590"
<b>Working frequency</b>	1.0~20MHz
<b>Material velocity</b>	3.94~787"/s
<b>Repetition frequency</b>	20~2000Hz
<b>Dynamic range</b>	≥36dB
<b>Vertical linearity</b>	≤3.0%
<b>Horizontal linearity</b>	≤1.0%
<b>Resolving power</b>	>42dB
<b>Sensitivity leavings</b>	>65dB
<b>Suppression</b>	0~80%
<b>Noise</b>	≤10%
<b>Probe selection</b>	single crystal probe, dual crystal probe, penetrating probe, climbing probe
<b>Pulse energy</b>	100V, 200V, 250V, 300V, 350V, 400V, 450V, 500V (selectable)
<b>Pulse width</b>	30ns-510ns
<b>Probe damping</b>	50Ω, 150Ω, 250Ω, 500Ω (selectable)
<b>Rectification</b>	positive half wave, negative half wave, full wave, RF
<b>Gates</b>	two independent gates controllable over entire sweep range
<b>Interface</b>	USB 2.0
<b>Operation temperature</b>	14~122°F
<b>Relative humidity</b>	20~95%RH
<b>Power</b>	build-in rechargeable battery
<b>Dimensions (L×W×H)</b>	10.35×6.69×2.40"
<b>Net weight</b>	4.23lb

### SPECIFICATION OF PROBE

Part No.	Frequency	Size	Probe type	Transducer sensor angle
<b>UFD-T60 (included)</b>	2.5MHz	.787" DIA	single-element straight probe	90°
<b>UFD-T61 (included)</b>	4.0MHz	.315×.354"	single-element angle probe	60°
<b>UFD-T62 (optional)</b>	5.0MHz	.394" DIA	dual-element straight probe	90°
<b>UFD-T63 (optional)</b>	5.0MHz	.394" DIA	single-element straight probe	90°
<b>UFD-T64 (optional)</b>	4.0MHz	.315×.354"	single-element angle probe	45°
<b>UFD-T65 (optional)</b>	4.0MHz	.315×.354"	single-element angle probe	70°

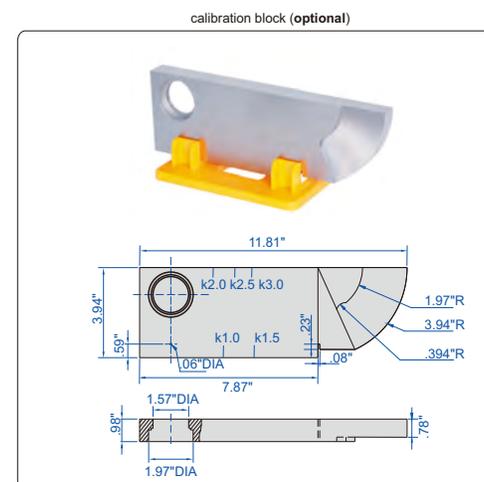
Note: Other types of the probes are available

### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Single-element straight probe UFD-T60</b>	1 pc
<b>Single-element angle probe UFD-T61</b>	1 pc
<b>USB cable</b>	1 pc
<b>Couplant</b>	1 bottle
<b>Probe connecting cable</b>	1 pc
<b>USB disk</b>	1 pc
<b>Power adapter</b>	1 pc

### OPTIONAL ACCESSORY

<b>Calibration block</b>	<b>UFD-CSK1</b>
--------------------------	-----------------



## DIGITAL ULTRASONIC FLAW DETECTOR (STANDARD TYPE) PART NO. UFD-F720

- Compact and lightweight, easy to carry
- High sensitivity, accurate defect positioning, super anti-interference ability, stable and reliable performance
- Built-in automatic performance test function
- Unique square wave excitation signal processing technology
- The background color and brightness can be freely adjusted to adapt to strong or low light environments to ensure a clear display
- Real-time dynamic recording of detection waveforms, data, rapid export via U disk



straight-beam probe  
(included)



angle-beam probe  
(included)

### FUNCTIONS

<b>Flaw detection standard</b>	built-in common flaw detection standards, direct call, convenient and fast
<b>Auto calibration</b>	automatic calibration of probe zero offset, probe angle (K value) and material velocity
<b>Peak hold</b>	compare frozen peak waveforms to live A-Scans to easily interpret test results
<b>Flaw locating</b>	real-time display of defect level, depth (vertical), sound range projection
<b>Flaw discrimination</b>	automatic flaw sizing using AVG or DAC, speeds reporting of defect acceptance or rejection
<b>Flaw sizing</b>	the equivalent dB value of defects or equivalent size of defects are displayed in real time
<b>DAC/AVG</b>	the curve is automatically generated, and the sampling points can be compensated and corrected. The curve automatically floats with the gain, automatically expands with the detection distance, and automatically moves with the delay time. It can display the AVG curve of any aperture
<b>AWS D1.1</b>	choosing this standard can reduce manual calculations and improve detection efficiency
<b>Automatic rating</b>	select different AWS standards, automatically calculate the rating of defects and display
<b>Gate magnify</b>	spreading of the gate range over the entire screen width
<b>Continuous record</b>	real-time waveform recording, storage and playback
<b>Scan freeze</b>	display freeze holds waveform and test distance data
<b>Peak mark</b>	capture and mark the peak in real time

### SPECIFICATION

<b>Measuring range</b>	0~590.55"
<b>Working frequency</b>	0.4~20MHz
<b>Material velocity</b>	0~393.7"/s
<b>Dynamic range</b>	≥36dB
<b>Gain range</b>	0~110dB (steps:0.1dB, 1.0dB, 2.0dB, 6.0dB, 12dB)
<b>Vertical linearity</b>	≤3.0%
<b>Horizontal linearity</b>	≤0.1%
<b>Resolving power</b>	> 36dB
<b>Sensitivity leavings</b>	> 62dB (200Ø2 flat bottom hole, narrow band)
<b>Attenuator</b>	20dB±1dB
<b>Suppression</b>	0~90%
<b>Pulse energy</b>	400V
<b>Noise</b>	≤10%
<b>Pulse front</b>	≤10ns
<b>Disply screen</b>	5.7"TFT color LCD, resolution 640x480
<b>Probe selection</b>	straight probe, angle probe, penetrating probe, climbing probe
<b>Gates</b>	Incoming wave gate, lost wave gate, single gate reading, double gate reading
<b>Alarms</b>	Incoming wave alarm, lost wave alarm, double gate alarm, buzzer alarm, LED light alarm
<b>Interface</b>	Q9 (BNC), USB 2.0, VGA
<b>Operation temperature</b>	-4~122°F
<b>Relative humidity</b>	20~95%
<b>Power</b>	rechargeable lithium-ion battery
<b>Dimensions (L*W*H)</b>	8.98×5.51×1.65"
<b>Net weight</b>	2.20lb

### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Single-element straight probe UFD-F70</b>	1 pc
<b>Single-element angle probe UFD-F71</b>	1 pc
<b>Probe connecting cable</b>	2 pcs
<b>USB cable</b>	1 pc
<b>Mainframe backpack</b>	1 pc
<b>USB disk</b>	1 pc
<b>Power adapter</b>	1 pc

### SPECIFICATION OF PROBE

Part no.	Frequency	Size	Probe type	Probe sensor angle
<b>UFD-F70 (included)</b>	2.5MHz	.787"DIA	single-element straight probe	90°
<b>UFD-F71 (included)</b>	2.5MHz	.512×.512"	single-element angle probe	63.4°
<b>UFD-F72 (optional)</b>	5.0MHz	.393"DIA	dual-element straight probe	90°
<b>UFD-F73 (optional)</b>	5.0MHz	.393"DIA	single-element straight probe	90°
<b>UFD-F74 (optional)</b>	2.5MHz	.354×.354"	single-element angle probe	45°
<b>UFD-F75 (optional)</b>	2.5MHz	.354×.354"	single-element angle probe	71.6°

Note: other probes can be customized according to customer requirements

## ELECTRONIC UNIVERSAL TESTING MACHINES



- 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



flat jaws (included)



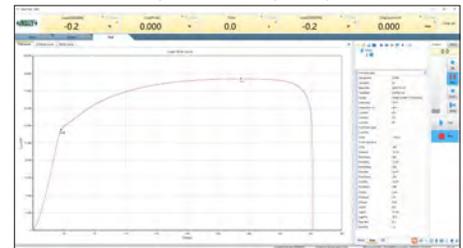
V-shaped jaws (included)

### SPECIFICATION

Part No.	UTM-E20-U	UTM-E50-U
Max. test force	20kN	50kN
Accuracy class	class 0.5	
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) ±0.2% of the set value (speed≥.02in/min)	
Range of force control speed	0.005~5%FS/s	
Accuracy of constant load force	±2% 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
Wedge tension fixture	flat jaw 0~.28" V-jaw .16~.35" DIA	flat jaw 0~.55" V-jaw .16~.35" DIA
Effective test width *	17.32"	17.32"
Vertical test space *	38.19"	38.19"
Effective compression height *	27.56"	27.56"
Dimension (L×W×H)	32.28×24.41×74.02"	32.28×24.41×74.02"
Net weight	771.62lb	771.62lb
Power supply	AC 110V, 60Hz, 0.4kW~1kW	

\*Can be customized according to test requirements

computer and software (included)



### 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

### 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

### 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)

## ELECTRONIC UNIVERSAL TESTING MACHINE PART NO. UTM-Z500-U



- Applicable to metal, non-metal and composite materials for tensile, compression, bending and other mechanical properties test analysis and analytical research
- Automatically obtain the maximum force, breaking force, yield strength, upper and lower yield strength, tensile strength, compressive strength, elongation at break, tensile modulus of elasticity, bending modulus of elasticity and other test data
- Test standards and test parameters can be managed and imported or exported test standards
- Overload emergency shutdown protection device, up and down travel limit protection device
- Crossbeam movement collision mitigation function

### SPECIFICATION

Max. test force *	50N
Accuracy class	class 0.5
Range of test force	0.4%~100%FS
Accuracy of test force	±0.5% of indicating value
Resolution of test force	1/300000FS
Accuracy of displacement	±0.5% of indicating value
Resolution of displacement	0.2μm
Range of crossbeam speed	39.37μin/min~39.37in/min
Accuracy of crossbeam speed	±0.5% of indicating value
Range of force control speed	0.05%~10%FS/s
Accuracy of force control speed	±0.5% of indicating value
Effective tensile travel *	17.72"
Effective compression travel *	27.55"
Dimension (L×W×H)	19.68"×14.96"×45.27"
Power supply	AC 110V, 60Hz
Net weight	220.46lb



computer and software (included)



### STANDARD DELIVERY

Main unit	1 pc
Computer	1 set
Software	1 set
Control box	1 pc
Tensile fixture	1 set

### OPTIONAL ACCESSORY

Fixture *	customized
Extensometer *	
Large deformation extensometer *	
Security cover *	

\*Can be customized according to test requirements

## DIGITAL SPRING TESTER PART NO. ISF-S50-U

DATA  
OUTPUT



- 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

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"
Net weight	38.14lb

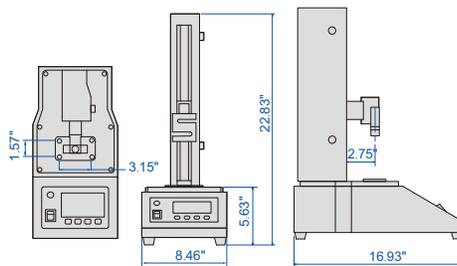


### STANDARD DELIVERY

Main unit	1 pc
-----------	------

## ELECTRONIC TENSILE AND COMPRESSION TESTING MACHINE PART NO. UTM-SC1000

- Suitable for tensile, peeling and tearing tests of metal wires, metal foils, plastics, food packaging, textile fibres, wires and cables, adhesives, connectors and other industries
- Fixed force test, fixed displacement test, fixed deformation test and cycle test can be realised
- Automatically obtain the maximum force, tensile strength, compressive strength, elongation at break, average peeling strength, average peeling force and other test data
- Overload emergency shutdown protection device, up and down travel limit protection device
- Leakage automatic power-off system, automatic breakpoint stop function



### SPECIFICATION

Max. test force	224.81lb
Accuracy class	class 0.5
Test force measurement range	0.4%~100%FS
Test force measurement accuracy	±0.5% of indicating value
Test force measurement resolution	.01lb
Deformation measurement range	0.2%~100%FS
Deformation measurement accuracy	±0.5% of indicating value
Deformation measurement resolution	.001"
Displacement range	0~11.81"
Displacement accuracy	±0.5% of indicating value
Displacement resolution	.001"
Displacement speed adjustment range	.1~19.7in/min
Effective tensile travel	5.90"
Power supply	AC 110~220V, 50/60Hz
Dimension	16.93"×8.46"×22.83"
Net weight	33.07lb



### STANDARD DELIVERY

Main unit	1 pc
Tensile fixture	1 set
Compression fixture	1 set



### OPTIONAL ACCESSORY

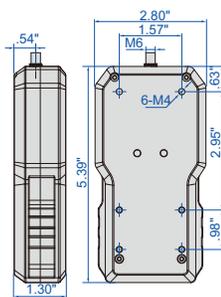
Fixture	customized, selection of specifications according to test requirements
---------	--



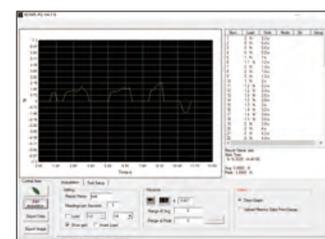
\* Can be customized according to test requirements

## DIGITAL FORCE GAUGES (HIGH ACCURACY)

- 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
- Two display modes: digital mode, chart mode
- Keyboard signal, can be transmitted to Excel



ISF-DF1KA



software (included)

### SPECIFICATION

Part No.	ISF-DF50A	ISF-DF100A	ISF-DF200A	ISF-DF500A	ISF-DF1KA
Type	internal sensor				
Load capacity (lbf)	1.1	2.2	44	110	220
Resolution (lbf)	0.001	0.005	0.01	0.01	0.05
Accuracy	±0.2% (of load capacity)				
Power supply	built-in rechargeable battery				

### STANDARD DELIVERY

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

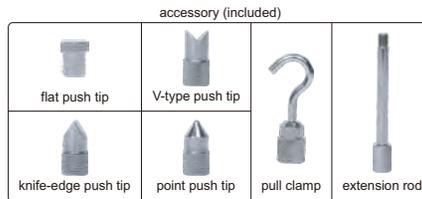
Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K
Wireless transmitter (receiver is needed)	7315-ISF-D

### accessory (included)



## DIGITAL FORCE GAUGES

- 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



INSPECTION  
CERTIFICATE

DATA  
OUTPUT



POPULAR  
MODEL



ISF-1DF100



software flash disk  
(included)



printer (optinal)

### 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"				
Net weight	.99lb				

### 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
Wireless transmitter (receiver is needed)	7315-ISF-D

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

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



### SPECIFICATION

Load capacity	220lbf
Travel	7.87" (.12" vertical movement per revolution of handwheel)
Dimension	7.72x9.84x17.56"
Net weight	28.67lb

### OPTIONAL ACCESSORY

Digital scale (range: 8", resolution .0005"/0.01mm)	ISF-MT1K-SCALE
---	----------------

force gauge  
is optional



digital scale (optional)



horizontal orientation test

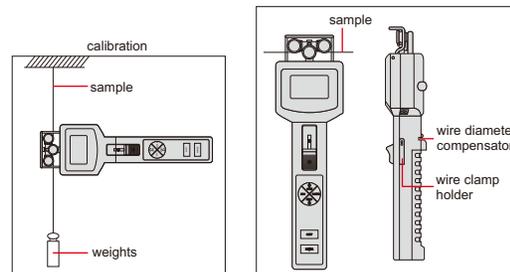
## WIRE TENSION METER PART NO. ISF-DT1000

### SPECIFICATION

Accuracy class	±2%FS
Range of test force	10~1000cN
Test force resolution	1cN
Width of measuring head	2.56"
Factory calibrated wire diameter	.0157" DIA
Range of diameter	.004~.020"
Frequency of display update	2 times/sec
Maximum line speed	78740 in/min
Power supply	built-in rechargeable battery
Environmental requirement	temp: 50~113°F, humidity: ≤90%RH

### STANDARD DELIVERY

Main unit	1 pc
-----------	------



- Suitable for testing the tension of stranding machines, winding machines, wire cutting machines, carbon fibre winding equipments, fibre optic winding equipments, fibre optic cable production equipments, glass fibre winding equipments, steel cord production equipments, steel wire rope production equipments and so on
- Automatic zeroing, manual zeroing also possible
- Memory function for recording the current real-time value (up to 200 data), for recording phase data (max., min., average)
- 10 calibration channels, 6 groups of calibration points to choose from
- Fine-tunable compensation, compensation value range ±10%FS, 1% for one component
- Six units g, cN, N, lb, daN, kg are automatically converted
- 3 min no operation auto shutdown
- With wire diameter compensation, high measurement accuracy



## WIRE TENSION METERS

- For tension measurement of fine materials: textiles, chemical fibers, fine wires
- With ball bearing guide pulley measuring head
- Unit: g, cN
- Record max, min, avg during measurement
- Built-in rechargeable battery, fully charged, operate for about 30h



ISF-DU100

### SPECIFICATION

Part No.	ISF-DU50	ISF-DU100	ISF-DU200
Accuracy class	±3%FS		
Range of test force	0.3~50cN	1~100cN	1~200cN
Test force resolution	0.1cN		
Width of measuring head	1.69"		
Factory calibrated wire diameter	.0047"	.0047"	.0079"
Range of diameter	.0020~.0079"		
Maximum line speed	2952.76ft/min		
Power supply	built-in rechargeable battery		
Dimension (L×W×H)	6.30×5.51×1.38"		
Net weight	.43lb		
Environmental requirement	temp: 50~113°F; humidity: ≤90%RH		

### STANDARD DELIVERY

Main unit	1 pc
Power dapter	1 pc

## INFRARED BELT TENSION METER PART NO. 5900-HZ18A



- High-precision infrared sensors enable accurate measurement
- By measuring the vibration frequency, combined with belt mass and length, calculate tension
- Two sensors: long probe is suitable for measurement in narrow spaces
- Automatic power off



### STANDARD DELIVERY

Main unit	1 pc
Long probe	1 pc
Short probe	1 pc

### SPECIFICATION

Measuring range	10~800Hz	
Input parameter range	maximum free belt length: 99.99m maximum belt weight: 9.999kg/m	
Digital sampling error	<1%	
Display error	±1Hz	
Accuracy	<5%	
Unit	Hz, N, lbf	
Measuring distance	.12~.79"	
Operation temperature	50~122°F	
Power supply	1×9V battery	
Dimension (L×W×H)	main unit	5.16×2.83×1.02"
	long probe	46.46×.87×.35"
Net weight	.36lb	

## SONIC BELT TENSION METER PART NO. 5910-HZ5K

- The sonic belt tension meter uses a microphone probe to capture the sound waves generated by the belt vibration, and can measure the waveform period, and then calculate the tension value by the frequency of the weekly wave
- Can store 500 sets of measurement data, comes with 48 sets of belt data, no need to manually input every time
- Automatic filtering of noise interference, suitable for measurement in small spaces
- Easy operation, one-handed operation
- Lightweight and portable



### STANDARD DELIVERY

Main unit	1 pc
Standard sensor	1 pc
Hammer	1 pc



### SPECIFICATION

Frequency range	10~5000Hz
Tension range	0.01~99900N
Input parameter range	belt mass: 0~999.9g/m
	belt width: 0~999.9mm/R
	belt span: 0~9999mm
Unit	N
Accuracy	±1%
Operation temperature	50~122°F
Dimension	6.30×2.32×1.06"
Power supply	2×1.5V AAA batteries
Net weight	150g



## DIGITAL TORQUE TESTERS

- External sensor
- Metal case, touch buttons
- Clockwise and counter-clockwise operation
- Test mode: track, peak, first peak, preset tolerance
- Unit: lbf.in, lbf.ft, N.m, N.cm, kgf.cm
- Set tolerance with judgement
- 1000 memories
- LCD display with backlight, can automatically turn 180°
- Overload alarm
- Automatic power off



DATA OUTPUT



### SPECIFICATION

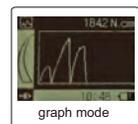
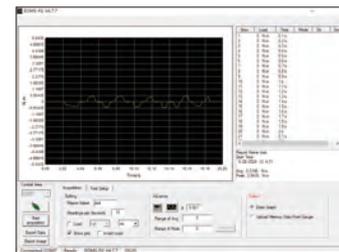
Part No.	IST-DDT1	IST-DDT5	IST-DDT10
Load capacity	.44~8.85lbf.in	2.21~44.3lbf.in	4.43~88.5lbf.in
	–	.18~3.69lbf.ft	.37~7.38lbf.ft
Resolution	.001lbf.in	.005lbf.in	.01lbf.in
	–	.0005lbf.ft	.001lbf.ft
Max. clamping diameter	.40" DIA	.40" DIA	.51" DIA
Sampling frequency	2000Hz		
Accuracy	±0.3% (of load capacity)		
Output	USB, RS232, alarm signal		
Power supply	built-in rechargeable battery		
Dimension	5.71x2.87x1.34"		
Net weight	3.09lb		

### STANDARD DELIVERY

Main unit	1 pc
External sensor	1 pc
AC/DC adapter	1 pc
Transmission cable (keyboard signal)	1 pc
Measuring software	1 set

### OPTIONAL ACCESSORY

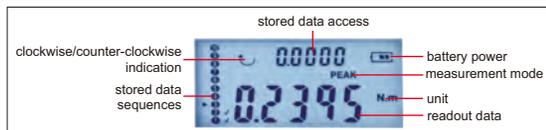
Printer	ISF-DF-PRINTER
RS232 cable	IST-DDT-CABLE
Wireless transmitter (receiver is needed)	7315-ISF-D



software (included)

printer (optional)

## TORQUE TESTERS



- 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

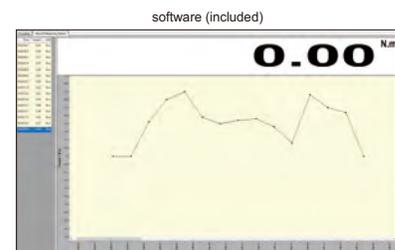
### SPECIFICATION

Part No.	IST-HP2-U	IST-HP5-U	IST-HP10-U
Maximum range	17.70lbf.in	44.25lbf.in	88.5lbf.in
Resolution	.01lbf.in	.02lbf.in	.05lbf.in
Accuracy	±1%		
Maximum test speed	3000rpm		
Number of memory	10 groups		
Power supply	built-in rechargeable battery		
Dimension	9.06x4.33x1.97"		
Net 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



buffer test example

**DIGITAL TORQUE TESTERS**

**ATTENTION: NOT SUITABLE FOR HIGH 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:
  - Yellow LED light on when the value is below the low tolerance;
  - green LED light on when the value is within tolerance;
  - red LED light on when the value is above the high tolerance
- The buzzer alarms when the maximum torque value is captured in the first peak mode
- Ability to upload data in real time, save data and export data to EXCEL
- Power off automatically in 2 minutes without any operations
- Supplied with manufacturer inspection certificate



**IST-04TT350**

**SPECIFICATION**

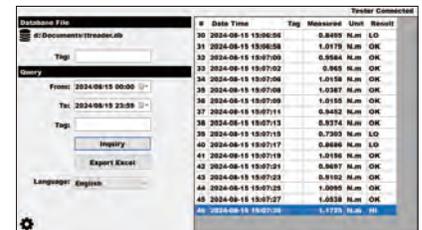
Part No.	IST-04TT5	IST-04TT28	IST-04TT68	IST-04TT350
Range	4.42~44.2in.lb .369~3.69ft.lb	24.8~247.8in.lb 2.06~20.65ft.lb	60.2~602in.lb 5.01~50.1ft.lb	310~3097in.lb 25.8~258.1ft.lb
Accuracy	±1% of indicated value (clockwise)			
Resolution	.01in.lb .001ft.lb	.1in.lb .01ft.lb	.1in.lb .01ft.lb	1in.lb .1ft.lb
Unit	in.lb, ft.lb, kg.cm, N.m			
Square socket/hex driver	1/4"	3/8"	3/8"	1/2"
Adaptor	no	3/8" to 1/4"	3/8" to 1/4"	1/2" to 3/8" 3/8" to 1/4"
Power supply	AC 100~240V, 50/60Hz			
Net weight	1.65lb	1.65lb	2.43lb	2.43lb

**STANDARD DELIVERY**

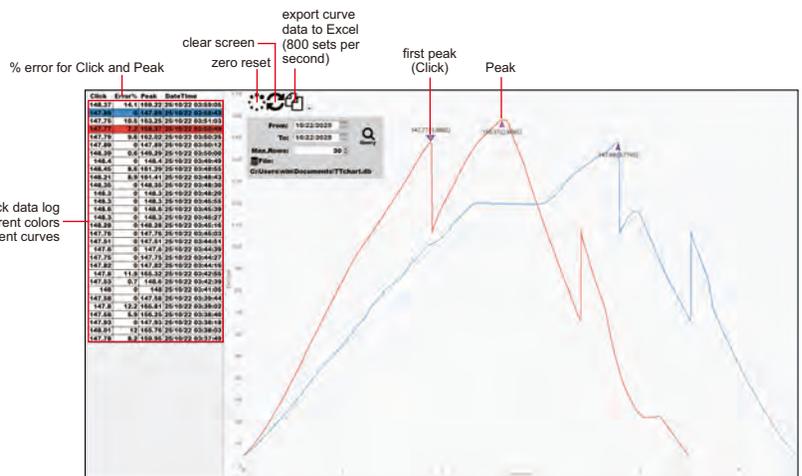
Main unit	1 pc
Software and transmission cable	1 pc
AC/DC adapter	1 pc
Adaptor	refer to details



adaptor (included)



software (included)



curve analysis software (optional)

- Over-torque analysis when Click signal is insufficient
- Real-time data tracking and recording

**OPTIONAL ACCESSORY**

Curve analysis software	IST-TT-CURVE
-------------------------	--------------

## DIGITAL TORQUE SCREWDRIVERS

- Clockwise and counter-clockwise operation
- Unit: in.lb, cN.m, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
  - Green LED light on and buzzer sounds when target torque value is 90%~100% of target torque
  - Red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations



IST-SD200

INSPECTION CERTIFICATE



### SPECIFICATION

Part No.	IST-SD50	IST-SD200	IST-SD400
Range	.88~4.42in.lb	3.54~17.7in.lb	7.08~35.39in.lb
Accuracy	clockwise	±3%	±2.5%
	counter-clockwise	±4%	±3.5%
Resolution	.01in.lb	.01in.lb	.01in.lb
Size of hex socket (L)	1/4"	1/4"	1/4"
Power supply	1×AAA battery		
Length	7.60"	7.99"	7.99"
Net weight	.42lb	.44lb	.44lb



### STANDARD DELIVERY

Torque screwdriver	1 pc
Phillips screwdriver bits	1 pc
Hex screwdriver bits	1 pc

### OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
-------------------	--------------

## TORQUE SCREWDRIVERS

### SPECIFICATION

Part No.	IST-MF18	IST-MF36	IST-MF50
Range (clockwise)	3.6~18lb.in	7~36lb.in	10~50lb.in
Graduation	.3lb.in	.5lb.in	1lb.in
Head	1/4" hex socket		
Accuracy	±6%		
Length	6.77"		
Net weight	.57lb		

### STANDARD DELIVERY

Torque screwdriver	1 pc
T-bar wrench (for IST-MF36, IST-MF50)	1 pc



IST-MF36



T-bar wrench (for IST-MF36, IST-MF50)

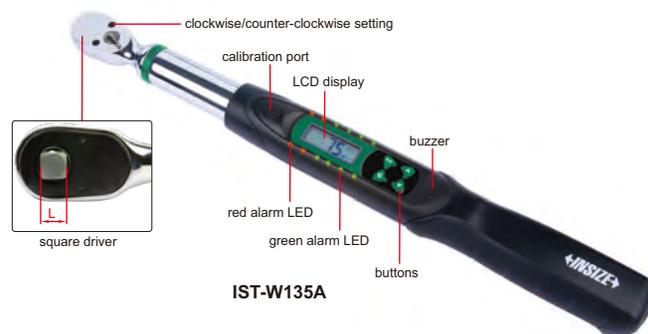
ATTENTION: CLOCKWISE OPERATION ONLY

## DIGITAL TORQUE WRENCHES

POPULAR MODEL

INSPECTION CERTIFICATE

- 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

OPTIONAL ACCURACY:  
CLOCKWISE: ±1%  
COUNTER-CLOCKWISE: ±2%  
ONLY FOR RANGE FOR 53.1~4424in.lb



### OPTIONAL ACCESSORY

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

### SPECIFICATION

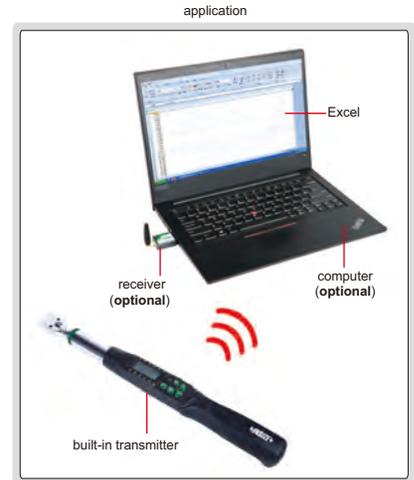
Part No.	Type	Range		Accuracy	Resolution		Square driver (L)	Power supply	Length	Net weight
IST-W30A	A	53.1~265.5in.lb	4.42~22.12ft.lb	clockwise: ±2% counter-clockwise: ±3%	.1in.lb	.01ft.lb	1/4"	2×AA batteries	15.35"	1.83lb
IST-W135A		239~1195in.lb	19.9~99.5ft.lb		1in.lb	.1ft.lb	3/8"		16.34"	2.09lb
IST-W200A		354~1770in.lb	29.5~147.5ft.lb		1in.lb	.1ft.lb	1/2"		20.87"	3.09lb
IST-W340A		602~3009in.lb	50.1~250.7ft.lb		1in.lb	.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	.1ft.lb	3/4"		50.59"	15.43lb

## BUILT-IN WIRELESS DIGITAL TORQUE WRENCHES (KEYBOARD SIGNAL)

OPTIONAL ACCURACY:  
CLOCKWISE: ±1%, COUNTER-CLOCKWISE: ±2%

DATA  
OUTPUT

INSPECTION  
CERTIFICATE



### Torque wrench:

- Clockwise and counter-clockwise operation
- Peak and track working mode
- Upper and lower tolerance limits can be set to determine pass or fail by LED lights, can set whether to send beyond tolerance limits
- 10 preset target torque values and usage modes, parameters can be locked to prevent change
- With audible and visible alarm:
  - Green LED light on in sequence and buzzer sounds louder and louder when torque value is 80%~99.5% of target torque
  - Both green and red LED light on and buzzer sounds long-lasting alarm when torque value is over 99.5% of target torque
- Measurement results automatically calculate % difference from target value
- Memory of 2000 results for browsing on the wrench
- Counting function, over 20% of the range counts once
- Auto power off time can be set
- Non-slip grip handle
- With overload record (once the torque reaches 110% of the maximum range)

### Data transmission:

- Measurement results can be sent manually by pressing the M button or sent automatically after measurement
- Built-in wireless data transmission module, which can be connected with computers, mobile phones, tablets and other devices
- Keyboard signal, can be transmitted to Excel, Word, Txt, etc.
- Transmission distance is 32.8ft (under the condition of no obstruction and no electromagnetic interference)
- Optional accessory: receiver (part no. 7315-2/3/6/7/8/9)

### SPECIFICATION

Part No.	Range	Accuracy	Resolution	Unit	Square driver (L)	Power supply	Length	Net weight
IST-42W30A	53.0~265.5in.lb	clockwise: ±2% counter-clockwise: ±3%	.1in.lb	N.m in.lb ft.lb kg.cm	1/4"	2×AA batteries	15.35"	1.67lb
IST-42W60A	106.0~530.9in.lb		.1in.lb		3/8"		16.34"	2.07lb
IST-42W135A	19.9~99.5ft.lb		.1ft.lb		3/8"		16.34"	2.07lb
IST-42W200A	29.5~147.5ft.lb		.1ft.lb		1/2"		20.87"	2.95lb
IST-42W340A	50.1~250.7ft.lb		.1ft.lb		1/2"		25.59"	3.39lb
IST-42W500A	73.7~368.7ft.lb	clockwise: ±2.5% counter-clockwise: ±3.5%	.1ft.lb		3/4"		37.40"	6.50lb

## MECHANICAL TORQUE WRENCHES (DIGITAL SETTING)

ATTENTION: DISPLAY PRE-SET TORQUE VALUE (NOT REAL TIME TORQUE)

ATTENTION: CLOCKWISE OPERATION ONLY

- Unit: ft.lb, in.lb, N.m
- Mechanical "click" torque wrench, the pre-set torque value is shown on the display



### 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"
Net weight	3.20lb	3.53lb	3.97lb



IST-20WM80

## TORQUE WRENCHES

ATTENTION: CLOCKWISE OPERATION ONLY

- According to DIN ISO 6789, ASME B107.300-2010
- All-metal construction, sturdy and durable



IST-10WM200



### SPECIFICATION

Part No.	IST-10WM200	IST-10WM250	IST-10WM100	IST-10WM150	IST-10WM250A	IST-10WM600
Range (clockwise)	40~200lb.in	50~250lb.in	20~100lb.ft	30~150lb.ft	50~250lb.ft	100~600lb.ft
Accuracy	±4%	±4%	±4%	±4%	±4%	±4%
Graduation	1lb.in	1lb.in	0.5lb.ft	1lb.ft	1lb.ft	2.5lb.ft
Square driver (D)	1/4"	3/8"	3/8"	1/2"	1/2"	3/4"
Length	11.02"	12.40"	16.73"	19.88"	20.67"	41.54"
Net weight	1.50lb	1.81lb	2.29lb	2.56lb	2.87lb	13.01lb

## DIAL TORQUE WRENCHES



- 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"
Net weight	1.06lb	1.06lb	1.06lb	1.06lb	1.82lb	2.89lb	2.89lb	2.89lb

# HANDHELD LIBS SPECTROMETER PART NO. HLS-B410



**IP54**  
WATERPROOF

**LASER CLASS**  
CLASS I

**EYE SAFE LASER**

**NO RADIATION**

- Widely used in metallurgy, casting, steel, non-ferrous metals and scrap metal recycling, etc.
- LIBS is a technique that uses laser light on the sample's surface to excite outer electrons and generate a plasma, analyzing its elemental composition
- Ability to quickly analyze the metal elements of materials for quantitative characterization and grade differentiation
- Ability to accurately analyse light elements such as Al, Si, Mg, etc.
- No radiation, faster, more accurate, eye-safe handheld spectrometer
- The instrument includes standard metal grade database, ability to create user-owned metal grade database
- Compact size, lightweight, replaceable batteries, long battery life
- IP54 dust/waterproof

**POPULAR  
MODEL**



## SPECIFICATION

Application	alloy analysis	can be used for almost all alloys, including scrap metal, high temperature alloys, alloy steel, stainless steel, tool steel, chromium molybdenum steel, aluminum alloys, nickel alloys, titanium alloys, cobalt alloys, copper alloys, precious metals, zinc alloys, anomalous alloys, zirconium alloys, mixed alloys, etc.
	material properties identification (PMI)	can be used for quality control in the metal fabrication and processing industry to analyze material composition and identify alloy grades for a wide range of materials including critical components, raw materials, and welded seams
Operative system	android	
Touch panel	5", 720×1280, multi-touch, adjustable brightness	
Light source	pulsed laser	
Wavelength	1535nm	
Laser life	1 billion times	
Laser class	class I	
Detection limit	0.05%	
Repeatability	major element RSD<1%, nonmajor element RSD<5%	
Analysis time	<5s	
Work distance	fit to probe plane	
Analysis environment	no protective gas required, direct analysis in ambient air	
View window material	sapphire	
Memory	16G	
Data export format	PDF, xlsx (photos available, can add report content: company information, material information, etc.)	
Data transmission	USB, flash drive (type C)	
Protection class	IP54	
Battery	3300mAh lithium battery	
Work time	8h	
Operation temperature	32~104°F	
Dimension (L×W×H)	11.42×11.81×3.54"	
Net weight	3.858lb	



wavelength calibration foil (included)



iron base calibration foils (included)



aluminum base calibration foils (included)



copper base calibration foils (included)

## STANDARD DELIVERY

Main unit	1 pc
Battery	2 pcs
Charger	1 pc
Sanding paper (HLS-B410-SP30)	20 pcs
Iron base calibration foil	2 pcs
Aluminum base calibration foil	2 pcs
Copper base calibration foil	2 pcs
Wavelength base calibration foil	1 pc

## STANDARD DATABASE

Alloy type	Elemental range
Iron Alloy	Fe, Cr, Ni, Mn, Cu, V, Mo, Si, Ti, Co, etc.
Aluminum Alloy	Al, Cr, Ni, Si, Mg, Ti, Fe, Cu, Sn, Pb, Zn, Zr, Be, Sr, Sc, etc.
Copper Alloy	Cu, Fe, Al, Mn, Sn, Pb, Zn, Ni, etc.

## OPTIONAL DATABASE

Alloy type	Database number	Elemental range
Nickel Alloy	A1	Ni, Cr, Fe, Nb, Mo, Ti, Al, Mn, Cu, etc.
Titanium Alloy	A2	Ti, Al, V, Fe, Cr, Mo, Sn, Mn, Zr, Nb, Si, Cu, etc.
Magnesium Alloy	A3	Mg, Si, Cu, Mn, Zn, Zr, Al, Y, Be, Ni, Fe, etc.
Au	A4	Au, Ag, Zn, Ni, Pd, Cu, Co, In, etc.
Ag	A5	Ag, Cu, Zn, Cd, Ni, etc.
Pt	A6	Pt, Pd, Ag, Cu, Ni, Zn, Co, Ru, Pb, Cr, Au, etc.
Pd	A7	Pd, Cu, Ni, Zn, Fe, Co, Ag, As, Pb, Cr, etc.



# COATING THICKNESS GAUGE (STANDARD TYPE) PART NO. 9501-1200

- DATA OUTPUT
- BLUETOOTH
- FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES
- POPULAR MODEL



- 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

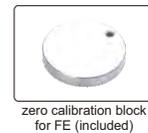


### SPECIFICATION

<b>Probe</b>	magnetic induction probe
<b>Measuring range</b>	refer to the specification of probes
<b>Accuracy</b>	$\pm(3\%L+.04)$ mils (range $\leq$ 50mils) $\pm(3\%L+.4)$ mils (range $>$ 50mils) L is measuring thickness in mils
<b>Resolution</b>	.01mils (range $\leq$ 10mils) .1mils (range $>$ 10mils)
<b>Measuring mode</b>	continuous and single
<b>Storage capacity</b>	600
<b>Output</b>	Type-C
<b>Power supply</b>	2x1.5V AA batteries
<b>Dimensions</b>	5.31x3.03x1.26"
<b>Net weight</b>	.38lb

### STANDARD DELIVERY

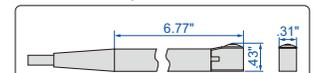
Main unit	1 pc
Magnetic induction probe (FE)	1 pc
Zero calibration block for FE probe	1 pc
Calibration foils (2/4/10/20/40mils)	5 pcs
1.5V AA battery	2 pcs
Software and USB cable	1 pc



### OPTIONAL ACCESSORY

<b>Probe</b>	9501-1200-NFE, 9501-1200-FE90, 9501-1200-FE10
<b>Receiver</b>	ISR-C300-RECEIVER
<b>Cable of receiver</b>	9501-1200-CABLE
<b>Bluetooth printer</b>	ISR-C002-PRINTER

FE90 probe dimension



### SPECIFICATION OF PROBES

Part No.	Range	Minimum substrate thickness	Minimum measuring area	Minimum curvature radius of convex workpiece	Probe type
9501-1200-FE	0~50mils	.02"	.28" DIA	.06"	magnetic induction probe (FE)
9501-1200-NFE	0~50mils	.01"	.59" DIA	.12"	eddy current probe (NFE)
9501-1200-FE90	0~50mils	.02"	.28" DIA	—	magnetic induction probe (FE90) for bores and grooves
9501-1200-FE10	20mils~4000mils	.08"	1.57" DIA	.40"	magnetic induction probe (FE10) for large range

# COATING THICKNESS GAUGE PART NO. ISO-8000FN

SUITABLE FOR THIN COATING  
BELOW .39mils

FOR MAGNETIC AND  
NON-MAGNETIC SUBSTRATES



calibration foils (included)



stand (optional)



eddy current probe N2000 (optional)



zero calibration plate (included)



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 *	±(.02mils+2%L)		
Repeatability *	≤(.008mils+.8%L)		≤(.008mils+1%L)
Measuring mode	single and continuous		
Measuring interval	single mode	1.5s	0.8s
	continuous mode	0.4s	0.4s
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	mil/μm		
Power supply	4×1.5V AAA batteries		
Dimension	5.83×2.99×1.02"		
Net weight	.33lb		

\*L is measuring thickness in mils

## 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 (with zero calibration plate and standard foil)	ISO-8000FN-N1500 **
	ISO-8000FN-N2000
Stand	ISO-8000FN-STAND

\*\*For precision measurement of thin coating below .39mils, please use the stand for eddy current probe

## COATING THICKNESS GAUGE (STANDARD TYPE) PART NO. 5405-QM23

- 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  
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)
- Upper and lower limits can be set, over-limit alarm alert
- Data statistics and chart analysis
- 2.4-inch rotatable color screen

### SPECIFICATION

Measuring range	FE mode: 0~196mil, NFE mode: 0~118mil
Measuring principle	FE mode: magnetic induction NFE mode: eddy current effect
Calibration mode	zero calibration, multi-point calibration
Accuracy	$\pm(2\%L+.04\text{mil})$ : $\leq 78\text{mil}$ $\pm(3\%L+.08\text{mil})$ : $78\text{mil}\sim 118\text{mil}$ $\pm(5\%L+.08\text{mil})$ : $\geq 118\text{mil}$ , L is measuring thickness in mils
Resolution	.001mil (<10mil), .01mil (10mil~100mil), .1mil ( $\geq 100\text{mil}$ )
Minimum curvature radius	convex .20" ; concave .98"
Minimum measuring area	.6" DIA
Minimum substrate thickness	FE .008"; NFE .001"
Storage	1300
Operation environment	temperature: 14°F~122°F; humidity: 20%~90% (non-condensing)
Unit	mil, inch, $\mu\text{m}$ , mm
Language	English, Chinese
Power supply	2×1.5V AA batteries
Dimension (L×W×H)	5.79×3.03×1.30"
Net weight	.30lb (exclude battery)



FOR MAGNETIC AND  
NON-MAGNETIC SUBSTRATES

INSPECTION  
CERTIFICATE



antitrust paint layer measurement



film thickness measurement



paint inspection



NFe zero calibration plate  
(included)



Fe zero calibration plate  
(included)



standard foil (included)

### STANDARD DELIVERY

Main unit	1 pc
Fe zero calibration plate	1 pc
NFe zero calibration plate	1 pc
Standard foil	5 pcs
1.5V AA battery	2 pcs



VIDEO

## COATING THICKNESS GAUGE (STANDARD TYPE) PART NO. 5407-QM27

- Separate probe, 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  
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)
- Upper and lower limits can be set, over-limit alarm alert
- Data statistics and chart analysis
- 2.4-inch rotatable color screen

### SPECIFICATION

Measuring range	FE mode: 0~196mil, NFE mode: 0~118mil
Measuring principle	FE mode: magnetic induction NFE mode: eddy current effect
Calibration mode	zero calibration, multi-point calibration
Accuracy	$\pm(2\%L+.04\text{mil})$ : $\leq 78\text{mil}$ $\pm(3\%L+.08\text{mil})$ : $78\text{mil}\sim 118\text{mil}$ $\pm(5\%L+.08\text{mil})$ : $\geq 118\text{mil}$ , L is measuring thickness in mils
Resolution	.001mil (<10mil), .01mil (10mil~100mil), .1mil ( $\geq 100\text{mil}$ )
Minimum curvature radius	convex .20" ; concave .98"
Minimum measuring area	.6" DIA
Minimum substrate thickness	FE .008"; NFE .001"
Storage	1300
Operation environment	temperature: 14°F~122°F; humidity: 20%~90% (non-condensing)
Unit	mil, inch, $\mu\text{m}$ , mm
Language	English, Chinese
Power supply	2×1.5V AA batteries
Dimension (L×W×H)	main unit: 5.79×3.03×1.30", probe: 2.64×.67" DIA
Net weight	main unit .30lb (exclude battery), probe .14lb



FOR MAGNETIC AND  
NON-MAGNETIC SUBSTRATES

INSPECTION  
CERTIFICATE



antitrust paint layer measurement



film thickness measurement



paint inspection



NFe zero calibration plate  
(included)



Fe zero calibration plate  
(included)



standard foil (included)

### STANDARD DELIVERY

Main unit	1 pc
Fe zero calibration plate	1 pc
NFe zero calibration plate	1 pc
Standard foil	5 pcs
1.5V AA battery	2 pcs



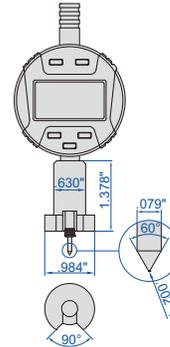
VIDEO

## DIGITAL SURFACE PROFILE GAUGE

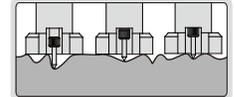
DISPLAY MAXIMUM, MINIMUM, DIFFERENCE VALUE BETWEEN MAXIMUM AND MINIMUM

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: wireless transmitter part no. 7315-50M (receiver is needed)



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"

## 60° GLOSS METER PART NO. 5702-DG6

- According to JJG 696, ISO 2813, ASTM D2457, ASTM D523, GB/T 9754
- To measure the gloss level of material surfaces such as paint, wood, stone, plastic, paper, leather, metal, etc.
- Automatic judgement after setting high and low limits
- Automatic power off

DATA OUTPUT



base with calibration block (included)



### SPECIFICATION

Measuring angle	60°
Measuring range	0~200GU
Measuring spot	.35"x.59"
Minimum measurement size	.79"x.39"
Accuracy	0~100GU: ±1.5GU 100~200GU: ±1.5%
Repeatability	0~100GU: 0.2GU 100~200GU: 0.2%
Resolution	0.1GU
Zero value error	0.1GU
Data port	USB (Type-C)
Power supply	3.7V rechargeable Li-ion battery
Dimension	5.31×1.77×.95"
Net weight	.52lb

### STANDARD DELIVERY

Main unit	1 pc
Base with calibration block	1 pc
USB flash disk	1 pc
AC/DC adapter	1 pc
USB data cable	1 pc

software (included), test can be controlled from the software, display test data and report



## 60° GLOSS METER PART NO. ISQ-DG6



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"
Net 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)



- 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

## HANDHELD SPECTROPHOTOMETER (STANDARD TYPE) PART NO. 5701-D40

DATA  
OUTPUT

GRATING  
SPECTROPHOTOMETRIC

MATCHING COLOR  
CARD QUICKLY

FOUR KINDS OF  
APERTURE

- Conforms with CIE No.15, ISO7724-1, ASTM E1164 and DIN5033 Teil7 standards
- Grating spectrophotometric, 3.5"IPS full color screen, dual optical path high precise CMOS array sensor
- Use long life and low power consumption combined LED light source, include UV and exclude UV measurement
- Camera locating function, switchable four aperture
- Large capacity storage space, over 20000 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



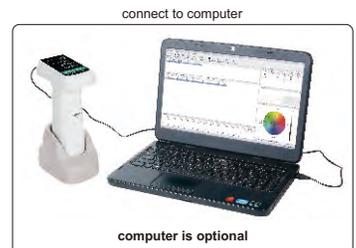
software (included) , test can be controlled from the software, display test data, report



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	400~700nm	
Wavelength interval	10nm	
Reflectance measurement range	0~200%	
Reflectance resolution	0.01%	
Display resolution	0.01	
Illumination area/Aperture	MAV Ø11mm; SAV Ø6mm, Ø3mm; MINI 1×3mm	
Color space	CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB	
Color difference formula	$\Delta E^*ab$ , $\Delta E^*cmc$ , $\Delta E^*94$ , $\Delta E^*00$	
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, T183, T184, 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	$\Delta E^*ab \leq 0.025$ (after whiteboard correction, measuring the whiteboard 30 times at 5s interval)
Inter-instrument error	$\Delta E^*ab \leq 0.25$ (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"	
Net weight	1.65lb	



computer is optional

### STANDARD DELIVERY

Main unit	1 pc
White calibration cavity	1 pc
Measuring aperture	8 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

MATCHING COLOR  
CARD QUICKLY

DATA  
OUTPUT



locating plate (included)



VIDEO



white calibration cavity (included)

software interface (included)



includes 6 electronic color charts, color chart libraries importable via colorcard software

download instrument data, test can be controlled from the software, report, Excel

### SPECIFICATION

<b>Illumination geometry</b>	D/8, specular component include (SCI)
<b>Illumination light source</b>	full spectrum LED light source
<b>Measurement conditions</b>	light source D65, observer angle 10°
<b>Wavelength range</b>	400~700nm
<b>Wavelength interval</b>	10nm
<b>Illumination aperture</b>	8mm
<b>Measuring time</b>	1s
<b>Color space</b>	CIE-Lab, CIE-LCh, CIE Luv, Yxy, CMYK, RGB, YI-98, WI-98, WI-Ganz, WI-Hunter, WI-R457, HSL, HSV, ITA, Spectra
<b>Color difference formula</b>	$\Delta E^*ab$ , $\Delta E^*uv$ , $\Delta E^*94$ , $\Delta E^*cmc(2:1)$ , $\Delta E^*cmc(1:1)$ , $\Delta E^*cmc(1.4:1)$ , $\Delta E^*00$
<b>Repeatability</b>	standard deviation $\Delta E^*ab \leq 0.03$ (measurement condition: the average value of 30 measurements on the whiteboard at an interval of 3s after calibration)
<b>Electronic color chart</b>	can create up to 46 charts, total 20000 color codes
<b>Operation environment</b>	32~113°F, 0~85%RH (no condensation)
<b>Storage environment</b>	-13~131°F, 0~85%RH (no condensation)
<b>Interface</b>	USB (Type-C)
<b>Dimension (L×W×H)</b>	3.39×2.48×6.22"
<b>Net weight</b>	.54lb

- 3.5-inch IPS display and capacity touch panel
- Able to store 1000 color compare records, 1000 color scan records, 100 standard records, 100 spectral curve records
- With multiple built-in standard electronic color charts, the color measurement function enables quick matching of the 3 closest color codes
- QC testing function, can set color difference threshold
- 3.7V/4000mAh battery, 10000 continuous measurements
- Testing can be controlled from the software, with test data displayed, passes counted, and reports exported

### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>White calibration cavity</b>	1 pc
<b>USB cable</b>	1 pc
<b>Power adapter</b>	1 pc
<b>Software</b>	1 set
<b>Cleaning cloth</b>	1 pc
<b>Locating plate</b>	1 pc

## ROTATIONAL VISCOMETER (STANDARD TYPE) PART NO. DRV-606

- Widely used to measure the viscosity of fluids such as grease, paints, pharmaceuticals, coatings, adhesives, detergents, etc.
- For measuring the absolute viscosity of Newtonian liquids and the apparent viscosity of non-Newtonian liquids
- Measurement results show rotor number, speed, liquid viscosity, and full-scale percentage simultaneously
- 5-inch color touch screen, convenient and quick operation
- Automatic measurement mode, the rotor stops when measurements stabilize
- The temperature sensor is included for real-time sample temperature detection
- Software is included for data transfer



rotors (included)

DATA  
OUTPUT



VIDEO



leveling bubble

rotor protection frame (included)

temperature sensor (included)

### SPECIFICATION

<b>Range (mPa·s)</b>	1~6×10 <sup>6</sup>
<b>Rotation speed (r/min)</b>	0.1, 0.3, 0.6, 1.5, 3, 6, 12, 30, 60
<b>Rotor No.</b>	1#, 2#, 3#, 4#
<b>Resolution (mPa·s)</b>	0.1
<b>Accuracy</b>	±1.0%FS
<b>Repeatability</b>	±0.5%FS
<b>Working environment</b>	41°F~95°F, ≤80%
<b>Power supply</b>	AC110V~220V, 50/60Hz
<b>Dimension (L×W×H)</b>	18.11×7.09×16.54"
<b>Net weight</b>	13.89lb

### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Rotor</b>	4 pcs
<b>Temperature sensor</b>	1 pc
<b>Protection cap</b>	1 pc
<b>Main post for lifting</b>	1 pc
<b>Host connection handle</b>	1 pc
<b>Main engine base</b>	1 pc
<b>Rotor protection frame</b>	1 pc
<b>Power adapter</b>	1 pc
<b>Wrench</b>	3 pcs

### OPTIONAL ACCESSORY

<b>Printer</b>	DRV-PRINTER
<b>Thermostatic water bath</b>	DRV-BATH
<b>Rotor 0</b>	DRV-SPINDLE

## INFRARED THERMAL IMAGING CAMERA (BASIC TYPE) PART NO. 9132-T400


**IP54**  
WATERPROOF

**DATA**  
OUTPUT

**VIDEO**

- Suitable for electric power, mechanical and electrical, heating ventilation and air conditioning, intelligent manufacturing, etc.
- High-sensitive infrared detector, resolution 256×192
- Support real-time super resolution technology, 4 times better image quality
- -4°F~1022°F wide temperature measurement range, automatic switch
- Software is included: support file management, thermal image analysis, video analysis, report editing, etc.
- Mobile APP is included: support real-time data and video transmission



### 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	25Hz/9Hz
	focal length	.13"
	field of view	56°×48°
	spatial resolution/IFOV	3.75mrad
	minimum object distance	3.94"
	distance to spot size/D:S	266:1
	focusing mode	focus-free
Measurement and analysis	measurement range	support auto-switching: -4°F~302°F, 32°F~1022°F
	measurement accuracy	±3.6°F or ±2%, whichever is greater
	analyzed target	center spot, fixed temperature measurement areas: small/medium/large
	temperature alarm	full screen temperature alarm with image and flash
	temperature measuring parameter	emissivity, reflected temperature, target distance
Image display	display screen	2.4" LCD
	image mode	IR, VIS, MIF, PIP
	color palette	6: iron red, white hot, arctic, rainbow 1, rainbow 2, hot iron
	image adjustment	level span mode: automatic, semi-automatic, manual
	digital camera	2MP
Function	laser	laser indication
	recording function	photo and video
Storage and transmission	storage	built-in 16GB
	image storage	JPG with temperature information
	video storage	support real-time video transmission, IRGD with temperature information
	external interface	TYPE-C, 1/4" tripod interface
	WIFI	can be connected to the mobile terminal for image and real-time video transmission
Power supply	battery type	rechargeable lithium-ion battery, non-removable
	operation time	11 hours
	charging mode	TYPE-C charging, capable of charging while using
	charging time	90% of full charge in 2.5 hours
Environmental parameter	operation temperature	5°F~122°F
	protection	IP54, 78.7" drop test
	certification	CE, RoHS
Physical parameter	net weight	.83lb
	dimension	7.64×2.42×2.99"

front view



### STANDARD DELIVERY

Main unit	1 pc
Power adapter	1 pc
TYPE-C data cable	1 pc
4G USB flash disk	1 pc
Software	1 pc

### OPTIONAL ACCESSORY

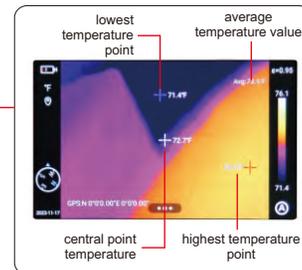
Tripod	0701-TR175
--------	------------

## INFRARED THERMAL IMAGING CAMERA (STANDARD TYPE) PART NO. 0231-IC650

DATA  
OUTPUT

IP54  
WATERPROOF

- 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



### 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
Measurement and analysis	laser ranging	indication/ranging: 3.94"~1574.8"
	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 maximum, minimum and average temperature tracking of analyzed target; full screen temperature threshold alarm (image, voice and flash)
Image display	temperature measuring parameter	emissivity, reflected temperature, target distance, humidity, atmospheric, transmittance, optical transmittance, dew point
	other	isothermals, smart stroke, intelligently calculate the area
	display screen	4.3", 800×480 pixel touch screen LCD
	digital camera	5MP
	image mode	IR, VIS, MIF, PIP
Function	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
	recording function	photo and video (infrared & visible light)
Storage and transmission	cloud service	available
	other	customized physical button, intelligent diagnosis, OTA update
	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
Power system	bluetooth	bluetooth 5.0, support image transmission (only for Android)
	battery type	lithium-ion rechargeable battery, working time≥5 hours
	charging mode	TYPE-C charging; PC/portable charger; capable of charging while using
Environmental parameter	charging time	90% of full charge in 2.5 hours
	operation temperature	-4°F~122°F
	storage temperature	-40°F~140°F
	protection	IP54, 78.7" drop test
Physical parameter	certification	CE, FCC, RoHS
	hardware	illuminator, microphone, speaker, electronic compass, GPS
	dimension	11.49×4.92×4.92"
net weight	2.53lb	

### STANDARD DELIVERY

Main unit	1 pc
64G SD card	1 pc
Lithium-ion battery	2 pcs
Power adapter	1 pc
Software	1 pc

### OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------



VIDEO

**POCKET-SIZED THERMAL CAMERA  
PART NO. 0232-PC550**

DATA  
OUTPUT

**IP54**  
WATERPROOF



front

back

- The 256×192 infrared detector produces crisp image
- The IR, VIS, PIP and MIF reveal temperature details
- -4°F to 1022°F temperature range with auto-switching capability
- Software is included

**STANDARD DELIVERY**

Main unit	1 pc
Power adapter	1 pc
Software	1 pc

**OPTIONAL ACCESSORY**

Tripod	0701-TR175
--------	------------

**SPECIFICATION**

Imaging and optics	detector type	unrefrigerated vanadium oxide/7.5µm~14µm
	infrared resolution	256×192@12µm
	thermal sensitivity/NETD	≤45mK
	infrared frame rate	25Hz/9Hz
	focal length	3.2mm
	field of view	56°×48°
	spatial resolution (IFOV)	3.75mrad
	minimum object distance	11.8"
	distance to spot size (D:S)	266:1
	focusing mode	focus-free
	digital zoom	1.1x~8x
laser ranging	≤314.9"	
Measurement and analysis	measurement range	-4°F~1022°F
	measurement accuracy	±3.6°F or ±2%, whichever is greater
	analyzed target	spot×2 (include center spot), area×3
	tracking/alarm	full screen maximum/minimum temperature tracking; the maximum or minimum temperature tracking of analyzed target; full screen temperature threshold alarm (image and flash)
	temperature measuring parameter	emissivity, reflected temperature, target distance
Image display	other	intelligently calculate the area
	display screen	3.5" LCD
	digital camera	5MP
	image mode	IR, VIS, MIF, PIP
	image adjustment	level span mode: automatic, semi-automatic, manual
Function	color palettes	white hot, black hot, iron red, hot iron, rainbow, arctic
	recording function	photo
	cloud service	available
	other	customized physical button×2
Storage and transmission	storage media	local storage (16GB)
	image storage	JPG with temperature information
	external interface	TYPE-C
	WIFI	can be connected to the mobile terminal for image transmission
Power system	battery type	rechargeable lithium-ion battery, working time≥4 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	14°F~122°F
	storage temperature	-40°F~158°F
	protection	IP54, 39.3" drop test
	certification	CE, FCC, RoHS
Physical parameter	hardware	illuminator, Laser (indication, ranging)
	dimension	5.43×3.50×1.38"
	net weight	.65lb

## INFRARED THERMAL IMAGING CAMERA FOR MOBILE PHONE PART NO. 0236-MC150



- Suitable for intelligent farming, electrical industry, mechanical industry, construction, heating ventilation and air conditioning, etc.
- Clearly identify people and animals hundreds of meters away in the darkness field
- Automatically focus on subjects by touching the screen to quickly produce clear thermal images
- Up to 3 spots, 1 line and 2 areas of subjects to be analyzed
- Mobile App is included (only for Android system)



### SPECIFICATION

Infrared detector	detector type	unrefrigerated vanadium oxide, .0003"~.0006"
	infrared resolution	256×192@.0005"
	infrared frame rate	25Hz
Lens	focal length	.28"
	field of view	25°
	focusing mode	automatic/electric
	detection range	328.1ft
Temperature measurement	measurement range	-4°F~302°F
	measurement accuracy	±3.6°F or ±2%, whichever is greater
	analyzed target	spot, line, area
Function	photo and video	available
	color palettes	9: white hot, fulgurite, iron red, hot iron, medical, north pole, rainbow 1, rainbow 2, black hot; 1 customized
	instant sharing	images, videos
Power supply	voltage	4.5V~5.5V
	power	500mW
Environmental parameter	operation temperature	14°F~140°F
	protection	IP43, 1m drop test
	certification	CE, RoHS
Physical parameter	external interface	USB TYPE-C
	dimension (L×W×H)	2.32×.79×.94"
	net weight	.09lb

connect to Android mobile phone



### STANDARD DELIVERY

Main unit	1 pc
Carrying box	1 pc
USB flash disk	1 pc

## 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

POPULAR MODEL



### SPECIFICATION

Temperature range	-58°F~932°F/-50°C~500°C
Temperature resolution	.2°F/0.1°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	0.10~1.00 (adjustable)
Repeatability	±1.0°F or ±0.5%; ±0.5°C or ±0.5%
Response time	≤500ms (95% of reading)
Spectral response	8μm~14μm
Positioning laser	single-spot, class 2 laser product, output<1mW, wavelength 630nm~670nm
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"
Net 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 resolution	.1°F/0.1°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)
Distance to spot size (D:S)	12:1
Emissivity	0.95 (fixed)
Repeatability	±1.8°F/±1.0°C
Response time	150ms
Spectral response	8μm~14μm
Positioning laser	dual-spot, class 2 laser product, output<1mW, wavelength 630nm~670nm
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"
Net weight	.30lb



#### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

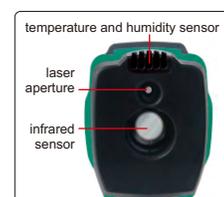
### INFRARED THERMOMETER (MEDIUM TEMPERATURE TYPE) PART NO. 0215-A900



- 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	.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	0.10~1.00 (adjustable)
	response time	<150ms
	spectral response	8μm~14μm
	positioning laser	circular, class 2 laser product, output<1mW, wavelength 630nm~670nm
Temperature and humidity sensor	ambient temperature range	32°F~122°F/0°C~50°C
	dew point temperature range	32°F~122°F/0°C~50°C
	temperature resolution	.1°F/.1°C
	temperature accuracy	±1.8°F/±1.0°C
	humidity range	0%RH~100%RH
	humidity resolution	.1%RH
humidity accuracy	±5%RH (20%RH~80%RH), other range ±7%RH	
Automatic power off	about in 10 seconds	
Power supply	1×9V battery	
Dimension	6.69×1.77×3.35"	
Net weight	.43lb	



#### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

## INFRARED THERMOMETER (MEDIUM-HIGH TEMPERATURE TYPE) PART NO. 0216-B210



### SPECIFICATION

Temperature range	-25.6°F~2372°F
Temperature accuracy	±(3.0+1· t )°F (<32°F) ±3.0°F or ±1.5% (≥32°F)
Temperature resolution	.1°F (<1000°F), 1°F (≥1000°F)
Distance to spot size (D:S)	30:1
Emissivity	0.10~1.00 (adjustable)
Repeatability	1.5°F or 0.7%
Response time	≤250ms (95% of reading)
Spectral response	8μm~14μm
Positioning laser	circular, class 3R laser product, output 1mW≤P<3mW, wavelength 630nm~670nm
Operation temperature	32°F~122°F
Operation humidity	<90%RH (non-condensing)
Storage temperature	-4°F~140°F
Power supply	1×9V battery
Dimension	7.48×5.00×2.13"
Net weight	.68lb

- Unit: °F/°C
- Circular laser sighting
- Over range indicator with LED and buzzer
- 99 data storage
- Auto interval measurement
- MAX/MIN/AVG/DIF display

### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

### OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------

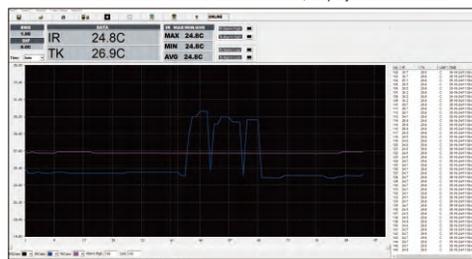
## INFRARED THERMOMETER (HIGH TEMPERATURE TYPE) PART NO. 0218-B610

DATA  
OUTPUT



- Unit: °F/°C
- MAX/MIN/AVG/DIF mode
- Trigger lock continuous measurement function
- Adjustable emissivity 0.10~1.00
- 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 stored 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	0.10~1.00 (adjustable)
	repeatability	±2.7°F (at -58°F~68°F), ±0.5% or ±.9°F (at 68°F~3362°F)
	response time	150ms
	spectral response	8μm~14μm
K-Type thermocouple system (electrical signal)	positioning laser	dual-spot, class 2 laser product, output<1mW, wavelength 630nm~670nm
	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)
Power supply	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"	
Net 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



- 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



### SPECIFICATION

Infrared system	temperature range	5°F~536°F/-15°C~280°C
	temperature resolution	.1°F/0.1°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	.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"
Net weight		.31lb

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

## DIGITAL THERMOMETER PART NO. 0340-DT53

**IP65**  
WATERPROOF

### SPECIFICATION

Temperature range	-58°F~482°F
Temperature accuracy	±1.8°F (at -58°F~22.2°F), ±.9°F (at -22°F~211.8°F), ±1.8% (at 212°F~482°F)
Temperature resolution	.2°F
Sampling rate	0.5 sec/time
Display	LCD display with backlight
Housing material	ABS
Operation temperature	-4°F~+122°F
Storage temperature	-4°F~+122°F
Power supply	1×3V CR2032 battery
Dimension (L×W×H)	9.25×1.46×.67"
Net weight	.10lb



- Unit: °F/°C
- MAX/MIN mode
- Display backlight
- Data hold function
- Automatic power off

### STANDARD DELIVERY

Main unit	1 pc
Battery (CR2032)	1 pc



## 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)
	0.1°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"
Net weight	.49lb

### STANDARD DELIVERY

Main unit	1 pc
Thermocouple (K-type)	1 pc
CR2450 battery	3 pcs



# THERMOCOUPLE THERMOMETER (FOUR CHANNELS) PART NO. 0323-CT47

DATA  
OUTPUT

BUILT-IN  
BLUETOOTH



- 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



## SPECIFICATION

Thermocouple type	J/K/T/E/R/S/N	
Temperature range (electrical signal)	K: -328.0°F~2501°F	
	J: -328.0°F~2192°F	
	T: -328.0°F~752.0°F	
	E: -238.0°F~1832°F	
	R: 572°F~3212°F	
	S: 572°F~3212°F	
Temperature accuracy (electrical signal)	N: -328.0°F~2372°F	
	±(2% t-32 +1.1°F) (at 14°F~3212°F);	
	±(4% t-32 +2.2°F) (at -328°F~14°F)	
	Temperature resolution	.1°F (<1000°F); 1°F (≥1000°F)
	Repeatability	±(0.1% t +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"	
Net 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

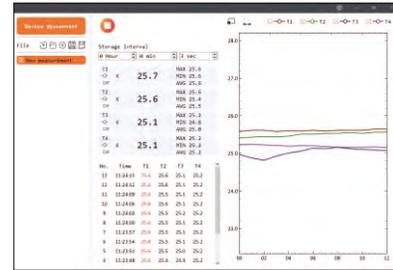
## STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs
USB cable	1 pc
K-type thermocouple (0323-K01)	4 pcs

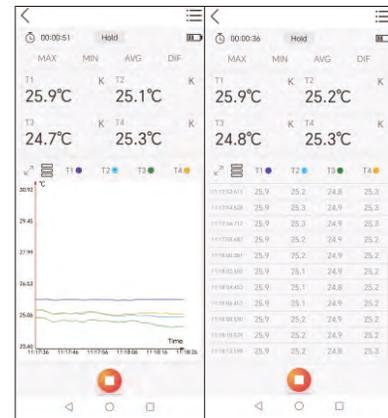
## OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------

computer software (included): connect to PC software via USB cable to collect, display and stored data



mobile APP (included): connect to mobile APP via bluetooth to collect, display and stored data, and can export the data stored on the device

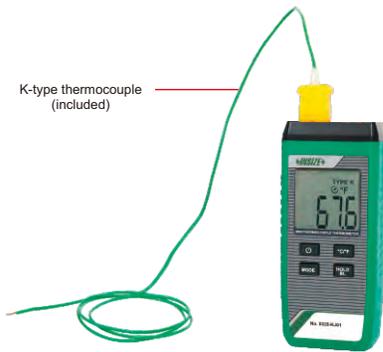


## SPECIFICATION OF K-TYPE THERMOCOUPLE \*\*

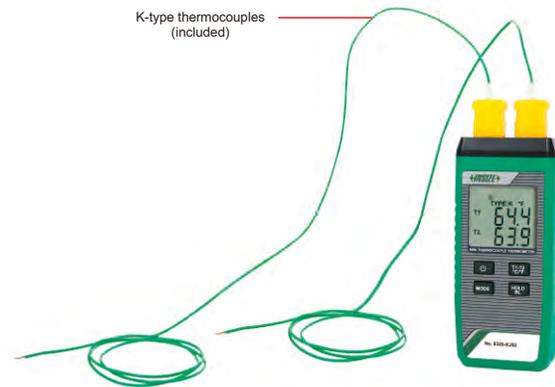
Part No.	Range	Accuracy	Length
0323-K01	-22°F~500°F	±4.5°F	35.4"

\*\*Other models, temperature range and length of thermocouples can be customized

## MINI THERMOCOUPLE THERMOMETERS (ECONOMIC TYPE)



0325-KJ01



0325-KJ02

- Unit: °F/°C
- MAX/MIN/AVG mode
- Display backlight
- Data hold function
- Low battery display
- Automatic power off

### SPECIFICATION

Part No.		0325-KJ01	0325-KJ02
Channel number		1	2
Net weight		.25lb	.26lb
Thermocouple type		K/J	
Temperature range	type K	-58°F~2372°F	
	type J	-58°F~2179°F	
Temperature accuracy *		±3.3°F (at -58°F~32°F); ±(0.5%+1.8°F) (at 32°F~1832°F); ±(0.8%+1.8°F) (at 1832°F~2372°F)	
Temperature resolution		.2°F (<1000°F); 1°F (≥1000°F)	
Operation environment		temperature: 32°F~104°F humidity: ≤80%RH	
Power		3×AAA alkaline batteries	
Dimension		4.72×2.16×1.18"	

\*Temperature accuracy does not include thermocouple error

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs
K-type thermocouple (0325-K01) *	1/2 pcs

\* Number of thermocouples is corresponding to the number of channels

### SPECIFICATION OF K-TYPE THERMOCOUPLE \*

Part No.	Range	Accuracy	Length
0325-K01	-40°F~500°F	±3.6°F	35.4"

\*Other types, temperature range and length of thermocouples can be customized

## THERMOCOUPLE THERMOMETERS (STANDARD TYPE)

IP52  
WATERPROOF



- Unit: °F/°C
- Support thermocouple type K/J/T
- MAX/MIN/AVG mode
- Temperature upper and lower limit alarm function
- Graphical display
- Multi-point calibration function
- Display backlight
- Data hold function
- Battery level display
- Automatic power off

### SPECIFICATION

Part No.		0326-CT31	0326-CT32
Channel number		1	2
Net weight		.52lb	.55lb
Thermocouple type		K/J/T	
Temperature range	type K	-328°F~2498°F	
	type J	-328°F~2192°F	
	type T	-328°F~752°F	
Temperature accuracy *		±(0.3%· t +.72)°F	
Temperature resolution		.02°F	
Sampling rate		2 times/sec	
Display		dot matrix LCD display with backlight	
Operation temperature		14°F~122°F (non-condensing)	
Storage temperature		-4°F~140°F (without battery)	
Power supply		3×AAA alkaline batteries	
Dimension		6.85×2.87×1.57"	

\*Temperature accuracy does not include thermocouple error



0326-CT31

### SPECIFICATION OF K-TYPE THERMOCOUPLE \*

Part No.	Range	Accuracy	Length
0326-K01	-40°F~572°F	±2.7°F	59"

\*Other types, temperature range and length of thermocouples can be customized

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs
K-type thermocouple (0326-K01) *	1/2 pcs

\*Number of thermocouples is corresponding to the number of channels

## THERMOCOUPLE THERMOMETERS (RECORD TYPE)

**IP52**  
WATERPROOF

**DATA**  
OUTPUT

- Unit: °F/°C
- Support thermocouple type K/J/T
- MAX/MIN/AVG mode
- 20000 data storage
- Graphical display
- Display backlight
- Multi-point calibration function
- Temperature upper and lower limit alarm function
- Data hold function
- Battery level display
- Automatic power off
- Computer software is included



### SPECIFICATION

Part No.	0327-DL31	0327-DL32
Channel number	1	2
Net weight	.52lb	.55lb
Thermocouple type	K/J/T	
Temperature range	type K	-328°F~2498°F
	type J	-328°F~2192°F
	type T	-328°F~752°F
Temperature accuracy *	±(.3% t +.72)°F	
Temperature resolution	.02°F	
Sampling rate	2 times/sec	
Logging interval	1s~86399s (adjustable)	
Memory capacity	20000	
Data transmission	Micro USB	
Display	dot matrix LCD display with backlight	
Operation temperature	14°F~122°F (non-condensing)	
Storage temperature	-4°F~140°F (without battery)	
Power supply	3×AAA alkaline batteries	
Dimension	6.85×2.87×1.57"	

\*Temperature accuracy does not include thermocouple error

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs
USB cable	1 pc
K-type thermocouple (0326-K01) *	1/2 pcs

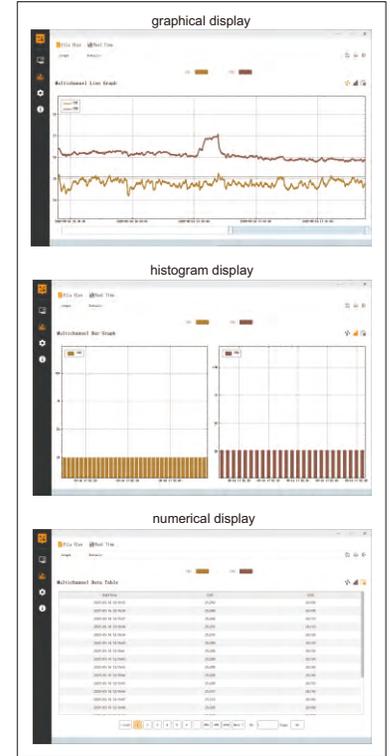
\*Number of thermocouples is corresponding to the number of channels

### SPECIFICATION OF K-TYPE THERMOCOUPLE \*

Part No.	Range	Accuracy	Length
0326-K01	-40°F~572°F	±2.7°F	59.0"

\*Other types, temperature range and length of thermocouples can be customized

computer software (included): connect to PC software via USB cable to collect, display and store data, and can be saved as TXT/CSV/XLSX/PDF formats



## HIGH PRECISION PLATINUM RESISTANCE THERMOMETERS

- Unit: °F/°C
- MAX/MIN/AVG mode
- Temperature upper and lower limit alarm function
- Graphical display
- Multi-point calibration function
- Display backlight
- Data hold function
- Battery level display
- Automatic power off

**IP52**  
WATERPROOF



### SPECIFICATION

Part No.	0328-PT41	0328-PT42
Channel number	1	2
Net weight	.63lb	.76lb
Platinum resistance sensor *	type	PT1000
	range	-40°F~392°F
Temperature accuracy	±.9°F	
Temperature resolution	.002°F	
Sampling rate	1 time/sec	
Display	dot matrix LCD display with backlight	
Operation temperature	14°F~122°F (non-condensing)	
Storage temperature	-4°F~140°F (without battery)	
Power supply	3×AAA alkaline batteries	
Dimension	6.85×2.87×1.57"	

\*Other types, specifications, and temperature ranges can be customized

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs
PT1000 Platinum resistance sensor (0328-PT1000) *	1/2 pcs

\*Number of PT1000 platinum resistance sensor is corresponding to the number of channels



## HIGH PRECISION PLATINUM RESISTANCE THERMOMETERS (RECORD TYPE)

**IP52**  
WATERPROOF

**DATA**  
OUTPUT



platinum resistance sensor  
PT1000 (included)

length 37.4"

.24" DIA×5.9"

platinum resistance sensor  
PT1000 (included)

length 37.4"

.24" DIA×5.9"

0329-DL41

0329-DL42

### SPECIFICATION

Part No.	0329-DL41	0329-DL42
Channel number	1	2
Net weight	.63lb	.76lb
Platinum resistance sensor	type	PT1000
	range	-40°F~392°F
Temperature accuracy	±.9°F	
Temperature resolution	.002°F	
Sampling rate	1 time/sec	
Logging interval	1s~86399s (adjustable)	
Memory capacity	20000	
Data transmission	Micro USB	
Display	dot matrix LCD display with backlight	
Operation temperature	14°F~122°F (non-condensing)	
Storage temperature	-4°F~140°F (without battery)	
Power supply	3×AAA alkaline batteries	
Dimension	6.85×2.87×1.57"	

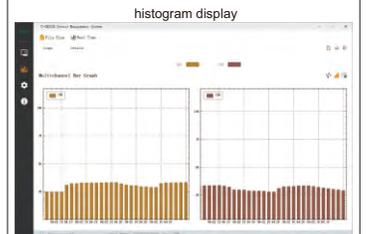
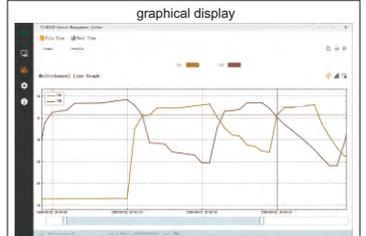
- Unit: °F/°C
- MAX/MIN/AVG mode
- Temperature upper and lower limit alarm function
- 20000 data storage
- Graphical display
- Display backlight
- Multi-point calibration function
- Data hold function
- Battery level display
- Automatic power off
- Computer software is included

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs
USB cable	1 pc
PT1000 Platinum resistance sensor (0328-PT1000) *	1/2 pcs

\* Number of PT1000 platinum resistance sensor is corresponding to the number of channels

computer software (included); connect to PC software via USB cable to collect, display and store data, and can be saved as TXT/CSV/XLSX/PDF formats



## DATA LOGGERS FOR TEMPERATURE AND HUMIDITY (BASIC TYPE)

- Built-in high-precision sensor
- 260,000 memory for long-term logging
- Unit: °F/°C
- Temperature and humidity upper and lower limit alarm
- Temperature and humidity linear correction function
- Battery level display
- Computer software is included

### SPECIFICATION

Part No.	0318-TH26A	0318-TH26B
Temperature range	-4°F~140°F/-20°C~60°C	
Temperature accuracy	±.9°F (at 32°F~140°F), other range ±1.4°F ±0.5°C (at 0°C~60°C), other range ±0.8°C	±.6°F/±0.3°C
Temperature resolution	.1°F/0.1°C	
Humidity range	0%RH~100%RH	
Humidity accuracy	±5%RH (at 10%RH~90%RH), other range ±7%RH	±3%RH
Humidity resolution	0.1%RH	
Memory size	260,000	
Sampling interval	2s~255s (adjustable)	
Logging interval	5s~18h (adjustable)	
Logging start mode	key operation/time-lapse start/timing start	
Logging end mode	key operation/Full/timing end	
Interface	Micro USB	
Power supply	3.7V rechargeable lithium battery, working time: 1 year (with logging interval of 10min); 5V DC	
Dimension (L×W×H)	4.72×1.30×4.45"	
Net weight	.46lb	



0318-TH26B

**DATA**  
OUTPUT



software (included), download data to PC software via USB cable and save the data as XLS, TXT, PDF format (cannot display data in real time)



### STANDARD DELIVERY

Main unit	1 pc
Software and USB cable	1 pc
4G USB flash disk	1 pc

## MINI DATA LOGGER FOR TEMPERATURE AND HUMIDITY (STANDARD TYPE) PART NO. 0317-TH37

**IP64**  
WATERPROOF

**DATA**  
OUTPUT



- Built-in high-precision sensor
- 15000 memory for long-term logging
- Unit: °F/°C
- Display backlight
- Over range indicator
- Battery level display
- Computer software is included

### STANDARD DELIVERY

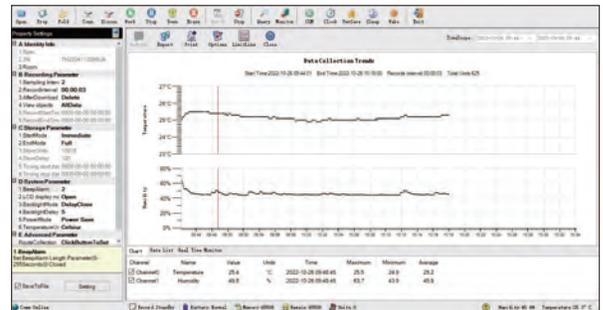
Main unit	1 pc
USB cable	1 pc
Software	1 pc
4G USB flash disk	1 pc

### SPECIFICATION

Temperature range	-22°F~-158°F/-30°C~70°C
Temperature accuracy	±.9°F/±0.5°C
Temperature resolution	.2°F/0.1°C
Humidity range	0%RH~100%RH
Humidity accuracy	±3%RH (at 10%RH~85%RH, testing temperature: 73.4°F±3.6°F); ±5%RH (at 0%RH~10%RH and 85%RH~100%RH, testing temperature: 73.4°F±3.6°F)
Humidity resolution	0.1%RH
Memory size	15,000
Alarm	function: alarm when over high or low limit method: display+backlight
Sampling interval	2s, 5s, 10s, 30s, 60s, 255s
Logging interval	2s~24h (adjustable)
Start with delay time	1s~120s (adjustable)
Logging start mode	key operation/start immediately/time-lapse start/timing start
Logging end mode	key operation/Full/FIFO/presetting units/timing end
Interface	Mini USB
Power supply	3.6V rechargeable lithium battery, working time: 1 year (with sample rate of 60s)
Storage temperature	-58°F~194°F
Dimension (L×W×H)	3.39×1.00×2.53"
Net weight	.18lb



software (included), connect to PC via USB cable,  
download and display in real time, collect, store and analyze data



## DATA LOGGER FOR TEMPERATURE AND HUMIDITY (ADVANCED TYPE) PART NO. 0311-3070

**IP54**  
WATERPROOF

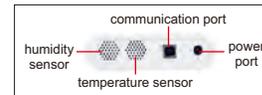
**DATA**  
OUTPUT



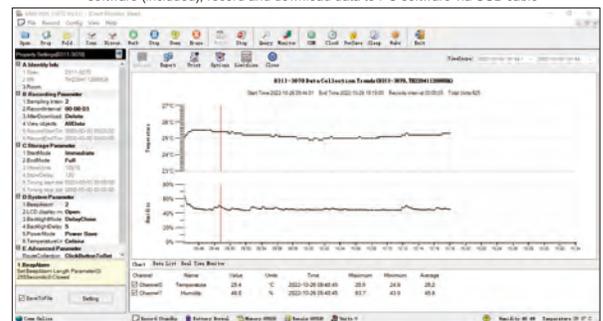
- Signal acquisition, display, storage, analysis function
- Low power consumption
- Built-in high-precision temperature and humidity sensor
- Software is included

### 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 ±0.3°C (at 23°C±2°C), other range ±0.5°C
Temperature resolution	.2°F/0.1°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"
Net 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



stand (included)

### MINI TEMPERATURE AND HUMIDITY METER (ECONOMIC TYPE) PART NO. 0319-TH60

POPULAR MODEL



- 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/0.1°C
Temperature accuracy	±.9°F/0.5°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"
Net 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	0.1°C
Temperature accuracy	±.5°C (at 26°C~42°C), other range ±1.0°C
Humidity range	10%RH~99%RH
Humidity resolution	0.1%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"
Net weight	.33lb

#### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

### TEMPERATURE AND HUMIDITY METER (ECONOMIC TYPE) PART NO. 0312-TH50

#### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

#### 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"
Net weight	.16lb



- Environment comfort display: COMFORT, WET, DRY
- Time/temperature/humidity display
- Highest/lowest temperature and humidity memory function
- Alarm clock function
- Unit: °F, °C

### DIGITAL THERMOHYGROMETER (ADVANCED TYPE) PART NO. 9362-TH27

IP50  
DUSTPROOF

#### 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	±.9°F/±0.5°C
Temperature resolution	.2°F (minimum adjustable unit is .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"
Net weight	.23lb



- Measure humidity, ambient temperature and dew-point temperature
- Max/Min/Average mode
- Alarm function
- IP50 protection grade

## THERMOHYGROMETER (ADVANCED TYPE) PART NO. 0330-TH36

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs



### SPECIFICATION

Temperature range	-22°F~149°F/-30°C~65°C
Temperature accuracy	±.5°F (at 14°F~149°F), other range ±.9°F; ±0.3°C (at -10°C~65°C), other range ±0.5°C
Temperature resolution	.1°F/0.1°C
Humidity range	0%RH~100%RH (non-condensing)
Humidity accuracy	±3%RH (at 10%RH~90%RH, testing temperature: 25°C), other range ±4%RH
Humidity resolution	0.1%RH
Sampling interval	5s
Power supply	3×AAA batteries
Dimension (L×W×H)	3.78×.79×4.25"
Net weight	.26lb

- Ambient temperature/humidity/dew point temperature/time/comfort display
- Real-time value/MAX/MIN/AVG display
- High and low alarm
- Unit: °F/°C
- 3.9" LCD screen
- Display backlight
- Battery level display

## THERMOHYGROMETER (BASIC TYPE) 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)
Temperature resolution	.1°F (at -20°F~100°F), other range 1°F 0.1°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	0.1%RH
Sensitivity attenuation value	temperature: <.2°F/year (<0.1°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"
Net 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 (STANDARD TYPE) PART NO. 0310-H26

### 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"		
Net weight	.38lb		



App measurement



App record



- 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

### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

### OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------

## LARGE SCREEN TEMPERATURE AND HUMIDITY METERS



0314-H533A-U

### SPECIFICATION

Part No.	0314-H323A-U	0314-H323B-U
Dimension	11.8×7.87×1.42"	
Sensor type	integrated	separated
Power consumption	5W	
Net weight	2.86lb	
Sensor	integrated: plastic probe case (not dustproof, not waterproof) separated: metal probe case (dustproof, waterproof), cable length 39.4" (can be customized, within 787.4")	
Temperature range	integrated: -20°C~60°C separated: -40°C~85°C	
Temperature resolution	integrated: 0.1°C (at 0°C~60°C), other range 1°C separated: 0.1°C (at 0°C~85°C), other range 1°C	
Temperature accuracy	integrated: ±0.5°C (at 0°C~60°C), other range ±2°C separated: ±0.5°C (at 0°C~85°C), other range ±2°C	
Humidity range	5%RH~95%RH	
Humidity resolution	0.1%RH	
Humidity accuracy	±3%RH (@25°C)	
Long-term stability	temperature≤0.1°C/year; humidity≤1%RH/year	
Repeatability	temperature≤0.1°C; humidity≤0.5%RH	
Sampling speed	1s	
Response time	3 minutes to reach 90% of the final value	
Time accuracy	±15s/month (@77°F±3.6°F)	
Power supply	AC100~240V (50/60Hz)	
Power cable length	70.8"	
Operation condition	temperature: -4°F~140°F; humidity: 5%~95% (non-condensing)	

- High definition LED large screen display: temperature, humidity, time
- Exceeding limit alarm: buzzer alarm, digit/light flash alarm
- Installation method: wall mounted or ring type

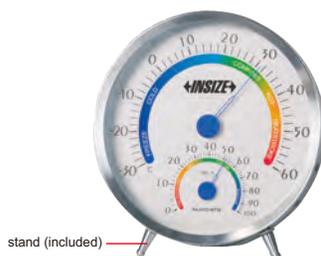
### STANDARD DELIVERY

Main unit (including sensor)	1 pc
------------------------------	------

## MECHANICAL TEMPERATURE AND HUMIDITY METER PART NO. 0332-MT36

BATTERY-FREE

- Constructed with 304 stainless steel, featuring anti-oxidation and anti-corrosion properties
- Easy to use, suitable for both hanging and placing
- Battery-free



### SPECIFICATION

Temperature range	-30°C~60°C
Temperature accuracy	±2°C (at 5°C~50°C), other range ±4°C
Humidity range	0%RH~100%RH (non-condensing)
Humidity accuracy	±6%RH (at 40%RH~70%RH, testing temperature: 20°C), other range ±8%RH
Dimension (L×W×H)	5.12×5.12×.79"
Net weight	.45lb

### STANDARD DELIVERY

Main unit	1 pc
Stand	1 set

## DIFFERENTIAL PRESSURE MANOMETER PART NO. 0140-DP05

DATA  
OUTPUT



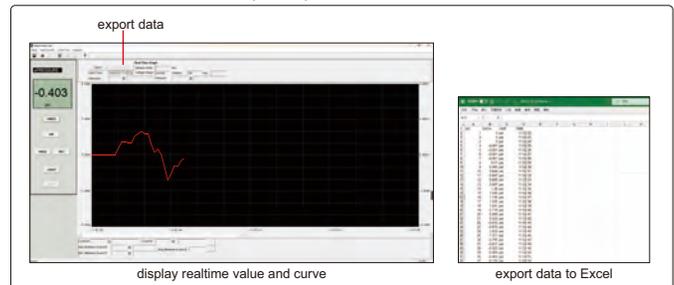
- Offset and differential measurement
- Record maximum/minimum/average value with relative timestamp
- Built-in USB interface for data transmission
- Unit: kPa, psi, inH<sub>2</sub>O, bar, mbar, inHg, mmHg, oz/in<sup>2</sup>, ftH<sub>2</sub>O, cmH<sub>2</sub>O, kg/cm<sup>2</sup>
- Zero adjust
- Data 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



### SPECIFICATION

Measurement range	-5psi~5psi
Maximum pressure	20psi
Unit	psi
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	6.50×3.54×1.57"
Net weight	.77lb

### 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

### OPTIONAL ACCESSORY

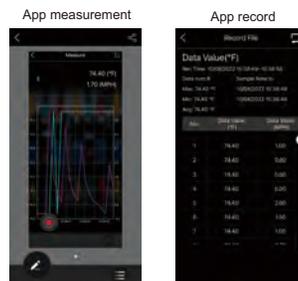
Tripod	0701-TR175
--------	------------

## ANEMOMETER PART NO. 0110-1125



### 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	±(3%+0.3)
	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 battery			
Dimension	8.39×2.13×1.42"			
Net weight	.38lb			



- Measure air velocity and temperature
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off
- Supplied with APP for Apple and Android

### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

### OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------

## HOT WIRE ANEMOMETER PART NO. 0111-HW30



VIDEO

- Measure with platinum resistance sensor, high accuracy and stability
- Retractable aluminum alloy rod with slim probe, split design for convenient operation
- Maximum/minimum/average mode
- Over-range indication
- Display with backlight
- Low battery indication
- Automatic power off



sensor

### SPECIFICATION

Function	Range	Accuracy	Resolution
Wind velocity	0~30m/s	$\pm(4\%+0.1\text{m/s})$	specified environment temperature: 59°F~86°F
	0~108km/h	$\pm(4\%+0.4\text{km/h})$	
	0~58.3kn	$\pm(4\%+0.2\text{kn})$	
	0~5906fpm	$\pm(4\%+20\text{fpm})$	
	0~67.1mph	$\pm(4\%+0.3\text{mph})$	
	0~11bft	$\pm 1\text{bft}$	1
Wind temperature	32°F~104°F	$\pm 0.9^\circ\text{F}$	specified wind velocity: $\geq 1.5\text{m/s}$
	-4°F~32°F, 104°F~158°F	$\pm 1.5^\circ\text{F}$	
Wind flow	maximum range: $9999 \times 10^2$		
	unit: $\text{m}^3/\text{min}$ , CFM, L/s		
	area setting: area, circle (set radius), rectangle (set length and width)		
Retractable rod length	3.94ft		
Storage capacity	99 groups		
Operation environment	temperature: 32°F~104°F, humidity: $\leq 80\%RH$ (no condensation)		
Storage environment	temperature: 4°F~140°F, humidity: $\leq 80\%RH$ (no condensation)		
Power supply	3×AAA battery		
Dimension	7.13×2.48×1.57"		
Net weight	.77lb		

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs

### OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------

## SOUND LEVEL METER (BASIC TYPE) PART NO. 0010-A35



VIDEO

- 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

### SPECIFICATION

Frequency	31.5Hz~8KHz
Measuring range	35dB~130dB
Accuracy	$\pm 3.0\text{dB}$ (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"
Net weight	.41lb



App measurement



App record

Level (dB)	Time
88.5	10:10:00
91.2	10:10:05
89.8	10:10:10
90.1	10:10:15
91.7	10:10:20
91.7	10:10:25
90.8	10:10:30
91.9	10:10:35
91.9	10:10:40

### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc
Windscreen	1 pc

### OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------

## DIGITAL SOUND LEVEL METER (ADVANCED TYPE) PART NO. 9353-413

### 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"
Net weight	.53lb

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	4 pcs
Screwdriver	1 pc

### OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------

- 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

## LIGHT METER (ECONOMIC TYPE) PART NO. 0131-A120

### SPECIFICATION

Measuring range	FC	0.01~19.99	0.1~199.9	1~1999	10~19990
Resolution	FC	0.01	0.1	1	10
Measuring range	Lux	0.1~199.9	1~1999	10~19990	100~199900
Resolution	Lux	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"				
Net weight	.29lb				

### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

### OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------



- 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



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"			
Net weight	.37lb			



- Suitable for measuring illuminance in various occasions
- Data hold function
- Fast switching of measuring range, easy to operate

### STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc



VIDEO

## UV LIGHT METER PART NO. 0132-UV199



- Self-recognize probes
- Real-time value, maximum value, minimum value, average value, time, energy value are displayed at the same time
- USB interface for data transmission



probe  
0132-UVA1  
(included)

### MAIN UNIT SPECIFICATION

Display	240×160 LCD
Power supply	4 AAA alkaline batteries
Output	USB
Dimension	5.83×2.99×1.02"
Net weight	.43lb

### STANDARD DELIVERY

Main unit	1 pc
Probe 0132-UVA1	1 pc
Software and USB cable	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	$\lambda_p=365\text{nm}$ 315nm-400nm	$\lambda_p=254\text{nm}$ 230nm-280nm	$\lambda_p=254\text{nm}$ 230nm-280nm
Power measuring range	0~200000 $\mu\text{W}/\text{cm}^2$		
Resolution	0.1 $\mu\text{W}/\text{cm}^2$		
Energy measuring range	0-9999999 $\mu\text{J}/\text{cm}^2$		
Measuring accuracy	±10%		
Record time	0-99999s		
Sampling speed	6 times/second		
Measuring unit	$\mu\text{W}/\text{cm}^2$ (default), $\text{mW}/\text{cm}^2$ , $\text{W}/\text{m}^2$		
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 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*	$\lambda_p=310\text{nm}^{**}$ 280nm-315nm	$\lambda_p=365\text{nm}$ 315nm-400nm
Power measuring range	0~200000 $\mu\text{W}/\text{cm}^2$		0~2000 $\text{mW}/\text{cm}^2$
Resolution	0.1 $\mu\text{W}/\text{cm}^2$		0.1 $\text{mW}/\text{cm}^2$
Energy measuring range	0-9999999 $\mu\text{J}/\text{cm}^2$		
Measuring accuracy	±10%		
Record time	0-99999s		
Sampling speed	6 times/second		2048 times/second
Measuring unit	$\mu\text{W}/\text{cm}^2$ (default), $\text{mW}/\text{cm}^2$ , $\text{W}/\text{m}^2$		$\text{mW}/\text{cm}^2$ (default), $\text{W}/\text{m}^2$
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 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	0~20000 $\text{mW}/\text{cm}^2$		0~200000 $\mu\text{W}/\text{cm}^2$
Resolution	1 $\text{mW}/\text{cm}^2$		0.1 $\mu\text{W}/\text{cm}^2$
Energy measuring range	0-9999999 $\mu\text{J}/\text{cm}^2$		
Measuring accuracy	±10%		
Record time	0-99999s		
Sampling speed	2048 times/second		6 times/second
Measuring unit	$\text{mW}/\text{cm}^2$ (default), $\text{W}/\text{cm}^2$ , $\text{W}/\text{m}^2$		$\mu\text{W}/\text{cm}^2$ (default), $\text{mW}/\text{cm}^2$ , $\text{W}/\text{m}^2$
Test hole diameter	.39" DIA	.04" DIA	.39" DIA
Probe size	1.54×1.26×.59"		

## CONTACT/NON-CONTACT TACHOMETER PART NO. 9225-405



- 2 measuring method, 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\"/>



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	$\pm(0.05\%n+1d)$ RPM n is rotary speed, d is resolution	$\pm(0.4\%n+1d)$ RPM (n<300RPM) $\pm(0.05\%n+1d)$ RPM (n≥300RPM) n is rotary speed, d is resolution
	line speed	—	$\pm(1\%+1d)$ 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"	
Net weight		.37lb	

### STANDARD DELIVERY

Main unit	1 pc
Reflection sticker (9220-RS)	3 pcs
Wheel with 3.937"/0.1m 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

### 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	$\pm(0.4\%n+1d)$ RPM (n<300RPM) $\pm(0.05\%n+1d)$ RPM (n≥300RPM) n is rotary speed, d is resolution
	line speed	$\pm(1\%+1d)$ m/min d is resolution
	line length	$\pm(1\%+1d)$ 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"
Net weight		.36lb



cone head (included)



small cone head (included)



cone cavity head (included)



clamping sleeve (included)



wheel with 0.1mm/.004\"/>



### STANDARD DELIVERY

Main unit	1 pc
Wheel with 3.937"/0.1m 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

### SPECIFICATION

Measuring range	2.5~99999RPM
Resolution	0.1RPM (range 2.5~999.9RPM) 1RPM (range 1000~99999RPM)
Accuracy	$\pm(0.05\%n+1d)$ 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"
Net weight	.32lb



VIDEO



reflection sticker (included)

### STANDARD DELIVERY

Main unit	1 pc
Reflection sticker (9220-RS)	3 pcs
Battery (AA)	3 pcs

## LED STROBOSCOPES



VIDEO

- Quick and easy operation with rotary encoder and buttons
- When the LED flash frequency matches with the rotational speed or cyclic movement frequency of the workpiece, the moving workpiece appears to be still and the surface quality can be checked
- Measure the rotational speed or cyclic movement frequency of the workpiece without physical contact or reflective stickers
- External trigger mode allows automatic tracking with external sensors such as proximity switch (PNP-NO), Hall switch (PNP-NO), photoelectric switch, encoder etc.
- Adjustable brightness and single flash duration
- Built-in storage memory for flash frequency and parameter setting
- Low battery indication

### SPECIFICATION

Part No.	ISQ-TS200K	ISQ-TS200A-U
Device type	DC type	AC type
Range	50.0FPM~36000FPM (flash per minute); 1.00Hz~600.00Hz	
Resolution	0.1FPM (<10000FPM), 1FPM ( $\geq 10000$ FPM); 0.01Hz (<1000Hz), 0.1Hz ( $\geq 1000$ Hz)	
Unit	FPM, Hz	
Accuracy	$\pm 0.1$ FPM (<1000FPM), $\pm 0.01\%$ ( $\geq 1000$ FPM)	
Trigger mode	internal trigger (F00), external trigger (F01, F02)	
Phase shift	range: 0°~359°, increment: 1° (only valid for F01 external trigger mode)	
Light source	9 CREE LED lamps, lamp lifetime: 3~5 years	
Power supply	DC type: 12.6V rechargeable Lithium battery; AC type: 100V~240V, 50/60Hz	
Dimensions (L×W×H)	7.87×3.94×4.72"	
Net weight	2.98lb	



proximity switch (included)

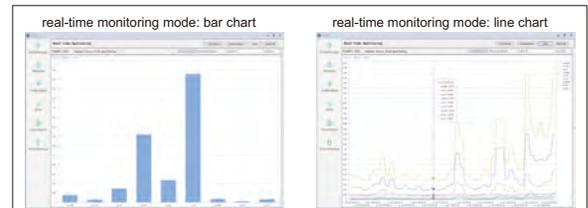
### STANDARD DELIVERY

Part No.	ISQ-TS200K	ISQ-TS200A-U
Main unit	1 pc	1 pc
Proximity switch	1 pc	1 pc
AC/DC adapter	1 pc	-
Power cord	-	1 pc

# VIBRATION METER PART NO. 0022-VM20



- 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



software (included), monitor and collect data to PC software via USB cable, data can sent to Excel

## 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 <sup>2</sup> (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"		
Net weight	.53lb		

## STANDARD DELIVERY

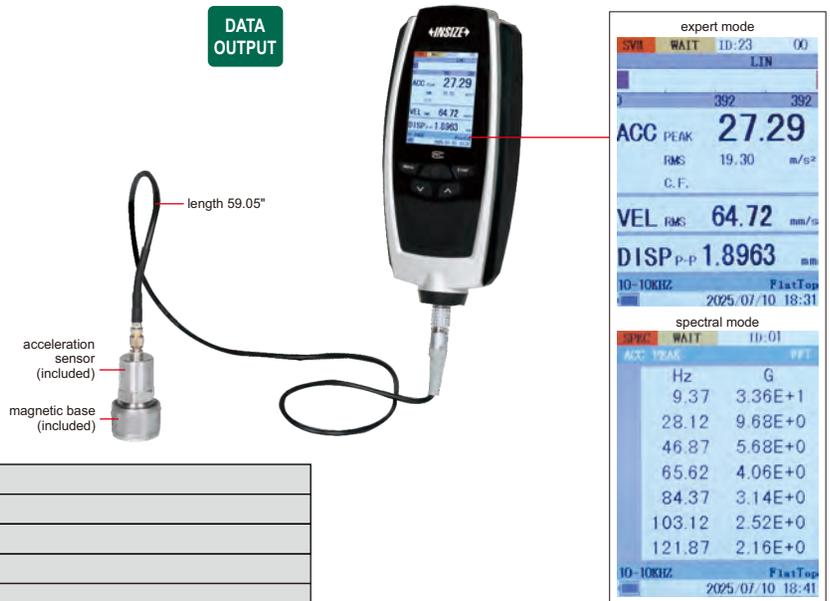
Main unit	1 pc
Software	1 pc
Accelerometer (including cable)	1 pc
Magnetic base	1 pc
M5 screw	1 pc
Battery (AAA)	4 pcs
AC/DC adapter	1 pc

## OPTIONAL ACCESSORY

Tripod	0701-TR175
--------	------------

## VIBRATION METER (STANDARD TYPE) PART NO. 0024-VM40

- Suitable for factory inspection, status monitoring and fault diagnosis of mechanical equipments such as motors, pumps, fans, household appliances, compressors, generators, gearboxes, etc.
- Can measure the peak value and RMS value of acceleration, RMS value of velocity and peak-to-peak value of displacement
- Measure mode: expert mode and spectral mode
- 2.4" TFT color screen
- Automatic power off
- Battery level display
- Mobile App is included (only for Android system): upload data stored in the device to the mobile phone



### SPECIFICATION

Measuring range	acceleration	0.1~392m/s <sup>2</sup> (peak value)
	velocity	0.01~800mm/s (RMS value)
	displacement	0.001~5mm (peak-peak value)
Frequency	acceleration	10Hz~10kHz
	velocity	10Hz~1kHz
	displacement	10Hz~500Hz
Frequency response	±5%	
Linearity	±5%	
Window function	rectangular window, hanning window, hamming window, flat-top window	
Display	2.4" TFT dot-matrix color screen, pixel: 320×240, adjustable backlight	
Data storage	99 sets of data, with each set capable of storing 50 data points or one spectrum data list	
Data interface	bluetooth 4.0	
Operation environment	temperature: 14°F~104°F humidity: ≤90%RH	
Power supply	2×AA batteries (for 15 hours working)	
Dimension (L×W×H)	5.91×2.68×1.30"	
Net weight	.66lb	

### STANDARD DELIVERY

Main unit	1 pc
Accelerometer (including cable)	1 pc
Magnetic base	1 pc
Battery (AA)	2 pcs

## VIBRATION METERS (BASIC TYPE)

- Applied to the environment, machinery manufacturing, electric power, chemical industry and other fields of all kinds of rotating machinery and equipment condition monitoring and fault diagnosis
- Acceleration, velocity and displacement can be tested
- Data hold function
- Automatic power off



### SPECIFICATION

Part No.	0023-V199A	0023-V199B
Sensor type	integrated	separated
Net weight	.50lb	.87lb
Measuring range	acceleration	0.1~199.9m/s <sup>2</sup> (peak value)
	velocity	0.1~199.9mm/s (virtual value)
	displacement	0.001~1.999mm (peak-peak value)
Frequency	acceleration	10Hz~1kHz (Lo) 1kHz~5kHz (Hi)
	velocity	10Hz~1kHz (Lo)
	displacement	10Hz~500Hz (Lo)
Frequency response	±(5%+2dpts) (≥20Hz) -20%~+10% (<20Hz)	±(5%+2dpts)
Linearity	±(5%+2dpts)	
Display	3 ½ count display	
Sampling time	1s	
Automatic power off	60s	
Operation environment	temperature: 32°F~122°F humidity: <90%RH	
Power supply	1×9V battery (for 25 hours working)	
Dimension (L×W×H)	6.85×2.87×1.38"	



### STANDARD DELIVERY

Part No.	0023-V199A	0023-V199B
Probe rod	2 pcs (short probe rod +long probe rod)	1 pc (long probe rod)
Magnetic base	—	1 pc
Main unit (including accelerometer)	1 pc	
9V battery	1 pc	

## 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 <sup>2</sup> (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 batteries (for 10 hours working)		
Dimension	5.91x.87x.71"		
Net weight	.12lb		

### STANDARD DELIVERY

Main unit	1 pc
LR44 battery	2 pcs

## STROKE COUNTER 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

### SPECIFICATION

Chronograph	range	0~23 hours 59 minutes and 59 seconds
	resolution	0.01s (<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	2.99x2.52x.87"	
Net weight	.14lb	

\*Underwater button operation is not supported

### STANDARD DELIVERY

Main unit	1 pc
String	1 pc

## 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)

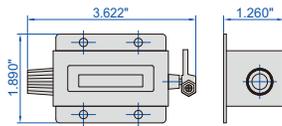
### SPECIFICATION

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)	

### STANDARD DELIVERY

Main unit	1 pc
String	1 pc

## 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

## MOISTURE METER PART No. 0121-PM32



- Suitable for packing materials, building materials, soft wood and hard wood
- Self-test and calibration function
- Replaceable test probes
- Data hold
- Low battery indication
- Automatic power-off



self-test cover (included)

### SPECIFICATION

Measuring range	packing	6.0%~61.2%
	building	0.4%~31.3%
	soft wood	5.7%~56.1%
	hard wood	3.9%~35.3%
Accuracy		±2%
Self-test range		21.3%~22.3%
Operation environment	temperature: 0°C~40°C, humidity: <85%RH, no condensation	
Storage environment	temperature: -10°C~50°C, humidity: <85%RH, no condensation	
Power supply	rechargeable Li-ion battery	
Dimensions (L×W×H)	6.57×2.64×1.06"	
Net weight	.33lb	

### STANDARD DELIVERY

Main unit	1 pc
Spare test probe	2 pcs

## PERSONAL DOSIMETER PART No. 0523-PD12



- Detect X ray, γ ray radiation
- Measure radiation dose rate in real-time and record cumulative dose at the same time
- Adjustable dose rate alarm and dose alarm threshold
- Data stored in built-in memory will not lose after power off
- Alarm mode: warning sound, flash, vibration
- Auto screen-off and wake-up
- Low battery indication
- Language: English, Chinese

### SPECIFICATION

Sensor	Geiger-Müller tube with energy compensation
Dose rate range	0.01μSv/h~10mSv/h
Dose range	0.00μSv~999.9Sv
Relative error	<5% (at 1mSv/h)
Sensitivity	>1.5cps/μSv/h (relative to <sup>137</sup> Cs)
Energy response	48keV~3.0MeV
Working environment	14°F~122°F
Power	<33mW
Power supply	2×1.5V AAA batteries or USB-C
Dimensions (L×W×H)	3.86×2.76×1.69"
Net weight	.24lb

### STANDARD DELIVERY

Main unit	1 pc
1.5V AAA battery	2 pcs

## 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

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	1 pc

### 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"
Net weight	.43lb



## EDDY CURRENT CONDUCTIVITY TESTER PART NO. 0420-EL60

DATA  
OUTPUT

INSPECTION  
CERTIFICATE



calibration blocks (included)



USB cable (included)



probe  
(included)

### SPECIFICATION

Conductivity	range	0.3MS/m~65MS/m or 0.51%IACS~112%IACS
	unit	MS/m, %IACS
	resolution	0.01 (<30MS/m or <30%IACS) 0.1 (30MS/m~65MS/m or 30%IACS~112%IACS)
	accuracy	68°F: ±0.5%: 4.00MS/m~65.0MS/m or 6.90%IACS~112.0%IACS 32°F~122°F: ±(1.0%+1d): 0.30MS/m~4.00MS/m ±(1.0%+2d): 0.51%IACS~6.90%IACS ±1.0%: 4.00MS/m~65.0MS/m or 6.90%IACS~112.0%IACS
Resistivity	range	0.01538Ω·mm <sup>2</sup> /m~3.3333Ω·mm <sup>2</sup> /m
	unit	Ω·mm <sup>2</sup> /m
	resolution	0.00001 (<1.0000Ω·mm <sup>2</sup> /m) 0.0001 (1.0000~3.3333Ω·mm <sup>2</sup> /m)
Temperature	range	0°C~50°
	resolution	0.1°C
	accuracy	±1.0°C
Test frequency	60kHz sinewave	
Probe diameter	.55" DIA	
Lift-off compensation	maximum .02"	
Storage capacity	16000 groups	
Interface	USB, RS232 protocol	
Calibration block	about 0.60MS/m, 4.10MS/m, 58.0MS/m refer to values marked on the supplied blocks	
Operation environment	temperature: 41°F~113°F; humidity: <95%RH, no condensation	
Power supply	3.7V rechargeable Li-ion battery	
Dimension	9.01×3.82×2.36"	
Net weight	.82lb	

\*d is resolution

- Measure conductivity (MS/m, %IACS) and resistivity (Ω·mm<sup>2</sup>/m) of non-ferromagnetic metals or alloys with eddy current phase detection
- With temperature compensation, even when the temperature of the calibration block and the material are different, test results can be automatically compensated
- Lift-off compensation function ensures accurate results when there are non-conductive layers such as coatings, dust, rough surfaces, etc., and reduces measurement error caused by operation as well
- Measure with high speed and efficiency, results show on screen after probe touch with the material in 1 second
- Data can be saved manually or automatically and exported to Excel with computer software
- Wear-resistant and heat-resistant probe
- Unit switch
- Display with backlight
- Language: English, Chinese, Japanese

### STANDARD DELIVERY

Main unit	1 pc
Probe (0420-TP01)	1 pc
Calibration block (0420-CB01)	3 pcs
USB cable	1 pc
AC/DC adapter	1 pc

## DC TESLAMETERS

- 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

### SPECIFICATION

Part No.	0501-MA01	0501-MA05
Range	2000mT	
Resolution	0.01mT (0~200mT) 0.1mT (200mT~2000mT)	
Accuracy	±1.0%	±2.0% (≤1000mT) ±5.0% (1000mT~2000mT)
Temperature coefficient	±0.1%/K	
Zero drift	±0.5mT/h	
Interface	USB	
Power supply	3×1.5V AA batteries or USB	
Dimension (LxWxH)	6.50×3.54×1.57"	
Net weight	.77lb	



magnetic shielding cavity  
(optional)



standard magnet  
(optional)



axial probe (optional)



0501-MA01

radial probe  
(included)

### STANDARD DELIVERY

Main unit	1 pc
Radial probe (0501-PR)	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 for calibration (□□□ is DC magnetic field specification, 100~600mT customizable)

## AC/DC TESLAMETERS

- Switch between DC or AC measurement mode
- Display N/S polarity of DC magnetic field
- Zero function: eliminate the influence of zero drift before measurement
- Maximum value hold: record the maximum value of the changing magnetic field
- Auto ranging
- Relative measurement mode
- Set upper and lower alarm limit
- Built-in USB interface for data transmission
- Display with backlight
- Auto power off

DATA  
OUTPUT



0502-MC01

### SPECIFICATION

Part No.	0502-MC01	0502-MC02
Range	2500mT	
Resolution	0.001mT (<30mT) 0.01mT (30~300mT) 0.1mT (300~2500mT)	
Unit	mT, G, Oe, kA/m (1mT=10G=10Oe=0.8kA/m)	
Accuracy	DC: ±1.0% AC: ±5.0%	DC: ±2.0% AC: ±5.0%
Frequency range	DC, 40~500Hz	
Temperature coefficient	±0.1%/K	
Zero drift	±0.1mT/h	
Interface	USB	
Operation environment	temperature: 32°F~113°F; humidity: 20%~80%RH, non-condensing	
Storage environment	temperature: -4°F~158°F; humidity: <85%RH, non-condensing	
Power supply	3×1.5V AA batteries or USB	
Dimension (L×W×H)	6.50×3.54×1.57"	
Net weight	.77lb	



axial probe (optional)



magnetic shielding cavity (optional)



standard magnet (optional)

### OPTIONAL ACCESSORY

Axial probe	0502-PA
Magnetic shielding cavity	0501-SHIELD
Standard magnet	0501-CT□□□, for verifying accuracy, not for calibration (□□□ is DC magnetic field specification, 100~600mT customizable)

### STANDARD DELIVERY

Main unit	1 pc
Radial probe (0502-PR)	1 pc
Battery (AA)	3 pcs

## LIGHT TRANSMITTANCE METER PART NO. 5804-LT21

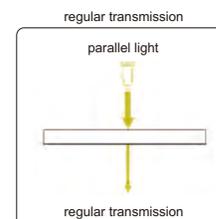
- Suitable for light transmittance testing of various "regular transmission materials", such as building glasses, auto glasses, transparent films, plastic products, etc.
- With the design of parallel optical path of the light source and condensed light of the receiver, it can measure up to 3.93" thickness
- Can measure the high transparent materials such as K9 glasses
- Two measuring modes, fixed base and handheld
- Conforming to CIE photopic luminosity function

### SPECIFICATION

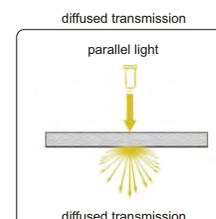
Optical source	380nm~760nm, conforming to CIE photopic luminosity function
Measuring range	0.001%~99.8%
Resolution	0.001% (0%~10%), 0.01% (10%~100%)
Accuracy	±1%
Thickness to be measured	<3.93"
Diameter to be measured	>.39"
Power supply	4×1.5V AAA batteries
Dimension	2.95×5.51×.98"
Net weight	1.40lb

### STANDARD DELIVERY

Main unit	1 pc
Transmitter	1 pc (connect to main unit)
Receiver	1 pc (connect to main unit)
Fixed base	1 pc
1.5V AAA battery	4 pcs



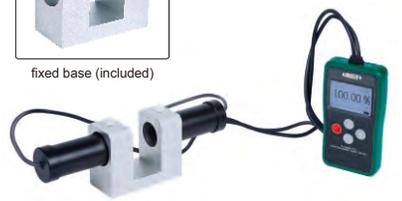
when the light penetrates a flat and evenly textured transparent material, the light does not change its direction



when the light penetrates a material with a rough surface or uneven texture, the light spreads out



fixed base (included)



# SEMIMICRO ELECTRONIC BALANCES

**INSIZE PLUS**

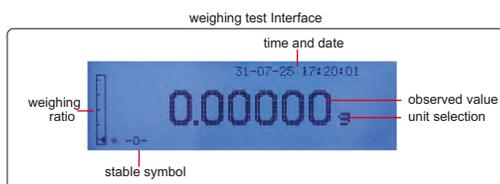
HIGH ACCURACY

DATA OUTPUT

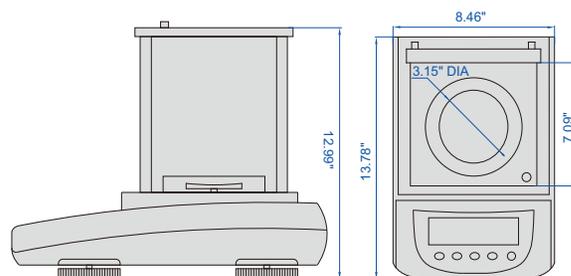
INTERNAL CALIBRATION



8313-62A



- Downward-mounted electromagnetic sensor
- Aluminum alloy base, wind shield, three side glass sliding doors
- Zero-setting, weighing, subtracting tare value
- Counting, checking alarm, accumulation, animal scale, percentage display
- Peak (max.) and tracking mode
- Administrator rights
- Recipe database: 99 recipes, up to 20 ingredients per recipe
- LCD display, with backlight
- Data output
- Automatic power off
- Unit: g, mg, ct, oz, ozt, dwt, mlb, GN, tj, gj, mo
- With a hook at the bottom



## SPECIFICATION

Part No.	8313-42A	8313-62A
Calibration method	internal calibration	
Maximum weighing	42g/210ct	62g/310ct
Minimum weighing	1mg/.005ct	1mg/.005ct
Resolution (d)	0.01mg/.00005ct	0.01mg/.00005ct
Verification interval (e)	1mg/.005ct	1mg/.005ct
Repeatability	±0.03mg/.00015ct	
Linearity	±0.08mg/.0004ct	
Stabilization time	6s	
Output	RS232	
Weighing pan size	3.15" DIA	
Operation temperature	64.4~73.4°F	
Operation humidity	20~85%RH	
Power supply	power adapter (24V/1A)	
Dimension (L×W×H)	13.78×8.46×13.58"	



wind protection ring (included)



grid weighing pan (included)



portable ioniser (optional)



printer (optional)

## STANDARD DELIVERY

Electronic balance	1 pc
Grid weighing pan	1 pc
Wind protection ring	1 pc
Gloves	1 pair

## OPTIONAL ACCESSORY

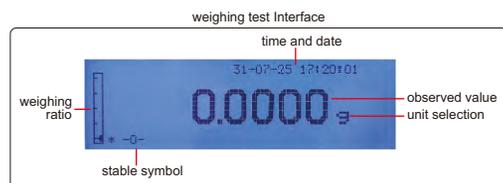
Portable ioniser	8312-PI
Printer	8306-PRINTER

# ELECTRONIC ANALYTICAL BALANCES



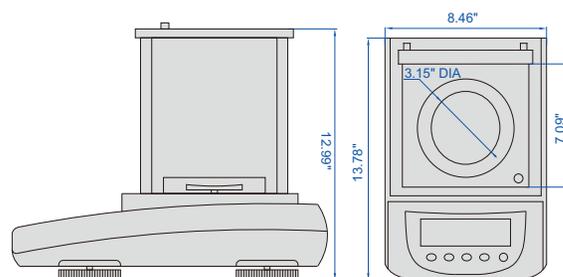
HIGH ACCURACY

DATA OUTPUT



8312-220A

- Downward-mounted electromagnetic sensor
- Aluminum alloy base, wind shield, three side glass sliding doors
- Zero-setting, weighing, subtracting tare value
- Counting, checking alarm, accumulation, animal scale, percentage display
- Peak (max.) and tracking mode
- Administrator rights
- Recipe database: 99 recipes, up to 20 ingredients per recipe
- LCD display, with backlight
- Data output
- Automatic power off
- Unit: g, mg, ct, oz, ozt, dwt, mlb, GN, tj, gj, mo
- With a hook at the bottom



## SPECIFICATION

Part No.	8312-120A	8312-220A	8312-310A
Calibration method	internal calibration		
Maximum weighing	120g/600ct	220g/1100ct	310g/1550ct
Minimum weighing	10mg/.05ct	10mg/.05ct	10mg/.05ct
Resolution (d)	0.1mg/.0005ct	0.1mg/.0005ct	0.1mg/.0005ct
Verification interval (e)	1mg/.005ct	1mg/.005ct	1mg/.005ct
Repeatability	±0.1mg/.0005ct		
Linearity	±0.3mg/.0015ct		
Stabilization time	2.5s		
Output	RS232		
Weighing pan size	3.15" DIA		
Operation temperature	64.4~73.4°F		
Operation humidity	20~85%RH		
Power supply	power adapter (24V/1A)		
Dimension (L×W×H)	13.78×8.46×13.58"		



printer (optional)



portable ioniser (optional)

## OPTIONAL ACCESSORY

Portable ioniser	8312-PI
Printer	8306-PRINTER

**ELECTRONIC PRECISION BALANCES**

- Aluminum alloy shell, wind shield, three side glass sliding doors
- Electromagnetic balanced sensor
- Unit: g, ct, ozt, oz, gn, dwt, mg
- Weighing, counting, taring
- Data output
- With a hook at the bottom



class F1 calibration weight (included)



printer (optional)

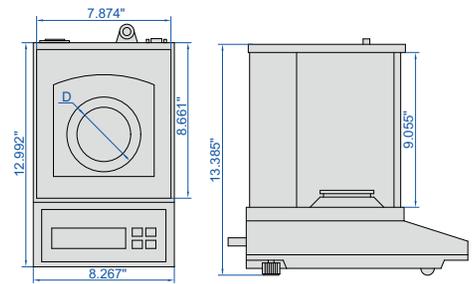


**8303-520U**

**DATA OUTPUT**

**SPECIFICATION**

Part No.	8303-220U	8303-320U	8303-520U	8303-620U	8303-1020U
Maximum weighing	1100ct/220g	1600ct/320g	2600ct/520g	3100ct/620g	5100ct/1020g
Minimum weighing	.1ct/20mg	.1ct/20mg	.5ct/100mg	.5ct/100mg	.5ct/100mg
Resolution (d)	.005ct/1mg	.005ct/1mg	.005ct/1mg	.005ct/1mg	.005ct/1mg
Verification interval (e)	.05ct/10mg	.05ct/10mg	.05ct/10mg	.05ct/10mg	.05ct/10mg
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	<b>8301-CABLE*</b>
Printer	<b>8303-PRINTER</b>
Data output cable (keyboard format)	<b>7302-8001</b>
Wireless transmitter (receiver is needed)	<b>7315-8301</b>

\*Used to connect with computers

**ELECTRONIC BALANCES (STANDARD TYPE)**

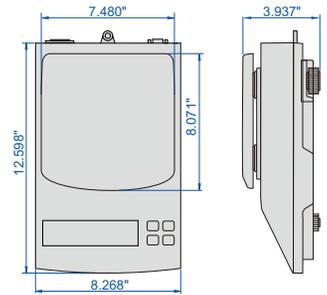


**DATA OUTPUT**

- LCD 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**



**SPECIFICATION**

Part No.	8305-2000U	8305-3000U	8305-5000U	8305-6000U
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)

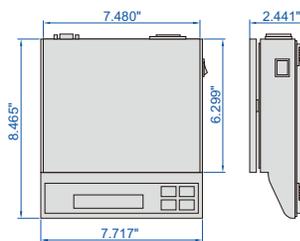
**OPTIONAL ACCESSORY**

RS232 cable	<b>8301-CABLE*</b>
Printer	<b>8303-PRINTER</b>
Data output cable (keyboard format)	<b>7302-8001</b>
Wireless transmitter (receiver is needed)	<b>7315-8301</b>

\*Used to connect with computers

## ELECTRONIC BALANCES

DATA  
OUTPUT



8301-3000U

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

### SPECIFICATION

Part No.	8301-300U	8301-600U	8301-1200U	8301-3000U	8301-6000U
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: ±.25ct; 250ct<m≤1000ct: ±.5ct; m>1000ct: ±.75ct		m≤2500ct: ±.25ct; m>2500ct: ±.5ct	m≤2500ct: ±2.5ct; 2500ct<m≤10000ct: 5ct; m>10000ct: ±7.5ct	
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 8301-300U,  
8301-600U and 8301-1200U)



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

### OPTIONAL ACCESSORY

RS232 cable	8301-CABLE*
Data output cable (keyboard format)	7302-8001
Wireless transmitter (receiver is needed)	7315-8301

\*Used to connect with computers

## WEIGHING SCALES

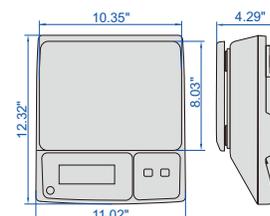
- LCD display, with backlight
- Zero-setting, subtracting tare value
- Overload alarm
- Automatic power off
- Unit: kg, lb

### SPECIFICATION

Operation temperature	14~104°F
Power	rechargeable lead acid battery (6V/3.2Ah)
Dimension of pan	10.354×8.031"



8001-30



Part No.	Maximum weighing	Minimum weighing	Resolution (d)	Accuracy (m is load)	Checking alarm
8001-6	6kg/12lb	4g/.009lb	0.2g/.0005lb	m≤2.2lb: ±.0025lb; 2.2lb<m≤8.8lb: ±0.005lb; m>8.8lb: ±.0075lb	tri-colour alarm light
8001-15	15kg/30lb	10g/.022lb	0.5g/.001lb	m≤5.5lb: ±.005lb; 5.5lb<m≤22lb: ±.01lb; m>22lb: ±.015lb	
8001-30	30kg/60lb	20g/.044lb	1g/.002lb	m≤11lb: ±.01lb; 11lb<m≤44lb: ±.02lb; m>44lb: ±.03lb	

## COUNTING SCALES

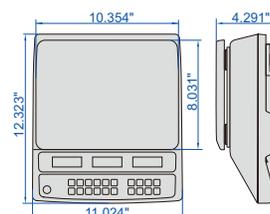
- LCD display, with backlight
- Zero-setting, subtracting tare value, counting, accumulation
- Upper and lower limit alarms: quantity, weight
- Overload alarm
- Unit: kg, g, lb, tj, hj, lb-oz

### 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)		
Dimensions of pan	10.354×8.031"		



8101-30



## WEIGHING SCALES (ECONOMIC TYPE)

- Unit: lb, oz, g, tl

### SPECIFICATION

Part No.	8003-3	8003-6	8003-10
Maximum weighing	6.61lb	13.23lb	22.05lb
Minimum weighing	0.02lb	0.02lb	0.04lb
Resolution (d)	0.001lb	0.001lb	0.002lb
Accuracy	±0.003lb	±0.006lb	±0.010lb
Weighing pan size	6.18×6.18"		
Working temperature	41~95°F		
Power supply	2×AAA batteries, power adapter		
Dimension (L×W)	6.30×8.86"		



8003-3

## ELECTRONIC POCKET SCALE (ECONOMIC TYPE)

ATTENTION:  
LOW ACCURACY

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

### 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)	4.724×2.756×0.669"
Operation temperature	14~104°F
Power supply	2×CR2032 batteries



8602-200



use of pan

## BLUETOOTH FOLDING SCALE PART NO. 8605-60

ATTENTION:  
LOW ACCURACY

BUILT-IN  
BLUETOOTH

DATA  
OUTPUT



VIDEO

- Zero-setting, weighing, subtracting tare value
- Voice to report the result
- Unit: kg, g
- Overload alarm

### SPECIFICATION

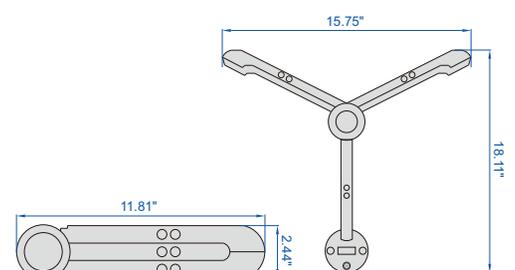
Maximum weighing	60kg
Minimum weighing	400g
Resolution (d)	20g
Accuracy (m is load)	±40g
Operation temperature	14~104°F
Operation humidity	20~90%RH
Power supply	3.7V rechargeable Li-ion battery
Output	bluetooth



8605-60



foldable and portable



# FLOOR SCALES (STANDARD TYPE)

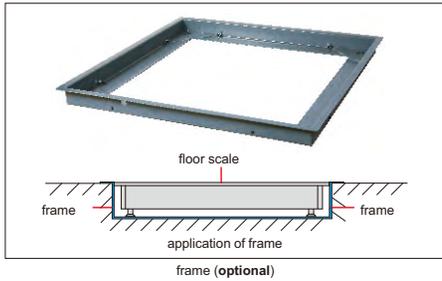
CAN BE CUSTOMIZED

DATA OUTPUT

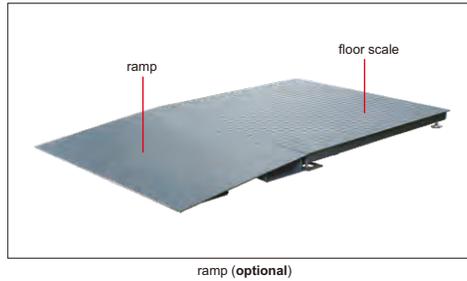
BUILT-IN BLUETOOTH



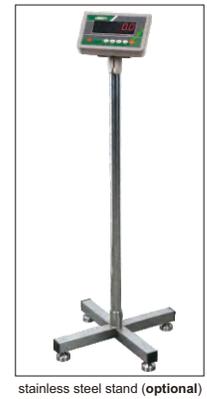
8403-3TC



frame (optional)

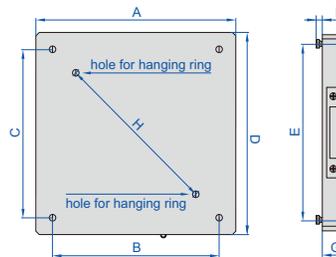


ramp (optional)



stainless steel stand (optional)

- Simple counting, animal scale, checking alarm
- Peak (max.) and tracking mode
- Zero-setting, weighing, subtracting tare value
- Overload alarm
- Automatic power off
- Data output
- Unit: kg, lb



printer (optional)

## SPECIFICATION

Part No.	Maximum weighing	Minimum weighing	Resolution (d)	Accuracy	Dimension of platform
8403-1TA	1t/2204lb	10kg/22lb	0.5kg/1.1lb	±1.1lb	31.5×31.5"
8403-2TA	2t/4409lb	10kg/22lb	0.5kg/1.1lb	±1.1lb	
8403-3TA	3t/6613lb	10kg/22lb	0.5kg/1.1lb	±2.2lb	
8403-1TC	1t/2204lb	10kg/22lb	0.5kg/1.1lb	±1.1lb	47.2×47.2"
8403-2TC	2t/4409lb	10kg/22lb	0.5kg/1.1lb	±1.1lb	
8403-3TC	3t/6613lb	10kg/22lb	0.5kg/1.1lb	±2.2lb	

Dimension of platform	A	B	C	D	E	F	G	H
31.5×31.5"	31.5"	25.2"	25.2"	31.5"	25.2"	1.77"	2.99"	25.2"
47.2×47.2"	47.2"	40.9"	40.9"	47.2"	40.9"	1.77"	2.99"	44.5"

Material of platform	carbon steel
Material of indicator	ABS plastic
Stable reading time	RS232
Operation temperature	14~104°F
Operation humidity	30~80%RH
Power	3.7V rechargeable Li-ion battery

## STANDARD DELIVERY

Main unit	1 pc
Indicator	1 pc
Power adapter	1 pc
Universal foot	4 pcs
Hanging ring	2 pcs

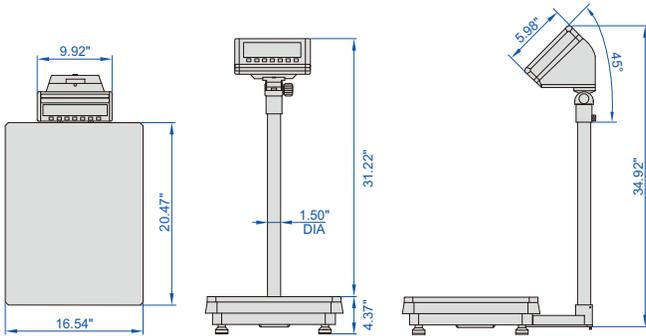
## OPTIONAL ACCESSORY

Ramp	customizable
Frame	customizable
Alarm light	8403-ALARM (must be supplied with scales together)
Stainless steel stand	8403-STAND
Printer	8403-PRINTER

## PLATFORM SCALES

DATA  
OUTPUT

CAN BE  
CUSTOMIZED



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

### 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	±0.02lb	±0.04lb	±0.06lb
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		
Net weight	40.34lb		



8501-AL150



alarm light (optional)



printer (optional)

### OPTIONAL ACCESSORY

Printer	8001-PRINTER
Alarm light	8001-ALARM
Data output cable (keyboard format)	7302-8001
Wireless transmitter (receiver is needed)	7315-8001

## DIRECT VIEW ELECTRONIC CRANE SCALES

IP65  
WATERPROOF

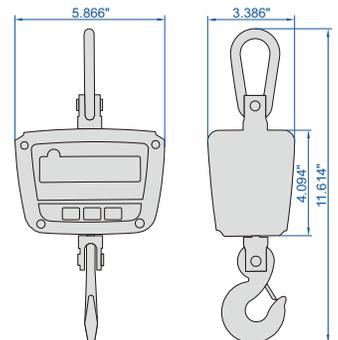
- Dust/waterproof level: IP65
- LED display, remote control
- Low voltage indicator
- Unit: lb, kg
- Automatic power off
- Overload alarm
- 360° safe rotary hook and shackle
- Aluminum alloy die casting case with high strength



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

## ELECTRONIC CRANE SCALES

- Zero-setting, taring, weighing
- LED display, remote control
- Low voltage indicator
- Unit: kg, lb
- Overload alarm
- Automatic power off
- Aluminum alloy die casting case with high strength



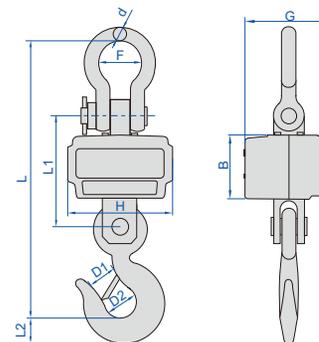
VIDEO



8204-CS3T



remote controller (included)



handheld display (optional)



large display (optional)

### SPECIFICATION

Overload alarm	100%FS+9e
Maximum safe load	150%FS
Limited overload	400%FS
Stable reading time	≤8s
Power supply	rechargeable battery 6V/4Ah (for 40 hours working)
Operation temperature	14~104°F
Operation humidity	≤85% RH

Part No.	B	G	H	L	L1	L2	D1	D2 (DIA)	d (DIA)	F (DIA)
8204-CS1T	4.72"	6.42"	7.80"	16.54"	7.48"	1.30"	1.57"	1.85"	1.57"	1.85"
8204-CS3T	4.72"	6.42"	7.80"	18.19"	7.72"	1.57"	1.97"	1.97"	1.97"	1.97"
8204-CS5T	4.72"	6.42"	7.80"	20.12"	8.03"	1.85"	2.05"	2.36"	2.05"	2.36"
8204-CS10T	5.31"	7.13"	8.11"	23.19"	9.41"	2.60"	2.05"	2.76"	2.05"	2.76"
8204-CS15T	5.31"	7.13"	8.11"	28.62"	10.12"	3.03"	2.36"	3.35"	2.36"	3.35"

Part No.	8204-CS1T	8204-CS3T	8204-CS5T	8204-CS10T	8204-CS15T
Maximum weighing	2200lb	6600lb	11000lb	22000lb	33000lb
Minimum weighing	20lb	40lb	80lb	220lb	220lb
Resolution (d)	1lb/.5lb	2lb/1lb	5lb/2lb	10lb/5lb	10lb/5lb
Verification interval (e)	1lb	2lb	5lb	10lb	10lb
Accuracy (m is load)	m≤550lb: ±.55lb; 550lb<m≤2200lb: ±1.1lb	m≤1100lb: ±1.1lb; 1100lb<m≤4400lb: ±2.2lb; m>4400lb: ±3.3lb	m≤2200lb: ±2.2lb; 2200lb<m≤8800lb: ±4.4lb; m>8800lb: ±6.6lb	m≤5500lb: ±5.5lb; 5500lb<m≤22000lb: ±11lb	m≤5500lb: ±5.5lb; 5500lb<m≤22000lb: ±11lb; m>22000lb: ±16lb

### STANDARD DELIVERY

Main unit	1 pc
Remote controller	1 pc
Battery charger	1 pc

### OPTIONAL ACCESSORY

Handheld display	8204-INDICATOR (must be supplied with scales together)
Large display	8204-SCREEN (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

### 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	1.5×AAA batteries



built-in measuring tape (included)

WEIGHT SETS

- Supplied with manufacturer inspection certificate



8910-5KGF1

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~500g	8910-500GE2	8910-500GF1	8910-500GF1S	8910-500GF2	8910-500GM1
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~500g	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	24 pcs	25 pcs	27 pcs	28 pcs
Total range	1mg~211.11g	1mg~611.11g	1mg~1111.11g	1mg~2111.11g	1mg~6111.11g	1mg~11111.11g

- sheet
- cylinder
- \* sheet, with mark
- \* cylinder, with mark

## PEN-TYPE CONDUCTIVITY TESTER (BASIC TYPE) PART NO. 0416-EB01



VIDEO

- Suitable for water quality testing, aquaculture, food processing, scientific research, etc.
- Mini design with an electrode diameter of .39"
- Manual temperature compensation
- With reading stabilization reminder function
- Replaceable electrodes
- Low voltage alarm
- CR2032 battery, automatic power off
- Probe protection level: IP54



### SPECIFICATION

Measuring range	(0~99.9) $\mu$ S/cm, (100~999) $\mu$ S/cm, (1.00~9.99) mS/cm, (10.00~99.99)mS/cm, (100~199.9)mS/cm
Resolution	0.01 $\mu$ S/cm, 0.1 $\mu$ S/cm, 1 $\mu$ S/cm, 0.01mS/cm
Accuracy	$\pm$ 1.5%FS
Temperature compensation range	32.0~211.8°F (manual)
Calibration mode	1 point (automatic recognition), electrode constant calibration
Standard solution	1413 $\mu$ S/cm
Power supply	CR2032 battery
Dimension (L×W×H)	1.97×7.40×0.67"
Net weight	.13lb

### STANDARD DELIVERY

Main unit	1 pc
Conductivity electrode (0416-EB01-E)	1 pc
Calibration powder (0416-EB01-S)*	2 pcs

\* Dissolve in distilled water to 50mL

## 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
- Automatic power off
- Probe protection level: IP67
- Lightweight, easy to carry and operate



electrodes can be replaced

"platinum black needle"  
electrode (included)



### SPECIFICATION

Measuring range	conductivity 0~200.0 $\mu$ S/cm, 0~2000 $\mu$ S/cm, 0~20.00mS/cm
	TDS 0~100.0ppm, 0~1000ppm, 0~10.00ppt
	salinity 0~10.00ppt
	temperature 0~122°F
Resolution	conductivity 0.1 $\mu$ S/cm, 1 $\mu$ S/cm, 0.01mS/cm
	TDS 0.1ppm, 1ppm, 0.01ppt
	salinity 0.01ppt
	temperature .2°F
Accuracy	conductivity $\pm$ 1%FS
	temperature $\pm$ .9°F
Calibration mode	1~3 points
Power supply	4×1.5V AAA batteries
Dimension (L×W×H)	7.0×1.6×1.6"
Net 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 METER PART NO. 0413-EC33

- 1~4 points automatic calibration, with calibration guidance and automatic inspection function
- The meter can recognize conductivity standard solutions automatically
- Manual and automatic temperature compensation functions for more accurate measurement
- The meter can be switched between conductivity and TDS
- 50 sets of data storage
- Featuring a foldable stand, suitable for multi scenario applications
- Probe protection level: IP57



glass conductivity electrode (optional)



high conductivity electrode (optional)



plastic conductivity electrode (included)



standard solution (included)



VIDEO

### SPECIFICATION

Conductivity	range	0~200mS/cm, divided into five ranges (0.00~19.99) $\mu$ S/cm, (20.0~199.9) $\mu$ S/cm, (200~1999) $\mu$ S/cm, (2.00~19.99)mS/cm, (20.0~199.9)mS/cm
	resolution	0.01/0.1/1 $\mu$ S/cm, 0.01/0.1mS/cm
	accuracy *	$\pm(1.0\%FS+1d)$
	temperature compensation	32°F~212°F (manual or automatic)
	calibration mode	1~4 points
TDS	electrode constant	0.1/1/10cm <sup>-1</sup>
	range	(0~100)g/L
	resolution	0.01/0.1/1mg/L, 0.01/0.1g/L
	accuracy *	$\pm(1.0\%FS+1d)$
Temperature	TDS conversion factor	0.40~1.00
	range	32°F~212°F
	resolution	.2°F
	accuracy *	$\pm(.9°F+1d)$
Standard solution		84 $\mu$ S/cm, 1413 $\mu$ S/cm, 12.88mS/cm
Power supply		3×1.5V AA batteries
Dimension (L×W×H)		3.38×7.72×1.30"
Net weight		.63lb

\* d is the resolution

### STANDARD DELIVERY

Main unit	1 pc
Standard solution	3 bottles
1.5V AA battery	3 pcs
Plastic conductivity electrode	1 pc

### OPTIONAL ACCESSORY

Glass conductivity electrode	0413-EC33-01
High conductivity electrode	0413-EC33-10

## PORTABLE CONDUCTIVITY/TDS METER PART NO. 0411-0200



VIDEO

- 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

### SPECIFICATION

Conductivity	range	0.00 $\mu$ S/cm~200mS/cm
	resolution	0.01 $\mu$ S/cm minimum
	electronic unit accuracy	$\pm 1.0\%FS$
	measurement accuracy	$\pm 1.5\%FS$
	reference temperature	77°F/25°C
	calibration point	1
TDS	standard recognition	84 $\mu$ S/cm, 1413 $\mu$ S/cm, 12.88mS/cm
	range	0.00mg/L~300g/L
	resolution	0.01mg/L minimum
Temperature	accuracy	$\pm 1.0\%FS$
	range	23~230°F/-5~110°C
	resolution	.2°F/.1°C
	accuracy	$\pm .7°F/\pm .4°C$
Input		electrode with 5-pin aviation connector
Power supply		rechargeable battery
Dimension		3.1×8.9×1.4"
Net weight		.88lb

IP65  
WATERPROOF



electrode holder

LCD with backlight

electrode holder

electrode



wristband (included)



standard solution (included)

### 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

## CONDUCTIVITY METER PART NO. 0414-ED34

DATA  
OUTPUT

- Equipped with rugged platinum-black conductivity electrode (K=1), rugged platinum-black coating, not only increases the surface area of the electrode and reduces the polarisation effect, but also improves the adhesion of the platinum-black to the metal, corrosion-resistant POM housing, built-in thermistor, automatic temperature compensation
- GLP data storage and management, USB data output
- 1~4 points automatic calibration, with calibration guidance and automatic inspection function
- The meter can recognize conductivity standard solutions automatically
- Manual and automatic temperature compensation functions for more accurate measurement
- The meter can switch conductivity, TDS, salinity
- Equipped with flexible electrode holder, easy to operate with one hand



### SPECIFICATION

Conductivity	range	(0.00~19.99) $\mu$ S/cm, (20.0~199.9) $\mu$ S/cm (200~1999) $\mu$ S/cm, (2.00~19.99)mS/cm, (20.0~199.9)mS/cm
	resolution	0.01/0.1/1 $\mu$ S/cm, 0.01/0.1mS/cm
	accuracy *	$\pm$ (1.0%FS+1d)
	temperature compensation	32°F~122°F (manual or automatic)
	calibration mode	1~4 points
	electrode constant	0.1/1/10cm <sup>-1</sup>
TDS	range	(0~100)g/L
	resolution	0.01/0.1/1mg/L, 0.01/0.1g/L
	accuracy *	$\pm$ (1.0%FS+1d)
	TDS conversion factor	0.40~1.00
Temperature	range	32°F~212°F
	resolution	.2°F
	accuracy *	$\pm$ (.9°F+1d)
Salinity	range	(0~100)ppt
Data storage		200 groups of USB data
Standard solution		84 $\mu$ S/cm, 1413 $\mu$ S/cm, 12.88mS/cm
Power supply		AC/DC adapter (9V)
Dimension (L×W×H)		7.68×8.46×3.94"
Net weight		2.09lb



### STANDARD DELIVERY

Main unit	1 pc
Standard solution	3 bottles
Power adapter	1 pc
Plastic conductivity electrode	1 pc
Flexible electrode holder	1 pc
USB flash disk	1 pc
USB cable	1 pc

\* d is the resolution

## PEN-TYPE pH TESTERS (BASIC TYPE)



- Suitable for water quality testing, sewage treatment, food and cosmetic testing, agriculture, scientific research, etc.
- Mini design with an electrode diameter of .39"
- Manual temperature compensation
- With reading stabilization reminder function
- Electrode failure alert, replaceable electrodes
- Low voltage alarm
- CR2032 battery, automatic power off
- Probe protection level: IP54

### SPECIFICATION

Part No.	0436-HB01	0436-HB02
Measuring range	0.0~14.0pH	0.00~14.00pH
Resolution	0.1pH	0.01pH
Accuracy	$\pm$ 0.5pH	$\pm$ 0.05pH
Temperature compensation range	32.0~211.8°F (manual)	
Calibration mode	1~3 points	
Standard solution	CH (pH buffers: 4.00, 6.86, 9.18) USA (pH buffers: 4.00, 7.00, 10.01) NIS (pH buffers: 4.01, 6.86, 9.18)	
Power supply	CR2032 battery	
Dimension (L×W×H)	1.97×7.40×0.67"	
Net weight	.13lb	



### STANDARD DELIVERY

Main unit	1 pc
pH electrode (0436-HB-E)	1 pc
pH buffer powder (0436-HB-S) *	6 pcs (CH)

\* Dissolve in distilled water to 250mL

## PEN-TYPE pH TESTER PART NO. 0432-HB22

- 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
- Automatic power off
- Lightweight, easy to carry and operate

### 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"
Net weight	.29lb



pH "bulb type" electrode (included)



VIDEO



ORP "platinum needle" electrode (optional)



pH "plane type" electrode (optional)



pH "puncture type" electrode (optional)

### 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. 0430-HA21



VIDEO

- 1~3 points automatic calibration, with calibration guidance and automatic inspection function
- Manual and automatic temperature compensation functions for more accurate measurement
- The meter provides three types of reading stability criteria
- 50 sets of data storage
- Featuring a foldable stand, suitable for multi scenario applications
- Probe protection level: IP57



standard solution (included)



plastic pH electrode (included)

### SPECIFICATION

pH	range	0.00~14.00pH
	resolution	0.1/0.01pH
	accuracy *	±(0.01pH+1d)
	temperature compensation	32°F~212°F (manual or automatic)
	calibration mode	1~3 points
mV	range	-1000mV~+1000mV
	resolution	1mV
	accuracy *	±(0.2%FS+1d)
Temperature	range	32°F~212°F
	resolution	.2°F
	accuracy *	±(.9°F+1d)
Standard solution	pH buffers: 4.00, 7.00, 10.01	
Power supply	3×1.5V AA batteries	
Dimension (L×W×H)	3.38×7.72×1.30"	
Net weight	.64lb	

\* d is the resolution

### STANDARD DELIVERY

Main unit	1 pc
Standard solution	3 bottles
1.5V AA battery	3 pcs
Plastic pH electrode	1 pc

### OPTIONAL ACCESSORY

Hydrofluoric acid/strong acid resistant glass pH electrode	0430-HA21-A
Strong alkali/high salt/high temperature pH electrode	0430-HA21-B



hydrofluoric acid/strong acid resistant glass pH electrode unit (optional)

## PORTABLE pH METER PART NO. 0431-0018

- 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

### SPECIFICATION

pH	range	-2.00~18.00pH
	resolution	0.01pH
	electronic unit accuracy	±0.01pH
	measurement accuracy	±0.02pH
	calibration point	1 or 2
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"	
Net weight	.88lb	



**IP65  
WATERPROOF**



wristband (included)



KCl powder (included)



standard solution (included)

### 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

## BENCHTOP pH METER PART NO. 0434-HD24

- Equipped with glass pH electrode, using a special gelation process, the solution inside the electrode will not flow, no air bubbles even when inverted, and the electrode glass adopts a thick film process, so there is no need to worry about the sphere rupture caused by ordinary collision
- GLP data storage and management, USB data output
- 1~3 points automatic calibration, with calibration guidance and automatic inspection function
- Automatic recognition of pH buffers, automatic display of slope at the end of calibration
- Manual and automatic temperature compensation functions for more accurate measurement
- Equipped with flexible electrode holder, easy to operate with one hand

### SPECIFICATION

pH	range	-2.00~20.00pH
	resolution	0.1/0.01pH
	accuracy*	±(0.01pH+1d)
	temperature compensation	32°F~212°F (manual or automatic)
	calibration mode	1~3 points
mV	range	-2000mV~+2000mV
	resolution	1mV
	accuracy*	±(0.1%FS+1d)
Temperature	range	32°F~212°F
	resolution	.2°F
	accuracy*	±(.9°F+1d)
Data storage	200 groups of USB data	
Standard solution	USA (pH buffers: 4.00, 7.00, 10.01) NIST (pH buffers: 4.01, 6.86, 9.18) China series, user-defined solutions	
Power supply	AC/DC adapter (9V)	
Dimension (L×W×H)	7.68×8.46×3.94"	
Net weight	2.09lb	

\*d is the resolution



standard solution (included)

### STANDARD DELIVERY

Main unit	1 pc
Standard solution	3 bottles (USA)
Power adapter	1 pc
Glass pH electrode	1 pc
Temperature electrode	1 pc
Flexible electrode holder	1 pc
USB flash disk	1 pc
USB cable	1 pc

**WATER QUALITY TESTER  
PART NO. 0410-EA31**



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 (L×W×H)	6.18×31.46×.55"	
Net weight	.15lb	

water quality grade

COD	TOC	TDS	COD	TOC	TDS	COD	TOC	TDS	COD	TOC	TDS
0.2	0.2	61	1.3	1.7	61	2.9	4.0	60	10.8	15.4	30
99 (Excellent)			88 (Good)			76 (Normal)			33 (Poor)		

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

- 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

**STANDARD DELIVERY**

Main unit	1 pc
Pure water calibration cup	1 pc

**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"
Net weight	.2lb

dropper (included)



**MINI DIGITAL REFRACTOMETER  
PART NO. 5801-A55**

SUITABLE FOR WATER  
BASED COOLANT



VIDEO

- 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

**STANDARD DELIVERY**

Main unit	1 pc
Dropper	1 pc

dropper (included)

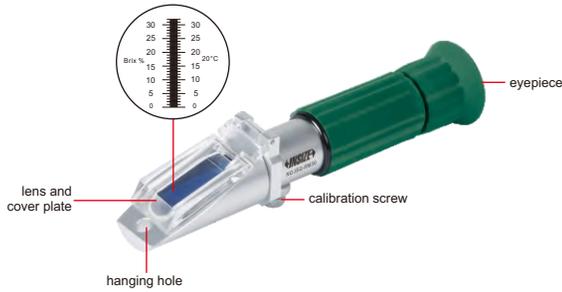


**SPECIFICATION**

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"
Net weight	.25lb

## PORTABLE REFRACTOMETER PART NO. ISQ-RM30

SUITABLE FOR WATER  
BASED COOLANT



- Quickly measure the concentration of coolant, sugar solution, juice and drinks
- Unique hanging hole design for easy storage
- No tools are required for zero adjustment, convenient and quick
- Refer to the refraction factor of coolant, for example: the refraction factor of grinding emulsion is 2.1, the reading value is 6%, so the actual concentration is  $(2.1 \times 6\%) = 12.6\%$

### SPECIFICATION

Measuring range	0~32%
Accuracy (20°C)	±0.2%
Resolution	0.2%
Dimension (L×W×H)	1.2×1.6×6.9"
Net weight	.39lb



lighting cover plate (optional)

### OPTIONAL ACCESSORY

Lighting cover plate ISQ-RM-LIGHT

## PORTABLE REFRACTOMETER FOR AUTOMOTIVE LIQUID PART NO. 5802-A510



lighting cover plate (optional)

- Measure the antifreeze freezing point, diesel exhaust fluid urea concentration, and battery fluid specific gravity
- Unique hanging hole design for easy storage
- No tools are required for zero adjustment, convenient and quick

### 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 (L×W×H)	1.57×1.77×6.42"			
Net weight	.33lb			

### OPTIONAL ACCESSORY

Lighting cover plate ISQ-RM-LIGHT

## SINGLE GAS DETECTORS

IP64  
WATERPROOF



- More than 30 types of gases can be customized, such as NO, NH<sub>3</sub>, Cl<sub>2</sub>, etc.
- Adjustable alarm level, alarm mode: sound, light, vibration
- Adjustable calibration level
- Sampling method: diffusion
- Self-test on startup
- Display with backlight
- Low battery indication
- Explosion proof level: Ex ib IIB T3 Gb



calibration cap (included)



0611-SG01

### SPECIFICATION

Part No.	0611-SG01	0611-SG02	0611-SG03	0611-SG04
Gas	combustible gas/EX	O <sub>2</sub>	CO	H <sub>2</sub> S
Range	0-100%LEL	0-30.0%vol	0-1000ppm	0-100ppm
Resolution	1%LEL	0.1%vol	1ppm	1ppm
Accuracy	±5%FS	±0.7%vol	±5ppm or ±10%	±2ppm or ±10%
Response time	≤30s	≤20s	≤60s	≤60s
Sensor lifetime*	2 years			
Operation environment	-4°F~122°F, <95%RH, no condensation			
Power supply	3.7V rechargeable Li-ion battery, working time>8h			
Dimension (L×W×H)	2.20×4.41×1.78"			
Net weight	.34lb			

\*Sensor lifetime depends on working environment

### STANDARD DELIVERY

Main unit	1 pc
Calibration cap	1 pc
Power adapter	1 pc

## MULTI GAS DETECTOR PART NO. 0612-MG04

**IP64  
WATERPROOF**

- Customize more than 30 types of gases, such as NO, NH3, Cl2, etc.
- Adjustable alarm level, alarm mode: sound, light, vibration
- Adjustable calibration level
- Sampling method: diffusion
- Self-test on startup
- Display with backlight
- Low battery indication
- Explosion proof level: Ex ib IIB T3 Gb



calibration cap (included)



VIDEO



### SPECIFICATION

Gas	combustible gas/EX	O <sub>2</sub>	CO	H <sub>2</sub> S
Range	0-100%LEL	0-30.0%VOL	0-1000ppm	0-100ppm
Resolution	1%LEL	0.1%vol	1ppm	1ppm
Accuracy	±5%FS	±0.7%vol	±5ppm or ±10%	±2ppm or ±10%
Response time	≤30s	≤20s	≤60s	≤60s
Sensor lifetime*	2 years	5 years	2 years	2 years
Operation environment	-4°F~122°F, <95%RH, no condensation			
Power supply	3.7V rechargeable Li-ion battery, working time>8h			
Dimension (L×W×H)	2.40×5.16×1.73"			
Net weight	.43lb			

\*Sensor lifetime depends on working environment

### STANDARD DELIVERY

Main unit	1 pc
Calibration cap	1 pc
Power adapter	1 pc

## GAS LEAK DETECTOR (RECORD TYPE) PART NO. 0615-CP01

- Suitable for locating leak points and detecting leaks of flammable gases, including methane, propane, acetylene, hydrogen, etc.
- Non-slip rubber protective cover allows equipment use in all environments
- 14" flexible gooseneck probe can be bent in any direction
- Top lighting fixture illuminates dark environments
- Large-size TFT color display provides real-time readings, sound mode, alarm points, battery status, etc.
- Switchable display of numerical values and curve charts
- Alarm modes include light alarm, buzzer alarm, and vibrator alarm, supporting independent activation or simultaneous activation
- Alarm records, failure records, calibration records, and system records can be queried
- Features built-in zero calibration and zero suppression functions
- Customizable alarm values and calibration values



lighting fixture



VIDEO



14" flexible gooseneck probe

green: normal, red: alarm, yellow: fault

indicator light

indicator light

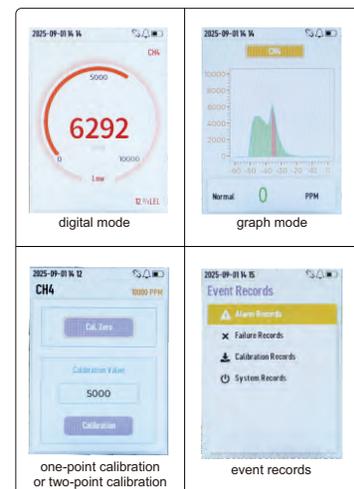
### SPECIFICATION

Gas	combustible gas/EX (CH <sub>4</sub> calibrated)
Range	0~10000μmol/mol (0~20%LEL)
Resolution	1μmol/mol (1%LEL)
Accuracy	±5%FS
Response time	≤45s
Indicator light mode	red: alarm, green: normal, yellow: failure
Sensor lifetime*	3 years
Work environment	14°F~131°F, <95%RH, no condensation
Power supply	3.7V rechargeable Li-ion battery, working time≥8h
Dimension (L×W×H)	6.34×2.72×1.22" (without gooseneck probe)
Net weight	.60lb

\*Sensor lifetime depends on working environment

### STANDARD DELIVERY

Main unit	1 pc
Power adapter	1 pc



digital mode

graph mode

one-point calibration or two-point calibration

event records

# HANDHELD AIRBORNE PARTICLE COUNTER

## PART NO. 0811-CA01

DATA  
OUTPUT



- Widely used in electronic production clean room testing, filter leakage detection, monitor biological safety, HVAC systems, computer rooms, food packaging environments, pharmaceutical and medical device production environments, hospital clean operating rooms, automotive spraying environments, etc.
- Using semiconductor laser sensor
- Measures the size and number of dust particles per unit volume of air in clean environments, and can be set to alarm at different purification levels
- Simultaneous counting of six counting channels (0.3µm, 0.5µm, 1µm, 3µm, 5µm, 10µm), and can be stored according to the room number respectively, according to the calculation of the upper confidence limit of 95% for each room (UCL value)
- It can be connected to a PC data acquisition system for remote control



high efficiency filter (included)

### SPECIFICATION

Sampling flow	range	2.83L/min (0.1ft <sup>3</sup> )
	accuracy	±5%
Particle	particle diameter passage	0.3µm, 0.5µm, 1µm, 3µm, 5µm, 10µm, simultaneous counting of six particle diameters
	repeatability	≤10%FS
	error of particle sizes	±30% (0.5µm, 5µm)
	accuracy	±30%FS (0.5µm)
Self-cleaning time		≤10min
Delay sampling time		0~99s
Sampling time		1s~9999s
Sampling mode		single, repeated, continuous, calculate, remote
Unit conversion		m <sup>3</sup> , ft <sup>3</sup>
Counting mode		cumulative value, difference value, concentration value
UCL setting *		sampling points (A): set from 2 to 9, sampling times per point (L): set from 2 to 9, location: set from 0 to 999
Alarm setting		the instrument is equipped with a clean room level alarm function, which will alarm when it exceeds the standard of class 100, 1000, 10000, 100000, 300000, 1000000, and will also alarm when the battery voltage is too low
Data storage		store 1000 sets of data (including particle size, data, environmental data, time, sample volume, data location), no data loss after power failure
Environmental requirement		temperature: 0~40°C, relative humidity: 20~90%, no condensation, the instrument should be used in a non-corrosive air environment
Power supply		16.8V rechargeable Li-ion battery, working time 8h
Dimension (L×W×H)		5.12×9.06×1.78"
Net weight		1.98lb

\* upper confidence limit of 95%

### STANDARD DELIVERY

Main unit	1 pc
Isokinetic sampling port	1 pc
High efficiency filter (0811-CA01-F)	1 pc
Communication cable	1 set
Adapter	1 pc
USB disk	1 pc

### OPTIONAL ACCESSORY

Printer	0811-CA01-PRINTER
Temperature and humidity sensors	0811-CA01-THW
Tripod	0701-TR175

## DIGITAL OSCILLOSCOPE PART NO. 9530-WA10



### SPECIFICATION

Analogue bandwidth	100MHz
Channel	2
Maximum real-time sampling rate	1GSa/s (non-interleaved mode)
Rise time	≤3.5ns
Memory depth	64kpts
Waveform capture rate	5000wfms/s
Vertical scale (V/div)	1mV/div~20V/div
Time base scale (s/div)	2ns/div~50s/div
Storage method	setup, wave, bitmap
Trigger type	edge, pulse, alternate, slope, video
Trigger mode	auto, normal, single
Trigger coupling	DC, AC, HF, LF, noise
Cursor measurement	time, voltage, tracking
Parameter measurement	automatic measurement of multiple waveform parameters
Mathematical operation	+, -, ×, ÷, FFT, filter
Digital filter	low pass, high pass, band pass, band stop
Setting	internal: 20 groups, USB: 200 groups
Waveform	internal: 20 groups, USB: 200 groups
Recorded frame	1000 frames of screen data
Interface	USB Host, USB Device, Pass/Fail
Maximum input voltage	300Vrms, the transient over voltage is 1000 Vpk.
Probe compensator output	voltage: about 3Vp-p frequency: 10Hz, 100Hz, 1kHz, 10kHz
Power supply	AC 100V~240V, 50-60Hz
Dimension (L×W×H)	12.05x5.43x4.88"
Net weight	5.51lb



- Analogue bandwidth: 100MHz
- Memory depth: 64kpts
- Sampling rate per channel: 1GSa/s (non-interleaved mode)
- Waveform capture rate: 5,000wfms/s
- Automatic measurement of multiple waveform parameters
- Multiple frequency standard square waves can be output: 10Hz, 100Hz, 1kHz, 10kHz
- Sampling mode: real-time sampling and equivalent sampling
- Lissajous method: measuring the phase of a waveform

### STANDARD DELIVERY

Main unit	1 pc
Passive probe	2 pcs
USB cable	1 pc



## HANDHELD LCR METER PART NO. 9652-RC02



- Automatic measure inductance (L), capacitance (C), resistance (R), impedance (Z), quality factor (Q), dissipation factor (D), phase (θ) and DC resistance (DCR)
- Internal trigger
- Data hold
- Full range open and short compensation
- Equivalent circuit: series and parallel
- Compare main parameter with nominal value and display percent deviation
- Built in USB-C interface for data transmission and charging
- Language: English, Chinese
- LCD touch screen with adjustable backlight
- Automatic power off



### SPECIFICATION

Measuring parameters	C-D, C-Q, C-R, L-D, L-Q, L-R, L-Rdc, R-Q, R-X, R-Rdc, Rdc, Z-D, Z-Q, Z-θr, Z-θd
Range	8 levels, auto range or hold range
Basic accuracy	0.2%
Test frequency	50Hz, 60Hz, 100Hz, 120Hz, 200Hz, 400Hz, 500Hz, 1kHz, 2kHz, 4kHz, 5kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz accuracy: 0.02%
Signal level	0.1V, 0.3V, 0.7V, 1V; accuracy: 10%
Test speed	slow 2.5 times/sec, fast 10 times/sec
Interface	USB-C interface: support HID and VCOM communication, compatible with SCPI command
Operation environment	32°F~104°F, <80%RH
Working time	50% brightness: 9h; 100% brightness : 7h
Power supply	rechargeable Li-ion battery
Power	<1.5W
Dimension	7.68×3.54×1.61"
Net weight	.84lb

### STANDARD DELIVERY

Main unit	1 pc
Kelvin clip lead	1 pc
SMD tweezer lead	1 pc
Short-circuit plate	1 pc

## DC RESISTANCE TESTER PART No. 9655-RM03-U



- Maximum reading: 30000
- Basic accuracy: 0.1%
- Short-circuit zero function
- Temperature compensation function
- Comparator: pass or fail judge



temperature probe (included)  
test clip (included)

### SPECIFICATION

Function	Range	Resolution	Accuracy of medium speed test	Accuracy of slow speed test	Test current
Resistance test	30mΩ	0.001mΩ	±(0.2%+5d)	±(0.1%+3d)	1A
	300mΩ	0.01mΩ	±(0.2%+3d)	±(0.1%+2d)	1A
	3Ω	0.0001Ω	±(0.2%+3d)	±(0.1%+2d)	100mA
	30Ω	0.001Ω	±(0.2%+3d)	±(0.1%+2d)	10mA
	300Ω	0.01Ω	±(0.2%+3d)	±(0.1%+2d)	1mA
	3kΩ	0.0001kΩ	±(0.2%+3d)	±(0.1%+2d)	1mA
	30kΩ	0.001kΩ	±(0.2%+3d)	±(0.1%+2d)	100μA
Range mode	auto range, manual range and nominal range				
Test speed	slow: 2t/s, medium speed: 12t/s				
Trigger	internal trigger, manual trigger, bus trigger				
Interface	RS232/RS485 communication interface, USB storage interface, temperature compensation interface				
Power supply	AC: 110V±10%, 50Hz/60Hz				
Dimension (L×W×H)	13.76×10.40×4.21"				
Net weight	7.72lb				

### STANDARD DELIVERY

Main unit	1 pc
RS232 cable	1 pc
Temperature probe	1 pc
Test clip	1 pc

### OPTIONAL ACCESSORY

Test probe	9655-TL
------------	---------

## EARTH RESISTANCE TESTER PART NO. 0716-ER120



- Timed measurement function
- Auto power off
- Display with backlight
- Data hold
- Low battery indication

auxiliary grounding rods (included)



### SPECIFICATION

Function	Range	Resolution	Accuracy
Earth resistance	20Ω	0.01Ω	±(2%+10d)
	200Ω/2000Ω	0.1Ω/1Ω	±(2%+3d)
AC earth voltage	1000V	1V	±(2%+5d)
DC voltage	1500V	1V	±(1%+5d)
Test methods	2-wire testing, 3-wire testing		
Power supply	8×1.5V AA batteries		
Dimension	7.01×4.33×2.32"		
Net weight	1.32lb		

### STANDARD DELIVERY

Main unit	1 pc
Test lead	5 pcs
Auxiliary grounding rod	2 pcs
Battery (AA)	8 pcs

## INSULATION RESISTANCE TESTER (BASIC TYPE) PART NO. 9452-IR21



- Continuous measurement: press and rotate the test button to measure continuously
- Alarm function: the tester alerts with buzzer when the insulation resistance is less than 4MΩ
- Over-range indication
- Data hold
- High-voltage output alert
- Auto backlight display
- Low battery indication
- Auto power off



### SPECIFICATION

Insulation resistance	test voltage *	100V	250V	500V	1000V
	range	100MΩ	500MΩ	2.00GΩ	5.00GΩ
	resolution	0.00MΩ~9.99MΩ: 0.01MΩ 10.0MΩ~99.9MΩ: 0.1MΩ 100MΩ~999MΩ: 1MΩ 1.00GΩ~5.00GΩ: 0.01GΩ			
	accuracy	0~99.9MΩ: ±(3%+5d); 100MΩ~5.00GΩ: ±(5%+5d)			
AC voltage **	range	30~750V (50/60Hz)			
	resolution	1V			
	accuracy	±(2%+3d)			
Short-circuit current	<2.0mA				
Operation environment	temperature: 32°F~95°F; humidity: <75%RH				
Power supply	6×1.5V AA batteries or AC/DC adapter (optional)				
Dimension	7.24×4.53×2.95"				
Net weight	1.32lb				

\* Open-circuit voltage: DC voltage 0~+10%

\*\* Data hold and backlight display function are not applicable for AC voltage measurement



test leads (included)



test clips (included)

### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Test clip	2 pcs
Battery (AA)	6 pcs

## DC POWER SUPPLY PART NO. 9914-BP506



### SPECIFICATION

Rate output voltage	0~50V	
Rate output current	0~6A	
Maximum output power	150W	
Voltage	setting resolution	10mV
	setting accuracy	≤0.5%+50mV
	readback resolution	10mV
	readback accuracy	≤0.5%+50mV
	load regulation	≤0.05%+5mV
	line regulation	≤0.1%+3mV
	ripple	≤5mVrms
Current	setting resolution	1mA
	setting accuracy	≤0.5%+5mA
	readback resolution	1mA
	readback accuracy	≤0.5%+5mA
	load regulation	≤0.1%+3mA
	line regulation	≤0.1%+3mA
ripple	≤20mArms	
OVP	0~55V	
OCP	0~6.5A	
Work condition	temperature: 32°F~104°F, humidity: ≤75%RH	
Storage condition	temperature: -4°F~122°F, humidity: ≤90%RH	
Cool system	fan cool	
Power supply	110V/220V±10%, 50Hz/60Hz	
Dimension	7.87×3.15×6.10"	
Net weight	2.71lb	



- Four-digit LED display
- Independent voltage and current control knob
- Output switch control
- Panel locking function to prevent misoperation
- USB interface for power supply
- OVP/OCP protection
- 3 shortcut keys for presetting

### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs

## DIGITAL MULTIMETER PART NO. 9216-F520

- 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



### SPECIFICATION

Function	Range	Resolution	Accuracy
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 (L×W×H)	5.91×2.76×1.89"		
Net weight	.56lb		

test leads (included)



temperature probe and adapter (included)



### 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

- 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)



VIDEO

POPULAR  
MODEL



### SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200.0mV	0.1mV	±(0.7%+3d)
	2000mV	1mV	±(0.5%+2d)
	20.00V/200.0V/600V	0.01V/0.1V/1V	±(0.7%+3d)
AC Voltage (40~400Hz)	200.0V/600V	0.1V/1V	±(1.2%+3d)
DC Current	200.0μA/200.0mA	0.1μA/0.1mA	±(1.0%+2d)
	10.00A	0.01A	±(1.2%+5d)
Resistance	200.0Ω	0.1Ω	±(1.0%+2d)
	2000Ω/20.00kΩ/200.0kΩ	1Ω/0.01kΩ/0.1kΩ	±(0.8%+2d)
	20.00MΩ	0.01MΩ	±(1.2%+3d)
Battery test	1.5V/9V/12V battery check		
Diode test	open circuit voltage: 2.1V DC		
Continuity test	<50Ω		
Power supply	2×1.5V AAA batteries		
Dimension (L×W×H)	5.28×3.03×1.85"		
Net weight	.45lb		

### STANDARD DELIVERY

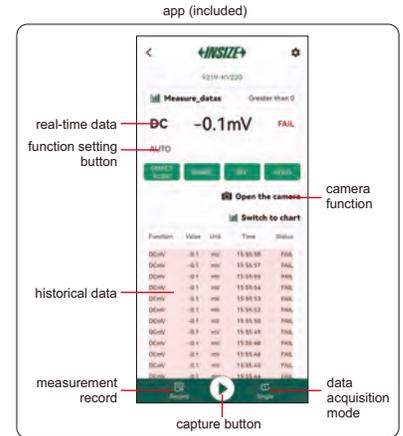
Main unit	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs

# BLUETOOTH DIGITAL MULTIMETER PART NO. 9219-KV220

DATA  
OUTPUT



- Built-in bluetooth
- Mobile app is included
- 9999 counts digital display
- True RMS measurement
- Display with backlight
- Relative measurement mode
- Auto/manual ranging
- Auto power off
- Data hold
- NCV detection
- Low battery indication
- Safety rating: CAT III 600V



test leads (included)



temperature probe (included)

### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Temperature probe	1 pc
Battery (AAA)	3 pcs

### SPECIFICATION

Function	Range	Resolution	Accuracy	
DC Voltage	9.999mV/99.99mV	0.001mV/0.01mV	±(0.7%+8d)	
	999.9mV/9.999V/99.99V/999.9V	0.1mV/0.001V/0.01V/.1V	±(0.5%+3d)	
AC Voltage (40~400Hz)	9.999mV/99.99mV	0.001mV/0.01mV	±(1.0%+3d)	
	999.9mV/9.999V/99.99V/999.9V	0.1mV/0.001V/0.01V/0.1V	±(0.8%+3d)	
DC Current	999.9µA	0.1µA	±(0.8%+3d)	
	999.9mA/9.999A	0.1mA/0.001A	±(1.0%+3d)	
AC Current (40~400Hz)	999.9µA	0.1µA	±(1.0%+3d)	
	999.9mA/9.999A	0.1mA/0.001A	±(1.2%+3d)	
Resistance	999.9Ω/9.999kΩ/99.99kΩ/999.9kΩ	0.1Ω/0.001kΩ/0.01kΩ/0.1kΩ	±(0.8%+2d)	
	9.999MΩ	0.001MΩ	±(1.5%+3d)	
Capacitance	99.99MΩ	0.01MΩ	±(2.0%+5d)	
	9.999nF	0.001nF	±(4.0%+10d)	
	9.999nF/99.99nF/999.9nF/9.999µF /99.99µF/999.9µF	0.001nF/0.01nF/0.1nF/0.001µF /0.01µF/0.1µF	±(4.0%+5d)	
Frequency	9.999mF	0.001mF	±(10.0%)	
	99.99Hz~9.999MHz	0.01Hz~0.001MHz	±(0.1%+5d)	
Temperature	-40~1000°C	-40~0°C	1°C	±4°C
		>0~100°C	1°C	±(1.0%+5d)
		>100~1000°C	1°C	±(2.0%+5d)
	-40~1832°F	-40~32°F	1°F	±5°F
		>32~212°F	1°F	±(1.5%+5d)
>212~1832°F	1°F	±(2.5%+5d)		
Duty cycle	0.1%~99.9%	0.1%	±(3%+5d)	
Diode test	open circuit voltage 3.3V, test current 1.5mA			
Continuity check	<30Ω			
Power supply	3×1.5V AAA batteries			
Dimension (L×W×H)	7.36×3.46×2.20"			
Net weight	.88lb			

## AC DIGITAL CLAMP METER PART No. 9243-CA600



VIDEO



- 6000 counts display
- 28mm jaw opening
- NCV detection with light and sound alarm
- Live/neutral wire measurement function
- 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



test leads (included)

### SPECIFICATION

Function	Range	Resolution	Accuracy
AC current *	6.000A	0.001A	±(4.0%+10d)
	60.00A/600.0A	0.01A/0.1A	±(2.0%+10d)
AC current frequency	50Hz~100Hz	0.1Hz	±(1.0%+5d)
DC voltage	600.0mV	0.1mV	±(0.7%+3d)
	6.000V	0.001V	±(0.5%+2d)
AC voltage *	60.00V/600.0V	0.01V/0.1V	±(0.7%+3d)
	6.000V	0.001V	±(1.0%+5d)
AC voltage frequency	10Hz~10kHz	0.01Hz~0.01kHz	±(1.0%+5d)
Resistance	600.0Ω	0.1Ω	±(1.0%+2d)
	6.000kΩ/60.00kΩ/600.0kΩ	0.001kΩ/0.01kΩ/0.1kΩ	±(0.8%+2d)
	6MΩ/60MΩ	0.001MΩ/0.01MΩ	±(2.0%+5d)
Capacitance	6.000nF/60.00nF/600.0nF	0.001nF/0.01nF/0.1nF	±(4.0%+10d)
	6.000μF/60.00μF/600.0μF	0.001μF/0.01μF/0.1μF	±(4.0%+5d)
	6.000mF/60.00mF	0.001mF/0.01mF	±10.0%
Frequency	10Hz~10MHz	0.01Hz~0.01MHz	±(0.1%+4d)
Duty cycle	0.1%~99.9%	0.1%	±(3.0%+5d)
Diode test	0V~6V		
Continuity check	<30Ω		
Power supply	2×1.5V AAA batteries		
Dimension (L×W×H)	8.46×2.48×1.42"		
Net weight	.54 lb		

\* AC current frequency response: 50Hz~100Hz, AC voltage frequency response: 45Hz~400Hz, true RMS display

### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Battery (AAA)	2 pcs

## AC/DC DIGITAL CLAMP METER PART No. 9312-CB120



test leads (included)



K-type thermocouple (included)



### SPECIFICATION

Function	Range	Resolution	Accuracy	
DC current	60.00A/600.0A	0.01A/0.1A	±(2%+5d)	
AC current *	60.00A/600.0A	0.01A/0.1A	±(2%+5d)	
DC voltage	600.0mV	0.1mV	±(0.7%+3d)	
	6.000V/60.00V/600.0V	0.001V/0.01V/0.1V	±(0.5%+2d)	
AC voltage *	6.000V	0.001V	±(1%+5d)	
	60.00V/600.0V	0.01V/0.1V	±(0.8%+5d)	
AC voltage frequency	10Hz~60kHz	0.01Hz~0.01kHz	±(0.5%+2d)	
Resistance	600.0Ω	0.1Ω	±(1%+2d)	
	6.000kΩ/60.00kΩ/600.0kΩ	0.001kΩ/0.01kΩ/0.1kΩ	±(0.8%+2d)	
	6MΩ/60MΩ	0.001MΩ/0.01MΩ	±(2.5%+5d)	
Capacitance	60.00nF/600.0nF/6.000μF/ 60.00μF/600.0μF	0.01nF/0.1nF/0.001μF/ 0.01μF/0.1μF	±(4%+5d)	
	6.000mF/60.00mF	0.001mF/0.01mF	±10%	
Frequency	10Hz~10MHz	0.01Hz~0.01MHz	±(0.1%+4d)	
Temperature	-40~1000°C	-40~40°C	1°C	±4°C
		>40~500°C	1°C	±(1.5%+5d)
		>500~1000°C	1°C	±(2%+5d)
	-40~1832°C	-40~104°C	1°F	±6°F
		>104~932°C	1°F	±(2%+6d)
		>932~1832°C	1°F	±(2.5%+4d)
Duty cycle	0.1%~99.9%	0.1%	±(3.0%+5d)	
Diode test	0V~6V			
Continuity check	<30Ω			
Power supply	2×1.5V AAA batteries			
Dimension (L×W×H)	8.46×2.48×1.42"			
Net weight	.51lb			

- 6000 counts display
- 1.10" jaw opening
- NCV detection with light and sound alarm
- Live/neutral wire measurement function
- 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

### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs
K-type thermocouple	1 pc

\* AC current frequency response: 50Hz~400Hz, AC voltage frequency response: 45Hz~400Hz, true RMS display

## 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



### 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	6.2×1.1×0.9"
Net weight	.07lb

## DIGITAL VOLTAGE TESTER PART NO. 9721-250



- 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"
Net 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
Net weight	.05lb

## INTELLIGENT LEAD FREE SOLDERING STATION PART NO. 0712-SS450-U



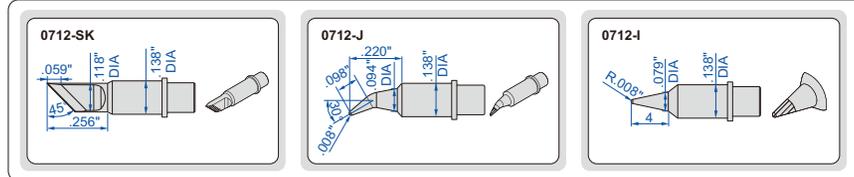
- Fast heat-up and temperature return of the welding table
- Quickly switch between 3 different temperatures
- Temperature calibration function
- Automatic sleep function
- Unit: °F/°C



soldering tip 0712-I  
(included)

soldering iron stand  
(included)

soldering tips (included)

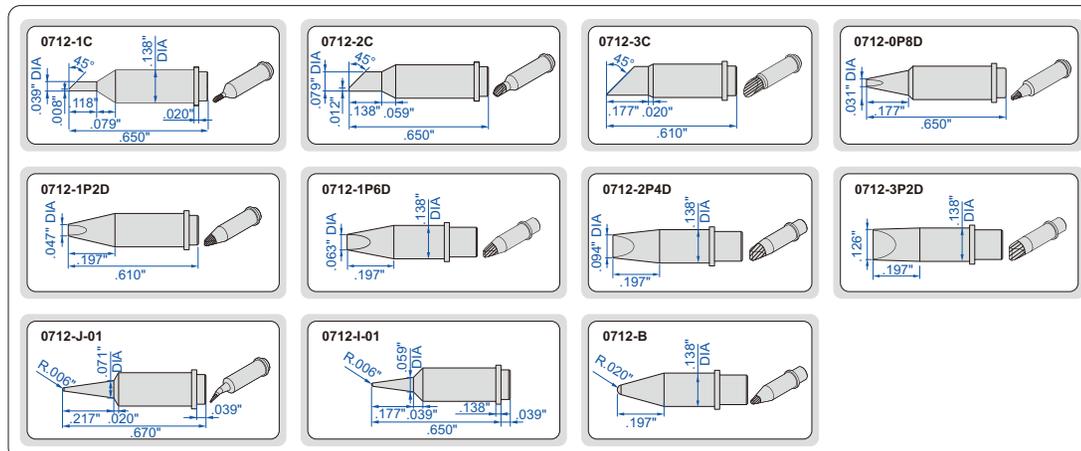


soldering tip 0712-SK (included)

soldering tip 0712-J (included)



soldering tips (optional)



### SPECIFICATION

Display screen	IPS
Temperature range	100°C~450°C/212°F~842°F
Temperature stability	±2°C (when the air is still and no load)
Power	90W (MAX)
Tip to ground potential	<2mV
Tip to ground resistance	<2Ω
Power supply	AC 110V, 50Hz
Dimension	4.57x5.87x3.66"
Net weight	3.97lb

### STANDARD DELIVERY

Main unit	1 pc
Soldering tip (0712-SK)	1 pc
Soldering tip (0712-J)	1 pc
Soldering tip (0712-I)	1 pc
Soldering iron stand	1 pc

### OPTIONAL ACCESSORY

Soldering tip	0712-1C
Soldering tip	0712-2C
Soldering tip	0712-3C
Soldering tip	0712-0P8D
Soldering tip	0712-1P2D
Soldering tip	0712-1P6D
Soldering tip	0712-2P4D
Soldering tip	0712-3P2D
Soldering tip	0712-J-01
Soldering tip	0712-I-01
Soldering tip	0712-B

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.insize.com](http://www.insize.com) or request a metric catalog from [sales@insizeus.com](mailto:sales@insizeus.com)

**DIAL CALIPERS**

**SHOCK PROOF**

**INSPECTION CERTIFICATE**

Dial indicator graduation 0.02mm (mm)

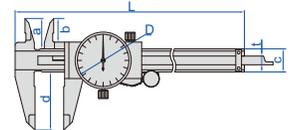
Part No.	Range	Accuracy	L	a	b	c	d	D	t
1312-150A*	0-150mm	±0.03mm	235	21	16.5	16	40	Ø39	6.5
1312-200A*	0-200mm	±0.03mm	288	24	19	16	48	Ø39	6.5
1312-300A*	0-300mm	±0.03mm	410	28	22	20	62	Ø44.5	7.5



1312-150A

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

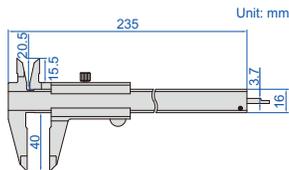


- Shockproof dial indicator
- Made of stainless steel

\*Supplied with manufacturer inspection certificate

**VERNIER CALIPERS**

**POPULAR MODEL**



1205-150S

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

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"

**OUTSIDE MICROMETERS**

**INSPECTION CERTIFICATE**

**POPULAR MODEL**

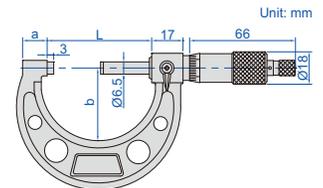
- Graduation: 0.01mm
- Carbide measuring faces
- Ratchet stop
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)



3203-25A



3203-50A



Individual (mm)

Part No.	Range	Accuracy	L	a	b
3203-25A*	0-25mm	±2µm	32	9	28
3203-50A*	25-50mm	±2µm	57	14	38
3203-75A*	50-75mm	±2µm	82	15	49
3203-100A*	75-100mm	±3µm	107	15	60
3203-125A	100-125mm	±3µm	133	16.5	73
3203-150A	125-150mm	±3µm	158	16.5	85

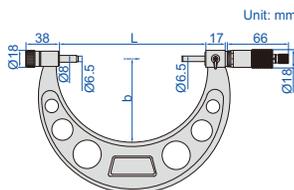
Set

Part No.	Range	Micrometers included	Packaging
3203-753A*	0-75mm	3203-25A, 3203-50A, 3203-75A	blow mould case
3203-1506A	0-150mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A	blow mould case

\*Supplied with manufacturer inspection certificate

**OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS**

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



(mm)

Part No.	Range	Accuracy	L	b	Setting standard (included)
3206-150A	0-150mm	6µm	158mm	82mm	25, 50, 75, 100, 125
3206-300A	150-300mm	9µm	308mm	165mm	150, 175, 200, 225, 250, 275



3206-150A



## BORE GAUGES (WITH DIAL INDICATOR)

**ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS**

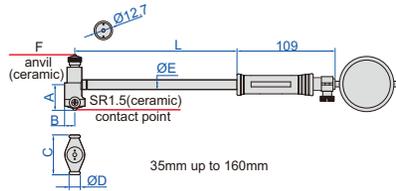
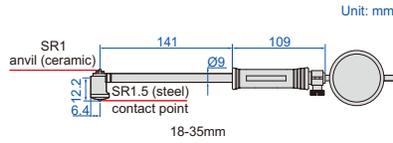


- Optional accessory: setting ring (part no. 6312), long handle (part no. 7351), bore gauge setter

Range	A	B	C	ØD	ØE	F	L
18-35mm	22	9	27	13	12.8	SR2	141
35-60mm	26	9	35	13	12.8	SR2	141

With dial indicator

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



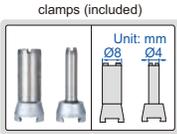
2322-35A

POPULAR MODEL

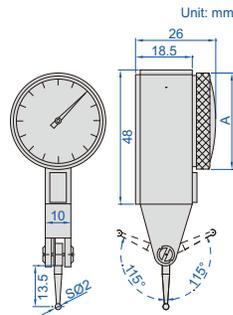
## DIAL TEST INDICATORS

INSPECTION CERTIFICATE JEWELLED BEARING

POPULAR MODEL



2380-08



- Graduation: 0.01mm
- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli

Part No.	Range	Accuracy	Hysteresis	Dial reading	A
2380-08*	0.8mm	13µm	3µm	0-40-0	Ø30
2381-08*	0.8mm	13µm	3µm	0-40-0	Ø37

\*Supplied with manufacturer inspection certificate

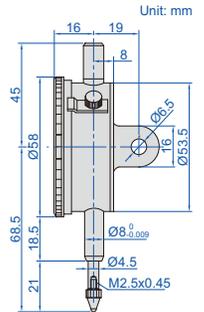
## DIAL INDICATORS (STANDARD TYPE)

INSPECTION CERTIFICATE

JEWELLED BEARING



2308-10A



- 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

Part No.	Range	Accuracy	Range/rev	Remark
2308-10A*	10mm	17µm	1mm	lug back
2308-10FA*	10mm	17µm	1mm	flat back

\*Supplied with manufacturer inspection certificate

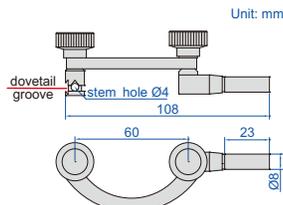
## DIAL TEST INDICATOR HOLDER



6291-1

- Can be used with dial test indicators

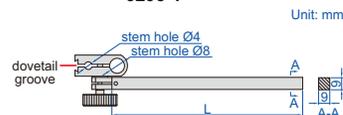
Part No.
6291-1



## DIAL TEST INDICATOR HOLDER



6293-1



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



## PART NO. INDEX

PART NO.	PAGE						
<b>00</b>		0434	299	1162	23	1539	20
0010	275	0436	297	1163	103	1540	26
0020	282	<b>05</b>		1164	20	<b>21</b>	
0022	280	0501	284	1165	21	2103	81
0023	281	0502	285	1166	138	2104	81
0024	281	0523	283	1167	23	2108	82
<b>01</b>		<b>06</b>		1168	23	2112	80
0110	274	0611	301	1169	18	2114	83
0111	275	0612	302	1172	22	2115	81
0120	283	0615	302	1176	16	2117	83
0121	283	<b>07</b>		1177	19	2118	83
0130	276	0712	311	1178	17	2121	96
0131	276	0716	305	1179	21	2123	67/69
0132	277	<b>08</b>		1180	76	2124	66
0140	274	0811	303	1181	23	2131	97
<b>02</b>		<b>11</b>		1183	18	2132	97
0213	263	1102	7	1184	21	2133	84
0215	263	1108	7	1185	17	2135	84-85
0216	264	1110	8	1186	20	2141	28
0218	264	1111	9	1187	17	2142	27
0222	262	1113	6	1188	18	2146	105
0231	260	1114	7	1189	76	2151	97
0232	261	1118	6	1191	17	2164	103
0236	262	1119	7	1192	19	2166	103
<b>03</b>		1120	16	1193	8	2168	104
0310	272	1121	15	1195	6	2170	150
0311	270	1122	20	1196	7	2171	116
0312	271	1123	18	<b>12</b>		2174	116
0313	272	1124	14	1205	9	2175	150
0314	273	1125	13	1211	10	2176	116
0316	271	1129	16	1250	33	2179	150
0317	270	1130	8	1251	33	2182	78
0318	269	1131	10	<b>13</b>		2183	73
0319	271	1133	10	1311	9	2186	103
0320	265	1135	10	1316	9	2187	111
0321	265	1138	19	1351	32	2188	74
0323	266	1139	9	<b>15</b>		2197	75
0325	267	1140	27	1501	76	2198	151
0326	267	1141	25	1511	12	2199	149
0327	268	1142	25	1512	24	<b>22</b>	
0328	268	1143	26	1513	24	2222	97
0329	269	1144	25	1520	15	2224	87
0330	272	1145	27	1522	8	2225	121
0332	273	1146	104	1523	8	2252	40
0340	265	1147	25	1524	19	2257	161
<b>04</b>		1148	26	1525	20	2258	161
0410	300	1149	24	1526	14	2262	100
0411	296	1150	31	1527	22	2274	136
0412	295	1151	32	1528	22	2276	137
0413	296	1154	33	1530	15	2278	136
0414	297	1155	30	1531	77	2280	119
0416	295	1156	32	1532	18	2281	137
0420	284	1157	30	1533	22	2282	137
0430	298	1159	31	1536	23	<b>23</b>	
0431	299	1160	129	1537	77	2304	86
0432	298	1161	21	1538	24	2307	86



**PART NO. INDEX**

PART NO.	PAGE
2312.....	87
2315.....	85
2320.....	87
2323.....	67/69
2324.....	86
2326.....	87
2330.....	71
2333.....	98
2341.....	28
2363.....	100
2364.....	99
2372.....	117
2373.....	117
2374.....	117
2376.....	100
2380.....	78
2381.....	78
2383.....	78
2385.....	158
2386.....	79
2394.....	161
2397.....	161
2398.....	79
2399.....	79
<b>24</b>	
2421.....	67
2480.....	79
<b>25</b>	
2503.....	80
2508.....	82
2509.....	82
2511.....	74
2512.....	75
2514.....	38
<b>26</b>	
2671.....	101
2673.....	98
2674.....	99
<b>27</b>	
2710.....	100
2712.....	98
2720.....	68
2721.....	68
2722.....	68
2724.....	70
2771.....	118
<b>28</b>	
2824.....	70
2826.....	68
2827.....	69
2828.....	70
2840.....	159
2844.....	256
2846.....	160
2849.....	137
2851.....	158

PART NO.	PAGE
2856.....	105
2859.....	100
2871.....	98
2872.....	99
2873.....	101
2876.....	101
2879.....	98
<b>29</b>	
2927.....	34~35
2931.....	36~37
2932.....	41~42
2933.....	44~45
2934.....	43
2935.....	46~47
2936.....	104
2937.....	72
<b>31</b>	
3101.....	50
3108.....	51
3109.....	51
3112.....	50
3127.....	65
3128.....	65
<b>32</b>	
3203.....	52
3206.....	52
3220.....	62
3221.....	63
3222.....	64
3227.....	64
3230.....	55
3232.....	56
3233.....	57
3235.....	53
3236.....	51
3238.....	60
3239.....	58
3240.....	29
3241.....	29
3260.....	57
3261.....	57
3262.....	58
3263.....	61
3266.....	56
3280.....	59
3281.....	55
3282.....	59
3283.....	60
3287.....	54
3288.....	58
3290.....	59
3292.....	61
3293.....	61
3294.....	60
<b>33</b>	
3332.....	49

PART NO.	PAGE
3334.....	53
3350.....	101
3351.....	49
3358.....	48
3359.....	48
<b>34</b>	
3400.....	51
<b>35</b>	
3506.....	53
3508.....	54
3509.....	102
3520.....	62
3521.....	63
3522.....	71
3525.....	63
3530.....	56
3532.....	56
3533.....	57
3539.....	58
3540.....	29
3560.....	57
3561.....	57
3562.....	58
3566.....	56
3580.....	59
3581.....	55
3583.....	60
3588.....	58
3590.....	59
3594.....	60
<b>40</b>	
4005.....	107
4006.....	146
4007.....	107
<b>41</b>	
4102.....	106
4112.....	106
4120.....	113
4121.....	113
4130.....	113
4131.....	113
4141.....	118
4158.....	146
4162.....	109
4180.....	120
4190.....	111
4191.....	120
<b>42</b>	
4206.....	73
4208.....	72
4209.....	73
<b>46</b>	
4608.....	126
4630.....	129
<b>47</b>	
4700.....	120

PART NO.	PAGE
4707.....	119
4721.....	124
4722.....	125
4725.....	121
4726.....	121
4728.....	125
4736.....	122
4737.....	122
4738.....	123
4739.....	123
4741.....	123
4742.....	124
4743.....	125
4744.....	124
4747.....	120
4770.....	118
4780.....	116
4781.....	117
4782.....	125
4786.....	122
4788.....	124
4789.....	121
4790.....	118
4791.....	119
4796.....	119
4799.....	116
<b>48</b>	
4801.....	127
4804.....	128
4806.....	127
4807.....	127
4808.....	129
4809.....	129
4810.....	127
4812.....	127
4820.....	126
4824.....	126
4829.....	130
4830.....	131
4831.....	131
4833.....	130
4835.....	132
4836.....	131
4837.....	130
4839.....	132
4842.....	128
4843.....	128
4844.....	76
4846.....	131
4849.....	131
4852.....	130
4853.....	129
4854.....	128
4856.....	128
4860.....	126
<b>49</b>	

## PART NO. INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
4901.....	151	6140.....	11	6539.....	145	7205.....	137
4902.....	151	6141.....	27	6540.....	108	7213.....	5
4910.....	153~154	6143.....	18	6566.....	158	7230.....	138
4911.....	156	6144.....	11	6567.....	159	7231.....	138
4912.....	154	6145.....	11	<b>68</b>		7232.....	138
4913.....	155	6146.....	12	6801.....	143	7247.....	133
4914.....	155	6147.....	10	6803.....	141	7260.....	133
4917.....	157	6148.....	10	6804.....	142	7261.....	132
4918.....	156	<b>62</b>		6805.....	142	7262.....	133
4921.....	155	6200.....	92	6806.....	142	<b>73</b>	
4922.....	154	6201.....	92	6841.....	95	7304.....	6
4950.....	152	6202.....	92	6848.....	38~39	7315.....	3~4
4951.....	153	6207.....	93	6849.....	37	7330.....	88
4952.....	148	6208.....	91	6852.....	120	7331.....	88
4953.....	152	6210.....	91	6861.....	96	7341.....	109
4955.....	156	6211.....	92	6862.....	95	7342.....	110
4956.....	151	6212.....	93	6863.....	95	7349.....	1~2
<b>50</b>		6214.....	93	6864.....	96	7353.....	72
5002.....	138	6215.....	92	6865.....	96	7360.....	84
5003.....	139	6216.....	92	6866.....	95	7381.....	55
5013.....	140	6217.....	93	6867.....	95	7394.....	54
5015.....	140	6221.....	91	6876.....	94	7397.....	61
5016.....	140	6222.....	90	6878.....	144	7398.....	171
5022.....	139	6224.....	91	6879.....	146	<b>75</b>	
5023.....	139	6225.....	94	6884.....	108	7511.....	208
5052.....	139	6226.....	93	6885.....	171	7512.....	210
5081.....	139	6227.....	94	6886.....	108	7513.....	209
5091.....	139	6228.....	91	6887.....	142	7514.....	208
<b>53</b>		6229.....	89	6888.....	143	7515.....	208
5301.....	190	6230.....	94	6889.....	144	7516.....	206
5302.....	189	6231.....	92	6890.....	144	7517.....	206
5305.....	203	6232.....	90	6891.....	145	7520.....	206
5307.....	195	6272.....	91	6896.....	141	7521.....	206
5310.....	193	6282.....	88	6897.....	143	7522.....	209
5311.....	198	6284.....	79	<b>69</b>		7523.....	209
5313.....	190	6291.....	88	6900.....	140	7524.....	208
5317.....	194~195	6293.....	88/89	6902.....	141	7525.....	207
5318.....	191	6294.....	89	6981.....	107	7526.....	207
5319.....	197	6295.....	89	6990.....	138	7527.....	208
5324.....	188	6296.....	88	<b>71</b>		7528.....	209
5325.....	196	<b>63</b>		7100.....	136	7529.....	209
<b>54</b>		6300.....	61	7101.....	163	7530.....	210
5405.....	255	6301.....	62	7102.....	164	<b>76</b>	
5407.....	255	6302.....	61	7110.....	135	7600.....	283
<b>57</b>		6311.....	62	7119.....	135	<b>80</b>	
5700.....	258	6313.....	110	7126.....	135	8001.....	289
5701.....	257	<b>65</b>		7142.....	134	8003.....	290
5702.....	256	6520.....	147	7143.....	134	<b>81</b>	
<b>58</b>		6521.....	147	7146.....	135	8101.....	289
5801.....	300	6526.....	147	7160.....	210	<b>82</b>	
5802.....	301	6527.....	147	7161.....	210	8201.....	292
5804.....	285	6531.....	146	7162.....	210	8204.....	293
<b>59</b>		6532.....	145	7163.....	211	<b>83</b>	
5900.....	246	6535.....	146	7171.....	134	8301.....	289
5910.....	246	6536.....	147	<b>72</b>		8303.....	288
<b>61</b>		6537.....	145	7202.....	138	8305.....	288



**PART NO. INDEX**

PART NO.	PAGE
8312.....	287
8313.....	286
<b>84</b>	
8403.....	291
<b>85</b>	
8501.....	292
<b>86</b>	
8602.....	290
8604.....	293
8605.....	290
<b>89</b>	
8910.....	294
<b>91</b>	
9132.....	259
<b>92</b>	
9216.....	307
9219.....	308
9223.....	279
9224.....	278
9225.....	278
9242.....	307
9243.....	309
<b>93</b>	
9312.....	310
9353.....	276
9362.....	271
<b>94</b>	
9408.....	223
9410.....	160
9452.....	306
<b>95</b>	
9501.....	253
9530.....	304
9561.....	218
9563.....	133
9565.....	218
9570.....	134
<b>96</b>	
9646.....	231
9652.....	304
9655.....	305
<b>97</b>	
9721.....	310
9722.....	311
9723.....	310
<b>99</b>	
9914.....	306
<b>DRV</b>	
DRV-606.....	258
<b>DSW</b>	
DSW-A010.....	282
DSW-B024.....	282
<b>EMU</b>	
EMU-A100.....	214
<b>GRL</b>	
GRL-L340.....	157

PART NO.	PAGE
<b>HDT</b>	
HDT-BRV330-U.....	230
HDT-DM290-U.....	224
HDT-L301.....	236
HDT-L410.....	234
HDT-L411.....	235
HDT-LG210.....	235
HDT-LP200.....	233
HDT-MB710-U.....	229
HDT-MVH1100-U.....	228
HDT-RT151.....	225
HDT-RW160.....	227
HDT-ST300.....	226
HDT-WP201.....	232
<b>HES</b>	
HES-TP01.....	114~115
HES-TP02.....	114~115
<b>HLS</b>	
HLS-B410.....	252
<b>ISD</b>	
ISD-H□□□.....	181
ISD-K322-U.....	182~183
ISD-Q762-U.....	184
ISD-V□□□.....	178~179
ISD-V220CNCA-U.....	179~180
ISD-V270CNCA-U.....	179~180
ISD-V370CNCA-U.....	179~180
<b>ISE</b>	
ISE-2DT.....	148
<b>ISF</b>	
ISF-1DF□□□.....	245
ISF-DF□□□.....	244
ISF-DT1000.....	245
ISF-DU□□□.....	246
ISF-MT1K.....	245
ISF-S50-U.....	243
<b>ISGF</b>	
ISGF-0901.....	138
<b>ISH</b>	
ISH-DSA.....	238
ISH-DSD.....	238
ISH-DS-STANDA.....	238
ISH-SAM.....	239
ISH-SDM.....	239
ISH-STAC.....	239
<b>ISHR</b>	
ISHR-P151.....	237
<b>ISHW</b>	
ISHW-H□□□.....	237
<b>ISL</b>	
ISL-A5-□□□.....	162
ISL-B5-□□□.....	162
ISL-DR2.....	162
ISL-DR3.....	162
ISL-LCD7.....	163
<b>ISM</b>	

PART NO.	PAGE
ISM-CM63.....	204~205
ISM-DL301.....	192
ISM-PM200SA.....	199
ISM-PM200SB.....	199
ISM-VR□□□.....	201
ISM-WF200.....	200
ISM-ZS30.....	203
ISM-ZS50.....	202
ISM-ZS50T.....	202
<b>ISO</b>	
ISO-8000FN.....	254
<b>ISP</b>	
ISP-A350.....	186
ISP-Z3015-U.....	175
<b>ISQ</b>	
ISQ-DG6.....	256
ISQ-DRM31.....	300
ISQ-RM30.....	301
ISQ-TS□□□.....	279
<b>ISR</b>	
ISR-C002.....	166
ISR-C003.....	170
ISR-C300.....	167~168
ISR-CSE130.....	170
ISR-T120.....	168~169
<b>IST</b>	
IST-04TT5.....	248
IST-04TT28.....	248
IST-04TT68.....	248
IST-04TT350.....	248
IST-10WM□□□.....	251
IST-20WM□□□.....	251
IST-42W□□□.....	250
IST-DTT□□□.....	247
IST-DW□□□.....	251
IST-HP□□□.....	247
IST-MF□□□.....	249
IST-SD□□□.....	249
IST-W□□□.....	249
<b>ISU</b>	
ISU-200D.....	217
ISU-250C.....	216
ISU-800D.....	215
<b>ISV</b>	
ISV-E30.....	213
ISV-E40.....	213
ISV-J6010.....	212
ISV-K3915.....	211
ISV-K6015.....	211
ISV-P6.....	212
<b>ISY</b>	
ISY-100.....	172~173
ISY-200.....	172
ISY-600.....	174
ISY-700.....	185
<b>LDM</b>	

PART NO.	PAGE
LDM-030.....	221
LDM-065.....	221
LDM-085.....	221
LDM-AT01-U.....	222
LDM-H02.....	223
<b>LSM</b>	
LSM-L340.....	219~220
<b>QMS</b>	
QMS-A110-U.....	176
QMS-A315-U.....	177
<b>SPM</b>	
SPM-1000-U.....	164~165
<b>TCM</b>	
TCM.....	114
<b>TLP</b>	
TLP-300H.....	187
TLP-A100.....	187
<b>TSB</b>	
TSB-A30.....	219
<b>UFD</b>	
UFD-F720.....	241
UFD-T680.....	239~240
<b>UTM</b>	
UTM-E20-U.....	242
UTM-E50-U.....	242
UTM-SC1000.....	244
UTM-Z500-U.....	243
<b>VIM</b>	
VIM-L40.....	178
<b>METRIC SECTION</b>	
<b>12</b>	
1205.....	312
<b>13</b>	
1311.....	312
1312.....	312
<b>23</b>	
2308.....	313
2322.....	313
2380.....	313
<b>32</b>	
3203.....	312
3206.....	312
<b>62</b>	
6291.....	313
6293.....	313
DLC COATED THREAD RING GAUGES AND PLUG GAUGES .....	111~112



MEASUREMENT SOLUTION PROVIDER

TEL: 470-240-2520

ISO17025 CALIBRATION SERVICES

Southern Precision Measuring
2230 Commerce Drive
Loganville, GA 30052
(478) 975-2023
sales@spmeasuring.com
www.spmeasuring.com

CERTIFICATE OF CALIBRATION



Certificate Number: 041725-16

For: Insize USA

Purchase Order #:

Description of Unit: 0-6" Digital Caliper

Manufacturer: Insize

Model #: 1108-150

Serial #: 1010245387

Customer Address: 2230 Commerce Drive, Loganville, GA 30052

As found: In Tolerance

As Left: In Tolerance

Location of Calibration: [X] Fixed Lab [ ] On Site

Technician: K. Geary

Calibration Conditions: 67 °F, 40 %RH

Date of Calibration/Issue: 4/17/2025

Customer Due Date:

Method Used
WI-002

This is to certify the equipment referenced have been calibrated and verified to meet the defined specifications. This calibration was performed using standards whose results that are metrologically traceable through National Institute of Standards and Technology (NIST) to the International System of Units (SI). The expanded uncertainties use a coverage factor of k=2 to approximate the 95% confidence level of the measurement, unless otherwise noted. This calibration certificate applies only to the item described and shall not be reproduced other than in full, without written approval from the calibration facility. Decision Rule: No additional accounting of uncertainty factors into the statement. Customers should review certificates to ensure that any effects of the uncertainty does not affect the intended use of the device.

Southern Precision Measuring, LLC is accredited to ISO/IEC 17025:2017 for calibration by PJLA, accreditation # 120047.

Technician: K. Geary
Date: 4/17/2025
(Individual Authorizing Report)

Calibration Results

Table with 7 columns: Feature, Nominal, Min of Tolerance, Max of Tolerance, As Found, As Left, Uncertainty. Rows include Outside Jaws, Inside Jaws, Depth, and Step.

- INSIZE is proud to announce our calibration service "INSIZE Calibration Services".
The most popular tools ready to ship same day!
Tools ordered by noon will ship same day with an ISO17025 Certificate with date of service. No need to wait a week or more.
All INSIZE precision tools available with ISO17025 certification. Contact us for pricing on all products.

Tools Available to Ship Today with Calibration Certificate

Table with 2 columns: Part No., Description. Lists various calibration tools like 1108-150CAL, 1108-200CAL, etc.



www.insizeus.com



Add: 2230 Commerce Drive Loganville, GA 30052
Tel: +470-240-2520
Fax: 470-448-4771
E-mail: sales@insizeus.com

Distributed by: