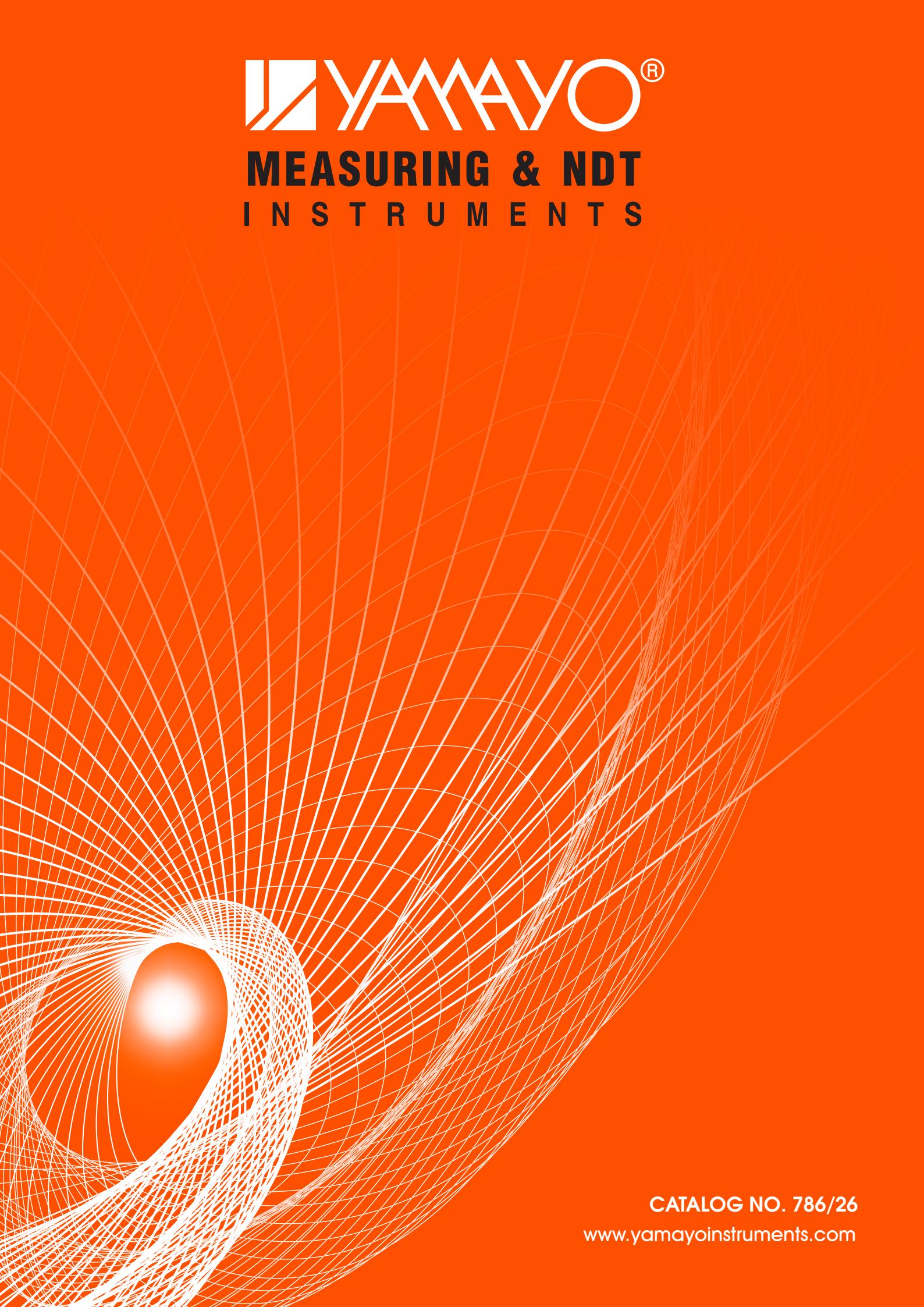




**MEASURING & NDT  
INSTRUMENTS**

A large, abstract graphic in the background consists of a dense, white, three-dimensional grid of lines that curve and twist, creating a sense of depth and motion. A bright, glowing circular opening is visible in the lower-left portion of the grid, suggesting a lens or a window into another dimension.

**CATALOG NO. 786/26**

[www.yamayo instruments.com](http://www.yamayo instruments.com)

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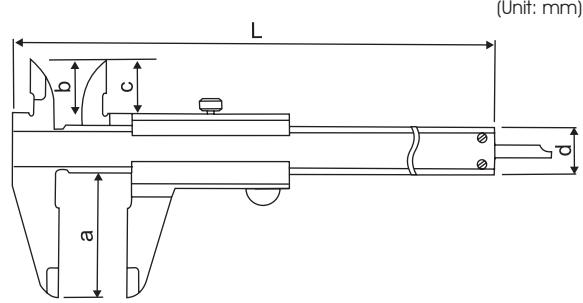


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## Vernier Calipers without fine Adjustment



### FEATURES

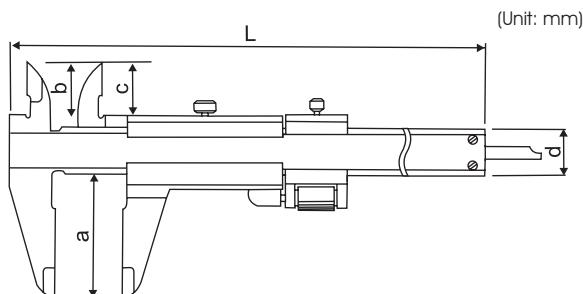
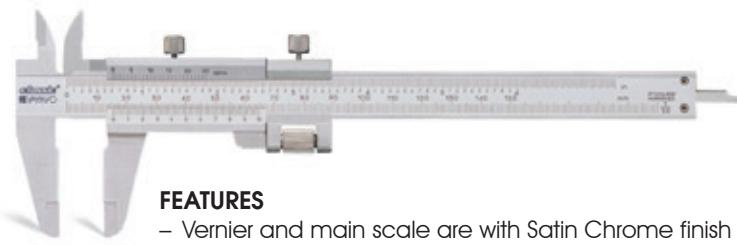
- Vernier and main scale are with Satin Chrome finish for glare free reading.
- Raised sliding surfaces for protection of the scale.
- Can measure OD, ID, Depth and Steps.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
101-150	150mm/6"	0.03mm	40	21	16.5	16	235
101-200	200mm/8"	0.03mm	50	25	20.5	16	290
101-300	300mm/12"	0.03mm	64	27.5	22	20	405

## Vernier Calipers with fine adjustment



### FEATURES

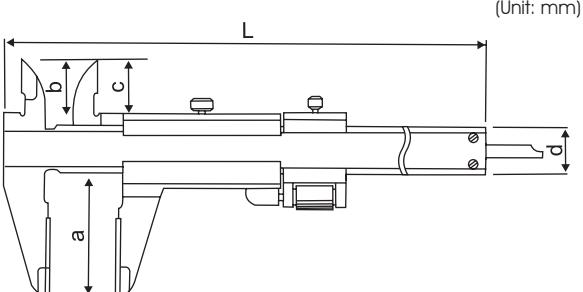
- Vernier and main scale are with Satin Chrome finish for glare free reading.
- Raised sliding surfaces for protection of the scale.
- Can measure OD, ID, Depth and Steps.
- Provided with a fine adjustment carriage to feed the slider finely.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
102-130	130mm/5"	0.03mm	40	21	16.5	16	235
102-180	180mm/7"	0.03mm	50	25	20.5	16	290
102-280	280mm/11"	0.03mm	64	27.5	22	20	405

## Vernier Calipers with Carbide Jaws



### FEATURES

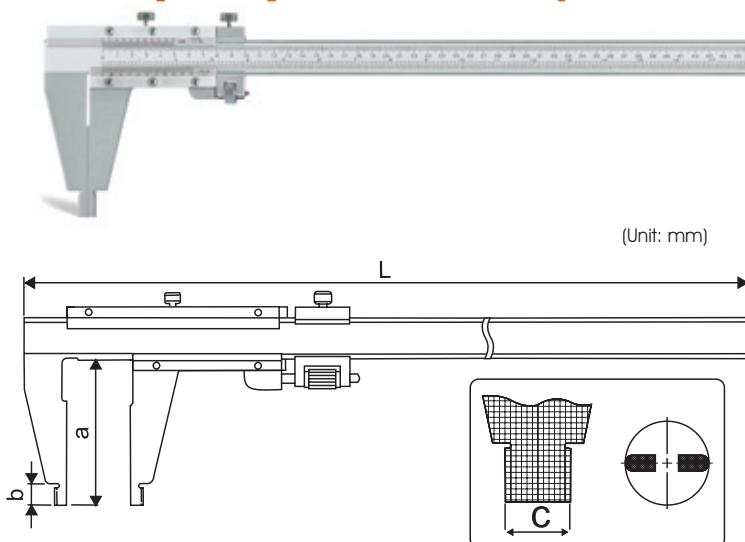
- Carbide Tipped Jaws for internal and external measurements, suitable for measuring rough surfaces, castings, abrasives.
- Vernier and main scale are with Satin Chrome finish for glare free reading.
- Raised sliding surfaces for protection of the scale.
- Can measure OD, ID, Depth and Steps.
- Provided with a fine adjustment carriage to feed the slider finely.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
103-130	130mm/5"	0.03mm	40	20.5	16.5	16	235
103-180	180mm/7"	0.03mm	50	23.5	19	16	290
103-280	280mm/11"	0.03mm	60	26	20	20	405

## Heavy Duty Vernier Calipers



### FEATURES

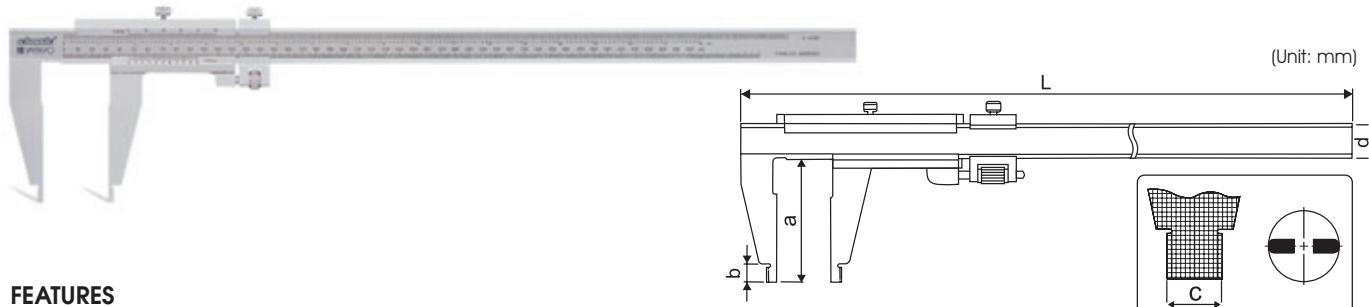
- Vernier and main scale are with Satin Chrome finish for glare free reading.
- Used for Internal, external and step measurements.
- Provided with a fine adjustment carriage to feed the slider finely.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
111-300	300mm/12"	0.04mm	75	12	10	20	415
111-450	450mm/18"	0.05mm	100	12	10	25	608
111-600	600mm/24"	0.05mm	100	12	10	25	750
111-1000	1000mm/40"	0.08mm	150	24	20	32	1250
111-1500	1500mm/60"	0.12mm	200	24	20	32	1755
111-2000	2000mm/80"	0.14mm	200	24	20	40	2240

## Heavy Duty Solid Type Vernier Calipers



### FEATURES

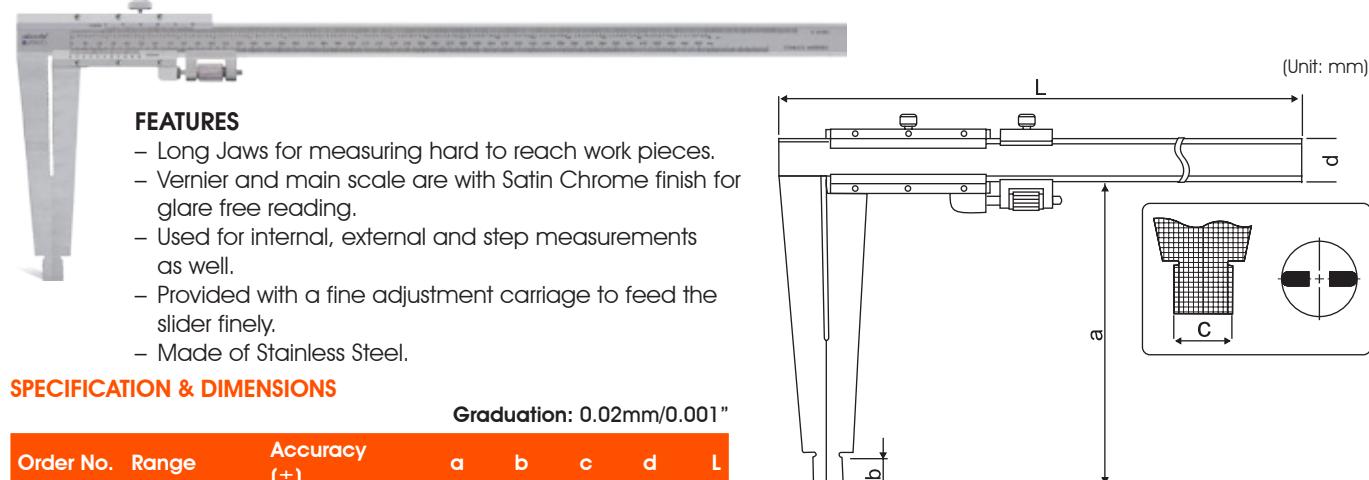
- Mono Block type Vernier Calipers.
- Vernier and main scale are with Satin Chrome finish for glare free reading.
- Used for Internal, external and step measurements.
- Provided with a fine adjustment carriage to feed the slider finely.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
112-450	450mm/18"	0.05mm	100	12	10	25	608
112-600	600mm/24"	0.05mm	100	12	10	25	750
112-1000	1000mm/40"	0.08mm	150	24	20	32	1250

## Long Jaw Vernier Calipers

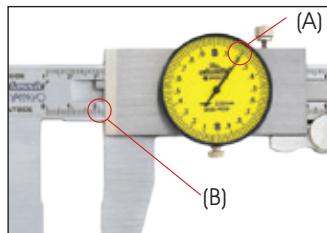
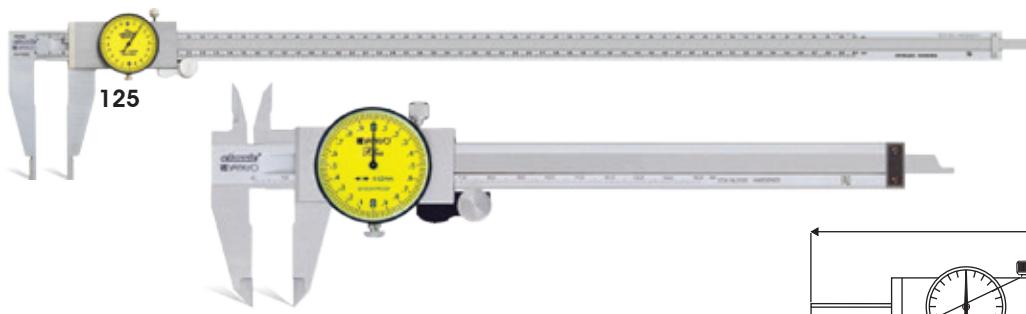


### SPECIFICATION & DIMENSIONS

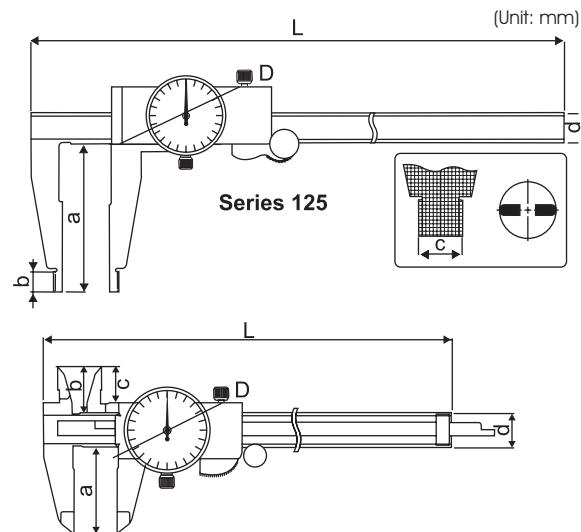
Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
113-300	300mm/12"	0.05mm	90	12	10	20	415
113-450	450mm/18"	0.06mm	200	12	10	25	605
113-600	600mm/24"	0.06mm	200	12	10	25	755
113-1000	1000mm/40"	0.08mm	200	24	20	32	1245

## Dial Calipers



Reading  
 (A): Main scale reading 22.00 mm  
 (B) Dial reading 00.21 mm  
 22.21 mm



### FEATURES

- Provided with Yellow colour dial to give excellent visibility of dial graduations.
- Slider displacements are amplified by a rack & pinion mechanism and indicated on the dial.
- Can measure OD, ID, Depth and Steps.
- Shock proof movement.
- Clamping screw atop the slider.
- Zero setting through swivelling dial and locking screw.
- Covered rack keeps gears, wheels clean.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	D	L
121-150	150mm	0.03mm	40	21	16.5	16	39	235
121-200	200mm	0.03mm	50	25	20.5	16	39	290
121-300	300mm	0.04mm	64	27.5	22	20	44.5	405

Graduation: 0.02mm

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	D	L
122-150	150mm	0.03mm	40	21	16.5	16	39	235
122-200	200mm	0.03mm	50	25	20.5	16	39	290
122-300	300mm	0.04mm	64	27.5	22	20	44.5	405

### SPECIFICATION & DIMENSIONS

Graduation: 0.05mm

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	D	L
123-150	150mm	0.03mm	40	21	16.5	16	39	235
123-200	200mm	0.03mm	50	25	20.5	16	39	290
123-300	300mm	0.04mm	64	27.5	22	20	44.5	405

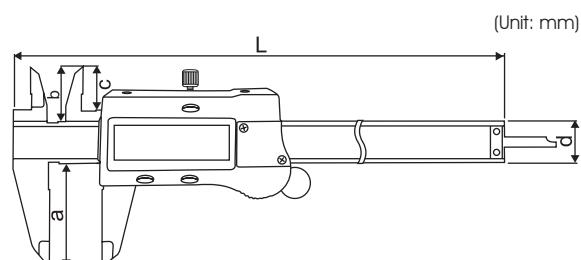
Graduation: 0.02mm

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	D	L
125-450	450mm	0.08mm	86	18	10	22	42.5	580
125-600	600mm	0.08mm	86	18	10	22	42.5	730
125-1000	1000mm	0.12mm	140	25	20	28	55	1200

## Digimatic Calipers



IP-54 SERIES  
 METAL FRAME



### FEATURES

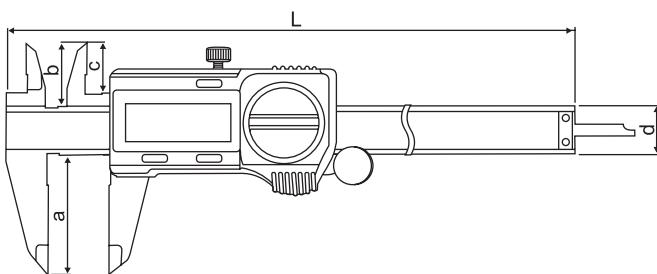
- Slide roller for easy controlled operation.
- Power supply : One LR44 Battery.
- Function : On/Off, Origin (Zero setting), inch/mm.
- Made of Stainless Steel.
- IP54 Protected from limited dust ingress and water spray from any direction

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
130-150	150mm/6"	0.03mm	40	21	16.5	16	235
130-200	200mm/8"	0.03mm	50	25	20.5	16	290
130-300	300mm/12"	0.04mm	62	26	21.5	17	400

## IP54 Digimatic Calipers



### FEATURES

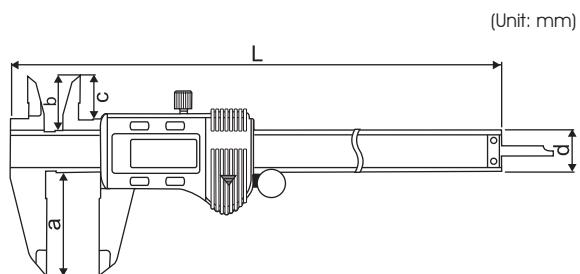
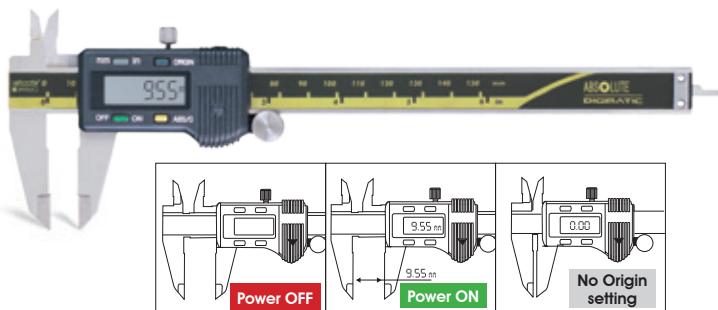
- Slide roller for easy controlled operation.
- Power supply: One 3V lithium battery CR2032.
- Function: On/Off, Origin (Zero setting), inch/mm.
- Made of stainless steel
- IP54 protection from limited dust ingress and water spray.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
132 -150	150mm/6"	0.03mm	40	21	16.5	16	235
132 -200	200mm/8"	0.03mm	50	25	20.5	16	290
132 -300	300mm/12"	0.04mm	62	26	21.5	17	400

## Absolute Digimatic Calipers



### FEATURES

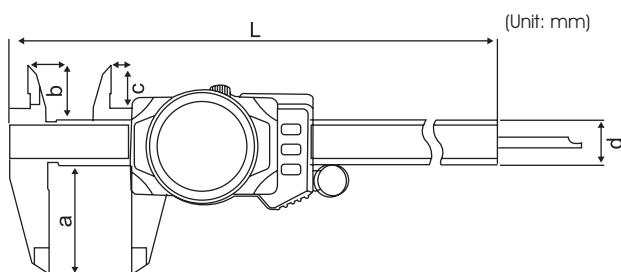
- Slide roller for easy controlled operation.
- Zero/ABS key : Allows the display to be Zero set at any slider position along the scale for incremental comparison measurements.
- This switch will also return to the absolute mode and display the true position from the origin point.
- Power supply : One LR44 Battery.
- Function : On/Off, Origin (Zero setting), Data output, inch/mm.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
131-150	150mm/6"	0.03mm	40	21	16.5	16	235
131-200	200mm/8"	0.03mm	50	25	20.5	16	290
131-300	300mm/12"	0.04mm	64	27.5	22	20	405

## Digimatic Smart Caliper



### FEATURES

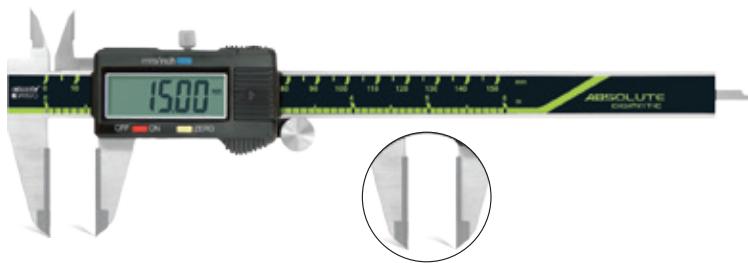
- Full backlit LCD colour display with three levels brightness adjustment and six options power off time.
- Metal Housing.
- Display mode can be selected to show only dial, only digital and can also show simultaneously dial and digital display
- Finely lapped and hardened stainless steel stem for smooth movement and accurate readings.
- IP67 dust tight/water resistance.
- Tolerance set and GO/NG indication.
- Built-in rechargeable lithium battery, magnetic charging port.
- Wireless data transfer via Bluetooth.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.005"/ 1/128"

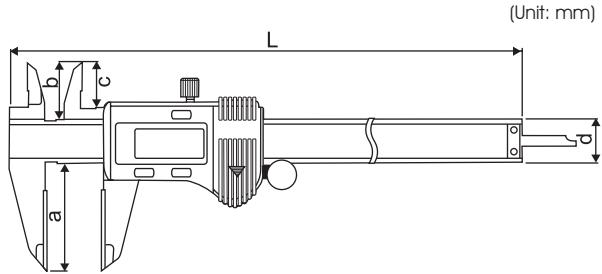
Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
138-150	150mm/6"	0.03mm	40	20	15.5	16	185
138-300	300mm/12"	0.04mm	62	26	21.5	17	400

## Digimatic Calipers with Carbide Jaws



### FEATURES

- Carbide Tipped Jaws for internal and external measurements, suitable for measuring rough surfaces, castings, abrasives.
- Provided with slide roller for easy controlled operation.
- Power supply : One LR44 Battery.
- Function: On/Off, Origin (Zero setting), Data output, inch/mm.
- Made of Stainless Steel.



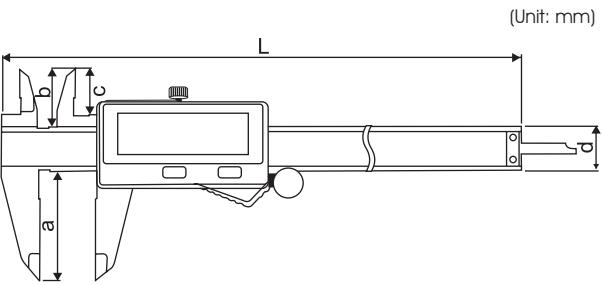
### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
133-150	150mm/6"	0.03mm	40	21	16.5	16	235

## Digimatic Calipers

WITH DUST & WATER PROOF CONFIRMING TO IP67 LEVEL



### FEATURES

- IP67 dust-tight/water resistant.
- Provided with Slide roller for easy controlled operation.
- Power supply : One CR2032 Battery.
- Function : On/Off, Origin (Zero setting), inch/mm.
- 136B series with built in wireless transmission (Bluetooth enabled).
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	L
136-150	150mm/6"	0.03mm	40	21	16.5	16	235
136B-150	150mm/6" (BLUE TOOTH)	0.03mm	40	21	16.5	16	235
136-300	300mm/12"	0.03mm	60	26	21.5	16	390
136B-300	300mm/12" (BLUE TOOTH)	0.03mm	60	26	21.5	16	390

## Heavy Duty Digimatic Calipers



TYPE A

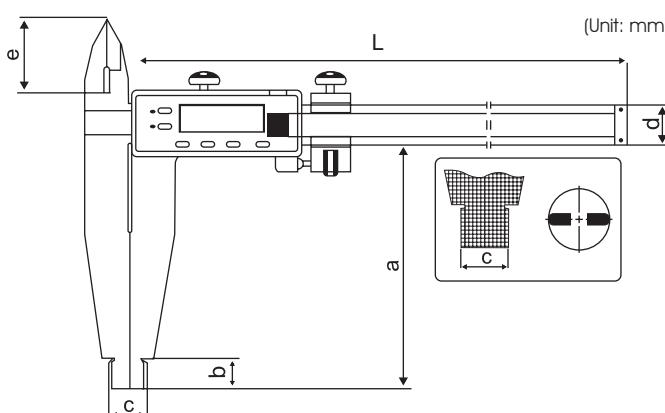
### FEATURES

- Functions: On/Off, ABS, Origin, Inch/mm, data pre-set.
- Power Supply: One CR2032 Battery.
- Made of Stainless Steel.
- Data Output.

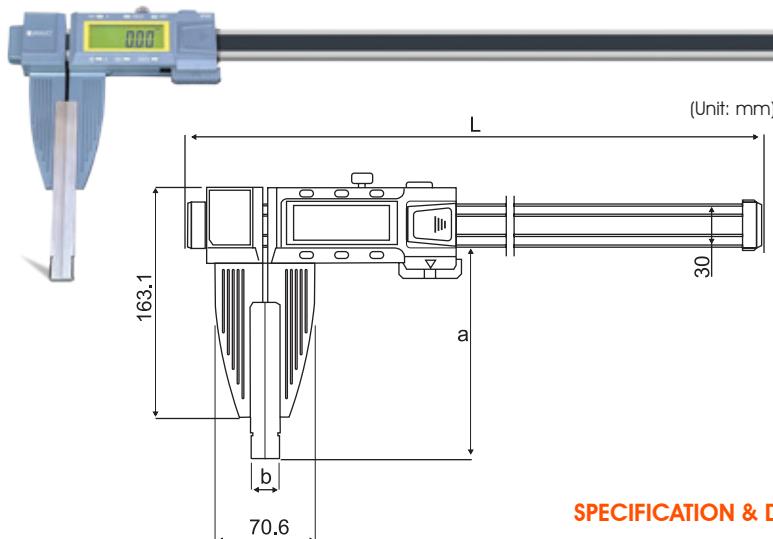
### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	e	L
145-300-100	300mm/12"	0.05mm	100	12	10	25	X	420
145-300-150	300mm/12"	0.05mm	150	12	10	32	X	420
145-450	450mm/18"	0.05mm	100	12	10	25	X	610
145-600	600mm/24"	0.06mm	100	12	10	25	X	770
145-600-150	600mm/24"	0.06mm	150	12	10	32	X	770
145-600-200	600mm/24"	0.06mm	200	12	10	32	X	770
145-1000	1000mm/40"	0.08mm	150	20	20	32	X	1210
145-1500	1500mm/60"	0.11mm	200	20	20	41.5	X	1755
145B-450	450mm/18"	0.05mm	100	12	10	25	55	620
145B-600	600mm/24"	0.06mm	100	12	10	25	55	770



## Digimatic Carbon Fiber Calipers



### FEATURES

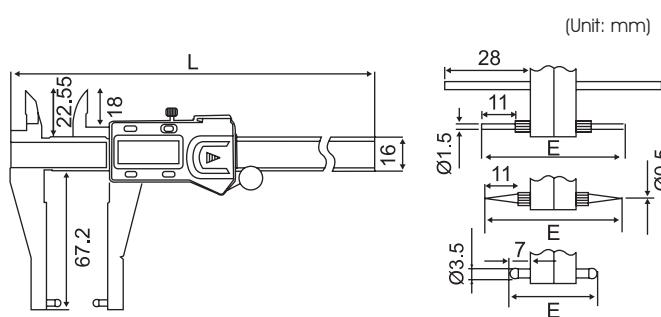
- Main Frame made of carbon fiber
- IP65 dust/water resistant
- Built in Bluetooth wireless transmission
- SPC data output
- Power supply: One CR2032 battery
- Functions: On/Off, zero, inch/mm conversion, hold, SET button for pre-set function.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	L
137-600-1	600mm/24"	0.05mm	138	20	826
137-600-2	600mm/24"	0.07mm	200	20	826
137-600-3	600mm/24"	0.10mm	300	20	826
137-1000-1	1000mm/40"	0.06mm	138	20	1226
137-1000-2	1000mm/40"	0.10mm	200	20	1226
137-1000-3	1000mm/40"	0.13mm	300	20	1226
137-1000-4	1000mm/40"	0.20mm	500	20	1226
137-1500-1	1500mm/60"	0.13mm	150	20	1736
137-1500-2	1500mm/60"	0.17mm	300	20	1736
137-1500-3	1500mm/60"	0.30mm	500	20	1736
137-2000-1	2000mm/80"	0.17mm	200	20	2246
137-2000-2	2000mm/80"	0.20mm	300	20	2246
137-2000-3	2000mm/80"	0.35mm	500	20	2246
137-3000-1	3000mm/120"	0.22mm	200	20	3266
137-3000-2	3000mm/120"	0.25mm	300	20	3266
137-3000-3	3000mm/120"	0.40mm	500	20	3266

## Digimatic Caliper with Interchangeable Anvils



### FEATURES

- Supplied with 4 types of interchangeable measuring anvils suitable for both internal as well as external measurements
- IP54 dust tight/ water resistant.
- ABSOLUTE measurement system
- Power supply: One CR2032 battery
- Function: On/Off, Origin (Zero setting), Preset, inch/mm.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	E	L
139-150	150mm/6"	0.03mm	to be preset by actual size	235

## Digimatic Inside Groove Calipers



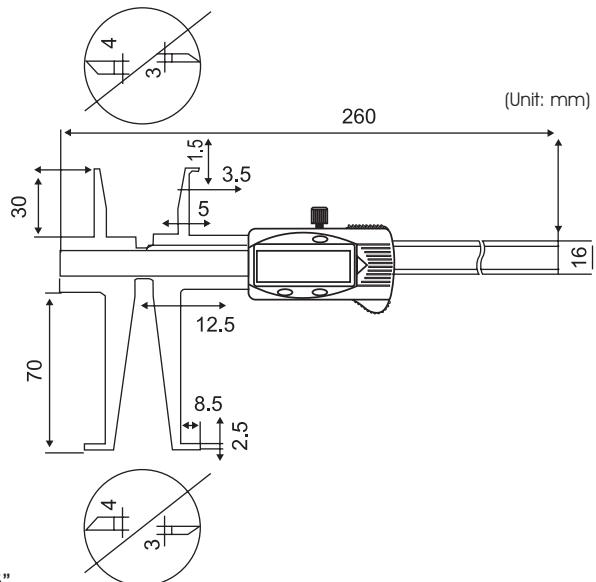
### FEATURES

- Used for measuring inside groove inside small bore
- Power supply: One LR44 battery
- Function: On/Off, Origin (Zero setting), Preset, inch/mm.
- Made of Stainless Steel.

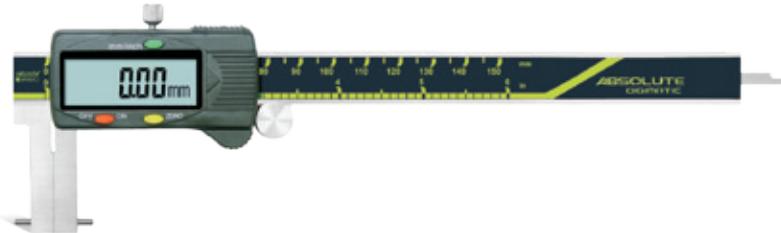
### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range of upper jaw	Range of lower jaw	Accuracy ( $\pm$ )
160-150	9-150mm/0.35-6"	15-150mm/0.59-6"	0.04mm



## Digimatic Inside Point Type Calipers



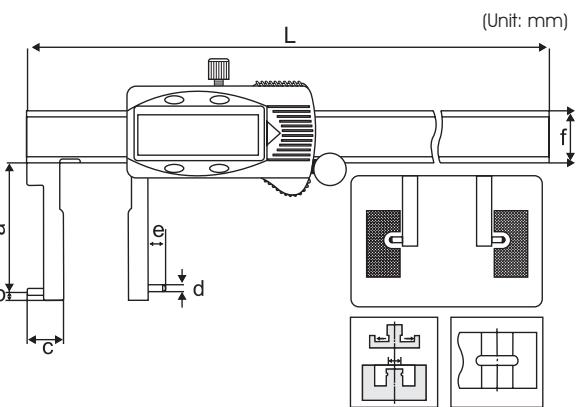
### FEATURES

- Designed for inside groove measurements.
- Function: On/Off, Origin (Zero Setting), Data Output, inch/mm.
- Power Supply: One LR44 Battery.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	e	f	L
155-150	24-150mm	0.04mm	30	3	12	2	5	16	250
155-200	25-200mm	0.04mm	40	3	12.5	2	5	16	310
155-300	50-300mm	0.06mm	80	3	25	3	10	17	410



## Digimatic Inside Flat Point Type Calipers



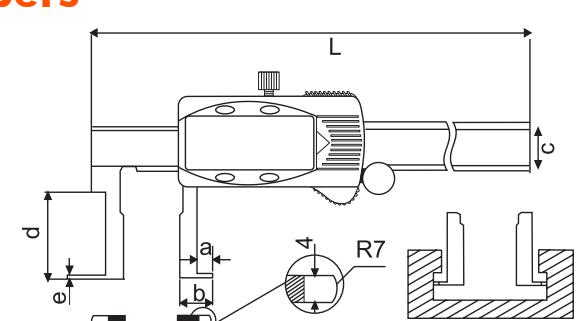
### FEATURES

- Designed for inside groove measurements
- Power supply: One LR44 battery
- Function: On/Off, Origin (Zero setting), Data output, inch/mm.
- Made of stainless steel

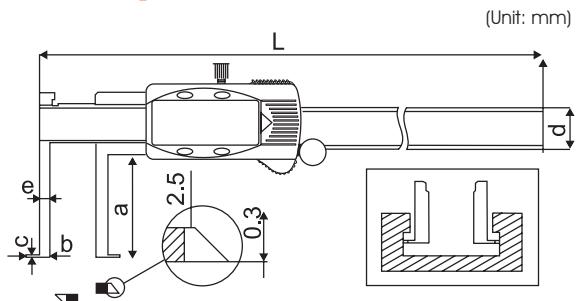
### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	e	L
156-150	22-150mm	0.05mm	5	11	16	30	1	250
156-200	25-200mm	0.06mm	5	12.5	16	40	1	310
156-300	30-300mm	0.06mm	5	15	17	50	1.5	410



## Digimatic Inside Knife Edge Point Type Calipers



### FEATURES

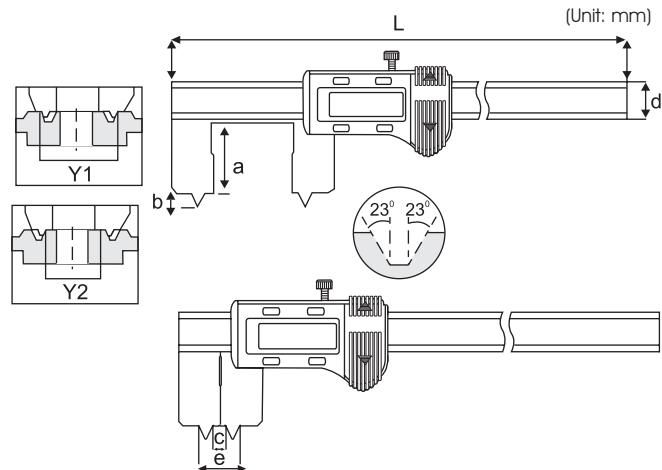
- Designed for inside groove measurements
- Power supply: One LR44 battery
- Function: On/Off, Origin (Zero setting), Data output, inch/mm.
- Made of stainless steel

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	d	e	L
157-150	14-150mm	0.05mm	30	10	1	16	5	240
157-200	15-200mm	0.05mm	40	10	1	16	5	290
157-300	17-300mm	0.06mm	50	12	1.5	17	5	400

## Digimatic RTJ Ring Groove Caliper



### FEATURES

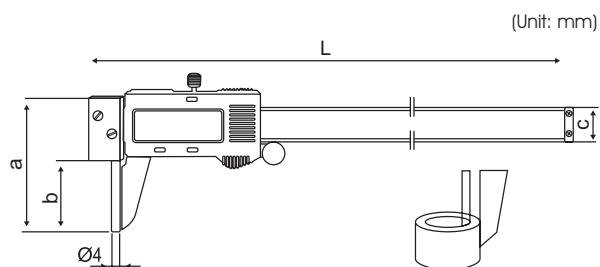
- Used for measuring the ring groove in valve flange and pipe flange
- ABSOLUTE measurement system
- Power supply: One CR2032 battery
- Function: On/Off, Origin (Zero setting), Preset, inch/mm.
- Made of Stainless Steel.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Angle of RTJ of RTJ ring groove	Accuracy ( $\pm$ )	a	b	c	d	e	L
161-300	10-300mm/0.4-12"	25-300mm/1-12"	23°	0.06mm	26	5	5	16	15	410
161-600	10-600mm/0.4-24"	25-600mm/1-24"	23°	0.07mm	53	6.5	10	25	25	770

## Digimatic Tube Calipers



### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	L
159-150	150mm/6"	0.03mm	60	30	16	235

### FEATURES

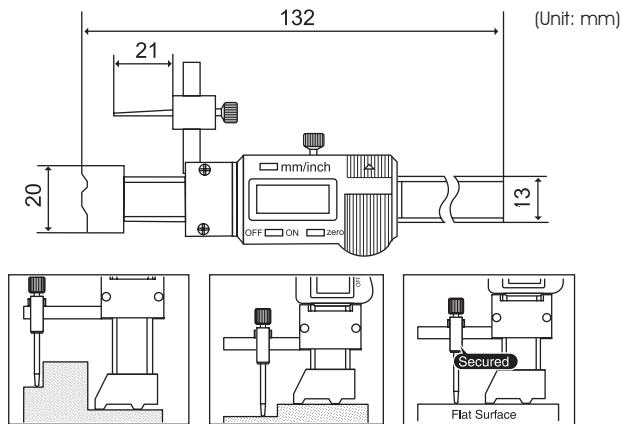
- Designed for measuring tube wall thickness
- Power supply: One LR44 battery
- Functions: On/Off, Zero, inch/mm conversion
- Made of stainless steel

## Digimatic Gap & Step Gauges



### FEATURES

- Used for checking the mutual position of two adjacent surfaces
- Zero setting at any position,
- Power supply: One LR44 battery
- Function: On/Off, Origin (Zero setting), Data output, inch/mm.
- Made of stainless steel

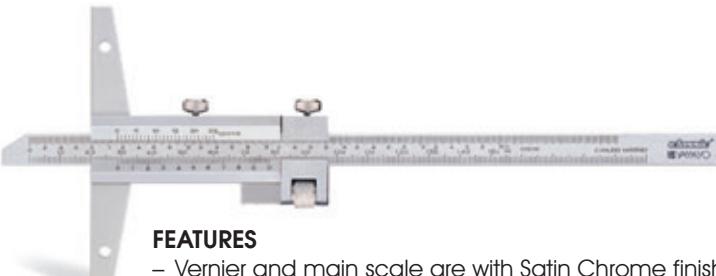


### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )
158-030	-10-30mm	0.02mm

## Vernier Depth Calipers



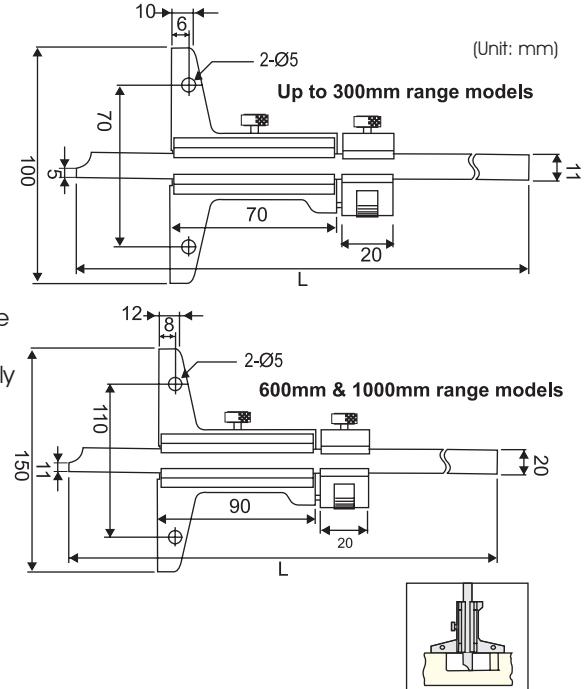
### FEATURES

- Vernier and main scale are with Satin Chrome finish for glare free reading
- Provided with a fine adjustment carriage to feed the slider finely
- Base and measuring faces are hardened and micro-lapped

### SPECIFICATION & DIMENSIONS

Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy ( $\pm$ )	L
185-150	150mm/6"	0.03mm	250
185-200	200mm/8"	0.03mm	300
185-300	300mm/12"	0.04mm	400
185-600	600mm/24"	0.05mm	720
185-1000	1000mm/40"	0.07mm	1125

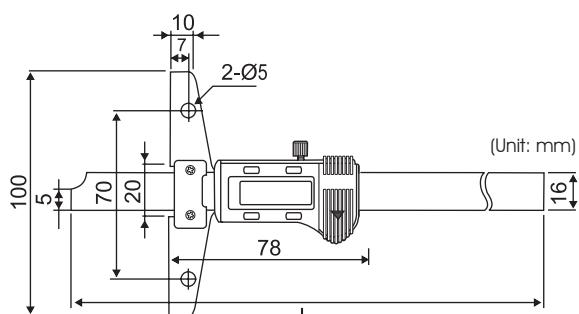


## Digimatic Depth Calipers



### FEATURES

- Provide stable depth measurements.
- Zero/ABS key : Allows the display to be Zero set at any slider position along the scale for incremental comparison measurements.
- This switch will also return to the absolute mode and display the true position from the origin point.
- Power supply: One LR44 Battery.
- Function: On/Off, Origin (Zero setting), Data output, inch/mm.
- Made of Stainless Steel.

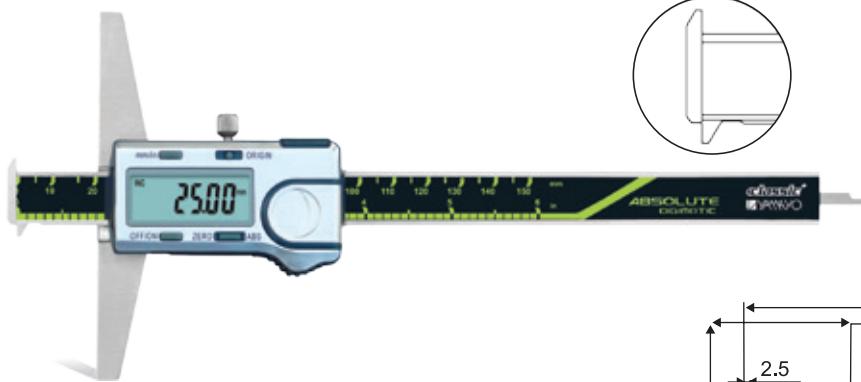


### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

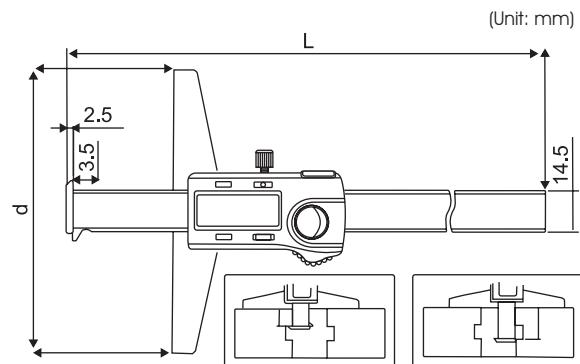
Order No.	Range	Accuracy ( $\pm$ )	L
186-150	150mm/6"	0.03mm	250
186-200	200mm/8"	0.03mm	300
186-300	300mm/12"	0.04mm	405

## Digimatic Double Hook Depth Calipers



### FEATURES

- For depth and step measurements.
- Function: On/Off, Origin(Zero set), ABS, inch/mm conversion.
- Power Supply: One CR1632 battery.
- Data output.
- Made of stainless steel.

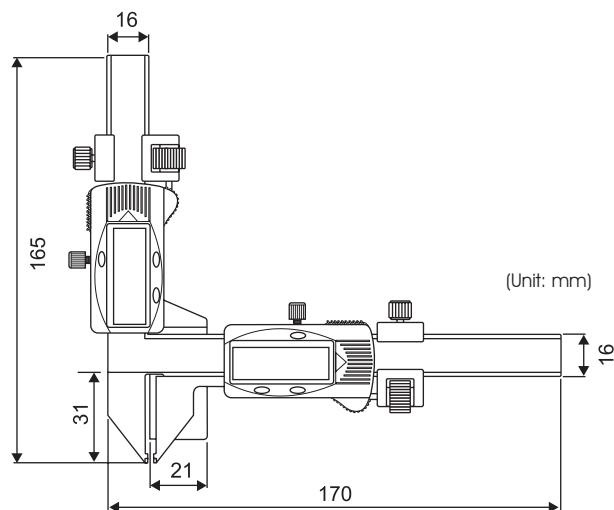


### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	d	L
187-150	0-150mm/0-6"	0.03mm	100	233
187-200	0-200mm/0-8"	0.03mm	100	283
187-300	0-300mm/0-12"	0.04mm	150	383

## Digimatic Gear Tooth Calipers



### FEATURES

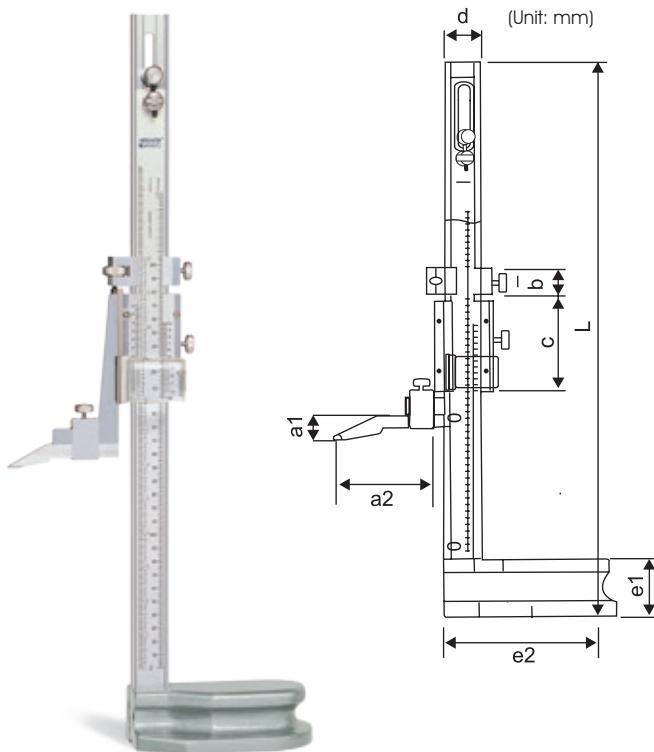
- Accurately measures the thickness of the gear.
- Function: On/Off, Origin(Zero Setting), Data Output, inch/mm.
- Power Supply: Two LR44 Batteries.
- Made of Stainless Steel.
- Carbide Tipped Jaws.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )
135-025	M1-25mm	0.04mm

## Vernier Height Gauges



### FEATURES

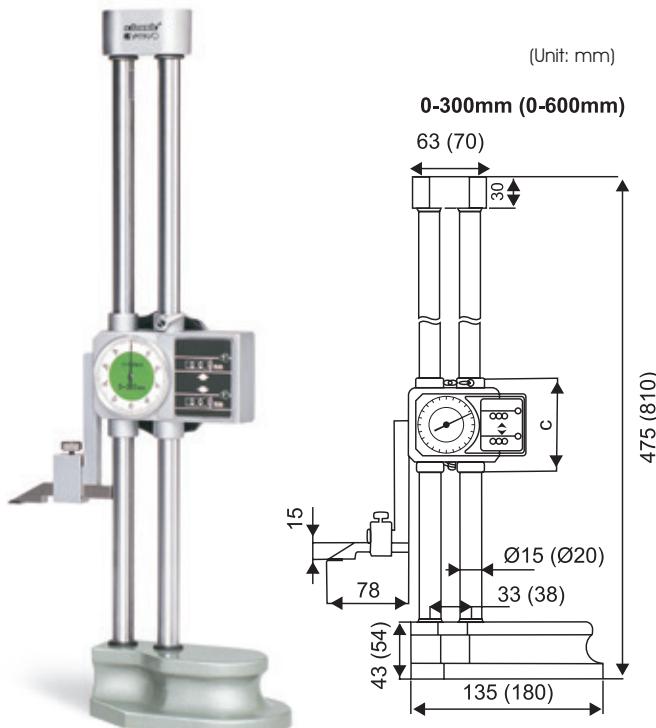
- Right hand type for easy use, clear crisp black graduations on a Satin Chrome finish for glare free reading.
- Provided with carbide tipped scribe.
- Fine adjustment carriage to feed the slider finely.
- Equipped with adjustable sliding scale.
- Provided with magnifier reading glass for easy reading.
- Super solid base for greater stability.

### SPECIFICATION & DIMENSIONS

Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy ( $\pm$ )	a1	a2	b	c	d	e1	e2	L
201-300	300mm/12"	0.04mm	17	80	22	74	28	50	140	545
201-450	450mm/18"	0.05mm	19	95	24	90	35	57	170	705
201-600	600mm/24"	0.05mm	19	95	24	90	35	57	170	860
201-1000	1000mm/40"	0.07mm	19	95	24	90	35	57	170	1750

## Digit Dial Height Gauges



### FEATURES

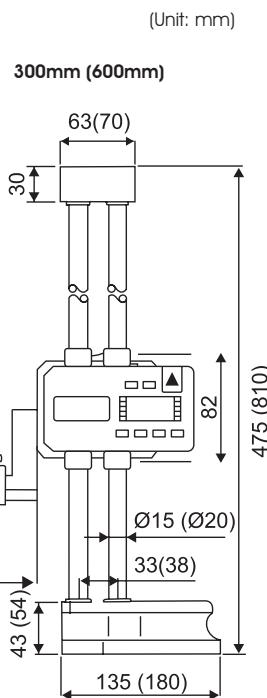
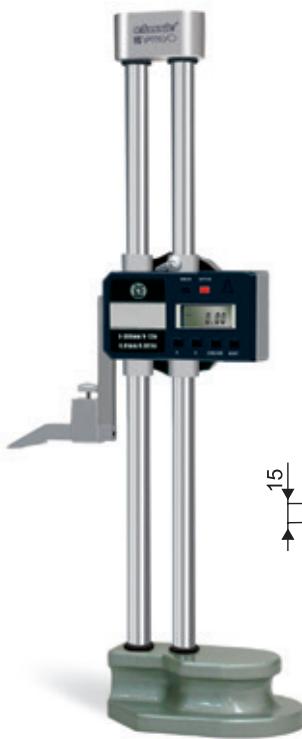
- Easy and error free reading with both up and down digital counters as well as a dial.
- The digital counter can be Zero set at any position.
- The double column gives high stability.
- Provided with a feed wheel for easy coarse feeding.
- Provided with carbide tipped scribe.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )
225-300	300mm	0.04mm
225-600	600mm	0.05mm

## Digimatic Double Beam Height Gauges



(Unit: mm)

### FEATURES

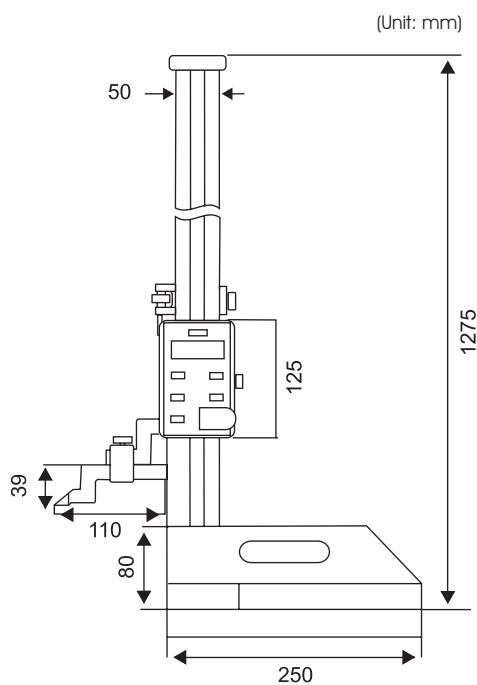
- Can easily measure the height of small parts.
- The clear LCD screen provides digital read out to 0.01 mm for error free reading.
- Double columns provide high stability.
- Provided with a feed wheel for easy coarse feeding.
- Provided with carbide tipped scribe.
- With locking screw.
- Functions : Zero setting, presetting, inch/mm conversion.
- Power supply : One LR44 Battery.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

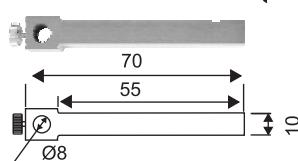
Order No.	Range	Accuracy ( $\pm$ )
251-300	300mm/12"	0.04mm
251-600	600mm/24"	0.05mm

## Digimatic Single Beam Height Gauges



(Unit: mm)

### Dial Indicator Holder (included)



### FEATURES

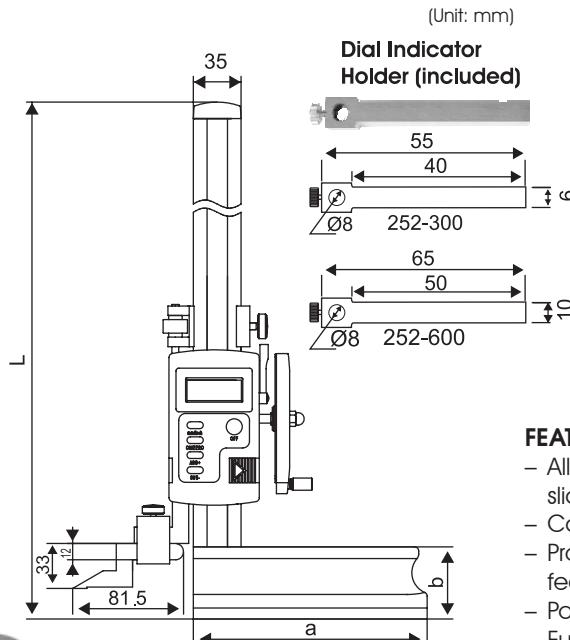
- Carbide Tipped scribe
- Provided with a fine adjustment carriage to feed the slider finely.
- Power supply: One LR44 Battery
- Function: On/Off, Origin (Zero setting), Data output, inch/mm.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )
253-1000	1000mm/40"	0.07mm

## Digimatic Single Beam Height Gauges with Hand Wheel



### FEATURES

- Allows smooth height measurements by using slider adjustment wheel.
- Carbide Tipped scribe.
- Provided with a fine adjustment carriage to feed the slider finely.
- Power supply: One LR44 Battery.
- Function: On/Off, Origin (Zero setting), Data output, inch/mm.

### SPECIFICATION & DIMENSIONS

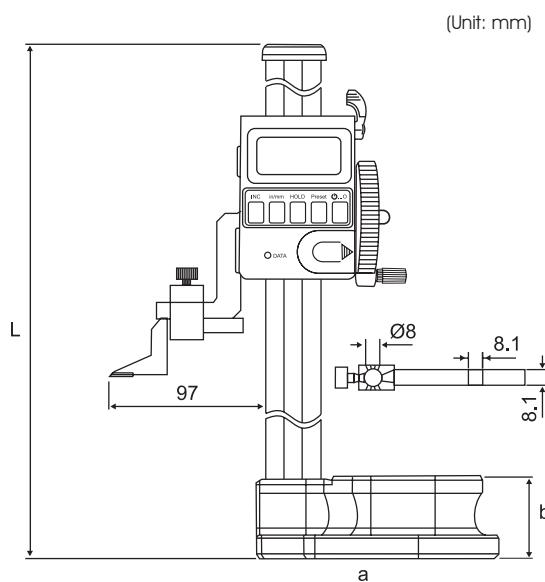
Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	L
252-300	300mm/12"	0.04mm	172	53	535
252-600	600mm/24"	0.05mm	178	53	835

## Digimatic Single Beam Height Gauge with Bluetooth

### FEATURES

- Allows smooth height measurements by using slider adjustment hand wheel
- Carbide tipped scribe
- SPC data output (built in wireless transmission model the SPC data output port is not available.)
- Built in wireless data transmission Bluetooth enabled (optional)
- IP65 dust and water resistant.
- Power supply: One 3 V lithium battery CR2032.
- Function: On/Off, Origin (Zero setting), Preset, inch/mm, absolute measurements, HOLD.
- Made of Stainless Steel.

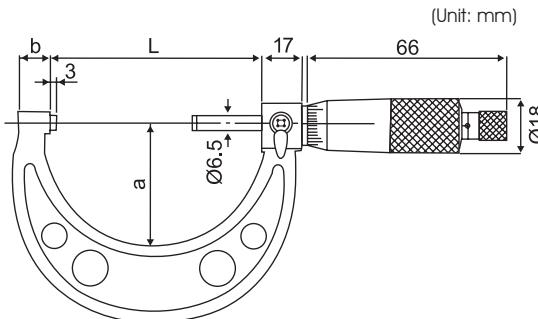


### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	L
254B-300	300mm/12"	0.04mm	150	50	492
254B-600	600mm/24"	0.05mm	183	57	796

## Outside Micrometers



### FEATURES

- Carbide tipped measuring faces.
- Clear graduations on Satin Chrome finish.
- Positive locking clamp.
- Ratchet stop for exact repetitive readings.

### SPECIFICATION & DIMENSIONS

METRIC		Graduation: 0.001mm			
Order No.	Range	Accuracy ( $\pm$ )	a	b	L
302-025	0-25mm	4 $\mu$ m	28	9	32
302-050	25-50mm	4 $\mu$ m	38	14	57
302-075	50-75mm	5 $\mu$ m	49	15	82
302-100	75-100mm	5 $\mu$ m	60	15	107
302-125	100-125mm	6 $\mu$ m	73	16.5	133
302-150	125-150mm	6 $\mu$ m	85	16.5	158
302-175	150-175mm	7 $\mu$ m	104	19.4	183
302-200	175-200mm	7 $\mu$ m	117	19.4	209
302-225	200-225mm	8 $\mu$ m	130	19.4	234
302-250	225-250mm	8 $\mu$ m	142	19.4	260
302-275	250-275mm	9 $\mu$ m	155	19.4	285
302-300	275-300mm	9 $\mu$ m	168	19.4	310

### SPECIFICATION & DIMENSIONS

METRIC		Graduation: 0.01mm			
Order No.	Range	Accuracy ( $\pm$ )	a	b	L
301-025	0-25mm	4 $\mu$ m	28	9	32
301-050	25-50mm	4 $\mu$ m	38	14	57
301-075	50-75mm	5 $\mu$ m	49	15	82
301-100	75-100mm	5 $\mu$ m	60	15	107
301-125	100-125mm	6 $\mu$ m	73	16.5	133
301-150	125-150mm	6 $\mu$ m	85	16.5	158
301-175	150-175mm	7 $\mu$ m	104	19.4	183
301-200	175-200mm	7 $\mu$ m	117	19.4	209
301-225	200-225mm	8 $\mu$ m	130	19.4	234
301-250	225-250mm	8 $\mu$ m	142	19.4	260
301-275	250-275mm	9 $\mu$ m	155	19.4	285
301-300	275-300mm	9 $\mu$ m	168	19.4	310

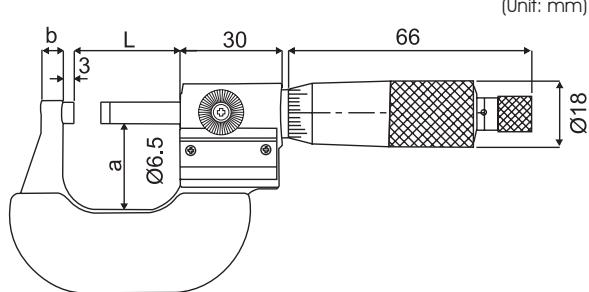
### SPECIFICATION & DIMENSIONS

IMPERIAL		Graduation: 0.001"			
Order No.	Range	Accuracy ( $\pm$ )	a	b	L
301-01	0-1"	0.00015"	28	9	32
301-02	1-2"	0.00015"	38	14	57
301-03	2-3"	0.0002"	49	15	82
301-04	3-4"	0.0002"	60	15	107
301-05	4-5"	0.00024"	73	16.5	133
301-06	5-6"	0.00024"	85	16.5	158
301-07	6-7"	0.00028"	104	19.4	183
301-08	7-8"	0.00028"	117	19.4	209

### SPECIFICATION & DIMENSIONS

IMPERIAL		Graduation: 0.0001"			
Order No.	Range	Accuracy ( $\pm$ )	a	b	L
302-01	0-1"	0.00015"	28	9	32
302-02	1-2"	0.00015"	38	14	57
302-03	2-3"	0.0002"	49	15	82
302-04	3-4"	0.0002"	60	15	107
302-05	4-5"	0.00024"	73	16.5	133
302-06	5-6"	0.00024"	85	16.5	158
302-07	6-7"	0.00028"	104	19.4	183
302-08	7-8"	0.00028"	117	19.4	209

## Digit Counter Type Outside Micrometers



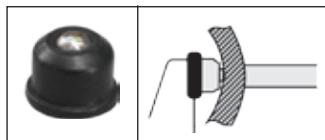
### FEATURES

- Provided with a Mechanical counter for quick and error free readings
- Carbide tipped measuring faces.
- Positive locking clamp.
- Ratchet stop for exact repetitive readings.

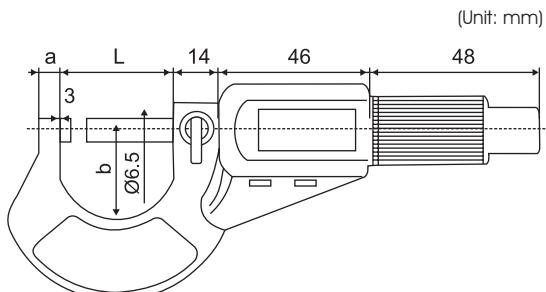
### SPECIFICATION & DIMENSIONS

		Counter Graduation: 0.01mm Sleeve Graduation: 0.001mm			
Order No.	Range	Accuracy ( $\pm$ )	a	b	L
331-025	0-25mm	4 $\mu$ m	26	6	32
331-050	25-50mm	4 $\mu$ m	32	8	57

## Digimatic Outside Micrometers



Spherical Anvil for Measuring Tube Wall Thickness



### FEATURES

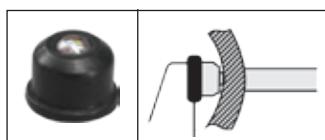
- Function: on/off, set, mm/inch, ABS/INC
- No data output
- CR2032 battery, automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Positive locking clamp

### SPECIFICATION & DIMENSIONS

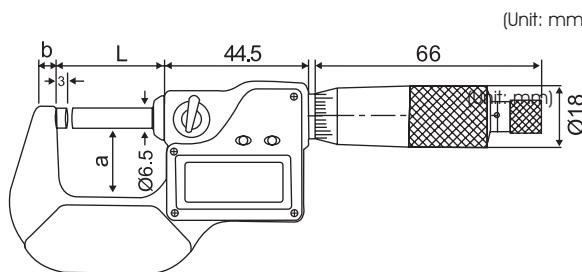
Resolution: 0.001mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	L
352-025	0-25mm/0-1"	2 $\mu$ m	6	27.5	32
352-050	25-50mm/1-2"	2 $\mu$ m	8	37	57
352-075	50-75mm/2-3"	3 $\mu$ m	8	50	82
352-100	75-100mm/3-4"	3 $\mu$ m	10	61	107

## Digimatic Outside Micrometers



Spherical Anvil for Measuring Tube Wall Thickness



### FEATURES

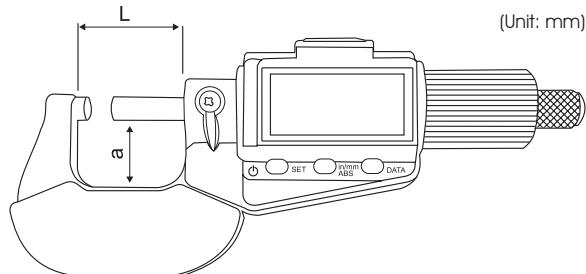
- Large LCD screen.
- With carbide measuring faces.
- IP65 (Dust and Water Jet Penetration Proof).
- Positive locking clamp.
- Ratchet stop.
- Supplied with spherical anvil.
- Functions: on/off, set, ABS/INC, inch/mm conversion.
- Without data output.
- Power supply : One LR44 Battery

### SPECIFICATION & DIMENSIONS

Resolution: 0.001mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	L
351-025	0-25mm	2 $\mu$ m	25	6	34.5
351-050	25-50mm	2 $\mu$ m	32	8	59.5
351-075	50-75mm	3 $\mu$ m	44.5	8	84.5
351-100	75-100mm	3 $\mu$ m	57	8	109.5

## Digimatic Outside Micrometers with Bluetooth



### FEATURES

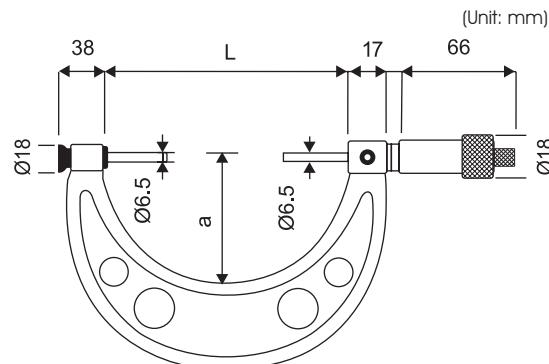
- With built in wireless data transmission (Bluetooth enabled)
- Functions: on/off, set, mm/inch conversion, ABS/INC, data output.
- Power supply: One CR2032 battery, automatic power off.
- Carbide tipped measuring faces
- Friction thimble
- Supplied with spherical anvil
- Positive locking clamp

### SPECIFICATION & DIMENSIONS

Resolution: 0.001mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	L
352B-025	0-25mm	4 $\mu$ m	22.5	31.5

## Interchangeable Outside Micrometers



### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	a	L
311-050	0-50mm	4 $\mu$ m	35	58
311-100	0-100mm	5 $\mu$ m	57	108
311-150	0-150mm	6 $\mu$ m	82	158
311-151	50-150mm	6 $\mu$ m	82	158
311-200	100-200mm	7 $\mu$ m	114	208
311-300	150-300mm	9 $\mu$ m	165	308
311-301	200-300mm	9 $\mu$ m	165	308

### SPECIFICATION & DIMENSIONS

Graduation: 0.0001"

Order No.	Range	Accuracy ( $\pm$ )	a	L
311-002	0-2"	0.00015"	35	58
311-004	0-4"	0.0002"	57	108
311-006	0-6"	0.00024"	82	158
311-048	4-8"	0.00028"	114	208
311-612	6-12"	0.00035"	165	308

## Digimatic Interchangeable Outside Micrometers



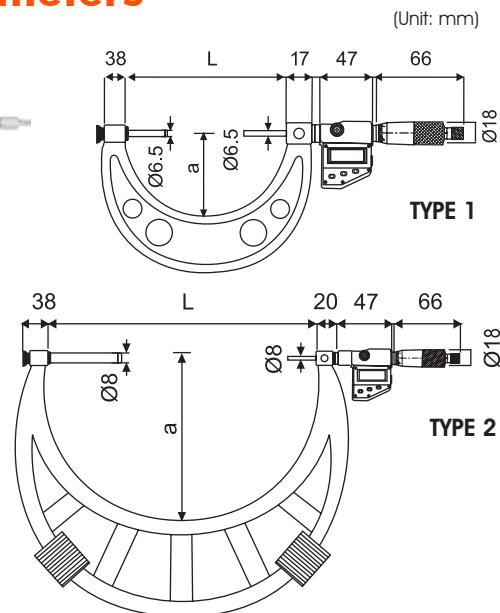
### FEATURES

- Large LCD screen.
- With carbide measuring faces.
- IP54 (Dust and Water Resistant).
- Positive locking clamp.
- Ratchet stop.
- Functions: on/off, set, ABS/INC, inch/mm conversion.
- With data output.
- Power supply:
  - One Battery LR44
- Supplied with setting standards for each range
- Optional : Output Data Cable

### SPECIFICATION & DIMENSIONS

Type 1: Resolution: 0.001mm/0.0001"

Order No.	Range	Accuracy ( $\pm$ )	a	L
361-100	0-100mm	3 $\mu$ m	57	108
361-150	0-150mm	3 $\mu$ m	82	158
361-151	50-150mm	3 $\mu$ m	82	158
361-200	100-200mm	4 $\mu$ m	114	208
361-300	150-300mm	5 $\mu$ m	165	308
361-301	200-300mm	5 $\mu$ m	164	308

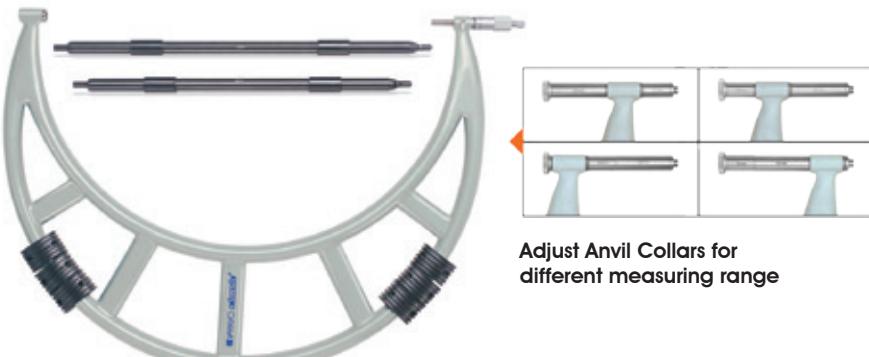


Type 2:

Resolution: 0.001mm/0.0001"

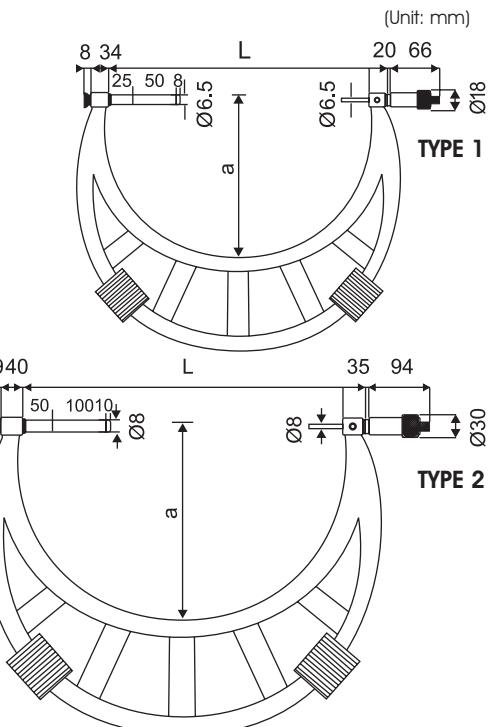
Order No.	Range	Accuracy ( $\pm$ )	a	L
361-400	300-400mm	6 $\mu$ m	224	409
361-500	400-500mm	7 $\mu$ m	275	509

## Adjustable Outside Micrometers



### FEATURES

- Wide measuring range with anvil collars.
- Tube type low-weight model.
- Satin chrome scale.
- Durable frame with insulated grips.
- With carbide measuring faces.
- Provided with Ratchet stop for constant force.
- Supplied with setting standards for each range.



### SPECIFICATION & DIMENSIONS

Type 1: Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	a	L
312-400	300-400mm	11 $\mu$ m	250	410
312-500	400-500mm	13 $\mu$ m	295	510
312-600	500-600mm	14 $\mu$ m	345	610
312-700	600-700mm	16 $\mu$ m	395	710
312-800	700-800mm	18 $\mu$ m	445	810
312-900	800-900mm	20 $\mu$ m	495	910
312-1000	900-1000mm	22 $\mu$ m	545	1010

### SPECIFICATION & DIMENSIONS

Type 2: Graduation: 0.01mm

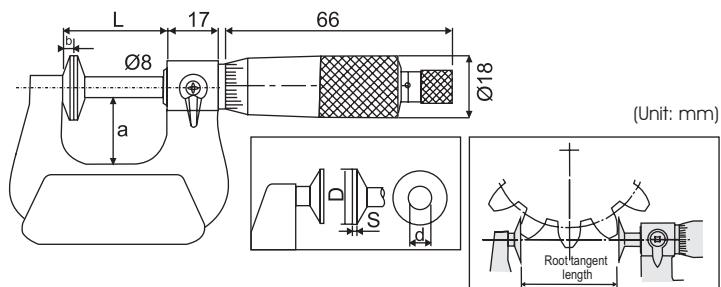
Order No.	Range	Accuracy ( $\pm$ )	a	L
312-1200	1000-1200mm	22 $\mu$ m	645	1210
312-1400	1200-1400mm	24 $\mu$ m	745	1410
312-1600	1400-1600mm	28 $\mu$ m	845	1610
312-1800	1600-1800mm	31 $\mu$ m	945	1810
312-2000	1800-2000mm	34 $\mu$ m	1045	2010

## Disc Micrometers



### FEATURES

- Measures "root tangent length" of spur gears and helical gears.
- Equipped with Ratchet Stop for constant measuring force.



### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

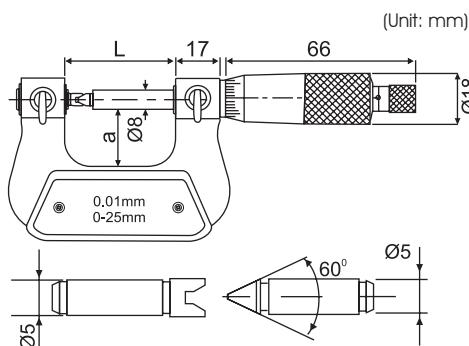
Order No.	Range	Accuracy ( $\pm$ )	a	b	L	DØ	S	d
321-025	0-25mm	4 $\mu$ m	24	3.3	34	20	0.7	8
321-050	25-50mm	4 $\mu$ m	32	3.3	59	20	0.7	8
321-075	50-75mm	5 $\mu$ m	45	3.3	85	20	0.7	8
321-100	75-100mm	5 $\mu$ m	57	3.3	110	20	0.7	8
321-125	100-125mm	6 $\mu$ m	70	4.3	138	30	0.9	12
321-150	125-150mm	6 $\mu$ m	82	4.3	163	30	0.9	12
321-175	150-175mm	7 $\mu$ m	95	4.3	188	30	0.9	12
321-200	175-200mm	7 $\mu$ m	107	4.3	214	30	0.9	12

## Screw Thread Micrometers



### FEATURES

- Measures pitch diameter of various screw threads
- Supplied with set of 5 matching anvils/spindle tips for pitch measurements.
- Supplied with 60° setting standard (except for 0-25mm).
- Ratchet stop for constant force.



### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	a	L	Remarks
322-025	0-25mm	4 $\mu$ m	26	42	5(mm/TPI) set of
322-050	25-50mm	4 $\mu$ m	38	67	Matching Anvils/Spindle included 0.4-0.5/64-48, 0.6-0.9/44-28, 1-1.75/24-14, 2-3/13-9, 3.5-5/8-5 5.5-7/4.5-3.5mm

## Tube Outside Micrometers

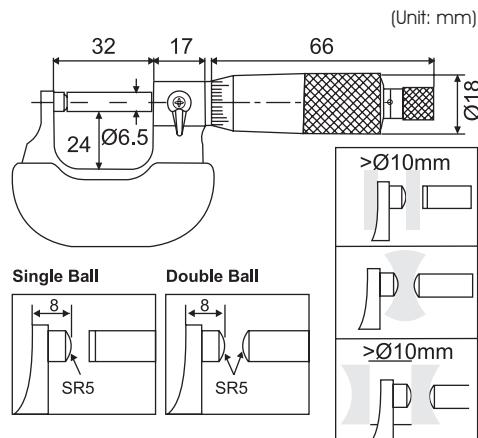


324-025S

324-025D

### FEATURES

- Measures wall thickness of tubes.
- Carbide tipped measuring faces.
- Clear graduations on Satin Chrome finish.
- Positive locking clamp.
- Ratchet stop for exact repetitive readings.



### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Type	Accuracy ( $\pm$ )
324-025S	0-25mm	Single Ball	4 $\mu$ m
324-025D	0-25mm	Double Ball	4 $\mu$ m

## Point Outside Micrometers



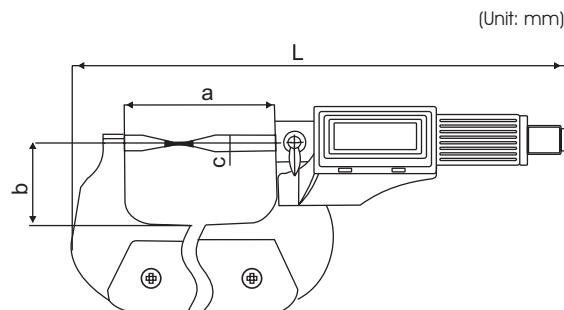
### FEATURES

- Pointed spindle and anvil for measuring the web thickness of drills, small grooves, keyways.
- Carbide tipped measuring points
- Ratchet stop for constant force

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm			
Order No.	Range	Degree	Accuracy ( $\pm$ )
325-25A	0-25mm	15°	4 $\mu$ m
325-25B	0-25mm	30°	4 $\mu$ m

## Digimatic Point Outside Micrometer



### FEATURES

- Pointed spindle and anvil for measuring the web thickness of drills, small grooves, keyways.
- Carbide tipped measuring points
- Friction Thimble
- Functions: on/off, set, ABS, inch/mm conversion
- Power supply: One CR2032 battery, automatic power off.

### SPECIFICATION & DIMENSIONS

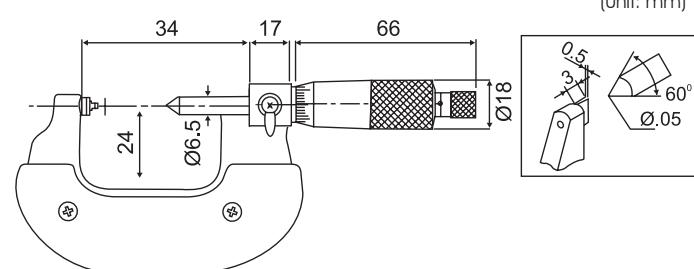
Resolution: 0.001mm/0.0005"					
Order No.	Range	Accuracy ( $\pm$ )	a	b	c
356-025	0-25mm/0-1"	3 $\mu$ m	56.5	31	Ø6.5

## Crimp Height Micrometers



### FEATURES

- Measures the height of crimp contacts
- Ratchet Stop for constant force



### SPECIFICATION & DIMENSIONS

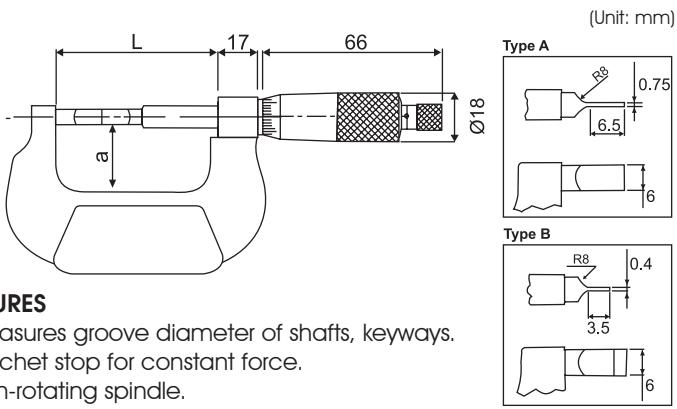
Graduation: 0.01mm		
Order No.	Range	Accuracy ( $\pm$ )
326-025	0-25mm	4 $\mu$ m

## Blade Outside Micrometers



TYPE A

TYPE B



### FEATURES

- Measures groove diameter of shafts, keyways.
- Ratchet stop for constant force.
- Non-rotating spindle.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Type	Accuracy ( $\pm$ )	a	L
323-25A	0-25mm	A	4 $\mu$ m	32	57
323-50A	25-50mm	A	4 $\mu$ m	44.5	82
323-75A	50-75mm	A	5 $\mu$ m	57	107
323-100A	75-100mm	A	5 $\mu$ m	69.5	132.6
323-25B	0-25mm	B	4 $\mu$ m	32	57

## Digimatic Blade Outside Micrometer



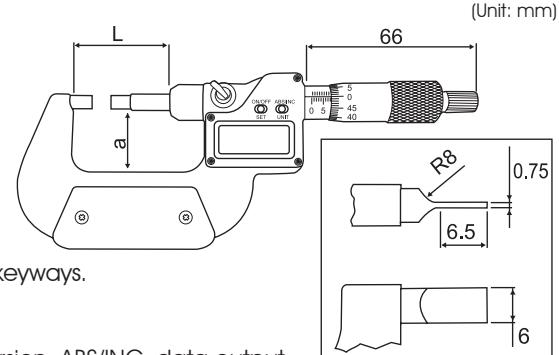
### FEATURES

- Measures groove diameter of shafts, keyways.
- Ratchet stop for constant force.
- Non-rotating spindle.
- Functions: on/off, set, mm/inch conversion, ABS/INC, data output.
- Power supply: One CR2032 battery, automatic power off.

### SPECIFICATION & DIMENSIONS

Resolution: 0.001mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	L
355-025	0-25mm	4 $\mu$ m	32	57

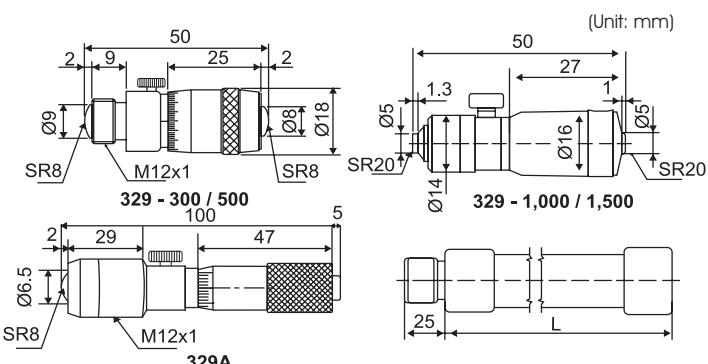


## Tubular Inside Micrometers



### FEATURES

- Measures wide range of ID measurements by combining extension rods and anvils with the micrometer head.
- Carbide tipped measuring faces.

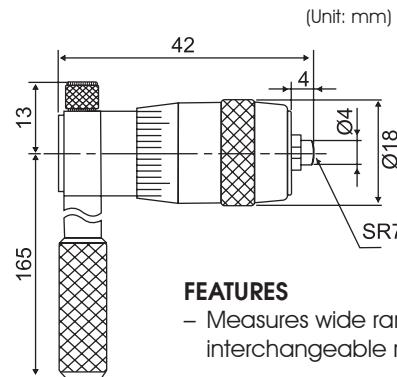


### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	Head Travel	Extension Rods
329-300	50-300mm	(3+n+L/50) $\mu$ m	13mm	13, 25, 50 (2pcs), 100
329-500	50-500mm	n= No. of Rods	13mm	13, 25, 50 (2pcs), 100, 200
329-1000	50-1000mm	L= Maximum Measuring Length	13mm	13, 25, 50 (2pcs), 100, 200, 250 (2pcs)
329-1500	50-1500mm		13mm	13, 25, 50 (2pcs), 100, 200, 250 (4pcs)
329A-2100	100-2100mm		25mm	25, 50, 100, 200, 400 (4pcs)

## Inside Micrometers Rod Type



### FEATURES

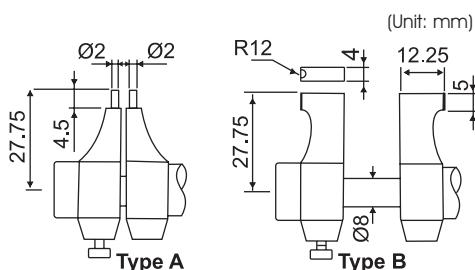
- Measures wide range of ID Measurements with interchangeable rods.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	Head Travel	Extension Rods
330-050	25-50mm	(3+nL/50) $\mu$ m	7mm	2pcs
330-200	50-200mm	n= No. of Rods	13mm	6pcs
330-300	50-300mm	L = Maximum measuring Length (mm)	13mm	10pcs

## Jaw Type Inside Micrometers



### FEATURES

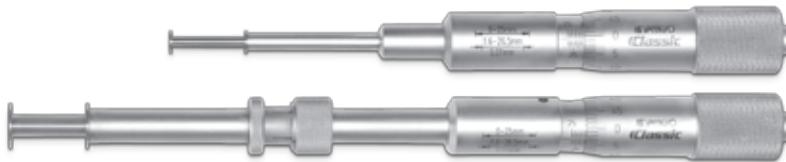
- Caliper type jaws for ID measurements.
- Carbide tipped measuring faces.
- Supplied with setting ring.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	Type	Setting Ring
328-030	5-30mm	7 $\mu$ m	A	5mm
328-050	25-50mm	8 $\mu$ m	B	25mm

## Groove Micrometers



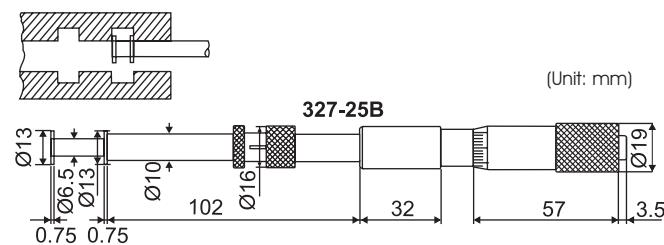
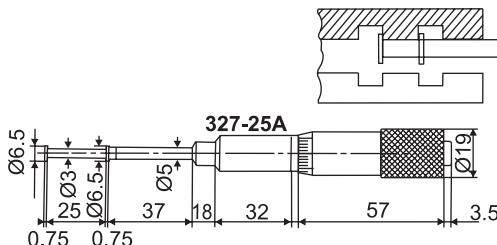
### FEATURES

- Measures width, depth of grooves, inside/outside bores and tubes.
- With two graduations for inside and outside measurements.
- Non-rotating spindle has two directional ratchet stop for constant force.

### SPECIFICATION & DIMENSIONS

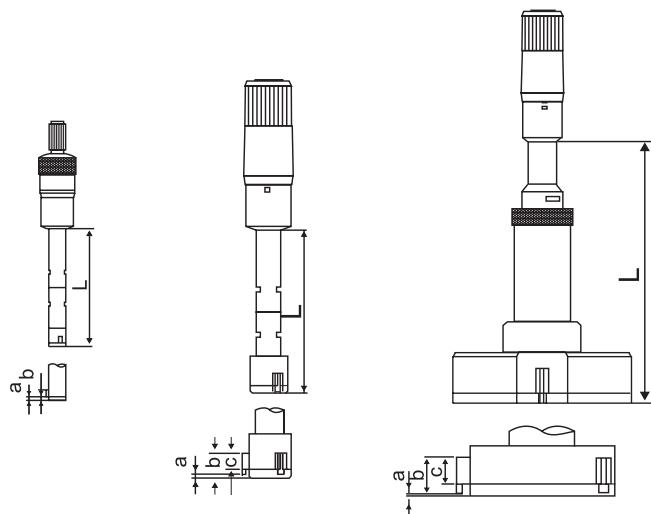
Graduation: 0.01mm

Order No.	Range		Flange Ø	Accuracy ( $\pm$ )
	Outside	Inside		
327-25A	0-25mm	1.6-26.5mm	6.5mm	10 $\mu$ m
327-25B	0-25mm	1.6-26.5mm	13mm	10 $\mu$ m



## Three Point Internal Micrometers

(Unit: mm)



6-12mm, carbide  
measuring points  
three points

12-50mm, carbide  
measuring points  
three points

50mm and above, carbide  
measuring points  
three points

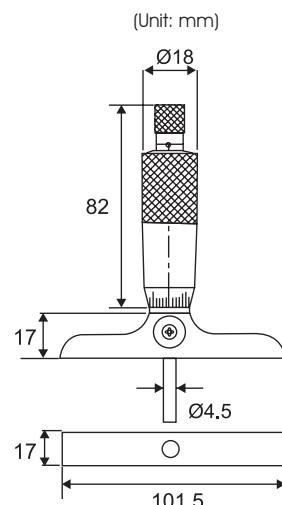
### FEATURES

- Measurements can be taken closer to the bottom of the blind hole, and can measure deep holes using an extension rod.
- Carbide tipped contact points
- Ratchet Stop
- Graduation: Within 12mm 0.001mm, Over 12mm 0.005mm

### SPECIFICATION & DIMENSIONS

Order No.	Range	Accuracy ( $\pm$ )	Setting Range	Extension Rod	a	b	c	L
340-008	6-8mm	4 $\mu$ m	$\varnothing$ 6mm (Included)	100mm (Included)	1.5	2.5	x	54.5
340-010	8-10mm	4 $\mu$ m	$\varnothing$ 8mm (Included)	100mm (Included)	1.5	2.5	x	54.5
340-012	10-12mm	4 $\mu$ m	$\varnothing$ 10mm (Included)	100mm (Included)	1.5	2.5	x	54.5
340-016	12-16mm	4 $\mu$ m	$\varnothing$ 16mm (Included)	150mm (Included)	0.5	6	4.5	80
340-020	16-20mm	4 $\mu$ m	$\varnothing$ 16mm (Included)	150mm (Included)	0.5	6	4.5	80
340-025	20-25mm	4 $\mu$ m	$\varnothing$ 25mm (Included)	150mm (Included)	0.5	8	6	90
340-030	25-30mm	4 $\mu$ m	$\varnothing$ 25mm (Included)	150mm (Included)	0.5	8	6	90
340-040	30-40mm	4 $\mu$ m	$\varnothing$ 40mm (Included)	150mm (Included)	0.5	14	12	97
340-050	40-50mm	5 $\mu$ m	$\varnothing$ 40mm (Included)	150mm (Included)	0.5	14	12	97
340-063	50-63mm	5 $\mu$ m	$\varnothing$ 62mm (Included)	150mm (Included)	0.5	17.5	14.5	114
340-075	62-75mm	5 $\mu$ m	$\varnothing$ 62mm (Included)	150mm (Included)	0.5	17.5	14.5	114
340-088	75-88mm	5 $\mu$ m	$\varnothing$ 87mm (Included)	150mm (Included)	0.5	17.5	14.5	114
340-100	87-100mm	5 $\mu$ m	$\varnothing$ 87mm (Included)	150mm (Included)	0.5	17.5	14.5	114

## Depth Micrometers



### FEATURES

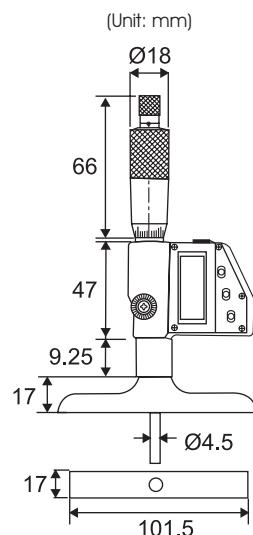
- Interchangeable rods, with lapped measuring end, provide a wide measuring range.
- Clear graduations on Satin Chrome finish.
- The rod length can be adjusted in 25mm increments.
- Positive locking clamp.
- Ratchet stop for exact repetitive readings.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )
392-025	0-25mm	4 $\mu$ m
392-050	0-50mm	4 $\mu$ m
392-100	0-100mm	5 $\mu$ m
392-150	0-150mm	5 $\mu$ m

## Digimatic Depth Micrometers



### FEATURES

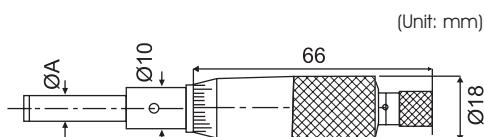
- Interchangeable rods, with lapped measuring end, provide a wide measuring range.
- The rod length can be adjusted in 25mm increments.
- IP54 (Dust and Water Resistant).
- Functions: on/off, set, ABS/INC, inch/mm conversion.
- With data output.
- Power supply : One Battery LR44.
- Positive locking clamp.
- Ratchet stop for exact repetitive readings.

### SPECIFICATION & DIMENSIONS

Resolution: 0.001mm/0.00005"

Order No.	Range	Accuracy ( $\pm$ )
393-025	0-25mm	Micrometer head 3 $\mu$ m
393-050	0-50mm	Rod (2+L/75) $\mu$ m
393-100	0-100mm	L=Maximum Measuring Length
393-150	0-150mm	

## Micrometer Head



### FEATURES

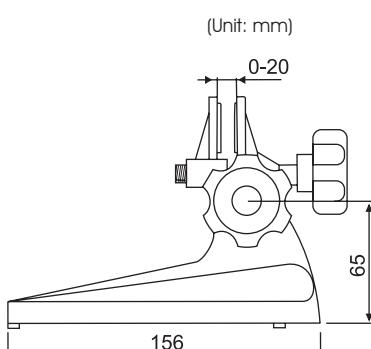
- Carbide Tipped Measuring Face.
- Ratchet Stop for constant force.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	A $\varnothing$	Accuracy ( $\pm$ )
5001	0-25mm	6.5mm	3 $\mu$ m
5002	0-25mm	8mm	3 $\mu$ m

## Micrometer Stands



### FEATURES

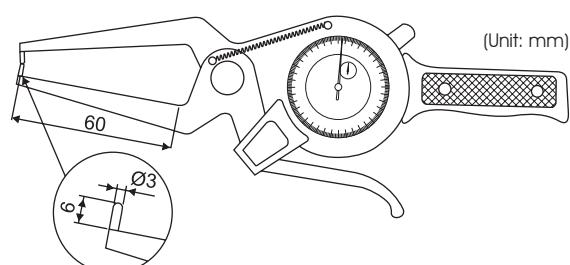
- Designed to hold micrometers up to 100mm, for easy and accurate measurement.

### SPECIFICATION & DIMENSIONS

Order No.

6001

## Outside Pistol Dial Caliper Gauges



### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )
465-020	0-20mm	0.04mm

### FEATURES

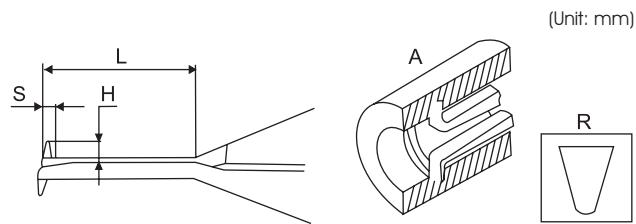
- Measures OD, groove thickness, tube wall thickness.

## Inside Dial Caliper Gauges



### FEATURES

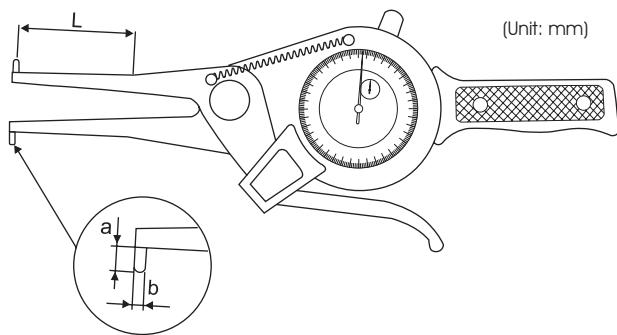
- Measures ID, inside grooves, center distance.



### SPECIFICATION & DIMENSIONS

Order No.	Range	Accuracy ( $\pm$ )	L	S	H	Graduation: 0.01mm A(R)
463-025	5-25mm	0.03mm	35	1	1.5	0.3
463-030	10-30mm	0.03mm	55	2	3.5	0.5
463-040	20-40mm	0.03mm	80	3	6.5	0.5
463-050	30-50mm	0.03mm	80	3	8.5	0.5
463-060	40-60mm	0.03mm	80	3	8.5	0.5

## Inside Pistol Dial Caliper Gauges



### FEATURES

- Measures ID, inside grooves, center distance.

### SPECIFICATION & DIMENSIONS

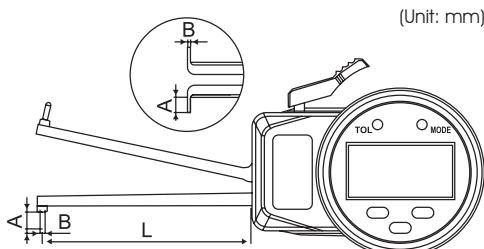
Order No.	Range	Accuracy ( $\pm$ )	a	L	b	Graduation: 0.01mm
464-035	15-35mm	0.04mm	3	50	3	
464-055	35-55mm	0.04mm	6	80	3	
464-075	55-75mm	0.04mm	8	90	3	
464-095	75-95mm	0.04mm	8	100	3	
464-115	95-115mm	0.04mm	10	150	3.2	
464-135	115-135mm	0.04mm	10	150	3.2	

## Digimatic Internal Measuring Gauge with Bluetooth



### FEATURES

- IP65 dust and water jet penetration proof.
- Built in rechargeable lithium battery.
- Built in wireless data transmission Bluetooth enabled.
- Function: On/Off, Origin (Zero setting), Preset, inch/mm, Tolerance preset.



### SPECIFICATION & DIMENSIONS

Order No.	Range	Resolution	Accuracy ( $\pm$ )	A	B	L
490B-15	5-15mm/0.2-0.6"	0.002mm/ 0.0001"	0.015mm	2.3	0.8	35
490B-30	10-30mm/0.4-1.2"	0.005mm/0.0002"	0.025mm	5.2	1.2	85
490B-50	30-50mm/1.2-2"	0.005mm/0.0002"	0.025mm	7	1.2	85
490B-100	50-100mm/2-4"	0.010mm/0.0005"	0.050mm	8.3	2.4	236
490B-150	100-150mm/4-6"	0.010mm/0.0005"	0.050mm	8.3	2.4	236
490B-200	150-200mm/6-8"	0.010mm/0.0005"	0.050mm	8.3	2.4	236

## Internal Dial Caliper Gauges

(WITH INTERCHANGEABLE ANVILS)



### FEATURES

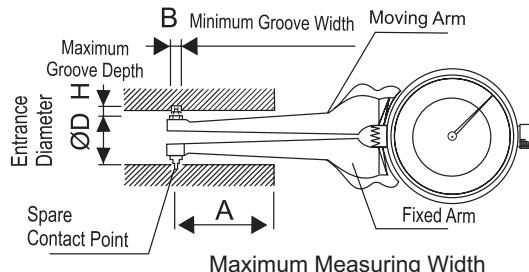
- Internal dial caliper gauge can measure internal diameter of cylindrical work piece and recessed groove diameter.
- Set dimension within  $\pm 1$  mm (indication range 2mm) can be comparatively measured by alternatively using auxiliary spare contact point in accordance with measured dimension.
- Please set standard dimension within measuring range with micrometer or ring gauge.
- Provided with a set of interchangeable spare measuring contact points that enables to measure various dimensions.

YM-880	(Unit: mm)	
YS-423~427	M2.5×P0.45	
SR0.5	$\varnothing 1.5$	
L1	2.5	
L2	4	
YS-428,429	M2.5×P0.45	
SR0.5	$\varnothing 1.5$	
L1	3.5	
L2	5	
Order No.	L1	L2
YS-423	2.5	4
YS-424	3.5	5
YS-425	4.5	6
YS-426	5.5	7
YS-427	5.5	8
YS-428	5.5	9
YS-429	5.5	10

YM-881	(Unit: mm)	
YS-408,409	M3.5×P0.6	
SR0.5	$\varnothing 1.5$	
L1	3	
L2	4.5	
YS-410~412	M3.5×P0.6	
SR0.5	$\varnothing 1.5$	
L1	5.5	
L2	7.5	
Order No.	L1	L2
YS-408	3	4.5
YS-409	5.5	7.5
YS-410	6	10.5
YS-411	6	13.5
YS-412	6	16.5

YM-882	(Unit: mm)
YS 413	$\varnothing 4.5$ M3.5 x P0.6 SR1.5 Ø2 7 13
YS 414	$\varnothing 4.5$ M3.5 x P0.6 SR1.5 Ø2 12 15 13
YS 415 - 418	$\varnothing 4.5$ M3.5 x P0.6 SR1.5 Ø2 12 L 13
Order No.	L
YS-413	7
YS-414	15
YS-415	23
YS-416	31
YS-417	39
YS-418	47

### Dimensions

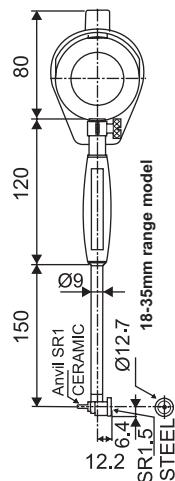


### SPECIFICATION & DIMENSIONS

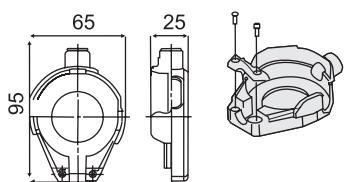
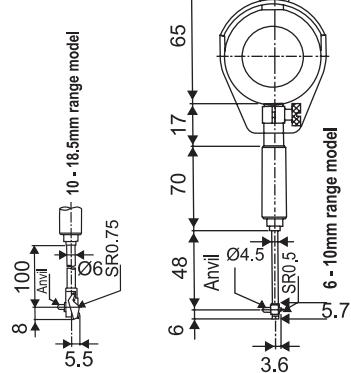
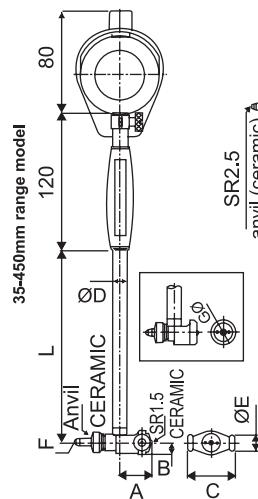
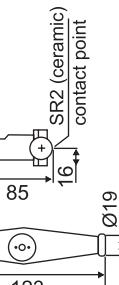
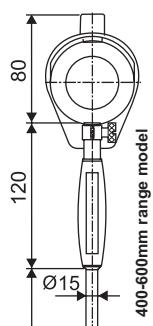
\* $\varnothing$  D=Measuring Range - 2H

Order No.	Graduation (mm)	Measuring Range (mm)	Indicating Range (mm)	Accuracy ( $\mu\text{m}$ )	Measuring Force (N)	Weight (g)	Spare Contact Code	Point Measuring Range (mm)	Maximum Depth A (mm)	Entrance Diameter (mm)	Groove Depth H (mm)	Minimum Groove B (mm)
YM-880	0.01	20-35	2	$(\pm)20$	3 or less	196	YS-423	20-23	70	15-18	2.5	2.5
							YS-424	22-25		15-18	3.5	
							YS-425	24-27		16-19	4	
							YS-426	26-29		18-21	4	
							YS-427	28-31		20-23	4	
							YS-428	30-33		22-25	4	
							YS-429	32-35		24-27	4	
YM-881	0.01	30-62	2	$(\pm)20$	3 or less	218	YS-408	30-38	75	24-32	3	2.5
							YS-409	36-44		27.4-35.4	4.3	
							YS-410	42-50		33.4-41.4	4.3	
							YS-411	48-56		39.4-47.4	4.3	
							YS-412	54-62		45.4-53.4	4.3	
YM-882	0.01	55-153	2	$(\pm)20$	3 or less	240	YS-413	55-73	90	45-63	5	3.5
							YS-414	71-89		54-72	8.5	
							YS-415	87-105		70-88	8.5	
							YS-416	103-121		86-104	8.5	
							YS-417	119-137		102-120	8.5	
							YS-418	135-153		118-136	8.5	

## Dial Bore Gauges



(Unit: mm)



### FEATURES

- Supplied with interchangeable anvils in different sizes.
- The Dial indicator is fully protected by a rugged cover.
- Packed as a set with all necessary accessories.

### SPECIFICATION & DIMENSIONS

Repeatability: 0.003mm

Order No.	Range	Indicator	Accuracy ( $\pm$ )
431-010	6-10mm	3mm x 0.01mm	0.012mm
432-018	10-18.5mm	3mm x 0.01mm	0.012mm
433-035	18-35mm	10mm x 0.01mm	0.015mm
433-060	35-60mm	10mm x 0.01mm	0.018mm
433-160	50-160mm	10mm x 0.01mm	0.018mm
433-250	160-250mm	10mm x 0.01mm	0.018mm
433-450	250-450mm	10mm x 0.01mm	0.018mm
433-600	400-600mm	10mm x 0.01mm	0.020mm

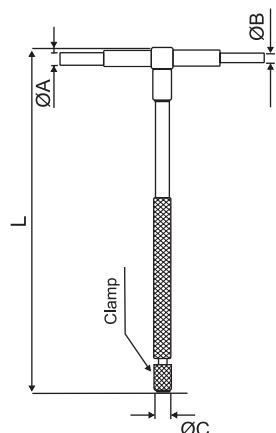
YAMAYO offers Dial Bore Gauges with interchangeable anvils and necessary accessories to perform close tolerance measurements of holes, taper and roundness.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	A	B	C	DØ	EØ	GØ	L
433-060	12.2	6.4	27	12.8	13	14	150
433-160	26	9	27	12.8	13	14	150
433-250	56.5	13	74.5	12.8	15	20	409
433-450	86.5	15	101.5	14.5	15	20	409

## Telescoping Gauges



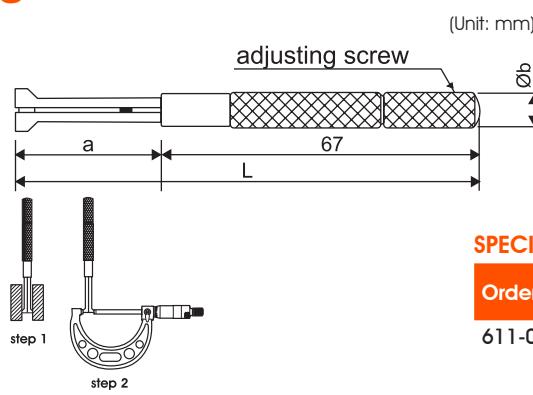
### FEATURES

- Used for measurements of internal diameter of holes and width of slots, measurement readings are achieved by using outside micrometer
- Supplied in a set of 6 gauges.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Gauges Included	L	AØ	BØ	CØ
612-150	8-150mm	8-12.7mm 12.7-19mm 19-32mm 32-54mm 54-90mm 90-150mm	115 115 115 138 138 138	4 5 5 7 7 7	3 4 4 6 6 7	6 6 6 7 7 7

## Small Hole Gauges



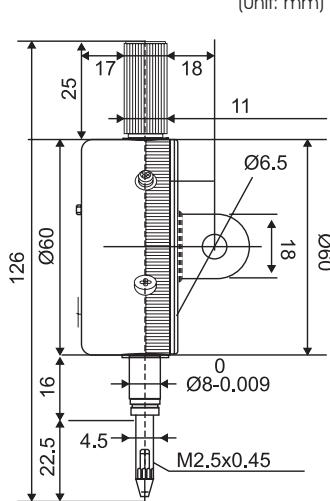
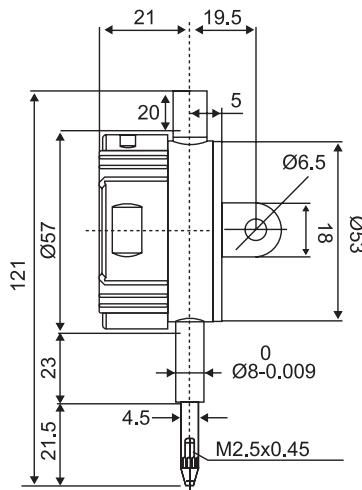
### FEATURES

- Measures small holes, grooves and slots.
- Supplied with 4 gauges per set.
- Satin chrome finish.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Gauges Included	L	Øb	a
611-013	3-13mm	3-5mm 5-7.5mm 7.5-10mm 10-13mm	90 97.5 103 103	5.5 5.5 8.5 8.5	22.5 30 35 40

## Digimatic Indicators



### FEATURES

- Functions: On/Off, Origin (Zero setting), Data output, inch/mm.
- Power Supply: One CR2032 battery.
- Provided with Flat and Lug backs.
- 415-010 with IP54 Protection.
- 415-010 with Ceramic Tip.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	Hysteresis
415-010	12.7mm/0.5"	15 $\mu$ m	10 $\mu$ m

Resolution: 0.001mm/0.00005"

Order No.	Range	Accuracy ( $\pm$ )	Hysteresis
415-001	12.7mm/0.5"	5 $\mu$ m	2 $\mu$ m

## Dial Indicators



(Unit: mm)

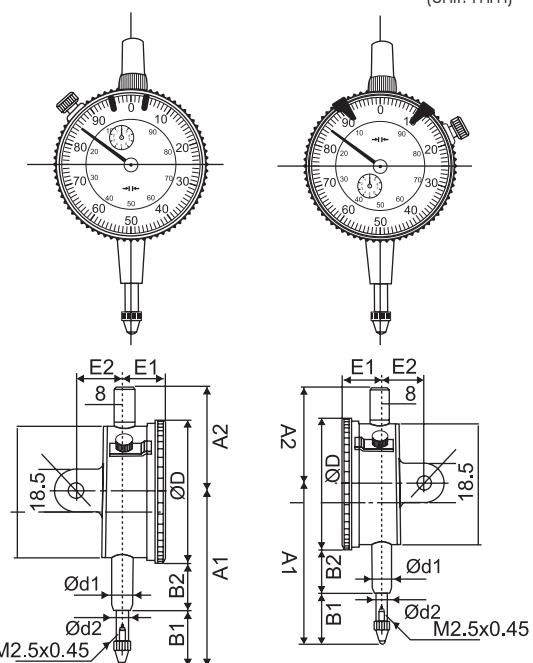
### FEATURES

- Satin Chrome body with inset dial indicator for measuring mm stroke.
- Adjustable scale with stop screw.
- Jeweled movement.
- Provided with Flat and Lug type back plates.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Accuracy ( $\pm$ )	Hysteresis	Range/Rev	Dial Reading
401-001	1mm x 0.001mm	5 $\mu$ m	2 $\mu$ m	0.2mm	0-100
402-010	10mm x 0.01mm	17 $\mu$ m	3 $\mu$ m	1mm	0-100
403-005	5mm x 0.01mm	16 $\mu$ m	3 $\mu$ m	0.5mm	0-50
404-025	25mm x 0.01mm	30 $\mu$ m	6 $\mu$ m	1mm	0-100
405-010	10mm x 0.1mm	40 $\mu$ m	6 $\mu$ m	10mm	0-10

Order No.	A1	A2	B1	B2	D $\varnothing$	E1	E2	$\varnothing$ d1	$\varnothing$ d2
401-001	64.7	57.5	14	18.8	60	16.5	18.5	8	4.5
402-010	68.4	45.5	20.9	17.5	60	14.5	19	8	4.5
403-005	50.5	33	17.5	13	40	14	18	8	4
404-025	56	56	36	17	56	15.5	20.5	8	4.5
405-010	68.5	45	21	18.5	58	16	19	8	4.5



## Back Plunger Dial Indicator



### FEATURES

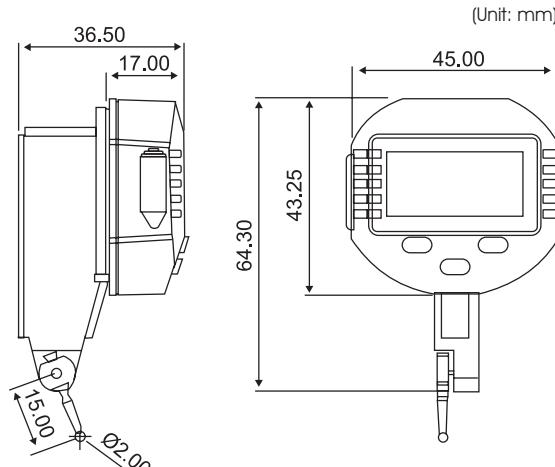
- Especially used under circumstances where regular dial indicators are difficult to read
- Highly Durable

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	Hysteresis	Range/rev	Dial reading
405-005	5mm	15 $\mu$ m	5 $\mu$ m	1mm	0-100

# Digimatic Water Proof Lever Indicator



## FEATURES

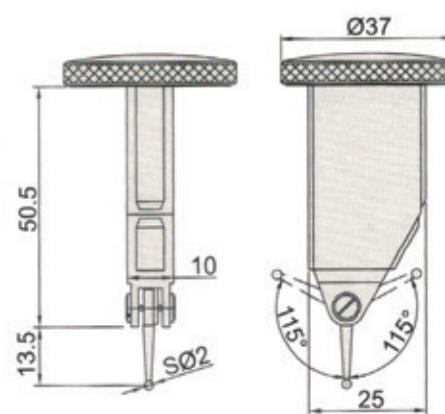
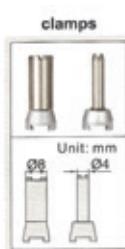
- IP65 dust/ water resistant.
- SPC data output (In wireless transmission model, the SPC output port is only used as an external power input port).
- Built in Bluetooth wireless transmission (optional).
- With Analogue pointer
- Functions: on/off, set (min) (max), inch/mm conversion.
- Power supply: One CR2032 battery, automatic power off.
- 360° rotatable display.

## SPECIFICATION & DIMENSIONS

**Resolution: 0.001mm/0.00005"**

Order No.	Range	Accuracy ( $\pm$ )	Repeatability
450-08	0- 0.8mm/0-0.03"	0.013mm/0.0005"	0.003mm/0.0005"
450B-08	0- 0.8mm/0-0.03"	0.013mm/0.0005"	0.003mm/0.0005"

## Vertical Dial Test Indicators



## FEATURES

**FEATURES**

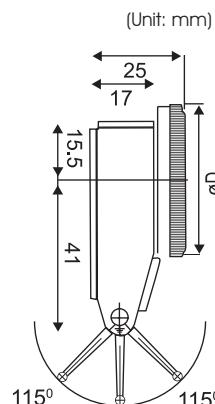
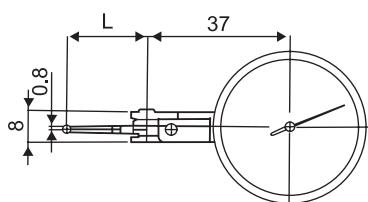
- Provides easy and accurate measurements of narrow and recessed areas.
- Two way measuring directions
- High Sensitivity and Quick Response.
- Jeweled Movement.
- Carbide Contact point is provided as standard.
- Supplied with dovetail locks.
- Optional Long Stylus 44.5 mm

## SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )	Hysteresis	Dial reading
448-08	0.8mm	13 $\mu$ m	3 $\mu$ m	0-40-0

## Dial Test Indicators



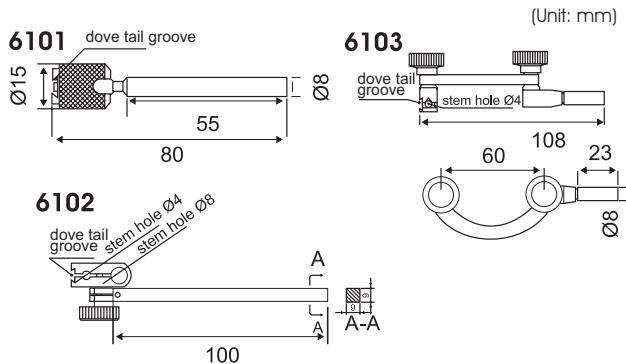
### FEATURES

- Provides easy and accurate measurements of narrow and recessed areas.
- Two way measuring directions
- High Sensitivity and Quick Response.
- Jeweled Movement.
- Carbide Contact point is provided as standard.
- Supplied with dovetail locks.
- Optional Long Stylus 44.5 mm

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm							Graduation: 0.002mm						
Order No.	Range	Accuracy ( $\pm$ )	Hysteresis	Dial Reading	D $\varnothing$	L	Order No.	Range	Accuracy ( $\pm$ )	Hysteresis	Dial Reading	D $\varnothing$	L
445-08	0.8mm	13 $\mu$ m	3 $\mu$ m	0-40-0	32	20.5	447-02	0.2mm	6 $\mu$ m	2 $\mu$ m	0-100-0	38	20.5
446-08	0.8mm	13 $\mu$ m	3 $\mu$ m	0-40-0	38	20.5							
446-08L	0.8mm	13 $\mu$ m	3 $\mu$ m	0-40-0	38	44.5							

## Lever Dial Holders



### FEATURES

#### UNIVERSAL HOLDER (6101)

- Compatible with all types of dial test indicators
- With dovetail slide clamp.

#### HOLDER (6102)

- Dial test indicator can be set at the required attitude to the work-piece

#### CENTERING HOLDER (6103)

- Cylinders and holes can be centered on machine tools

### SPECIFICATION & DIMENSIONS

Order No.	Type
6101	A Universal Holder
6102	B Holder
6103	C Centering Holder

## Gauge Block Set



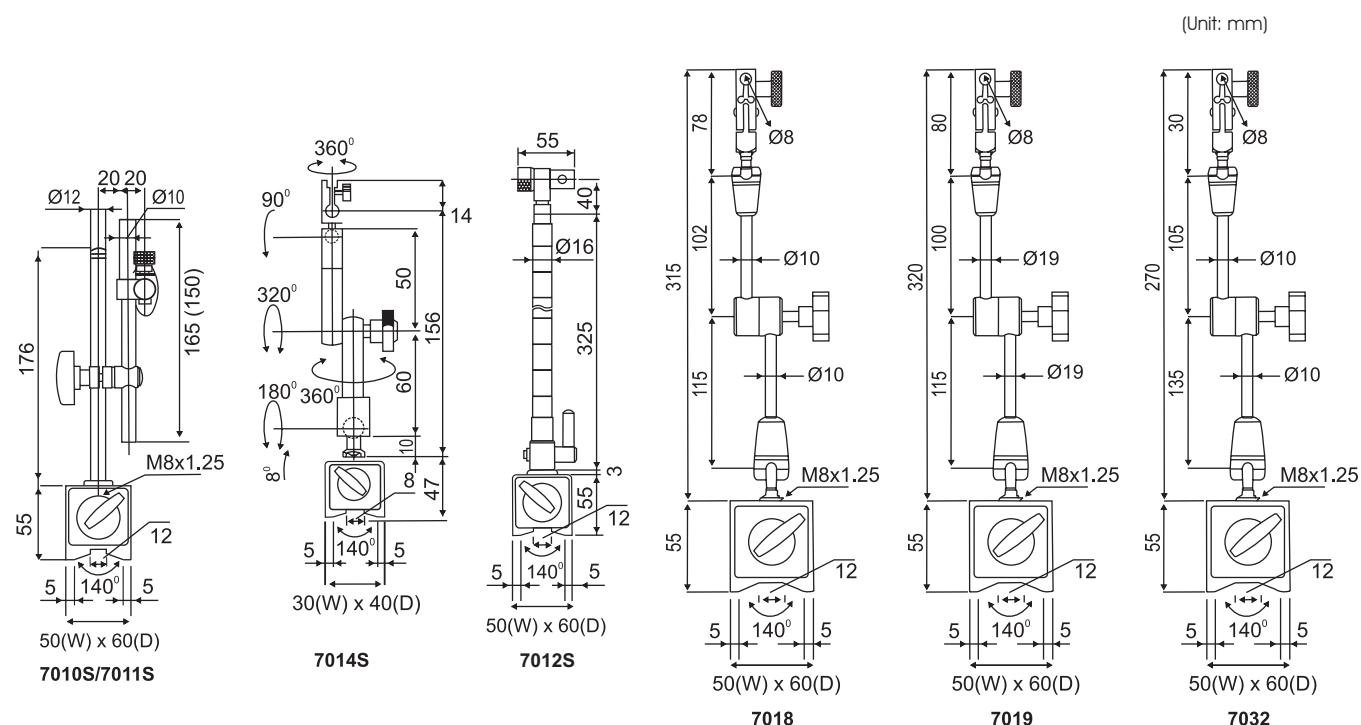
### SPECIFICATION & DIMENSIONS

Order No.	Grade	Blocks Per Set	Block included in Set	Step of 0.5 mm : 0.5 - 24.5 (49 pcs.)
621-1120	0	112 pcs	1.0005 mm (1 pc.)	Step of 0.001 mm : 1.001-1.009 (9 pcs.)
621-1122	2	112 pcs	Step of 0.01 mm : 1.01-1.49 (49 pcs.)	Step of 25 mm : 25 - 100 (4 pcs.)
621-870	0	87 pcs	Step of 0.001 mm : 1.001-1.009 (9 pcs.)	Step of 0.5 mm : 0.5 - 9.5 (19 pcs.)
621-872	2	87 pcs	Step of 0.01 mm : 1.01-1.49 (49 pcs.)	Step of 10 mm : 10 - 100 (10 pcs.)
621-830	0	83 pcs	0.5 mm (1 pc.); 1.0 mm (1 pc.); 1.005 mm (1 pc.)	
621-832	2	83 pcs	Step of 0.01 mm : 1.01-1.49 (49 pcs.)	Step of 0.5 mm : 2.0 - 9.5 (16 pcs.)
			Step of 0.1 mm : 1.5 - 1.9 (5 pcs.)	Step of 10 mm : 10 - 100 (10 pcs.)
621-322	2	32 pcs	1.005mm (1pc.); 50mm (1pc.)	Step of 1mm: 1 - 10 (10pcs.)
			Step of 0.01mm: 1.01 - 1.10 (10pcs.)	Step of 10mm: 10 - 30 (3pcs.)
			Step of 0.1mm: 1.10 - 1 (10pcs.)	

### FEATURES

- Made from high quality steel.
- Excellent wring-ability.

## Magnetic Stands



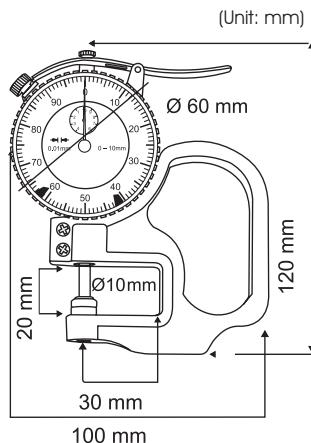
### FEATURES

- With powerful On/Off magnetic base.
- The On/Off switch offers instant mounting and dismounting without any adverse effect to indicator or the work surface.
- For Digital/Dial Indicators and Dial Test Indicators.
- Extra rigid.

### SPECIFICATION & DIMENSIONS

Order No.	Magnetic Force	Applicable Holding Stem Ø	Dovetail groove	Remarks
7010S	80kgf	8mm, 1/4" (6.35mm)	-	-
7011S	80kgf	8mm, 1/4" (6.35mm)	-	With Fine Adjustment
7014S	40kgf	8mm	Provided	-
7012S	80kgf	1/4" (6.35mm), 3/8" (9.53mm)	Provided	-
7018	80kgf	8mm	Provided	-
7019	80kgf	8mm	Provided	Hydraulic Stand With Fine Adjustment
7032	80kgf	8mm	Provided	With Fine Adjustment

## Dial Thickness Gauges



### FEATURES

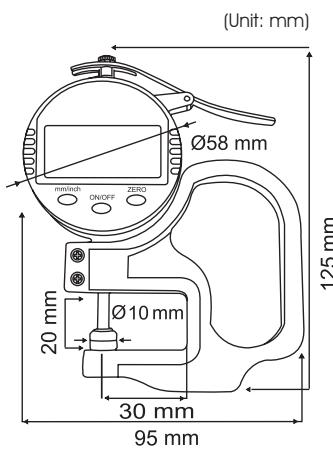
- Suitable for measuring thickness of paper, film, wire, sheet metal, jewellery, leather and similar materials.
- Equipped with ceramic rust free spindle tips.

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm

Order No.	Range	Accuracy ( $\pm$ )
462-10	10mm	0.02mm

## Digimatic Thickness Gauges



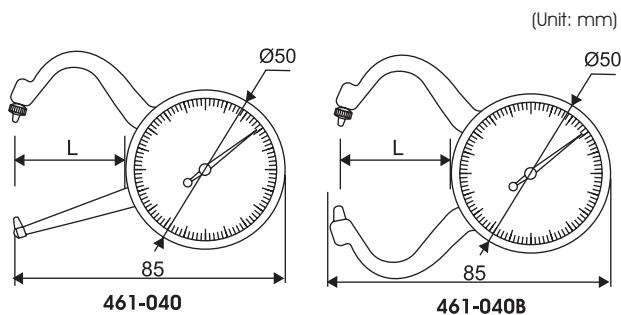
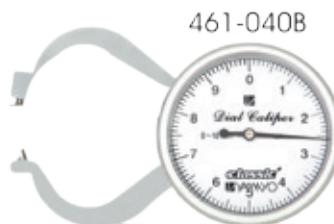
### FEATURES

- Suitable for measuring thickness of paper, film, wire, sheet metal, jewellery, leather and similar materials.
- Equipped with ceramic rust free spindle tips.
- Functions: On/Off, Origin(Zero setting), Data output, inch/mm.
- Power Supply: One CR2032battery, automatic power off.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Resolution	Accuracy ( $\pm$ )
466-010	0-10mm/0-0.4"	0.01mm/0.0005"	0.02mm
466-001	0-10mm/0-0.4"	0.001mm/0.00005"	0.005mm

## P Type Dial Caliper Gauges



### FEATURES

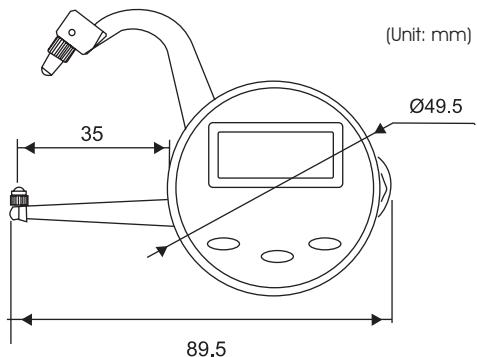
- Compact and convenient these calipers measure the thickness of leather, fabric, paper, metal or any other kind of similar material, made from the highest quality parts and material, ensuring years of reliable service. Comes in an impact resistant plastic case.

### SPECIFICATION & DIMENSIONS

Graduation: 0.05mm

Order No.	Range	Accuracy ( $\pm$ )	L
461-040	10mm	0.1mm	35
461-040B	10mm	0.1mm	30

## P Type Digimatic Caliper Gauges



### FEATURES

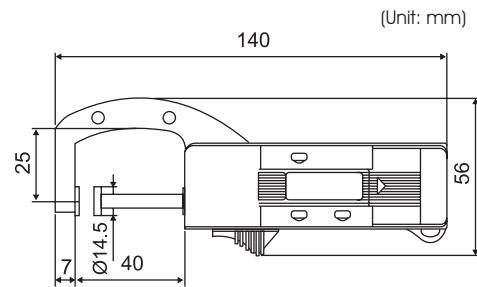
- Conveniently Measures thickness and inside dimensions.
- Functions: On/Off, Origin (Zero setting), mm/inch/fraction conversion, data hold.
- Power supply: One CR2032 battery, automatic power off.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	Repeatability
467-025	25mm/1"	0.05mm	0.02mm

## Quick Mini Thickness Gauges



### FEATURES

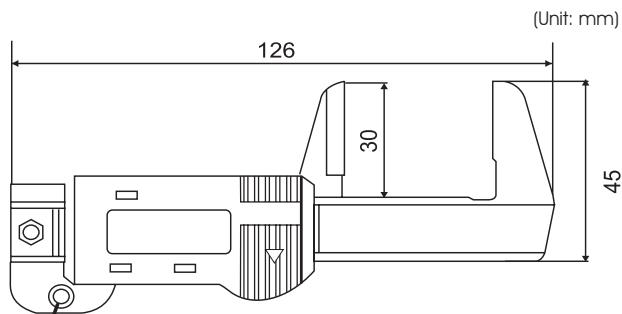
- Suitable for quick thickness inspection of gems stones, paper, leather, wires, plastic parts, etc.
- Flat measuring faces on one side for easy and multiple usage.
- Functions: On/Off, Origin(Zero set), inch/mm conversion.
- Power Supply: One LR44 battery.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )
475-025	25mm/1"	0.03mm

## Digimatic Snap Thickness Gauges



### FEATURES

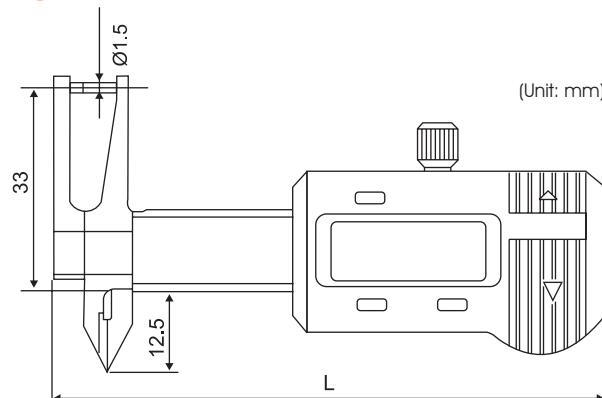
- Specifically used for quick measurements of small work pieces.
- Measuring speed: 3m/s
- Functions: On/Off, Origin (Zero setting), mm/inch/fraction conversion, data hold.
- Power supply: One CR2032 battery, automatic power off.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.001"/1/64"

Order No.	Range	Accuracy ( $\pm$ )
476-025	25mm/1"	0.03mm

## Digimatic Multi-Purpose Snap Gauges



### FEATURES

- Light weight.
- Easy to operate
- Functions: On/Off, Origin (Zero set), inch/mm conversion.
- Power supply: One LR44 battery

### SPECIFICATION & DIMENSIONS

Resolution: 0.01 mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	L
478-025	25mm/1"	0.03mm	87

## Digimatic Thickness Gauges

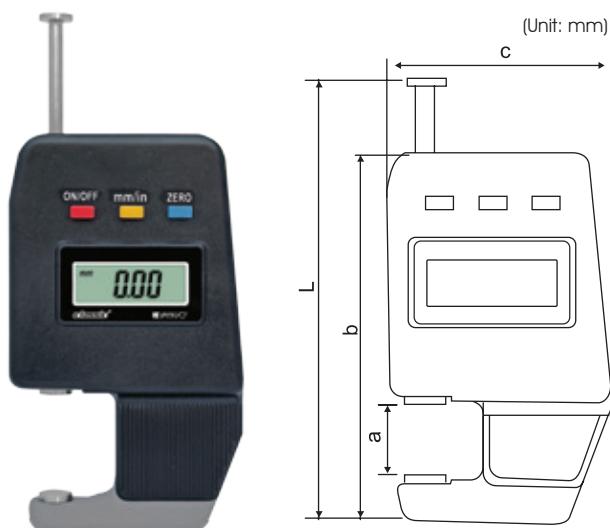
### FEATURES

- Suitable for measuring thickness of paper, film, leather and similar materials.
- Easy to operate
- Functions: On/Off, Origin (Zero set), inch/mm conversion.
- Power supply: One LR44 battery

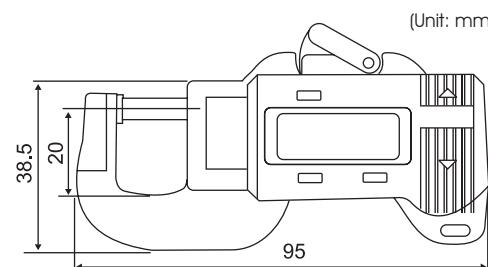
### SPECIFICATION & DIMENSIONS

Resolution: 0.01 mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )	a	b	c	L
479-025	25mm/1"	0.03mm	26	104	61	133



## Digimatic Mini-Snap Gauges



### FEATURES

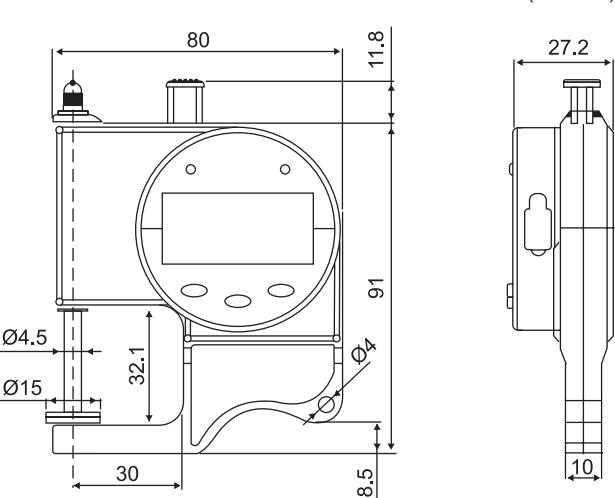
- Suitable for measuring thickness of films, wire, sheet metal, jewellery and other similar materials.
- Functions: On/Off, Origin (Zero set), inch/mm conversion.
- Power supply: One LR44 battery

### SPECIFICATION & DIMENSIONS

Resolution: 0.01 mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )
477-012	12mm/0.5"	0.03mm

## Digimatic Thickness Gauges



### FEATURES

- Frame made from high strength engineering plastic
- With data output.
- Interchangeable measuring tips (flat and ball type).
- Functions: on/off, inch/mm conversion, origin (zero setting).
- Power supply: One CR2032 battery, automatic power off.

### SPECIFICATION & DIMENSIONS

Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )
480-025	25mm/1"	0.05mm/0.002"

## Digimatic Welding Seam Gauges



### FEATURES

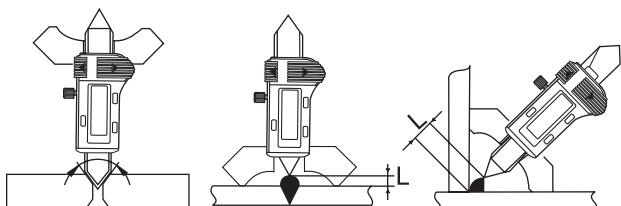
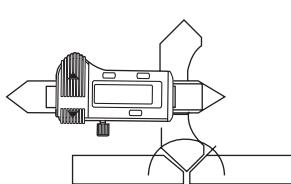
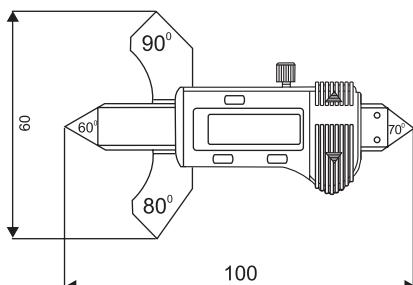
- Used for measuring welding seam thickness.
- Can check the angles of the groove (The gauge is provided with four angular templates: 60°, 70°, 80° and 90°)
- Zero setting at any position,
- Power supply: One LR44 battery
- Function: On/Off, Origin (Zero setting), Data output, inch/mm.
- Made of stainless steel

### SPECIFICATION & DIMENSIONS

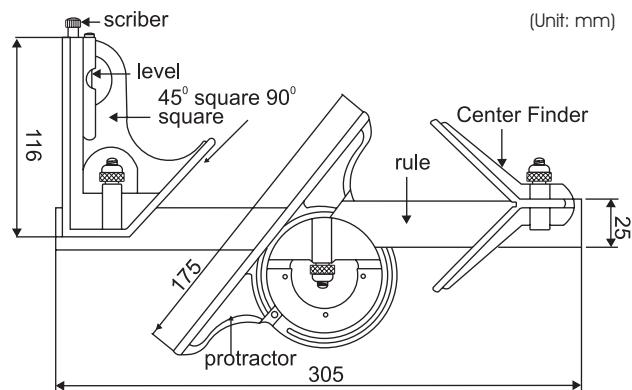
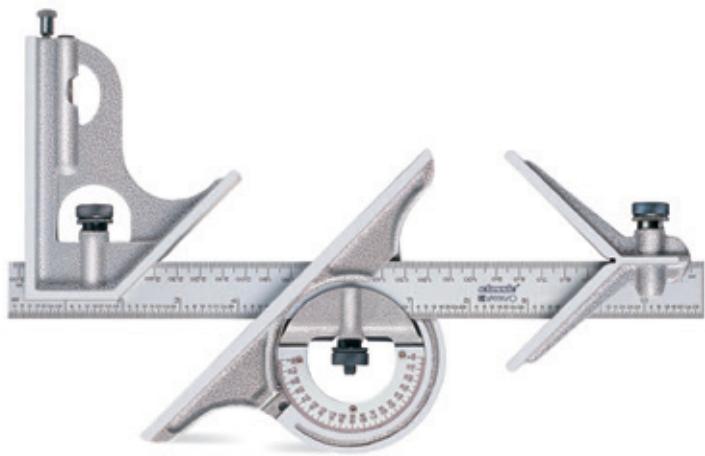
Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy ( $\pm$ )
800-020	20mm	0.03mm

(Unit: mm)



## Combination Square Sets



### SPECIFICATION & DIMENSIONS

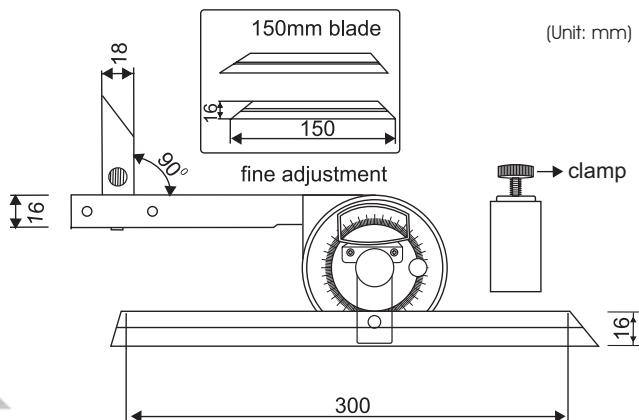
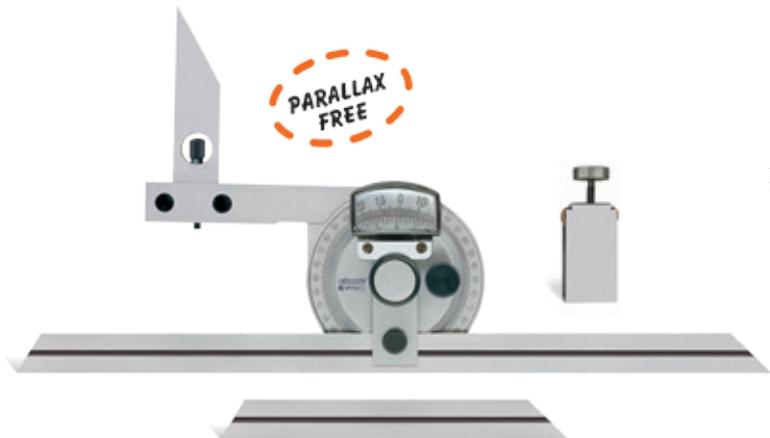
Graduation: 5min ( $0^{\circ}$ - $90^{\circ}$ - $0^{\circ}$ )

Order No.	Range	Accuracy ( $\pm$ )
501-300	300mm	Center - 0.15mm
501-600	600mm	Protractor - 7 min
		Square 45° - 10 min
		Square 90° - 8 min

### FEATURES

- Three measuring heads are attached to the stainless steel rule (blade) allowing versatile measurements on various types of work pieces.
- Square head is used to set the ruler at 90° or 45° to an edge of a work piece.
- Center head is used to locate centers of round work pieces.
- Protractor head is used to set the ruler at a desired angle to an edge of a work piece. Also used for measuring angles.
- The measuring heads are hardened.

## Bevel Protractors



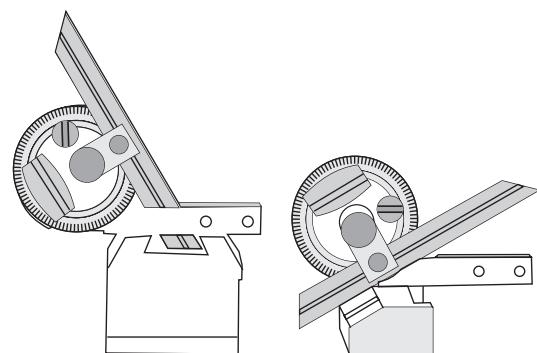
### SPECIFICATION & DIMENSIONS

Graduation: 5'

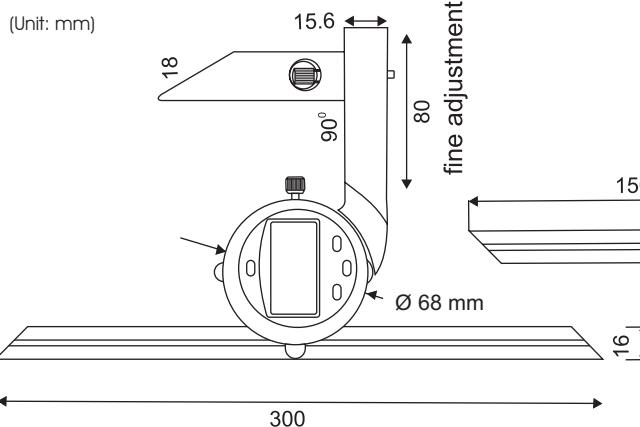
Order No.	Range	Accuracy ( $\pm$ )
511-360	360°	5'

### FEATURES

- For use as a reference for assembling and machining.
- Provided with magnifying glass for easy readings.



## Digimatic Bevel Protractors



## Angle Gauge Set



### FEATURES

- Used for checking of internal and external angles.
- Quick reference gauge for inspection in various industries like metal fabrication, wood working, tools and moulds.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Composition of Angle Gauges (°)	Set of	Accuracy (±)
601-18	5°-90°	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90	18 pcs	30'

## Radius Gauges



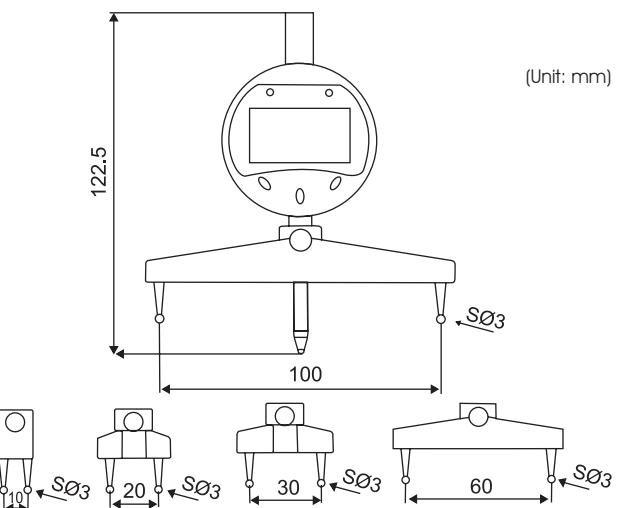
### FEATURES

- Each piece compromises of 2 internal and 3 external radius gauge.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Composition of Angle Gauges (°)	Set of	Accuracy (±)
602-26	0.5-15mm	0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 10.5, 11.0, 11.5, 12.0, 12.5, 13.0	26 pcs	0.05mm

## Digimatic Pye Tapes



### FEATURES

- For measuring radius of internal and external arcs.
- 5 jaws provided for measuring different sizes of arcs.
- Power Supply: One CR2032 battery.

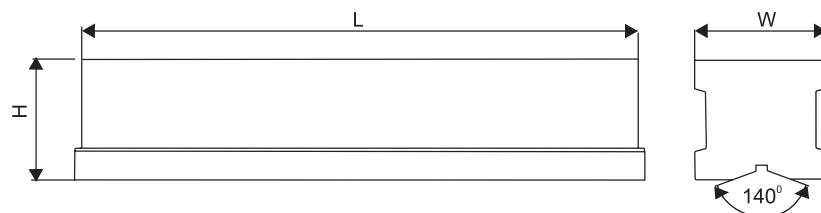
### SPECIFICATION & DIMENSIONS

Resolution: 0.005mm/0.00005"

Order No.	Range of radius (R)	Accuracy ( $\pm$ )
651-1000	6.5-1000mm	R x 1%
651-3000	6.5-3000mm	R x 1%

R being the radius to be measured

## Linear Block Levels



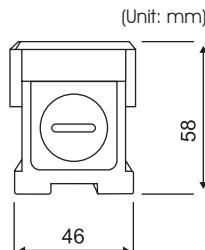
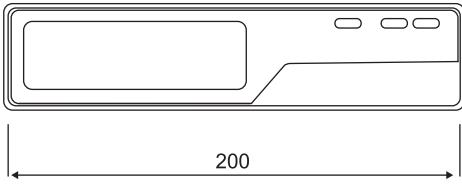
### FEATURES

- Made of high quality cast iron.
- Measuring Surface is lapped finish.
- With Transverse vial.
- V-grooved on bottom for shafts.
- Supplied with adjusting wrench.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Sensitivity	H	L	W
531-150	150mm	0.02mm/m (=0.001°)	48	150	48
531-200	200mm	0.02mm/m (=0.001°)	48	200	48
531-300	300mm	0.02mm/m (=0.001°)	48	300	48

## Digimatic Linear Levels



### FEATURES

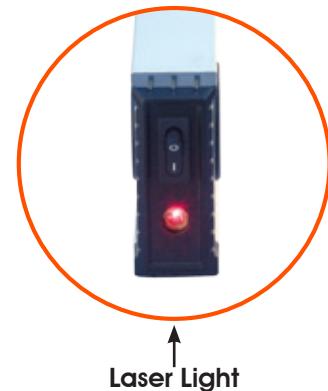
- High accuracy level measurements.
- With built in wireless transmission (Bluetooth enabled).
- Analog bubbles show the tilt in the X-axis and Y-axis.
- Easy self-calibration.
- Power supply: One 3AAA batteries.
- Function: On/Off, HOLD, M (flips display). unit conversion (0, mm/ m)

### SPECIFICATION & DIMENSIONS

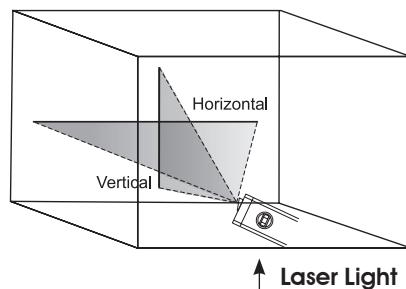
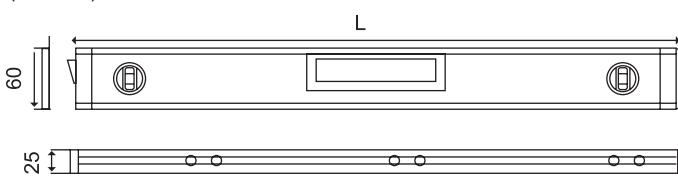
Resolution: 0.01mm/m (0.001°)

Order No.	Range	Repeatability	Response time	Accuracy ( $\pm$ )
534-200	$\pm 0.5\text{mm/m}$ ( $\pm 0.028^\circ$ )	0.01mm/m	<3s	$\pm 0.02\text{mm/m}$

## Digital Levels



(Unit: mm)



### FEATURES

- Measures angles, levels quickly and accurately.
- Frame made of aluminium
- Magnetic bottom
- Permanent zero pre-set
- Power supply: Two AAA batteries
- Function: On/Off, absolute and relative measurement conversions, backlight, mm/m, %, in/ft conversions, alarm buzzer.
- Auto display flip over when bottom faces up
- Horizontal and Vertical cross line laser light
- Machined base for higher accuracy

### SPECIFICATION & DIMENSIONS

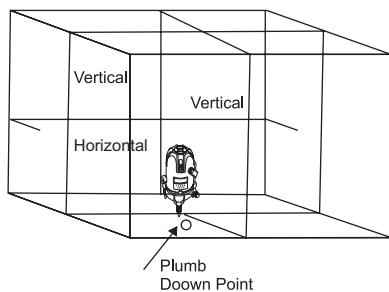
Resolution:  $0.1^\circ$

Order No.	Range	Size/length	Accuracy ( $\pm$ )
533-330		300mm	
533-345	$360^\circ$ ( $90^\circ \times 4$ )	450mm	$0^\circ$ and $90^\circ$ : $0.1^\circ$ Rest: $0.2^\circ$
533-360		600mm	

## Laser Level Markers



(Unit: mm)



### FEATURES

– The **YAMAYO 534-010** Three-Line Laser generates one horizontal and two 360° vertical lines plus plumb down point for level, plumb, align and square applications. Equipped with a 360° rotational base and a durable belt pouch that helps users quickly layout the job, with precision. The base has manual fine adjustment, which allows easy setup and convenient viewing of the laser point on the floor, the 360° rotational base helps users effectively set right angles up to 10 meters without having to reset. 5/8" Thread mount provided for use with a tripod, The Smart Pendulum System self-levels and beeps when out-of-level condition.

### TECHNICAL DATA

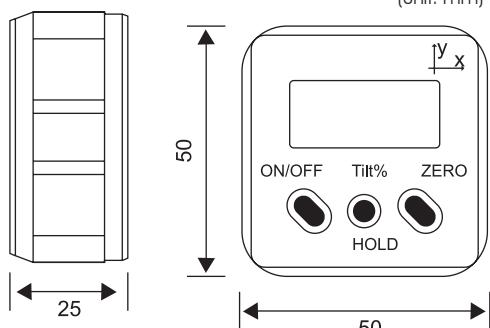
Order No.	<b>534-010</b>
Laser Wavelength	Vertical/Horizontal 635nm, Plumb Down Point 650nm
Range	Radius 10M
Range of Auto Self Level Setting	±3°
Launch Angle	≥110°
Control Mode	Gravity Pendulum / Magnetic Damping
Horizontal Accuracy	±1mm/5M
Vertical Accuracy	±1mm/5M
Right Angle (90°) Accuracy	±0.025° (±1mm/3M)
Plumb Down Point Accuracy	±1mm/1.5M
Orthogonal Accuracy	±1mm/3M
Working Environment	Indoors and Outdoors
Working Temperature	-10°C... + 45°C
Material	Metal
Size	Ø: 100mm* H: 175mm
Weight	1.75Kg (including battery)
Accessories included	Laser light visibility enhancement glasses, (3) AA Batteries, Aluminium carrying case, belt, Strap

## Dual Axis Digital Angle Protractor

DUST & WATER RESISTANCE CONFIRMING TO IP65 LEVEL



(Unit: mm)



### FEATURES

- Measures angles in single and dual axis
- IP65 dust/water resistant
- Frame made of Aluminium
- User friendly display
- Magnetic Bottom
- Automatic backlit display
- Zero setting not required when battery is replaced as the same is permanently zero preset, Auto display flip over when bottom faces up.
- Functions: On/off, Origin, Tilt%, Hold, Absolute and relative measurements.
- Power supply: Two AAA batteries
- Power Off aromatically in 3 minutes

### SPECIFICATION & DIMENSIONS

Resolution: 0.1°

Order No.	Range	Repeatability	Accuracy (±)
532-090	4x90°	0.1°	0.2°

## Digimatic Protractors

### FEATURES

- IP65 Dust/Water resistant.
- Function: On/Off, Origin(Zero Setting), Hold.
- Permanent Zero Pre-set.
- Power Supply: Two AAA Batteries.
- Frame made of aluminium.
- Magnetic bottom V-grooved for shafts.
- Automatic backlit display.
- Auto display flip over when bottom faces up.

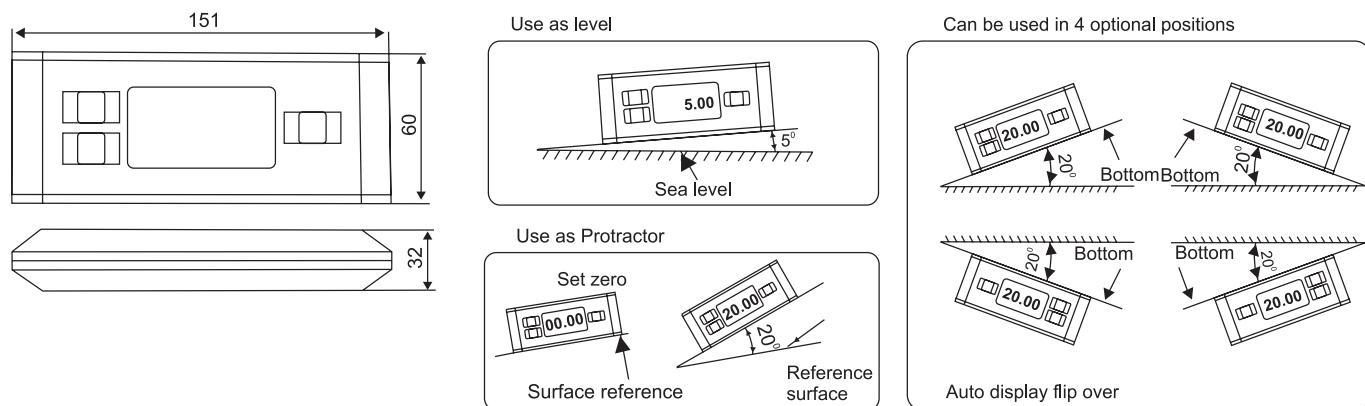


### SPECIFICATION & DIMENSIONS

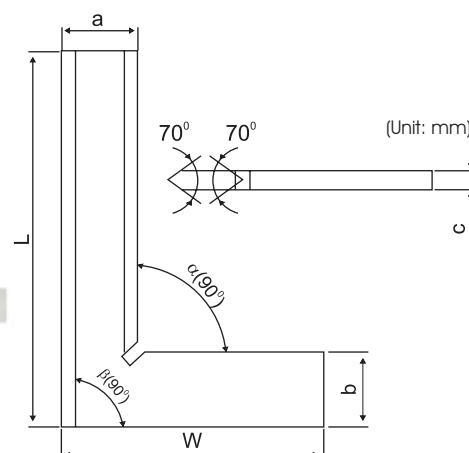
Resolution: 0.05°

Order No.	Range	Accuracy ( $\pm$ )
	0: 4x90°	0° and 90°: 0.05°
513-360	mm/m: 1000mm/m	Others: 0.15°
	%: 100%	
	in/ft: 12in/ft	

(Unit: mm)



## Beveled Edge Squares



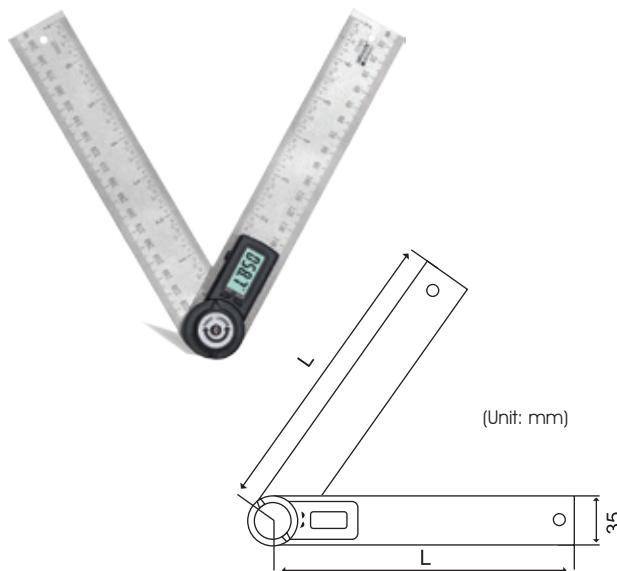
### FEATURES

- The finest precision checking squares, not graduated
- The blade is bevelled on both edges of each side, providing excellent visual line contact with the job.
- The beam and blade are hardened, ground and lapped to ensure parallelism and straightness.
- The beam is grooved at the inner corner for clearance of burr or dirt.
- Made of high quality hardened stainless steel.

### SPECIFICATION & DIMENSIONS

Order No.	Size (L x W)	Accuracy ( $\pm$ ) Inside Outside	a	b	c
502-075	75 x 100mm	6 $\mu$ m 7 $\mu$ m	15	15	4.5
502-100	100 x 70mm	7 $\mu$ m 7 $\mu$ m	18	18	5.5
502-150	150 x 100mm	7 $\mu$ m 8 $\mu$ m	25	25	6.5

## Digital Angle Finder



### FEATURES

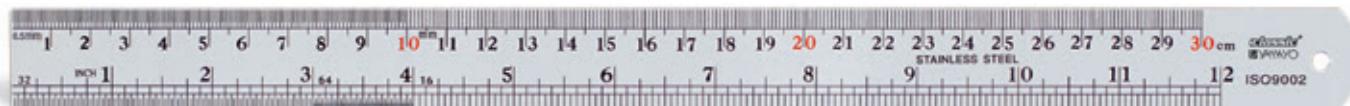
- Measures angles, lengths quickly and accurately.
- 1mm & 1/32" graduations on the steel rulers
- Power supply: One CR2032 3V lithium battery
- Function: On/Off, Origin(Zero setting), inch/mm.
- With clamping screw to lock the steel rulers at any angle
- Made of stainless steel

### SPECIFICATION & DIMENSIONS

Resolution: 0.05°

Order No.	Size/Length(L)	Range	Accuracy (±)
514-200	200mm	0-360°	0.3°
514-300	300mm	0-360°	0.3°
514-500	500mm	0-360°	0.5°

## Steel Rulers



### SPECIFICATION & DIMENSIONS

Graduation: Centimeter scale 0.5mm, 1mm, Inch scale 1/64", 1/32", 1/16"

Order No.	Size	Width	Thickness	Remark
701-015	15cm/6"	18mm	0.8mm	
701-030	30cm/12"	25mm	1mm	inch to mm conversion table provided
701-060	60cm/24"	28mm	1.2mm	Conversion table provided
701-100	100cm/40"	35mm	1.5mm	Conversion table provided
701-120	120cm/48"	38mm	2mm	Conversion table provided
701-200	200cm/80"	40mm	2mm	Conversion table provided

### FEATURES

- Clear Graduations on satin-chrome matt finish surface.
- Stainless tempered.

## Straight Edge

GRADE (2)



### FEATURES

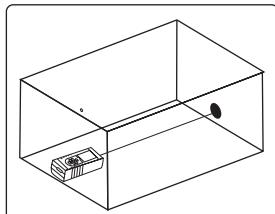
- Used for checking straightness, flatness and marking purposes.
- Made from hardened steel.
- Satin-Chrome plated.

### SPECIFICATION & DIMENSIONS

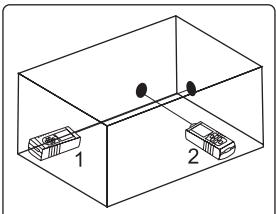
Order No.	Size (L x W x H)	Straightness
671-1000	1000x10x50mm	0.05mm
671-1500	1500x12x60mm	0.09mm
671-2000	2000x12x60mm	0.15mm
671-3000	3000x20x100mm	0.35mm

## Laser Distance Meter

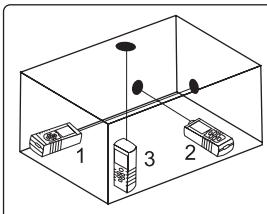
(Unit: mm)



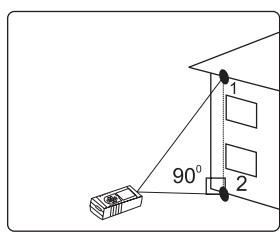
Distance measurements



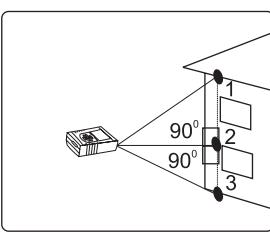
Area measurements



Volume measurements



Indirect measurements



Calculating a distance using 3 measurements

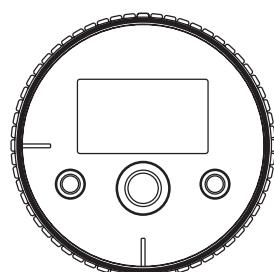
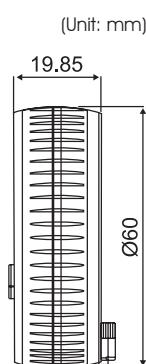
### FEATURES

- Distance measure, Area, Volume Calculations
- Indirect Measurement
- Continuous Measurement
- Reference setting
- History: Can Store up to twenty measurements
- Unit settings: m/in/ft with instant conversions to any mentioned units
- Laser Class: 2
- Laser Wavelength: 635nm
- Laser Power: <1mW
- With sound setting
- Auto Instrument switch-off after 3 min
- Power Supply: 2 x 1.5V AAA batteries
- Protective pouch provide with the instrument
- Shockproof & Robust
- Provided with 1/2" thread mount for use with a tripod
- Operating Temperature: 0°C ... +40°C
- Storage Temperature: -10°C...+60°C

### SPECIFICATION & DIMENSIONS

Order No.	Range	Accuracy ( $\pm$ )	L X W X H	Net Weight
CJ-50	0.2-50m	3mm	118mm X 53mm X 30mm	110g

## Digital Measuring Wheels



### FEATURES

- 4 measurement modes: rectangle area, length, cube and diameter of the circle.
- IP40 dust/ water resistant.
- Functions: on/off, measurement mode selection and conversion (meter/ft),
- Power supply: One CR2032 battery, automatic power off

### SPECIFICATION & DIMENSIONS

Resolution: 0.001m/0.01ft

Order No.	Range	Accuracy ( $\pm$ )
Y-10	10m/32.8ft	(0.1%L)m L=measuring length

## Steel Tapes

### SPECIFICATION & DIMENSIONS

Order No.	Size	Width	Size (Length)
Y-16	3mts	16mm	
Y-19	5mts	19mm	



## Oil Tape Refills

CARBON STEEL REFILL, STAINLESS STEEL REFILL (MATT FINISH)



### SPECIFICATION & DIMENSIONS

Length	Width
MS 10mts	13mm
SS 10mts	13mm
MS 15mts	13mm
SS 15mts	13mm
MS 20mts	13mm
SS 20mts	13mm
MS 30mts	13mm
SS 30mts	13mm
MS 50mts	13mm
SS 50mts	13mm
MS 100mts	13mm
SS 100mts	13mm
MS 200mts	13mm

## Oil Tapes

CARBON STEEL & STAINLESS STEEL BLADE



### SPECIFICATION & DIMENSIONS

Order No.	Size (Length)	Blade (Width)	Remarks
10MS	10mts	13mm	
10SS	10mts	13mm	
15MS	15mts	13mm	With 100mm Brass Plumbob Carbon Steel Refill
15SS	15mts	13mm	
20MS	20mts	13mm	
20SS	20mts	13mm	
30MS	30mts	13mm	Optional: 150mm Brass Plumbob
30SS	30mts	13mm	
50MS	50mts	13mm	150mm Brass Plumbob
50SS	50mts	13mm	
100MS	100mts	13mm	150mm Stainless Steel Plumbob
100SS	100mts	13mm	
200MS	200mts	13mm	

## Plumbobs for Oil Tapes



150mm  
S.S.  
PLUMBOB



150mm  
BRASS  
PLUMBOB

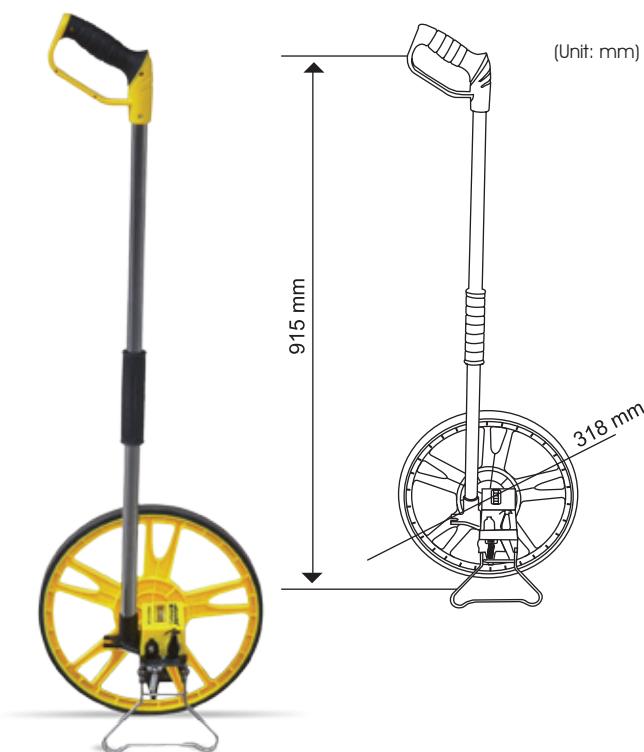


100mm  
BRASS  
PLUMBOB

### SPECIFICATION & DIMENSIONS

Order No.	Size (Length)	Remarks
100B	100mm	Brass Plumbob
150B	150mm	Brass Plumbob
150SS	150mm	Stainless Steel Plumbob

## Measuring Wheel



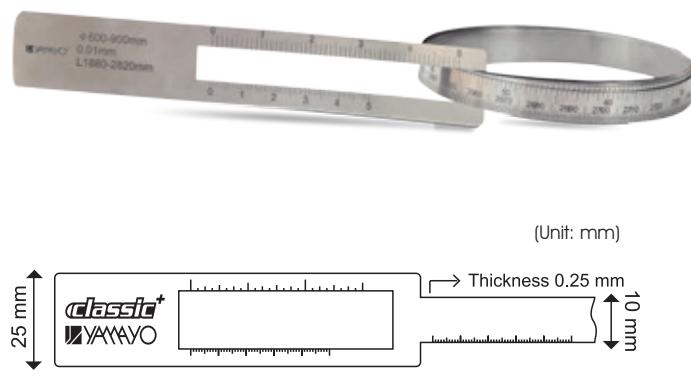
### FEATURES

- Light weight and durable
- 318 mm diameter PVC rubber coated ABS wheel
- Measures forwards, backwards and subtracts when retracted
- 5 digit mechanical counter with reset button
- Foldable metal handle
- Wide range of measuring applications for indoor and outdoor spaces
- Packed in nylon carry bag

### SPECIFICATION & DIMENSIONS

Order No.	Range	Accuracy ( $\pm$ )
8500	0.1-9999.9m	0.5%

## Pye Tapes



### FEATURES

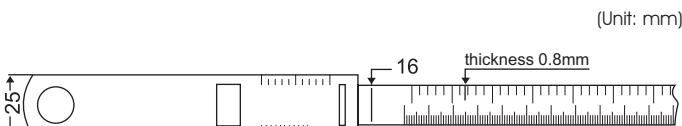
- Used for measuring circumference and diameters of all types of round bodies
- Scale with laser engraved markings
- Made of stainless steel

### SPECIFICATION & DIMENSIONS

Graduation: 0.01mm			
Order No.	Circumference Range	Diameter Range	Accuracy ( $\pm$ ) Circumference
652-300	90-950	28-300mm	( $\pm$ ) (0.3 + 0.2L)
652-600	940-1880	300-600mm	Where "L" is the Value of Length in Meter
652-900	1880-2880	600-900mm	
652-1200	2820-3760	900-1200mm	
652-1500	3760-4710	1200-1500mm	

### SPECIFICATION & DIMENSIONS

Order No.	Circumference Range	Diameter Range	Accuracy ( $\pm$ )	
			Circumference	Diameter
653-950	90-950	20-300mm	1.5mm	0.5mm
653-2200	940-2200	300-700mm	1.5mm	0.5mm
653-3460	2190-3460	700-1100mm	1.5mm	0.5mm



## Durometers



### FEATURES

- Suitable for accurately measuring the penetration hardness of Rubber, Vinyl, silicone, leather, soft plastics and other similar materials.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Graduation	Accuracy ( $\pm$ )
661-100	0-100 HA	1 HA	Shore A

## Digital Durometers



### FEATURES

- Durometer Shore A type measures hardness of flexible rubber and elastomers.
- Durometer Shore D type measures, specifically harder materials such as harder rubbers, thermoplastic elastomers, and some plastics.
- Power supply: one CR2032 battery.
- Functions: on/off, zero setting, data hold, with data output.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Resolution	Accuracy ( $\pm$ )	Response Speed	Probe Stroke
662-100A	0-100HA	0.5HA	2HA	3m/s	0-2.5mm
662-100D	0-100HD	0.5HD	2HD	3m/s	0-2.5mm

## Anemometer



### FEATURES

- Measures air velocity and temperature
- Provides Max/ Average/ Current air velocity measurements.
- Wind chill indication (Beaufort scale)
- Functions: M/s, Kmph, Ft/min, Knots, Mph units for air velocity measurement, °C/F unit for temperature measurement, Backlight, Automatic power off, Low battery indication.
- Power supply: One CR2032 battery.

### SPECIFICATION & DIMENSIONS

Order No.	Unit	Air Velocity				Temperature			
		Range	Resolution	Threshold	Accuracy ( $\pm$ )	Unit	Range	Resolution	Accuracy ( $\pm$ )
665-030	M/s	30	0.1	0.1	5%	°C	-10 ~ 45°C	0.2	2°C
	Ft/min	5860	19	39		°F	14 ~ 113°F	0.36	3.6°F
	Knots	55	0.2	0.1					
	Kmph	90	0.3	0.3					
	Mph	65	0.2	0.2					

## Sound Level Meters



### FEATURES

- Sound level meters are used to measure and manage noise from a variety of sources, including industrial plants, road and rail traffic, construction work, concerts, leisure parks, residential and commercial neighbours
- Frequency Weighting: A Weighted
- Functions: On/Off, Min/Max/Lock current value, Data Hold, backlight
- Power supply: 3 x 1.5V AAA batteries, automatic power off

### SPECIFICATION & DIMENSIONS

Order No.	Range	Resolution	Accuracy (±)	Frequency Response
663-130	30~130dB(A)	0.1dB	1.5dB	31.5Hz ~ 8KHz

## Infrared Thermometer



### FEATURES

- Used to serve a wide variety of temperature monitoring functions like hot spots in fire fighting, checking temperature and hot spots in mechanical or electrical equipment, for calibration and controlling of heater or oven temperature.
- Emissivity: 0.95 (Fixed)
- Power supply: one 9V battery
- Functions: °c/°f unit, laser on/off, backlight, data hold, automatic power off

### SPECIFICATION & DIMENSIONS

Order No.	Range	Resolution	Accuracy (±)	Distance spot ratio
664-550	-50~550°C(-58~1020°F)	0.1°C or 0.1°F	1.5°C/1.5%	12:1
664-1250	-50~1250°C(-58~2282°F)	0.1°C or 0.1°F	1.5°C/1.5%	12:1

## Lux Meter



### FEATURES & TECHNICAL SPECIFICATIONS

- Display: Large LCD characters display
- Range: 0.1~200,000Lux, 0.01~20,000Fc
- Resolution: 0.1Lux / 0.01Fc
- Accuracy: ±4%
- Measurement speed: 2 times / second
- Units: Lux & Fc
- Hold function, Auto range & Manual range
- Auto Power OFF: After approx.15 minutes
- Power Supply: One 9V battery
- Low power of battery detecting
- Operating Environment: 14 to 122°F (-10 to 50°C), 10%~90%RH
- Dimensions: 145 X 67 X 32mm (5.7" x 2.6" x 1.3")
- Weight: 170g (6.0 oz)

## Digital Tachometer



### FEATURES

- Non-contact optical tachometer.
- Uses laser light to accurately measure the RPM.
- Memory: Automatically stores Max, Min and the Last reading.
- Power supply: 4 x 1.5V AAA batteries.

### SPECIFICATION & DIMENSIONS

Order No.	Range	Resolution	Accuracy ( $\pm$ )
8505	2.5~99,999 RPM	0.1 RPM up to 999.9 RPM 1 RPM over 1000 RPM	0.5% + 1 digit

## Vibration Meter



### FEATURES

- Measures acceleration, velocity and displacement.
- Functions: Vibration frequency selection, Equipped with AC signal output interface, Backlight, Low battery indicator, Automatic power off.
- Power supply: One 9V battery.
- Supplied with 2 probes (1 Long, 1 Short) for appropriate applications.

### SPECIFICATION & DIMENSIONS

Order No.	Range			Frequency			
	Acceleration	Velocity	Displacement	Acceleration	Velocity	Displacement	Accuracy
8510	0.1~19.9m/s <sup>2</sup> peak	0.1~199.9mm/s rms	0.001~1.999mm p-p	10~1 KHz (LO) 1~15 KHz (HI)	10~1 KHz (LO)	10~1 KHz (LP)	5%

## 5100 Portable Metal Hardness Tester



### APPLICATION:

The 5100 portable metal hardness tester is suitable for most hardness testing tasks. It can be used for die cavity moulds, heavy workpieces, and assembled or permanently installed parts. It is also useful for failure analysis of pressure vessels, steam turbo generator sets, and other large equipment. In addition, it can be applied to testing bearings and other components, as well as for material identification of different metals.

### FEATURES

- OLED display with a 128 × 32 matrix
- Converts measurements to all hardness scales (HV, HB, HRC, HEB, HRA, and HS)
- Easy-to-use, menu-driven system
- Mini USB interface
- Testing possible at any angle (360°)
- Stores up to 600 data groups
- Upper and lower hardness limits can be preset with an alarm
- Built-in calibration software
- Supports optional devices: C, DC, G, D+15, and DL
- Smart, skidproof design
- Operating environment: –10°C ~50°C; humidity: 20% ~80% RH
- Storage environment: –30°C ~70°C; humidity: 5% ~95% RH
- Dimensions: 155 X 55 X 25 mm
- Weight: 160g

### MEASURING RANGE / MATERIALS

Material	HLD	HRB	HRC	HB	HV	HSD
Steel and cast steel	300-900	38-100	20-68	81-654	81-955	32-100
Cold work tool steel	300-840	-	20-67	-	80-898	-
Stainless steel	300-800	46-101	-	85-655	85-802	-
Grey cast iron	360-650	-	-	93-334	-	-
Nodular cast iron	400-660	-	-	131-387	-	-
Cast aluminium alloys	170-570	23-84	-	19-164	-	-
Brass	200-550	13-95	-	40-173	-	-
Bronze	300-700	-	-	60-290	-	-
Copper	200-690	-	-	45-315	-	-

### STANDARD DELIVERY

Particulars	Particulars	Particulars	
Main unit	1 pc	Cleaning brush	1 pc
Charger	1 pc	Small support ring	1 pc
Test block	1 pc	Carry case	1 pc

## 5100-DL Portable Metal Hardness Tester



### APPLICATION:

The 5100-DL portable metal hardness tester is used for on-site hardness testing in locations where access is limited, such as gear wheels and other compact components. It is suitable for inspecting steel and cast steel parts during production, maintenance, or service work. The hardness tester can be used in different positions and orientations, making it useful for field inspections and in place testing. Its ease of use allows quick hardness checks with minimal preparation and effort.

### FEATURES

- Integrated DL impact device for confined spaces (e.g., Gear wheels); no cables required
- Wide measuring range in HLDL scale with display of converted hardness scale in HB, HRB, HRC, HV, and HS
- Suitable for steel and cast steel materials
- Testing possible at any angle (360°)
- Simple operation with low testing effort

### Measuring Range / Materials

Material	HLDL	HB	HRB	HRC	HV	HS
Steel &	560	81	37	20.6	80	30.6
Cast steel	~950	~646	~99.9	~68.2	~950	~96.8

### TECHNICAL PARAMETERS

#### Particulars

Standard impact device	DL integrated
Hardness scales	HLDL, HB, HRC, HRB, HV, HS
Measuring range/materials	See table above
Accuracy	±12HLDL
Memory	99 average readings
Output	USB to PC (Optional)
Min. surface roughness of workpiece	1.6µ (Ra) Diameter = 2.8mm
Needle front section of DL-device	Length = 50mm
Max. workpiece hardness	950HLDL
Min. radius of workpiece (convex/concave)	Rmin = 10mm
Min. workpiece weight	2~5kg on stable support 0.05~2kg with compact coupling
Min. workpiece thickness coupled	5mm
Min. thickness of hardened layer	0.8mm
Indentation depth	Impact devices data
Continuous working time	8h
Power	rechargeable NiMH battery
Overall dimensions	155 X 55 X 25 mm
Operating environment	10°C ~50°C; humidity: 20% ~80% RH
Storage environment	30°C ~70°C; humidity: 5% ~95% RH
Weight	200g

### STANDARD DELIVERY

#### Particulars

Main unit integrated with impact device DL	1 pc
Test block with HLDL value	1 pc
Charger	1 pc
Cleaning brush	1 pc
Carrying suitcase	1 pc
Calibration certificate	1 pc
Instructional manual	1 pc

## TH-130 Plus+ Portable Metal Hardness Tester



### APPLICATION:

The TH-130 Plus portable metal hardness tester is suitable for on-site and laboratory hardness testing of metallic components. It is ideal for quality control, material inspection, maintenance, and production monitoring across manufacturing and heavy engineering industries. The instrument delivers accurate measurements in any impact direction, displays results in all common hardness scales, and supports data storage and PC connectivity for easy analysis and reporting.

### FEATURES

- Self-contained unit (Impact Device D integrated); no cables required
- Integrated impact direction sensor
- High accuracy ( $\pm 4$  HL) in any impact direction ( $360^\circ$ ), fully automatic
- Integrated display of results for all common hardness scales
- 128 x 64 dot-matrix, high-contrast LCD for optimal viewing in all conditions
- Easy calibration
- Full USB communication with PC; software included free of charge
- Internal data storage with date and time; data capacity: 560 readings
- Battery: 3 x AAA rechargeable Ni-MH (3.6 V / 800 mAh)
- Intelligent sleep mode
- Standards and guidelines applied: DIN 50156 (2007), DGZfP Guideline MC 1 (2008), VDI/VDE Guideline 2616 Paper 1 (2002), ISO 18625 (2003), ASTM A956 (2006), GB/T 17394 (1998), JB/T 9378 (2001), JJG 747 (1999), CNAL T0299 (2008), JIS B7731 (2000)
- Optional accessories: wireless mini printer, support ring set
- CE certified
- Operating environment: temperature  $-10^\circ\text{C} \sim 60^\circ\text{C}$ ; humidity 20%  $\sim$  85% RH
- Storage environment: temperature  $-30^\circ\text{C} \sim 80^\circ\text{C}$ ; humidity 5%  $\sim$  95% RH
- Dimensions: 148 X 63 X 24.5 mm
- Weight: 300 g

### MEASURING RANGE / MATERIALS

Material	HLD	HRB	HRC	HB	HV	HSD
Steel and cast steel	300-900	38-100	20-68	81-654	81-955	32-100
Cold work tool steel	300-840	-	20-67	-	80-898	-
Stainless steel	300-800	46-101	-	85-655	85-802	-
Grey cast iron	360-650	-	-	93-334	-	-
Nodular cast iron	400-660	-	-	131-387	-	-
Cast aluminium alloys	170-570	23-84	-	19-164	-	-
Brass	200-550	13-95	-	40-173	-	-
Bronze	300-700	-	-	60-290	-	-
Copper	200-690	-	-	45-315	-	-

### STANDARD DELIVERY

Particulars	Particulars	Particulars	
Main unit	1 pc	Small support ring	1 pc
Test block	1 pc	Cleaning brush	1 pc
Charger	1 pc	USB cable	1 pc
		Manual	1 pc
		Calibration certificate	1 pc
		Carry case	1 pc

## TH-160 Portable Metal Hardness Tester



### APPLICATION:

The TH-160 portable metal hardness tester is used for non-destructive hardness testing of materials in laboratories, engineering sites, metal processing, chemical industries, and inspection environments. It supports 360° measurement, is compatible with multiple impact devices with automatic recognition, and includes built-in calibration software. Compact and portable, it features a high contrast, backlit display for low light conditions, offers internal data storage with optional PC transfer, and complies with ASTM A956-06 standards for Leeb hardness testing.

### FEATURES

- Non-destructive hardness testing of materials
- Most suitable for use in laboratories, engineering sites, metal processing, chemical industries, commodity inspection, and other testing fields
- Supports 360-degree measurement in any direction
- High-contrast segment code LCD display
- Compatible with seven types of optional impact devices for special applications, with automatic recognition
- Built-in calibration software
- High brightness LED backlight display for dim working environments
- Compact, portable, and highly reliable in harsh operating environments
- Resistant to vibration, shock, and electromagnetic interference
- Memory capacity of 100 groups, with 32 readings per group (optional data transfer to PC software)
- Conforms to ASTM A956-06 standard test method for Leeb hardness testing

### TECHNICAL PARAMETERS

Particulars	
Range	HLD(170~960) / HRC(17.9~69.5) / HRB(13.5~101.7) / HB(19~683) / HV(80~1042) / HS(30.6~102.6)
Hardness scales	Leeb(HL), Brinell(HB), Rockwell B(HRB), Rockwell C(HRC), Vickers(HV), Shore(HS)
Measuring materials	Steel & Cast Steel, Alloy Tool Steel, Stainless Steel, Grey Cast Iron, Ductile Iron, Cast Aluminium, Copper Zinc Alloy(Brass), Copper Tin Alloy(Bronze), Pure Copper
Accuracy	+/- 0.5%(HLD=800) / Indication repeatability: 0.8%(HLD=800)
Display	High contrast segment coded liquid crystal display
Data output	USB to PC without software (Optional)
Memory	100 groups (32 readings in each group)
Power	2 X AA batteries
Operating temperature	-10°C ~50°C, Humidity: 20%~85% RH.
Dimensions	150 X 74 X 33mm

### STANDARD DELIVERY

Particulars	Particulars	Particulars	
Main unit	1 pc	Nylon brush	1 pc
D-type impact device	1 pc	Small support ring	1 pc
Standard leeb hardness block	1 pc	Carry case	1 pc

## TH-170 Portable Metal Hardness Tester



### APPLICATION:

The TH-170 portable metal hardness tester is designed for precise hardness measurement across a wide range of applications. With its LEMO connector ensuring enhanced accuracy and compatibility with various optional impact devices, it is suitable for diverse testing requirements. Its wide measuring range, simple operation, low power consumption, and long standby time make it ideal for both field and laboratory hardness testing in industrial environments.

### FEATURES

- Measuring direction: any direction
- Display: 128 x 64 dot-matrix LCD with backlight and adjustable contrast
- Data memory: 100 groups of readings
- Power supply: 3 X AAA batteries
- Weight: 220g (standard configuration: host unit + D impact device)
- Dimensions: 155 X 68 X 27 mm

### MEASURING RANGE / MATERIALS

Material	System Hardness	Impact Devices (Optional)					
		D/DC	D+15	C	G	E	DL
Steel and Cast Steel	HRC	17.9-68.5	19.3-67.9	20.0-69.5	-	22.4-70.7	20.6-68.2
	HRB	38.4-99.6	-	-	47.7-99.9	-	37.0-99.9
	HRA	59.1-85.8	-	-	-	61.7-88.0	-
	HB	81-651	80-638	80-683	90-646	83-663	81-646
	HV	83-976	80-937	80-996	-	84-1042	80-950
	HS	32.2-99.5	33.3-99.3	31.8-102.1	-	35.8-102.6	30.6-96.8
Wrought Steel	HS	32.2-99.5	-	-	-	-	-
Cold Work Tool Steel	HRC	20.4-67.1	19.8-68.2	20.7-68.2	-	22.6-70.2	-
	HV	80-898	80-935	100-941	-	82-1009	-
Stainless Steel	HRB	46.5-101.7	-	-	-	-	-
	HB	85-655	-	-	-	-	-
	HV	85-802	-	-	-	-	-
Grey Cast Iron	HRC	-	-	-	-	-	-
	HB	93-334	-	-	92-326	-	-
	HV	-	-	-	-	-	-
Nodular Cast Iron	HRC	-	-	-	-	-	-
	HB	131-387	-	-	127-364	-	-
Cast Aluminum	HV	-	-	-	-	-	-
	HB	19-164	-	23-210	32-168	-	-
Brass	HRB	23.8-84.6	-	22.7-85.0	23.8-85.5	-	-
	HB	-	-	-	-	-	-
Bronze	HRB	-	-	-	-	-	-
	HB	60-290	-	-	-	-	-
Copper	HB	45-315	-	-	-	-	-

### STANDARD DELIVERY

Particulars	
Main unit	1pc
D-impact device	1pc
Standardized test block	1pc
Small support ring	1pc
Nylon cleaning brush	1pc
Calibration certificate	1pc
Manual	1pc

## TH-170 Plus Portable Metal Hardness Tester



### APPLICATION:

The TH-170 plus portable metal hardness tester is suitable for a wide range of hardness testing applications. It is capable of measuring the hardness of materials such as steel and cast steel, alloy steel, stainless steel, grey cast iron, nodular cast iron, aluminium casting alloys, copper zinc alloys (brass), and pure copper, making it ideal for both field and laboratory use.

### FEATURES

- Accuracy:  $\pm 6$  HLD ( $\pm 1.5$  HRC)
- 160 x 128 dot-matrix LCD display
- Automatic scale conversion: HB, HRB, HRC, HV, HSD, MPa
- Automatic recognition of impact devices (D, DC, DL, C, D+15, G)
- Measurement direction compensation function
- Supports wireless micro printer
- USB data upload (optional)
- Powered by 3 X AAA dry batteries with low power consumption design

### TECHNICAL PARAMETERS

Particulars	
Accuracy	$\pm 6$ HLD ( $\pm 1.5$ HRC)
Hardness scales	HRC, HRB, HB, HV, HSD, Mpa
Impact device	D Standard (Optional: DC, DL, C, D+15, & G)
Display	160 x 128 dot matrix LCD with backlight
Memory	1000 bars
Test direction	All-directional
Printers	Micro wireless printer
Data transfer	USB (Optional)
Power supply	3 X AAA batteries
Operating temperature	Temperature: $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$ , Humidity: 20% ~ 85% RH
Storage environment	Temperature: $-30^{\circ}\text{C} \sim 80^{\circ}\text{C}$ , Humidity: 5% ~ 95% RH
Dimensions	154 X 82 X 26mm
Weight	230g
Standards	GB/T17394, GB/T1172, ASTM A956 & DIN 50156

### STANDARD DELIVERY

Particulars	
Main unit	1pc
Impact-device D	1pc
Test Block	1pc
Mini IR printer	1pc
Charger	1pc
Manual	1pc
Calibration certificate	1pc
Small support ring	1pc
Clearing brush	1pc
Carry case	1pc

## TH-180 Pen Type Portable Metal Hardness Tester



### APPLICATION:

The TH-180 pen type portable metal hardness tester, with an integrated D impact device, is designed for convenient and accurate hardness testing without the need for cables. Equipped with an integrated impact direction sensor, it automatically delivers high accuracy in all 360° impact directions. The instrument displays results for all common hardness scales on a large, high-contrast screen, ensuring clear visibility in all working conditions. Easy calibration, a rechargeable Li-ion battery, and compliance with ASTM A956 make it suitable for reliable on-site and laboratory hardness testing across a wide range of industrial environments.

### FEATURES

- Self-contained unit (integrated D impact device); no cables required
- Integrated impact direction sensor
- High accuracy in any impact direction (360°), fully automatic
- Integrated display of results for all common hardness scales
- Large, high-contrast display for optimal viewing in all conditions
- Easy calibration
- Battery: rechargeable Li-ion
- Standards and guidelines applied: ASTM A956
- Operating environment: temperature –10°C ~ 50°C; humidity 20% ~ 85% RH
- Dimensions: 147 X 35 X 22 mm
- Weight: 100 g

### Materials

Steel and cast steel, Cold work tool steel, Stainless steel, Grey cast iron, Nodular cast iron, Cast aluminium alloys, Brass, Bronze, Copper

### Measuring Range

HLD (170~960), HRC (17.9~69.5), HB (19~683), HV (80~1042), HS (30.6~102.6), HRA (59.1~88), HRB (13.5~101.7)

### STANDARD DELIVERY

#### Particulars

Main unit	1pc
Charger	1pc
Test block	1pc
Cleaning brush	1pc
Carry case	1pc
Manual	1pc
Calibration certificate	1pc

## TH-270 Portable Metal Hardness Tester



### APPLICATION:

The TH-270 portable metal hardness tester is an advanced portable metal hardness tester offering high accuracy, a wide measuring range, and simple operation. It is ideal for testing individual components, die and mould surfaces, heavy parts such as rolling mill rolls, and in line production components like crankshafts and cylinder blocks. Suitable for most metals, it displays results in multiple hardness scales and features an infrared printer for easy on-site result printing. It conforms to ASTM A956-02. environments.

### FEATURES

- High-accuracy hardness testing with a wide measuring range
- Simple and user-friendly operation
- Suitable for testing individual parts or components in assembly machines
- Ideal for testing die and mould surfaces
- Designed for heavy components such as rolling mill rolls
- Suitable for in line production testing (e.g., crankshafts, cylinder blocks)
- Applicable to most metal materials
- Displays results in appropriate hardness scales
- Integrated infrared printer for easy online printing of results
- Conforms to the internationally accepted ASTM A956-02 standard

### TECHNICAL PARAMETERS

Particulars	
HL display range	0 ~ 999HLD
Accuracy	±6 HL(at 800HLD)
Repeatability	±6 HL
Testing direction	All-directional
Display	Large LCD with back light
Hardness Scales	HRB, HRC, HB, HV, HSD, MPa
Power	3 X AAA
Operating temperature	0°C ~ 50°C
Storage temperature	10°C ~ +60°C
Humidity	5% ~ 95% RH
Dimensions	150 X 80 X 24mm
Weight	200g

Particulars	
Min. weight of test object	5kg ( less than 5kg to 0.1kg must be coupled on solid support)
Min. thickness of test object	5mm (less than 5mm up to 3mm must be coupled)
Min. thickness of layers	0.8mm
Min. radius of curved surface	30mm (with optional support rings : 11mm)
Measuring range	HRC: 19.8~68.5, HB: 30 ~ 655, HV: 80 ~ 976, HRB: 13.5 ~ 99.6, HSD: 26.4 ~ 99.5, Mpa: 375 ~2639

### STANDARD DELIVERY

Particulars	
Main unit	1pc
Impact device D	1pc
Test block	1pc
Mini IR printer	1pc
Charger	1pc
Manual	1pc
Calibration certificate	1pc
Small support ring	1pc
Clearing brush	1pc
Carry case	1pc

## TH-370 Pro Portable Metal Hardness Tester



### APPLICATION:

The TH-370 pro portable metal hardness tester is designed for fast and reliable hardness testing in field and laboratory applications. It features a color capacitive touch screen, automatic scale conversion, intelligent Richter sensor identification, and direction compensation for accurate measurements. With large data storage, wireless on-site printing, USB connectivity, and lithium battery power, it is ideal for efficient metal hardness testing in industrial environments.

### FEATURES

- High accuracy ( $\pm 6HLD$ )
- Colour cap-active touch screen
- Automatic scale conversion
- HB,HRB,HRC,HV,HSD, Mpa
- Automatic identification of the Richter scale sensor (D,DC,DL,C,D+15,G)
- Direction compensation function of measurement data
- 2000 group data storage capacity
- Wireless micro printer for quick on spot testing reports
- USB data interface

### TECHNICAL PARAMETERS

Particulars	
Accuracy	$\pm 6HLD$
Conversion scale	HRC, HRB, HB, HV, HSD, Mpa
Impact device	D Type (Universal)
Display	Color cap-active touch screen
Data storage	2000 groups
Measurement direction	All-directional
Printer	Wireless micro printer
Data transmission	USB
Power	1400mAh Lithium-Ion rechargeable battery
Working condition	Temperature: -10°C~40°C; Humidity: 20%~85% RH
Storage condition	Temperature: -30°C~80°C; Humidity: 5%~95% RH
Approved standards	GB/T17394, GB/T1172, ASTM A956 & DIN50156

### MEASURING RANGE / MATERIALS

Material	HV	HB	HRC	HRB	HSD	Intensity
Steel or cast steel	83-976	140-651	19.8-68.5	59.6-99.6	26.4-99.5	375-2639
Cold rolled tool steel	80-900		21-67			
Stainless steel	85-802	85-655	20-62	47-102		
Cast iron		140-387				
Cast aluminium alloy		30-159				
Pinchbeck alloy (brass)		40-173		13.5-95.3		
Copper-tin alloy (bronze)		60-290				
Pure copper and low copper alloys		45-315				

### STANDARD DELIVERY

Particulars	Particulars	Particulars			
Main unit	1 pc	Charger	1 pc	Calibration certificate	1 pc
Impact device D	1 pc	Nylon brush	1 pc	Carry case	1 pc
Printer	1 pc	Small support ring	1 pc		
Test block	1 pc	Manual	1 pc		

## TH-420 Portable Metal Hardness Tester



### APPLICATION:

The TH-420 portable metal hardness tester is powered by a high performance ARM Cortex-M4 processor, is designed for efficient and reliable hardness testing across a wide range of applications. It displays all hardness scales at a glance, supports multiple impact devices with automatic identification, and ensures accurate testing through impact waveform monitoring. With USB data communication, optional Bluetooth printing, and battery operation, it is well suited for both on-site and laboratory metal hardness testing.

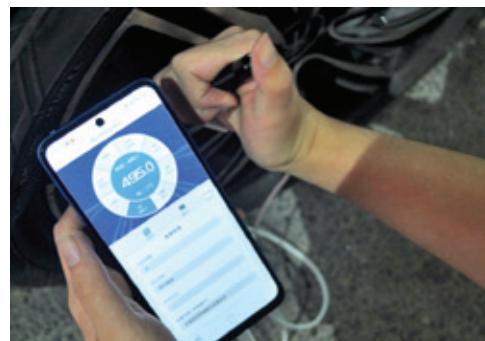
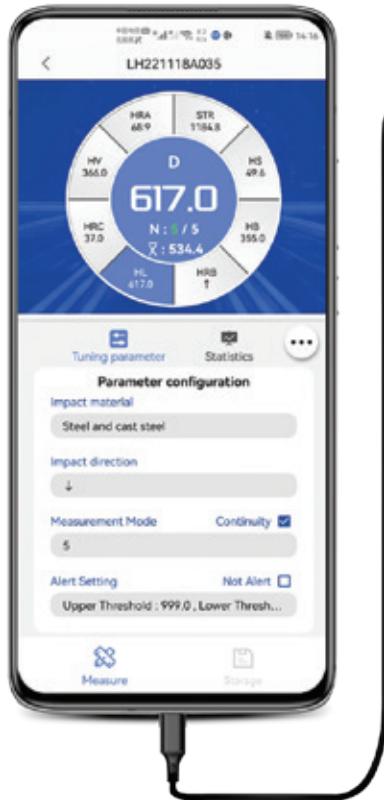
### FEATURES

- High-performance ARM processor with Cortex-M4 processing chip
- Values in all hardness scales displayed at a glance on the main interface
- Six impact devices available for special applications (optional)
- Automatic impact device probe identification with plug and play functionality
- Impact waveform benchmarking (PROCEQ type) to evaluate test effectiveness and the operating condition of the impact device
- Wide measuring range
- USB communication interface with data processing software
- Optional Bluetooth printer support
- Power source: 2 X AA batteries

### MEASURING RANGE / MATERIALS

Material	System Hardness	Impact Devices (Optional)					
		D/DC	D+15	C	G	E	DL
STEEL AND CAST STEEL	HRC	17.9-68.5	19.3-67.9	20.0-69.5	-	22.4-70.7	20.6-68.2
	HRB	59.6-99.6	-	-	47.7-99.9	-	37.0-99.9
	HRA	59.1-85.8	-	-	-	61.7-88.0	-
	HB	127-651	80-638	80-683	90-646	83-663	81-646
	HV	83-976	80-937	80-996	-	84-1042	30.6-96.8
	HS	32.2-99.5	33.3-99.3	31.8-102.1	-	35.8-102.6	30.6-96.8
WROUGHT STEEL	HS	32.2-99.5	-	-	-	-	-
CWT, ST	HRC	20.4-67.1	19.8-68.2	20.7-68.2	-	22.6-70.2	-
	HV	80-898	80-935	100-941	-	82-1009	-
STAINLESS STEEL	HRB	46.5-101.7	-	-	-	-	-
	HB	85-655	-	-	-	-	-
	HV	85-802	-	-	-	-	-
GC, IRON	HRC	-	-	-	-	-	-
	HB	93-334	-	-	92-326	-	-
	HV	-	-	-	-	-	-
NC, IRON	HRC	-	-	-	-	-	-
	HB	131-387	-	-	127-364	-	-
C, ALUM	HV	-	-	-	-	-	-
	HB	19-164	-	23-210	32-168	-	-
BRASS	HRB	23.8-84.6	-	22.7-85.0	23.8-85.5	-	-
	HB	-	-	-	-	-	-
BRONZE	HRB	-	-	-	-	-	-
	HB	60-290	-	-	-	-	-
COPPER	HB	45-315	-	-	-	-	-

## MHT-600 Mobile Generation Portable Metal Hardness Tester



### APPLICATION:

MHT-600 mobile generation portable metal hardness tester uses integrated sensing technology and a dedicated mobile app to replace traditional testing interfaces. It connects seamlessly with a smartphone to deliver accurate measurements, easy data storage, and convenient data sharing, greatly improving efficiency and ease of use in both field and laboratory applications.

### FEATURES

- The impact device establishes and processes signals while using a mobile phone for full scale display, distributed storage, and automatic data output
- Strong resistance to electromagnetic interference through full shielding technology, making it suitable for on-site hardness measurements
- Convenient report generation and report printing
- Supports user-defined watermarks with easy sharing across various social media platforms
- Supports the Android operating system
- Can connect to multiple mobile phones through a USB hub

### TECHNICAL PARAMETERS

Particulars	
Min. weight of test object	5kgs (less than 5 kgs to 0.1kg must be coupled)
Min. thickness of test object	5mm (less than 5mm up to 3mm must be coupled)
Min. thickness of hardness layers	0.8mm
Min. radius of curved surface	30mm (with optional support rings 11mm)
Measuring range	HLD 170-960 / HRC 17.9-68.5 / HB 30-655 / HV 80-976 / HRB 13.5-99.6 / HSD 32.2-99.5

### STANDARD DELIVERY

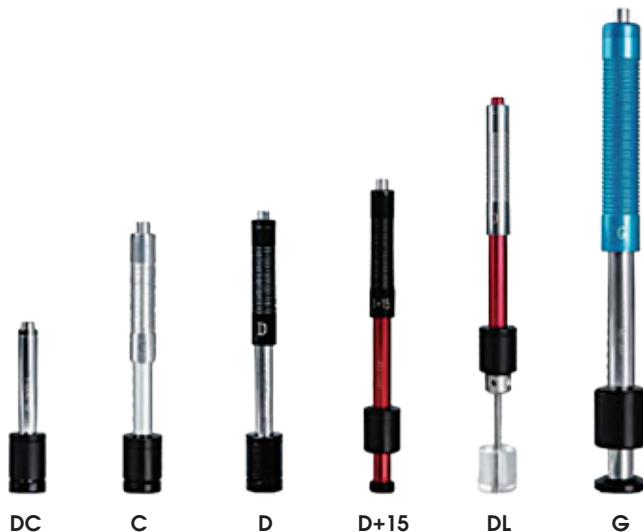
Particulars	Qty.
Software	1 pc
Data cable	1 pc
Impact device	1 pc
Calibration block	1 pc

## Special Purpose Impact Devices for Portable Hardness Testers

### OPTIONAL IMPACT DEVICES

The unit is supplied with the universal Impact Device D. Special impact devices are available for applications in extremely confined spaces or on components with unique geometries or surface finishes. These devices significantly expand the range of applications for the testing procedure. Each special impact device is fully compatible with the Impact Device D indication on the unit and is supplied as an optional accessory.

**COMPATIBLE HARDNESS TESTER MODELS:**  
TH-160, TH-170, TH-370 Pro, and TH-420.



Optional Impact Devices

Impact device	D	DC	DL	D+15	C	G
Application	For the majority of your hardness testing requirements.	Use in very confined spaces, e.g. in holes, cylinders or for internal measurements on assembled machines.	For measurements in extremely confined spaces or at the base of grooves.	For measurements in grooves or recessed surface.	Surface hardened components, coatings, thin walled or impact sensitive components (small measuring indentation).	Solid components. E.g. heavy castings and forgings.
Impact energy	11Nmm	11Nmm	11Nmm	11Nmm	3Nmm	90Nmm
Mass of impact body	5.5g	5.5g	7.3g	7.8g	3g	20g
Tip	Diameter	3mm	3mm	3mm	2.78mm	3mm
	Hardness	1600HV	1600HV	1600HV	1600HV	1600HV
	Material	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
Impact device	Length	147mm	86mm	202mm	162mm	141mm
	Diameter	20mm	20mm	20mm	20mm	30mm
	Weight	75g	50g	100g	80g	75g
Max. hardness of sample	940HV	940HV	950HV	940HV	1000HV	650HB
The average roughness of sample	Ra: 1.6µm	Ra: 1.6µm	Ra: 1.6µm	Ra: 1.6µm	Ra: 0.4µm	Ra: 6.3µm
Min. weight of sample	of compact shape	5 kg / 11lbs	5 kg / 11lbs	5 kg / 11lbs	1.5 kg / 3.3 lbs	15 kg / 33 lbs
	on solid support	2 kg / 4.5 lbs	2 kg / 4.5 lbs	2 kg / 4.5 lbs	0.5 kg / 1.1 lbs	5 kg / 11 lbs
	coupled on plate	0.05 kg / 0.2 lbs	0.05 kg / 0.2 lbs	0.05 kg / 0.2 lbs	0.02 kg / 0.045 lbs	0.5 kg / 1.1 lbs
Min. thickness of sample	uncoupled	25 mm / 0.98 inch	25 mm / 0.98 inch	25 mm / 0.98 inch	15 mm / 0.59 inch	70 mm / 2.73 inch
	coupled	3 mm / 0.12 inch	3 mm / 0.12 inch	3 mm / 0.12 inch	1 mm / 0.04 inch	10 mm / 0.4 inch
	surface layer thickness	0.8 mm / 0.03 inch	0.8 mm / 0.03 inch	0.8 mm / 0.03 inch	0.2 mm / 0.008 inch	
Indentation size on test surface with 300 HV, 30 HRC	diameter	0.54 mm / 0.21 inch	0.54 mm / 0.21 inch	0.54 mm / 0.21 inch	0.38 mm / 0.015 inch	1.03 mm / 0.04 inch
	depth	24 µm / 960 µinch	24 µm / 960 µinch	24 µm / 960 µinch	12 µm / 480 µinch	53 µm / 2120 µinch
Indentation size on test surface with 600 HV, 55 HRC	diameter	0.45 mm / 0.017 inch	0.45 mm / 0.017 inch	0.45 mm / 0.017 inch	0.32 mm / 0.012 inch	0.9 mm / 0.035 inch
	depth	17 µm / 680 µinch	17 µm / 680 µinch	17 µm / 680 µinch	8 µm / 2560 µinch	41 µm / 1640 µinch
Indentation size on test surface with 800 HV, 63 HRC	diameter	0.35 mm / 0.013 inch	0.35 mm / 0.013 inch	0.35 mm / 0.013 inch	0.30 mm / 0.011 inch	
	depth	10 µm / 400 µinch	10 µm / 400 µinch	10 µm / 400 µinch	7 µm / 280 µinch	

## UHT-910 Ultrasonic Portable Metal Hardness Tester



### APPLICATION:

The UHT-910 ultrasonic portable metal hardness tester is suitable for a wide range of industrial applications, including hardness testing of flange edges, gear roots, stamped parts, moulds, thin plates, surface hardened gear teeth, gear grooves, and tapered components. It is also ideal for testing axles, thin walled pipes and vessels, wheels, and turbine rotors. The instrument can be used for hardness testing of bit edges and welded parts, as well as for most ferrous and non-ferrous metals and their alloys in industrial production.

### FEATURES

- High hardness testing range up to 76 HRC
- High accuracy
- Supports 360-degree test direction
- High test speed: outputs results within 1 second; suitable for assembly-line testing
- Very small test indentation; requires a high power microscope to observe the indentation mark
- USB connectivity for data communication
- High data storage capacity
- 3.5-inch large display with 320 × 480 color graphic dot matrix
- Conforms to DIN 50159-1-2008; ASTM A1038-2005; JB/T 9377-2010; JJG 654-2013; JJF 1436-2013



### TECHNICAL PARAMETERS

Particulars	Technical Parameters			
Test range:	HV50-1599, HRC20-68, HB85-650, HRB41-100, HRA61-85.6, HS34.2-97.3, MPa255-2180			
Accuracy	$\pm 4\%$ HB, $\pm 1.5\%$ HR, HV please refer to the table below			
Hardness	Maximum allowable relative error of hardness tester %			
Value	HV10	HV5	HV2	HV1
<250HV	4	4	4	4
250HV-500HV	4	4	4	4
500HV-800HV	4	4	5	5
>800HV	4	4	6	6

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Probe (standard)	1 pc
Connectivity cable	1 pc
Charger	1 pc
Standard test block	1 pc
Manual	1 pc
Certificate	1 pc
Carry bag	1 pc

## UHT-920 Ultrasonic Portable Metal Hardness Tester



### APPLICATION:

The UHT-920 ultrasonic portable metal hardness tester is suitable for a wide range of industrial applications, including hardness testing of flange edges, gear roots, stamped parts, moulds, thin plates, surface-hardened gear teeth, gear grooves, and tapered components. It is also ideal for testing axles, thin walled pipes and vessels, wheels, and turbine rotors. The instrument can perform hardness testing on bit edges and welded parts, as well as measure hardness in deep holes with limited apertures, concave and convex surfaces with large radii, and irregular surfaces. Additionally, it is suitable for hardness testing of most ferrous and non-ferrous metals and their alloys used in industrial production, as well as thin coatings.

### FEATURES

- Main hardness scale: HV; convertible hardness scales: HRC, HRA, HRB, HBW
- In multi-point calibration mode, any hardness scale can be selected
- Testing range: HV 50–1599, HRC 20–68, HB 85–650
- Test direction: supports 360° testing, provided the angle between the indenter and the test surface does not exceed 90° ± 3°
- Power: 3000 mAh rechargeable lithium-Ion battery
- Endurance: up to 10 hours of continuous operation
- Test data can be exported to a computer
- Standards: GB/T 34205-2017; DIN 50159-1-2008; ASTM A1038-2005; JB/T 9377-2010; JJF 1436-2013
- High accuracy: ±4% HV, ±4% HB, ±1.5 HR
- Tiny test indentation: requires a high-power microscope for observation
- High test speed; results displayed within 1 second
- New industrial design with innovative styling; comfortable grip and high-quality craftsmanship
- A large full-screen display with menu-driven operation; minimal keys for simple and convenient use
- 3.5-inch LCD screen with 320 × 480 color graphic dot matrix, clear fonts, graphics, and rich information display
- Data storage capacity: 50 data sets
- For materials with different elastic constants, only single-block calibration is required
- Suitable for easy testing on assembly lines
- Optional probes available: 2 kgf, 3 kgf, 5 kgf, and 10 kgf

### TECHNICAL PARAMETERS

Particulars				
Test range:	HV50-1599, HRC20-68, HB85-650, HRB41-100, HRA61-85.6, HS34.2-97.3, MPa255-2180			
Accuracy	±4%HB, ±1.5HR, HV please refer to the table below			
Hardness	Maximum allowable relative error of hardness tester %			
Value	HV10	HV5	HV2	HV1
<250HV	4	4	4	4
250HV-500HV	4	4	4	4
250HV-500HV	4	4	5	5
>800HV	4	4	6	6

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Probe (standard)	1 pc
Connectivity cable	1 pc
Charger	1 pc
Standard test block	1 pc
Manual	1 pc
Certificate	1 pc
Carry bag	1 pc

## HL-112 Ultrasonic Hardened Layer Depth Tester



Bearing measurement



Circular axis measurement



Crankshaft measurement



Wheel measurement

### APPLICATION:

The HL-112 ultrasonic hardened layer depth tester is used for non-destructive evaluation of hardened layer depth, significantly improving testing efficiency by eliminating the need for conventional hardness or microscopic testing. It is widely applied for the inspection of gears, shafts, and critical components across automotive, wind turbine, construction, agricultural, and general industrial machinery industries.

### FEATURES

- Non-destructive measurement of induction-hardened layer depth
- Measures hardened layer depth without cutting, eliminating the need for hardness or microscopic testing
- Suitable for medium and high-frequency quenching applications
- Intelligent gating for accurate layer location identification, with color B-scan display
- Repetition frequency range of 10-10,000 Hz, enabling high-speed detection, real time smooth waveforms, and easy acquisition of optimal results
- Customizable probes available to suit various on-site working conditions
- High-definition, high-brightness display with a user-friendly operating interface
- All measurement results, parameters, and waveforms can be stored directly, with automatic report generation
- Bluetooth wireless transmission supports on-site report generation and printing via a mobile app
- IP65 protection (dust and water resistant)
- Sturdy and durable construction

### TECHNICAL PARAMETERS

Particulars	
Measurement range	0.5-40mm
Test method	Immersion focused ultrasound; Unfocused ultrasound
What can be tested	various types of cast work pieces
Optional available transducers	1. Single Crystal Immersion transducer 2. Single Crystal Unfocused transducer 3. Dual Crystal Unfocused transducer
Test frequency	0.2-35Mhz
Test repeatability	±0.1mm
High temperature test	60°C ~ 100°C, Humidity: 20% ~ 90%RH
Pulse repetition frequency	10-10,000Hz (adjustable)
Dynamic range	≥38dB
Vertical linearity error	≤1.5%
Horizontal linearity error	≤0.2%
Resolution	>40dB (5P14)
Testing sensitivity	>66dB (flat-bottomed hole deep 200mm ø2)
Rejection	0~80%, without affecting the linearity and gain
Gate	Wave-getting gate, Wave-losing gate, Single gate, double gate
Power supply	DC 9V, AC100 to 240V, 50/60Hz
Pulse amplitude	100V, 200V, 300V, 400V, 500V
Pulse width	(0.03~0.51) μs
Transducer damping	50Ω, 100Ω, 150Ω, 400Ω
Wave method	Positive Half-wave, Negative Half-wave, Full-wave, RF
Usage cost	Few consumable parts, low cost

## TH-250 PLUS Portable Coating Thickness Gauge



### APPLICATION:

The TH-250 plus portable coating thickness gauge is designed for non-destructive measurement of coating and paint thickness on various substrates. It is integrated with Fe, NF, and Fe+Zn probes for accurate and versatile testing.

The Fe probe, based on the magnetic induction principle, measures non-magnetic coatings such as chrome, copper, zinc, varnish, or rubber on magnetic metal substrates.

The NF probe, using the eddy current principle, measures insulating coatings such as paint, anodizing, or ceramics on non-ferrous substrates like aluminium, copper, or brass.

The Fe+Zn probe automatically detects the presence of a galvanized layer on ferromagnetic materials for quick and precise evaluation.

TH-250 Plus is an ideal tool for coating inspection, quality control, and material testing across a wide range of applications.

### FEATURES

- Portable, one hand use
- Fe&NF and Fe+Zn Probe
- Color dot matrix screen with backlight
- Single and continuous measuring modes

### TECHNICAL PARAMETERS

Particulars	
Probe	Fe&NF and Fe+Zn
Dimensions	124 X 31 X 23mm
Measurement range	0 ~ 1500 $\mu$ m or 0 ~ 59.1mil
Minimum measurement area	6 x 6mm
Thinnest substrate thickness	0.4mm
Operating temperature	Temperature -20°C ~ 40°C, Humidity: 20% ~ 90%RH (Keep away from areas with high magnetic field strength )
Accuracy	0~ 1000 $\mu$ m: $\pm$ (3%+1 $\mu$ m) or $\pm$ (3%+0.04mil); ≥1000 $\mu$ m: $\pm$ (5%+1 $\mu$ m) or $\pm$ (5%+0.04mil)
Unit	$\mu$ m, mil

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Calibration plates	2 pc
Carry pouch	1 pc

## TT-260 Portable Coating Thickness Gauge (Extended Probe)

### APPLICATION:

The TT-260 portable coating thickness gauge is used for accurate measurement of coating thickness on metallic substrates using magnetic induction and eddy current principles. It is ideal for measuring chrome plating on steel and copper, as well as other non-magnetic and conductive coatings, in industries such as automotive, electroplating, metal finishing, manufacturing, and quality control. The instrument supports both on-site inspection and batch testing, with statistical analysis and direct reporting, ensuring reliable process monitoring and compliance with coating thickness standards.

### FEATURES

- Two measurement methods: magnetic induction (F) and eddy current (N)
- Measurement of chrome plating on copper using the N probe
- Measurement of chrome plating on steel using the F probe
- Six types of optional probes available for various applications
- Two measurement modes: continuous and single
- Five statistical parameters: mean value, maximum value, minimum value, number of measurements (No.), and standard deviation (S. DEV)
- Memory capacity of up to 495 readings
- Direct measurement mode and batch statistics mode (APPL/BATCH)
- Direct printout of statistical values via the built-in printer
- Data viewing software for PC connection via USB
- Low battery indication
- Two power-off modes: manual and automatic



### 6 OPTIONAL PROBES AVAILABLE

#### TECHNICAL PARAMETERS

Particulars	
Measuring range	
Probes available	
Tolerance	Refer to the table below
Minimum resolution:	
Measuring condition	
Operation language	English
Standards	DIN, ISO, ASTM, BS
Calibration	Zero and foil calibration
Statistics	Number of measurements, mean, standard deviation, maximum and minimum of 3000 readings
Data memory	495 readings
Limits	Adjustable with alarm
Interface	USB
Working temperature	0°C~50°C, Humidity: 20% ~ 90% RH
Power Supply	Lithium-Ion rechargeable battery
Dimensions	210 X 86 X 37mm
Weight	530g

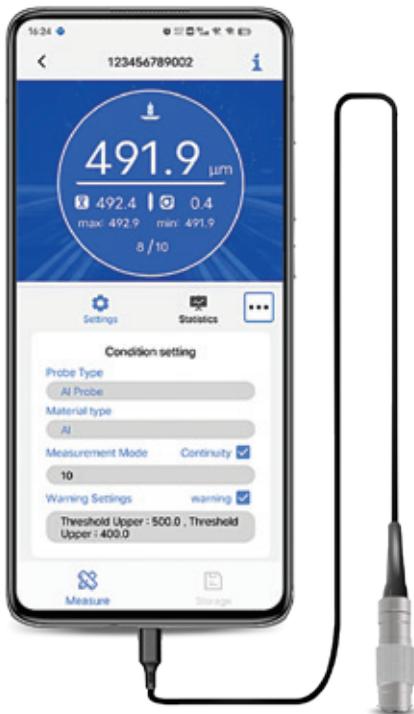
#### STANDARD DELIVERY

Name	Qty.
Main unit	1 pc
Calibration foil set	1 pc
Substrate	1 pc
Charger	1 pc
Probe (F/NF)	2 pc
Instruction manual	1 pc
Certificate of calibration	1 pc
6 optional probes	1 pc

#### OPTIONAL PROBE AND MEASURING RANGE

Particulars	F400	F1	F1/90°	F10	N1	CN02
Operating principle			Magnetic induction		Eddy current	
Measuring range (μm)	0-400	0-1250	0-10000		0 to 1250 μm 0 to 40 μm (for chrome Plate on copper)	10~200
Low range resolution (μm)	0.1	0.1	10		0.1	1
Accuracy	One-point calibration (μm)	±(3%H+1)		±(3%H+10)	±(3%H+1.5)	±(3%H+1)
	Two-point calibration (μm)	±[(1~3)H%+0.7]	±[(1~3)H%+1]	±[(1~3)%H+10]	±[(1~3)%H+1.5]	-
Measuring conditions	Min curvature of the min area (mm)	Convex	1	1.5	Flatten	Flatten
	Diameter of the min area (mm)	ø3	ø7	ø7	ø40	ø5
	Critical thickness of substrate (mm)	0.2	0.5	0.5	2	unlimited

## MCT-300 Mobile Generation Portable Coating Thickness Gauge



### APPLICATION:

The MCT-300 mobile generation portable coating thickness gauge is designed for convenient and accurate measurement of coating thickness using a smart sensor probe connected to a mobile phone via a dedicated application. It enables precise on-site inspection, data storage, and result analysis without the need for a traditional host unit. The system supports easy data sharing and interconnection across platforms, making it ideal for quality control, surface treatment inspection, and coating evaluation in manufacturing, electroplating, automotive, and industrial maintenance applications.

### FEATURES

- The sensor probe acquires and processes signals while using a mobile phone for full standard display, distributed storage, and automatic data output
- Strong resistance to electromagnetic interference through full shielding technology, making it suitable for on-site measurements
- Convenient report generation and easy report printing
- Supports user-defined watermarks with easy sharing across various social media platforms
- Operates on Android mobile phones
- Can connect to multiple devices via a USB hub



### TECHNICAL PARAMETERS

Particulars		
Working principle	Magnetic induction	Eddy current
Probe type	F	N
Measuring range (μm)	0 ~ 1500	0 ~ 1500 Chromium plating on copper 0-40
Lower limit of resolution (μm)	0.1	0.1
Indication Value		
Zero calibration (μm) (H refers to the actual thickness of the measured object)	±(3%H + 1)	±(3%H + 1.5)
Two point calibration (μm) (H refers to the actual thickness of the measured object)	± [(1 ~ 3)% H + 1]	± [(1 ~ 3)% H + 1.5]
Indication Value		
Minimum radius of curvature (mm)	Convex 3	Convex 3
Diameter of minimum area (mm)	Ø7	Ø7
Critical thickness of matrix (mm)	0.5	0.3

### FACTORS AFFECTING MEASUREMENT ACCURACY

(▲ indicates influence)

Factors / Method	Magnetic Induction	Eddy Current
Magnetic properties of base metal	▲	
Electrical properties of base metal		▲
Base metal thickness	▲	▲
Edge effect	▲	▲
Curvature	▲	▲
The deformation	▲	▲
Surface roughness	▲	▲
Magnetic field	▲	
Attached substance	▲	▲
Pressure of the probe	▲	▲
Direction of the probe	▲	▲

### STANDARD DELIVERY

Name	Qty.
Probe with Type-C connector	1 pc
Software	1 pc
Calibration plates	2 pc

## TR-110 Portable Surface Roughness Tester

### APPLICATION:

The TR-110 portable surface roughness tester is used for accurate surface roughness inspection of both metallic and non-metallic materials. With its wide measurement range, stable performance, and portable design, it is well suited for on-site and workshop use in machining, manufacturing, quality control, and surface finishing applications.

### FEATURES

- Optimized electronic circuit and transducer structure with highly integrated power, drive, and display design
- Selectable roughness parameters: Ra, Rz, Rq, and Rt
- Capable of measuring external cylindrical surfaces, flat surfaces, conical surfaces, and grooves with length and width greater than 80 x 30 mm
- Metal casing for enhanced strength and resistance to electromagnetic interference
- High-speed DSP processor for fast response and accurate measurement
- OLED color display with high brightness, wide viewing angle, and wide operating temperature range, suitable for all working environments
- Rechargeable lithium battery with long operating time and extended service life
- USB port for PC connection and battery charging
- Clear display providing comprehensive measurement information
- Battery level indication
- Auto power-off function with low power consumption design
- Transducer equipped with a protective gate to ensure measurement accuracy



### TECHNICAL PARAMETERS

Particulars
Parameters (μm): Ra, Rz, Rq, Rt
Stroke length (mm): 6
Sample length (mm): 0.25, 0.80, 2.50
Evaluation length (mm): 1.25, 4.0
Measuring range (μm): Ra: 0.05 ~ 10.0; Rz: 0.1 ~ 50
Error: ± 15%
Variability: <12%
Contacting pin round diameter: 10 μm ± 1 μm
Degrees: \$
Power: Lithium-Ion rechargeable battery
Size: 106 X 70 X 24 mm
Weight: 200g
Operating temperature: 20°C ~ 40°C
Relative humidity: <90%

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Calibration block	1 pc
AD/DC adapter and data line	1 pc
Testing support board	1 pc

## TR-210 Portable Surface Roughness Tester

### APPLICATION:

The TR-210 portable surface roughness tester is used for precise evaluation of surface quality in machining and manufacturing processes. It measures multiple roughness parameters in compliance with ISO 4287, making it suitable for inspection of metal components, precision parts, and finished surfaces. With its high-precision inductive sensor, stable performance, and long battery life, the TR 210 is ideal for on-site inspection, quality control, and laboratory use in automotive, aerospace, tooling, and general industrial applications.

### FEATURES

- Seven roughness parameters: Ra, Rz, Rq, Rt, Rp, Rv, and Rc
- High-precision inductive sensor
- Gaussian filter
- Complies with ISO 4287
- 256 X 64 OLED display
- Built-in lithium-Ion battery with charging control circuit, high capacity, no memory effect, and continuous working time of more than 15 hours
- Aluminium moulded body design for durability and improved resistance to electromagnetic interference



### TECHNICAL PARAMETERS

Particulars	
Parameters	RA, RZ, RQ, RT, RP, RV, RC
Range	160 μm
Indication variability	≤6%
Resolution	0.001 μm
Probe type	Inductive
Probe stylus radius / angle	5 μm
Probe stylus material	Diamond
Measuring force	4mN(0.4gf)
Measuring unit	Um/Uin
Sensor angle	90°
Longitudinal radius of guide head	45mm
Max. driving length	6mm
Traverse speed	λ1: cut off = 0.25mm, Vt = 0.135mm/s λ2: cut off = 0.8mm, Vt = 0.5mm/s λ3: cut off = 2.5mm, Vt = 1mm/s
Power	Lithium-Ion rechargeable battery

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Calibration block	1 pc
AD/DC adapter and data line	1 pc
Testing support board	1 pc

## TR-310 Portable Surface Roughness Tester



### APPLICATION:

The TR-310 portable roughness tester is used for measuring surface roughness on both metallic and non-metallic materials across a wide range of applications. It is suitable for inspecting flat, cylindrical, and sloped surfaces, making it ideal for quality control, machining, and production environments. With support for multiple roughness parameters, mobile app connectivity, and USB data output, the TR-310 enables efficient evaluation, recording, and analysis of surface finish in both industrial and laboratory settings..

### FEATURES

- Measures surface roughness of both metallic and non-metallic surfaces
- Selectable parameters: Ra, Rz, Rq, Rt
- External calibration via keypad
- High-speed DSP microprocessor
- Dual OLED displays
- USB port for data output
- Wide measuring range suitable for most materials
- Suitable for flat, cylindrical, and sloped surfaces
- Mobile phone app support

### TECHNICAL PARAMETERS

Particulars	
Recharge parameter	Ra, Rz, Rt, Rq
Tracing length	6mm
Tracing speed	1.0mm/sec
Cut-off lengths	0.25mm/ 4.0mm/ 5.0mm
Measuring range	Ra, Rq: 0.05~10.0μm; Rz, Rt: 0.1~50μm
Accuracy	0.01m
Repeatability	<12%
Power	Lithium-Ion rechargeable battery
Recharging time	3 hours
Operating temperature	-20°C ~ 40°C
Relative humidity	<90%
Dimensions	110 X 81 X 32mm
Weight	150g

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Calibration block	1 pc
Calibration support	1 pc
USB cable	1 pc
Instruction manual	1 pc

## TR-410 Mini Portable Roughness Tester



### APPLICATION:

The TR-410 mini portable roughness tester is a new generation surface roughness measurement instrument developed by our company. It features high measurement accuracy, a wide measuring range, simple operation, excellent portability, and stable performance. The instrument is suitable for evaluating a wide variety of metal and non-metal machined surfaces. Designed as a compact, pocket-sized device with an integrated sensor, the TR 410 enables long-duration measurements and is especially convenient for on-site use in production environments. It can simultaneously display measurement values, surface waveforms, and parameter conversions, ensuring efficient and comprehensive surface analysis in a single operation..

### FEATURES

- Durable aluminium die-cast housing with excellent resistance to electromagnetic interference, designed to meet modern industrial aesthetics
- High-performance, low-power ARM processor ensures fast data processing and accurate measurement calculations
- 2.4-inch IPS TFT LCD display with high brightness and wide viewing angles, suitable for use in various environments
- Built-in high-capacity rechargeable lithium-ion battery with charge control circuitry; no memory effect and long operating time on a single charge
- Automatic power-off function combined with low-power hardware and software design enables extended operation, ideal for field applications
- Sensor probe equipped with a protective cover to prevent damage and ensure consistent measurement accuracy

### TECHNICAL PARAMETERS

Particulars	
Measurement parameters ( $\mu\text{m}$ )	Ra, Rz, Rq, Rt, Rp, Rv, Rc
Stroke length(mm)	5.6
Sampling length(mm)	0.25, 0.80, 2.50
Evaluation length(mm)	1.25, 4.0
Measuring range ( $\mu\text{m}$ )	Ra; Rq; 0.05~10.0; Rz, Rt, Rp, Rv, Rc; 0.1~50
Indication error	$\pm 10\%$
Repeatability	<6%
Angle of sensor stylus tip	$90^\circ \pm 5^\circ$
Tip arc radius	$10 \mu\text{m} \pm 1 \mu\text{m}$
Sensor guide head pressure	$\leq 0.5\text{N}$
Power	Lithium-Ion Rechargeable Battery
Dimensions	73 X 28 X 62 mm
Weight	220g
Working environment conditions	Temperature: -20°C~40°C Relative humidity: < 90% No Vibration and corrosive medium around

### STANDARD DELIVERY

Particulars	Qty.
Roughness tester host	1 pc
Test block	1 pc
Manual	1 pc
Certificate	1 pc
Charging cable	1 pc
Instrument box	1 pc

## TR-200 Portable Surface Roughness Tester



### APPLICATION:

The TR-200 portable surface roughness tester is designed for precise surface finish evaluation across a wide range of industrial applications. With the ability to measure up to 13 roughness parameters and display roughness values, profiles, and curves, it is ideal for quality control, inspection, and process monitoring in machining and manufacturing environments. Its wireless operation, mobile and computer connectivity, Bluetooth printing, data storage, and automatic power-off features make it especially suitable for on-site inspections and laboratory use where accuracy, efficiency, and convenience are essential.

### TECHNICAL PARAMETERS

Particulars	
Parameters:	Ra, Rz, Ry, Rp, Rm, Rt, R3z, Rmaz, Sk, S, Sm, tp
Maximum measuring range	320 $\mu\text{m}$
Accuracy:	$\pm 10\%$
Resolution (Ra):	0.001 $\mu\text{m}$
Probe:	Type: inductive Stylus radius/range: 5 $\mu\text{m}/900$ Stylus material: diamond
Measuring force:	0.4mN
Measuring unit:	$\mu\text{m}/\mu\text{in}$
Cut off:	0.25/0.8/2.5mm
Number of cut-offs:	1 to 5
Traverse speed:	0.5mm/s, 1mm/s
Memory:	100 measurement results

Particulars	
Output:	Bluetooth/USB
Power:	Lithium-Ion rechargeable battery
Dimension:	140 X 52 X 48mm
Weight:	440g
Optional accessory:	Extension rod(code ER 100), Curved surface probe (code RS 110), Groove probe 3mm (code RS 130), Deep groove probe 10mm (code RS 131), Advanced software (Presurf-10), Test stand (TS 620), Printer (code PRT100, 200, 300)

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Sensor case	1 pc
Standard Sensor	1 pc
Data cable (charging cable)	1 pc
Roughness standard test block	1 pc
5V/2A charger	1 pc
Manual	1 pc
Certificate	1 pc
Instrument box	1 pc

## TR-220 Portable Surface Roughness Tester

### APPLICATION:

The TR-220 portable surface roughness tester is designed for accurate and reliable surface roughness inspection across a wide range of industrial applications. With its compact mechatronic design and compliance with international standards such as ISO, DIN, ANSI, and JIS, it is ideal for use in automobile manufacturing, machining, metal processing equipment, mould casting, and printing and packaging industries. Its high accuracy, wide measurement range, portability, and stable performance make it suitable for both shop floor and laboratory use, while optional sensors allow effective measurement of curved surfaces, small holes, and deep grooves.

### FEATURES

- Wide measurement range with multi-parameter capability; measures 14 roughness parameters: Ra, Rz = Ry (JIS), Rq, Rt = Rmax, Rp, Rv, R3z, R3y, Rs, Rsk, Rku, Rsm, Rmr
- Compact mechatronic design; small size, lightweight, easy to carry and operate
- Stylus with semi-enclosed guide improves measurement stability and range
- Gaussian, D-P, RC, and PC-RC filtering methods
- Complies with ISO, DIN, ANSI, and JIS standards
- Informative and intuitive display showing all parameters and waveforms
- 2.0-inch IPS LCD with high brightness and wide viewing angle, suitable for various environments
- 1000 mAh rechargeable lithium-ion battery for extended operation without performance loss
- Large data storage capacity, storing up to 500 sets of raw data and waveforms
- Automatic power-off and low-power hardware/software design for long on-site working time
- Supports connection to a dedicated Bluetooth printer for real time report printing
- Sensor protection mechanism effectively safeguards the stylus and ensures measurement accuracy
- High-performance ARM microprocessor with high precision operational amplifiers and ADCs for fast, accurate data processing
- Supports waveform display and rate curve analysis

### TECHNICAL PARAMETERS

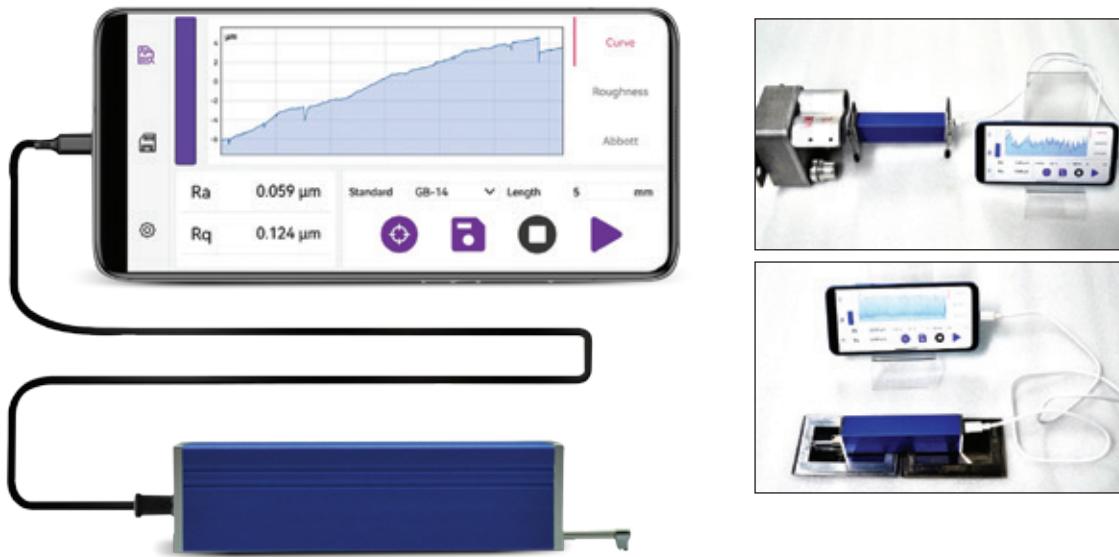
Particulars			
Detection principle	inductive	Maximum drive travel	≤ 17.5mm
Maximum measuring range	320 μm	Maximum range	Ra, Rq: 0.005 μm ~ 320 μm; Rz, Ry, Rt, Rp, Rm: 0.02 μm ~ 320 μm; Rsm, Rs: 1mm; Rmr: 0~100%
Needle tip radius	5 μm	Accuracy	0.001 μm;
Needle tip material	Diamond	Value error	≤±8%
Measured force	≤4mN	Value Variability	≤ 5%
Needle stylus angle	90°	Power	Lithium-Ion rechargeable battery / external power adapter
Leader longitudinal radius	45mm	Output	Bluetooth/USB
Parameters measurement	Ra, Rq, Rz, Rt, Rp, Rv, RS, RSm, RsK, Rku, RPC, Ry, Rmax, R3z		
Sample length	0.25mm, 0.80mm, 2.50mm		
Evaluation length	IL~5L optional (L is the sample length)		
Size	156 X 55 X 46.5mm		
Weight	398g		
Operating temperature	Temperature: -20°C ~ 40°C; Relative humidity: <90%, no vibration, no corrosive medium around		
Optional accessories	Curved surface sensor, small hole sensors, deep groove sensors, extension rods, Bluetooth printers, measuring platforms		



### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Sensor case	1 pc
Standard sensor	1 pc
Data cable (charging cable)	1 pc
Roughness standard test block	1 pc
5V/2A charger	1 pc
Manual	1 pc
Certificate	1 pc
Instrument box	1 pc

## MSJ-210 Mobile Generation Portable Surface Roughness Tester



### APPLICATION:

The MSJ-210 mobile generation portable surface roughness tester is designed for convenient and efficient surface roughness measurement in modern industrial and laboratory environments. By connecting intelligent sensors to a mobile phone via a dedicated app, it enables roughness testing, data storage, analysis, and sharing directly on the mobile platform. This makes it ideal for on-site inspections, production quality control, research laboratories, and field applications where portability, fast data access, and multi-platform connectivity are essential.

### TECHNICAL PARAMETERS

Particulars	
<b>Sensor</b>	
Detection principle	Inductive type
Maximum measuring range	200μm
Stylus radius	5μm
Stylus material	Diamond
Measuring force	4mN (0.4gf)
Stylus angle	90°
Guide head longitudinal radius	45mm
Parameters measurement	Ra75, Rq, Rp, Rv, Rc, Rt, S, R3z, PPI, Ra, Rsk, Rku, Ry, Sm, R△a, R△q, Rz, Pc, Rλq, Ir, RSm, Rz94, RPc, Rz.l, Rpm, HSC, Rk, Rpk, Rvk, Mr1, Mr2, V0, K, A1, A2, Rmr(i), Rmr2(i), Rdc(i)

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Sensor / data cable	1 pc
Adjustable stand	1 pc
Roughness standard test block	1 pc

## TR-540 Portable Surface Roughness Tester



### APPLICATION:

The TR-540 portable surface roughness tester is widely used in machining, aerospace, automotive parts, communications, power generation, electronics, and other industrial sectors. It is also suitable for use in universities, scientific research institutes, technical supervision departments, and forensic laboratories.

### FEATURES

- ARM processor for control and data processing, offering high speed and low power consumption
- Real-time operating system with support for multi-task parallel processing
- Wide measurement range with multiple parameters
- 128 × 64 high-brightness OLED display with self-illumination and full viewing angle
- Clear and intuitive display of measurement values, parameters, and graphics
- Built-in rechargeable lithium-ion battery
- Low battery indicator to prompt timely charging
- Large data storage capacity: internal FLASH memory stores up to 200 groups of original data and waveforms
- Expandable storage via micro SD card, up to 16 GB
- Compatible with a wide range of optional sensors, including standard, small hole, groove, and deep groove sensors
- Optimized sensor structure for stable and reliable measurements
- USB interface for connection to a computer or printer, supporting embedded software online upgrades
- Compliant with ISO, DIN (Germany), JIS (Japan), and ANSI standards

### TECHNICAL PARAMETERS

Particulars	
Parameters	R <sub>a</sub> , R <sub>z</sub> , R <sub>y</sub> , R <sub>q</sub> , R <sub>t</sub> , R <sub>p</sub> , R <sub>v</sub> , R <sub>max</sub> , R <sub>3z</sub> , R <sub>Sk</sub> , R <sub>S</sub> , R <sub>Sm</sub> , R <sub>mr</sub>
Range of measurement	± 20µm, ± 40µm, ± 80µm
Maximum display resolution	0.001µm
Filter	RC, PC-RC, GAUSS, D-P
Length of sampling	0.25mm, 0.8mm, 2.5mm
Maximum drive stroke	17.5mm / 0.7 inch
Minimum drive stroke length	1.3mm 0.052 inch
Error of indication	≤ ± 10%
Value variability	≤ ± 6%
Display	128 X 64 OLED Lattice liquid crystal display
Power	Lithium-Ion rechargeable battery
Dimensions	140 X 52 X 48mm
Weight	440g

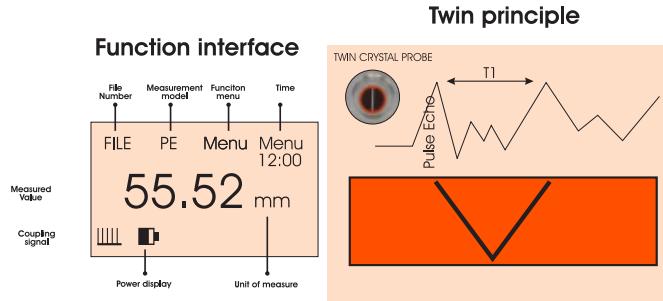
### SENSOR

Sensor performance index	
Principle of detection	Inductance type
Maximum measuring range	160µm
Radius of stylus tip	5µm
Needle tip material	Diamond
Measuring force	4mN(0.4gf)
Stylus tip angle	90°
Radius of skid curvature	45mm

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Standard sample plate	1 pc
Sensor case	1 pc
Standard sensor	1 pc
Power adaptor	1 pc
Packing list	1 pc
Calibration certification	1 pc

## TT-100 Pro/ TT-100 Pro Plus Portable Ultrasonic Thickness Gauge (With Data Transfer)



### APPLICATION:

The TT-100 PRO/TT-100 PRO Plus portable ultrasonic thickness gauge operates on the principle of pulse reflection ultrasonic measurement and is widely used for thickness inspection across various industries. It is suitable for applications in the petroleum and chemical industries, metallurgy, shipbuilding, aviation, aerospace, and other industrial fields where accurate material thickness measurement is required.

### FEATURES

- Supports PE and VERTI measurement modes for accurate thickness measurement of various materials
- Utilizes a high-precision timing chip and V-PATH calibration model, providing a wide measurement range and high accuracy
- Display resolution: 0.01 mm
- Adjustable LCD contrast with LED backlight for clear viewing in various lighting environments

### TECHNICAL PARAMETERS

Particulars		Particulars	
Working theory	Ultrasonic	Testing arrange	0.65 - 500 mm
Test model	PE/VERI	Display size	2.0" FSTN, 128 x 64 lattice, LED
Resolution	0.01mm	Velocity range	1000-9999m/s
Testing material	Steel, Iron, Glass, Plastic, Aluminium	Testing system	Metric/English
Storage capacity	500 groups data	Operating temperature	0°C ~ 50°C
Relative humidity	≤90%	Power	2 X AA batteries
Size	150 x 71 x 33mm	Weight	160g
Display	0.01mm		

### OPTIONAL PROBE

Probe	Features	Frequency (MHz)	Diameter (mm)	Testing range (mm)	Allowed Temperature
5M standard probe	Universal	5	10	1.0 ~ 250.0	
2M coarse grain probe		2	12	2.0 ~ 500.0	-10°C ~ 60°C
7M small diameter probe	Special	7.5	6	0.65 ~ 35.0	
H2M high temperature probe		3	12	4.0 ~ 80.0	-10°C ~ 350°C

### STANDARD DELIVERY

Particulars	Particulars	Particulars
Main unit	1 pc	AA battery
Probe 5MHz 10 Dia	1 pc	Instruction manual
Coupling agent	1 pc	Calibration certificate

## TT-200 Portable Ultrasonic Thickness Gauge (With Through Coat Measurement Function)

### APPLICATION:

The TT-200 portable ultrasonic thickness gauge is a multi-mode ultrasonic instrument capable of measuring the thickness of various materials with a high degree of accuracy. Its multi-mode functionality allows users to switch between pulse-echo mode for standard thickness measurement and echo-echo mode, which eliminates the influence of paint or coating thickness from the measurement. In addition, the TT-200 features a dedicated testing function to detect adulteration and identify the purity of precious metals. It is primarily used for the identification and inspection of gold bars, silver bars, gold coins, silver coins, and other precious metals.

### FEATURES

- Multi-mode operation: pulse-echo mode and echo-echo mode
- Capable of measuring a wide range of materials, including metals, plastics, ceramics, composites, epoxies, and glass
- Various probes (transducers) available to meet special application requirements
- Multiple measurement modes (P-E, I-E, and TEST) for accurate thickness measurement; I-E mode enables through-coating measurement
- Equipped with a high-precision timing chip and V-path calibration model, providing a wide measurement range and high accuracy
- Measurement range in pulse-echo mode: 0.65 to 500 mm in steel
- Maximum through-coating thickness: 1.5 mm
- Base thickness range in echo-echo mode: 1 to 75 mm in steel
- Sound velocity range: 1000 to 9999 m/s
- Resolution: 0.1 mm / 0.01 mm
- Measurement data storage includes thickness value, sound velocity, and time information
- Powered by two AA alkaline batteries
- Display resolution selectable between 0.1 mm and 0.01 mm, with an error limit of  $\pm 0.4\% H$  (H = thickness of the workpiece)
- Adjustable LCD contrast with LED backlight for use in various lighting environments

### TECHNICAL PARAMETERS

Particulars	
Display accuracy	0.1mm/0.01mm
Measurement period	4 times/second
Velocity range	1000-9999m/s
Display	FSTN LCD display, with cold light source illumination display
Power	2 X AA Batteries
Continuous working time	50 hours (without backlight)
Data storage	500 groups of measurement results, including measurement time and sound velocity information
Auto power off	Automatic shutdown without action for 2 minutes (settable), with switch button
Display content	Thickness value, coupling state, electric quantity state, calibration state, sound velocity, time, etc.
Size	155 X 68 X 27mm
Weight	230g

### OPTIONAL PROBE

Probe	Features Description	Frequency (MHz)	Diameter of Contact Area (mm)	Measuring Range (steel) (mm)	Allowable contact temperature (°C)
5Mhz probe	Universal	5	10	0.65~500.0	-10~60
2M coarse crystal probe	Special use	2	12	2.0~500.0	-10~60
7M micro diameter probe	Special use	7.5	6	0.85~40.0	-10~60
H2M high Temperature probe	Special use	3	12	4.0~80.0	-10~310



### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
AA battery	2 pc
Carry case	1 pc
Probe 5MHz 10 dia	1 pc
Instruction manual	1 pc
Coupling agent	1 pc
Calibration certificate	1 pc

## TT-900 Portable Ultrasonic Thickness Gauge For Composite Materials



### APPLICATION:

The TT-900 portable ultrasonic thickness gauge is specifically designed for inspection of composite materials. It is ideal for accurate thickness evaluation of fiberglass and other composite structures, including through-coating measurements. With advanced scanning modes, automatic calibration, and reliable data storage, the device is well suited for quality control, maintenance, and non-destructive testing of composite components.

### FEATURES

- A-scan and B-scan measurement modes
- Large digit color TFT display (320 x 240 resolution)
- Through-coating thickness measurement capability
- Thickness measurement of fiberglass and composite materials (using Probe D1025)
- Automatic probe recognition
- Automatic zero calibration
- Automatic detection point location
- Selectable automatic and manual measurement modes
- Automatic freezing of the measurement screen
- Data memory for up to 100 files with 100 readings per file
- Direct data transfer to PC with no additional software required

### TECHNICAL PARAMETERS

Particulars	
Range	T-E 0.65mm ~ 400mm
	E-E 3.00mm ~ 25.00mm
Resolution	0.01mm
Accuracy	+/- (0.1% thickness +0.04mm when thickness=10~99.9mm) +/- 0.3% thickness mm when thickness >100mm
Probe mode	Dual Element 5MHz (Standard)

### STANDARD DELIVERY

Particulars	Qty.
Main unit	1 pc
Dual element probe (D5301 or D1025)	1 pc
Build-in calibration block (Thickness=4mm, Velocity = 5920m/s)	1 pc
USB cable	1 pc

Particulars	
Data output	USB to PC without software
Memory	10,000 readings in 100 files
Power	2 x AA batteries
Operating temperature	20°C~50°C, Humidity: 20% ~ 90% RH
Dimensions	133 X 75 X 29mm
Weight	260g (including batteries)

### USES: THICKNESS OF COMPOSITE MATERIALS



Fibre glass in the inner part of Yacht



Wind mill blades



Fibre glass in component of front bumper in automobile



Polyurethane Materials

## YG-60 Portable Gloss Meter

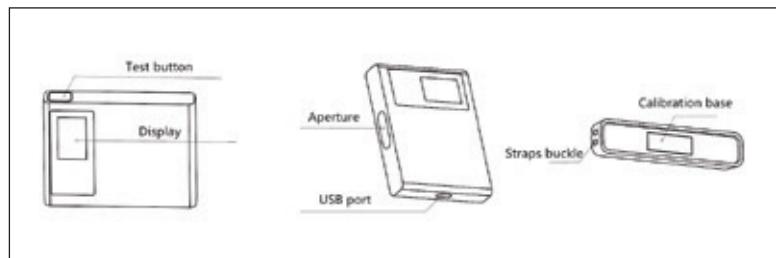


### APPLICATION:

The YG-60 portable gloss meter is a compact and high precision measuring device which is designed for fast and reliable measurements in both field and laboratory environments. Its lightweight, portable design and automatic calibration make it ideal for on-site inspections, quality control, and routine testing where quick results, repeatable accuracy, and long-term reliability are required.

### FEATURES

- Compact and lightweight design; weighs only 80 g and is approximately the size of a business card
- High accuracy; certified through metrological testing
- Fast response time; single measurement completed in less than 1 second
- Long operating life; supports up to 10,000 continuous measurements on a full charge
- Automatic calibration; no manual calibration required, ready for measurement immediately after power-on
- Integrated calibration base with anti-contamination design, allowing calibration at any time to ensure long-term accuracy



### OPTIONAL PROBE

Particulars	YG60 SE	YG60 Pro	YG60 Max
Calibration	Automatic	Automatic	Automatic
Measure angle	60°	60°	60°
Parameter	Gloss (GU)	Gloss (GU)	Gloss (GU)
Aperture	23 x 7 mm	23 x 7 mm	23 x 7 mm
Measure range	0-200 GU	0-1000 GU	0-1200 GU
Stability	1 GU	0.100:0.1GU; >100:1GU	0.100:0.1GU; >100:1GU
Repeatability	1	0.2 / 0.2%	0.1 / 0.1%
Measure time	Less than 1s	Less than 1s	Less than 1s
Battery	Rechargeable, 5000 times continuous tests	Rechargeable, 10000 times continuous tests	Rechargeable, 12000 times continuous tests
Display	IPS full color screen, 135 x 240, 1.14 inch	IPS full color screen, 135 x 240, 1.14 inch	IPS full color screen, 135 x 240, 1.14 inch
Interface	USB	USB, Bluetooth	USB, Bluetooth
Working temperature	0 ~ 40°	0 ~ 40°	0 ~ 40°
Humidity	<85%, with no condensation	<85%, with no condensation	<85%, with no condensation
Accessories	USB cable, Straps, Manual, Calibration base, Cleaning cloth	USB cable, Straps, Manual, Calibration base, Cleaning cloth	USB cable, Straps, Manual, Calibration base, Cleaning cloth
Weight	80g	116g	116g
Size	84 X 70 X 17mm	84 X 70 X 17mm	84 X 70 X 17mm

## MT-10 Moisture Meter



### APPLICATION:

The MT-10 moisture meter is designed for accurate measurement of moisture content in a wide range of wood species. It is ideal for use in woodworking, furniture manufacturing, carpentry, lumber processing, and construction applications, helping professionals monitor moisture levels to prevent warping, cracking, decay, and other moisture-related defects.

### FEATURES

- Specifically designed for measuring wood moisture; includes four calibration scales for accurate measurements across 100 wood species
- Large LCD display for easy reading
- Operating principle: electrical resistance
- Functions include power on/off, low battery indicator, HOLD function, and mode selection for wood groups
- Integrated measuring electrode pins
- Automatic power-off function
- Power supply: one 9V battery
- Operating temperature: 0°C ~ 40°C, Humidity: 20% ~ 90% RH
- Weight: 110 g (excluding battery)
- Dimensions: 140 X 65 X 35mm

### TECHNICAL PARAMETERS

Particulars	Range (Wood)	Resolution	Accuracy (±)
MT 10	0~99.9%	0.1%	0.5%

## MT-11 Multi-Moisture Meter



### APPLICATION:

The MT-11 multi-moisture meter offers quick and reliable measurement of moisture content in wood, packaging materials, and building materials. Built on advanced conductivity principles, it accurately detects changes in material resistance to deliver precise moisture readings. Designed for ease of use, the instrument features a dual alarm system with both indicator light and buzzer alerts, ensuring clear and intuitive results every time. Its ergonomic, rubberised body provides a comfortable, non-slip grip, combining durability, elegant design, and user-friendly handling—making it ideal for professionals who demand accuracy and reliability in every test.

### FEATURES

- Large high-definition display
- High-precision measurement
- Premium, sturdy construction
- Audible and visual alarm indications
- Easy mode switching
- Data HOLD function
- Automatic power-off function
- Low battery indication
- High sensitivity probe

### TECHNICAL PARAMETERS

Particulars	MT-11 multi- moisture meter
Measuring mode	Packing material, Building material, Soft wood and Hard wood
Measuring range	Packing: 5% ~ 75%, Building: 1.5% ~ 30%, Soft Wood: 5% ~ 75%, Hard Wood: 5% ~ 75%
Accuracy	±0.5%
Screen size	2.6 inch LCD
Battery	3 x AAA batteries
Weight	140g
Dimensions	139 X 55 X 25mm

# ET-711

## Industrial Endoscope



## APPLICATION:

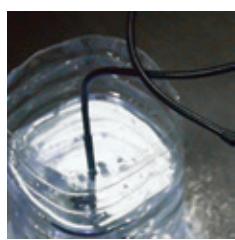
The ET-711 industrial endoscope is designed for non destructive visual inspection of components and assemblies that are difficult to dismantle. It provides high-definition inspection, video recording, and image capture of deep cavities and critical internal surfaces. The device is widely used for inspection of aircraft and industrial engines, gas and steam turbines, diesel engines, automotive and truck engines, as well as for quality control of machined and cast parts. It is also suitable for building inspection, law enforcement, and gunsmithing applications where reliable internal inspection is required.

## FEATURES

- Practical and easy to handle design for non-destructive inspection of components that are difficult to dismantle
- Enables high-definition visual inspection, video recording, and photography
- Suitable for inspecting deep cavities, partitions, ducts, and critical internal surfaces
- Designed for reliable inspection of aircraft engines, gas and steam turbines, diesel engines, and automotive and truck engines
- Helps prevent unnecessary and costly maintenance through early defect detection
- Suitable for inspection of machined and cast parts to identify burrs, surface finish issues, and through holes
- Versatile use for building inspection, law enforcement, and gunsmithing applications

## TECHNICAL PARAMETERS

Particulars	
Monitor	5.0-inch color high-definition IPS display
Resolution	2 megapixel
Number of camera lens	2 lens (optional : 3 lens)
Lens diameter	5.5mm for 2 Lens / 8.0 mm for 3 Lens
Horizontal perspective	70°
Auxiliary lights	8 adjustable LED lights
Standard cable length	1 mtr (optional : 5mtr/8mtr/10mtr/15mtr)
Memory	32 GB
IP grade	IP67 (Dust and Water resistance)



## Engine inspection

## Sewer inspection

## Underwater detection

## Air conditioning detection

## ET-808 Industrial Endoscope

### APPLICATION:

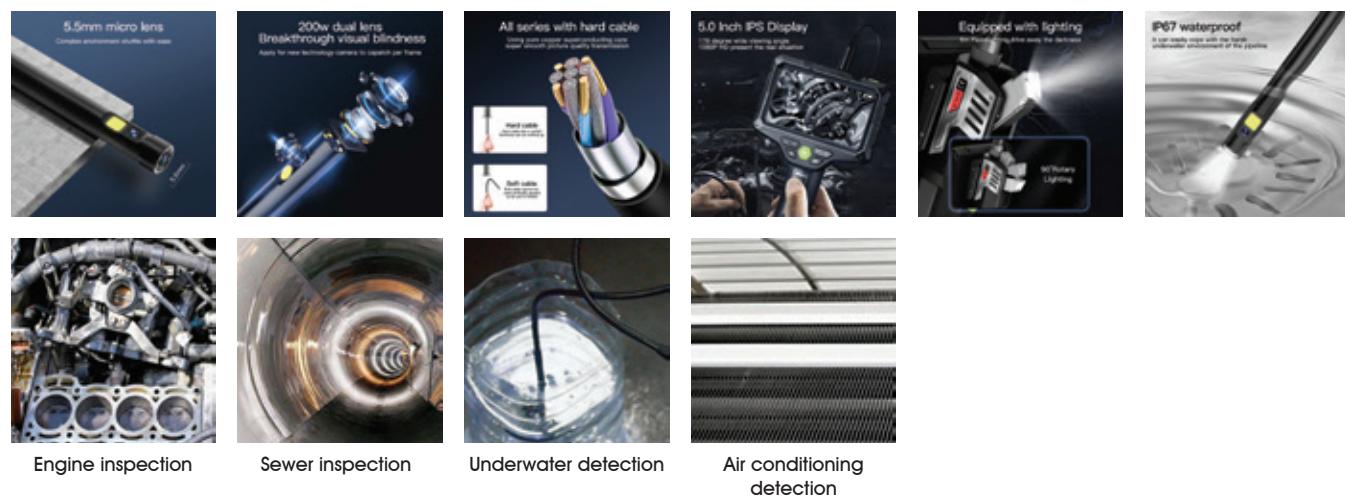
The ET-808 industrial endoscope is a practical, easy to use device designed for non-destructive inspection of components that are difficult to dismantle. It provides high-definition visual inspection, video recording, and image capture of deep cavities and critical internal surfaces. The ET-808 is widely used in inspecting aircraft and industrial engines, gas and steam turbines, automotive components, and machined or cast parts, as well as in building inspection, law enforcement, and gunsmithing applications.

### FEATURES

- Practical and easy to handle design for non destructive inspection
- Enables high-definition visual inspection, video recording, and image capture
- Suitable for inspecting deep cavities, ducts, partitions, and critical internal surfaces
- Effective inspection of components that are difficult or costly to dismantle
- Supports inspection of engines, turbines, automotive components, and machined or cast parts
- Helps reduce unnecessary maintenance and downtime through early defect detection

### TECHNICAL PARAMETERS

Particulars	
Monitor	5.0 inch IPS display (high definition)
Resolution	2 megapixel
Number of camera lens	2 Lens (optional: 3 Lens)
Lens diameter	5.5mm (2 lens) / 8 mm (3 lens)
Viewing angel	70° (2 lens) / 70° (3 lens)
Auxiliary lights	6+1 adjustable LED lights / 6+1+1 adjustable LED lights
Flood light	90° rotary light
Photo/Video resolution	1920x1080
Standard cable length	1 mtr (optional : 5mtr/8mtr/10mtr/15mtr)
Storage	32 GB
IP grade	IP67 (Dust and Water resistance)



## Multi Functional Articulating Endoscope

**Model No: ET 1002**  
with 8 mm lens,  
1 mtr cable lenght

**Model No: ET 7006**  
with 6 mm lens,  
1 mtr cable lenght

**Model No: ET 9009**  
with 8 mm lens,  
2 mtrs cable lenght



### Six funcitons

- 2.0 megapixels
- 5 inch IPS display
- Temperature control
- Full HD
- 6 nmov coms sensor
- Take photos videos

### TECHNICAL PARAMETERS

Particulars	
Screen type	5.10 inch IPS display
Lens	Dual lens
Image resolution	1920* 1080P
Auxiliary light	8 + 1LED
Charge time	2.5h
Charging interface	Type-C
Flexible cable length	1M/2M

Particulars	
Screen type	2 million pixels
Screen resolution	1280* 720P
Focal depth	A:2- 10CM B:25CM
Battery	2000mAh
Working time	3h
IP grade	IP67 (Dust and Water resistance)
Storage	32 GB

### FEATURES



## ET-909 Industrial Endoscope with 360° Joystick Articulation

### APPLICATION:

The ET-909 industrial endoscope is designed for efficient non-destructive visual inspection in industrial environments. With high-definition imaging, fiber optic illumination, wireless transmission, and a detachable display, it enables convenient inspection of internal structures and hard to reach areas in machinery, equipment, and components. The ET-909 is suitable for use in manufacturing, maintenance, quality control, and infrastructure inspection applications.

### FEATURES

- Equipped with multiple detection functions using advanced technology to assist inspectors in completing inspection tasks efficiently
- Fiber optic illumination with high-definition image quality
- Detachable display for flexible operation
- Wi-Fi wireless transmission for convenient data sharing and remote viewing
- HDMI output port for external display connection



### TECHNICAL PARAMETERS

Particulars		
Host	Dimension	265 X 140 X 132.7mm
	Screen	5 IPS HD monitor
	Output port	Type-C
	Storage	32GB, max 128GB
	Power	2650 mAh lithium-Ion battery
	IP grade	IP54 / IP67 (cable) (Dust and Water resistance)
	Working temperature	-10°C ~ 50°C
	Storage temperature	-20°C ~ 60°C
	Relative humidity	Max 90%, No condensation
System	Operation system	Multifunctional operating system
	Operation method	Button navigation, one-click photo and video button
	Function	With freeze, zoom, photo, flip, playback, analog ruler functions
	File format	Image: JPEG, Video: MOV
	Language	Eight languages
Packing case	Weight	> 0.8kg with battery
	Dimension	345 X 265 X 91mm

### CAMERA AND PROBE

There are several length and diameters Avail according to the requirement.

Particulars		
Lens	Direction	Front view/side view
	FOV(Ø)	120°
	(DOF)	12-200mm
	Pixels	1000,000 pixels
	Illumination	Rear high-power LED and optional fibre transmission
Probe	Length (L)	13±0.5 mm
	Diameter (D)	6mm   2.8mm (optional)   4mm (optional)
	Articulation	360° joystick rotation
	Bend angle (α)	170°±10°
Insert tube	Waterproof	IP67
	Working temperature	-20°C~70°C
	Length	1m   2m (optional)   3m (optional)
	Materials	Flexible (tungsten braided tube)

## ET-1095 Industrial Endoscope



### TECHNICAL PARAMETERS

Particulars		
Host	Dimension	350 X 155 X 59mm
	Display	5 inch industrial LCD screen
	Output port	HDMI video output, Micro USB, TF card slot
	Storage	32GB
	Power	Special rechargeable lithium battery pack, online charging, battery life $\geq$ 4 hours
	IP grade	IP54 (Dust and Water resistance)
	Working temperature	-10°C ~ 50°C
	Storage temperature	-20°C ~ 60°C
	Relative humidity	Max 95%, No condensation
	Operation System	Multifunctional operating system
System	Operation method	Button navigation, dual camera and video buttons
	Support function	With freeze, zoom, photo, flip, video playback, analog ruler functions
	File format	Image: JPEG (JPG), Video: AVI
	Support language	English, French, German, Spanish, Italian, Japanese
Packing Case	Weight	3.9kg
	Dimension	479 X 387 X 155 mm

### APPLICATION:

The ET-1095 industrial endoscope is designed for visual examination of narrow and internal areas without disassembly. With a 5-inch industrial display, image and video recording, powerful LED illumination, and an IP54 rated rugged design, it is suitable for reliable on-site inspections in industrial and maintenance environments.

### FEATURES

- 5-inch industrial LCD display
- HDMI video output, Micro USB interface, and TF card slot
- Supports up to 32 GB storage
- Rechargeable lithium battery with online charging;  $\geq$  4 hours battery life
- IP54-rated dust and water resistant housing
- Multifunctional operating system with button navigation
- Dual photo and video control buttons
- Supports freeze, zoom, photo capture, image flip, video playback, and measurement functions
- Supports JPEG (image) and AVI (video) file formats
- Multilingual interface: English, French, German, Spanish, Italian, Japanese, and Chinese
- Direct-view lens with 120° field of view and 3–70 mm depth of field
- High-power rear LED fiber optic illumination
- Probe diameter: 0.95 mm; insertion tube length: 0.5 m
- Non-articulating probe with durable Bourdon tube construction

### CAMERA AND PROBE

There are several lengths and diameters available in the ET-1095 series to choose from, according to specific requirements.

Particulars		
Lens	Direction	Direct view
	View angle (DOF)	120° 3~70mm
	Pixels	160000
	Illumination system	Rear high-power LED fibre optic transmission
Probe	Length (L)	Direct view/Side view: $4.5 \pm 0.5$ mm Double view: $9 \pm 0.5$ mm
	Diameter (D)	0.95mm
	Articulation	No articulation
	Working temperature	-20°C~70°C
Inserting Tube	Length	0.5m
	Materials	Bourdon tube

## ET-1180 Industrial Endoscope

### APPLICATION:

The ET-1180 industrial endoscope is designed for visual inspection of internal and hard to reach areas in machinery, components, and structures without disassembly. With a high resolution display, flexible and articulating probes, image and video recording, and measurement functions, it is ideal for use in manufacturing, maintenance, automotive, aerospace, and infrastructure inspection in demanding environments.

### FEATURES

- 5-inch industrial LCD display
- HDMI, Micro USB, and TF card support
- 32 GB internal storage
- Rechargeable lithium-ion battery with  $\geq 4$  hours operating time
- IP54-rated rugged design
- Multifunctional operating system with button navigation
- Dual camera support with photo and video recording
- Freeze, zoom, playback, flip, and measurement functions
- Supports JPEG and AVI file formats
- Multilingual interface
- Direct, side, and dual-view lens options with LED illumination
- Flexible, tungsten braided probes
- Probe diameters from 1.8 mm to 8 mm with articulation options



### TECHNICAL PARAMETERS

Particulars		
Host	Dimension	350 X 155 X 59mm
	Display	5 inch industrial LCD screen
	Output port	HDMI video output, Micro USB, TF card slot
	Storage	32GB
	Power	Lithium-Ion rechargeable battery
	IP grade	IP54 (Dust and Water resistance)
	Working temperature	-10°C ~ 50°C
	Storage temperature	-20°C ~60°C
	Relative humidity	Max 90%, No condensation
	Operation System	Multifunctional operating system
System	Operation method	Button navigation, dual camera and video buttons
	Support function	With freeze, zoom, photo, flip, video playback, analog ruler functions
	File format	Image: JPEG (JPG), Video: AVI
	Support language	French, English, German, Spanish, Italian, Japanese
	Weight	3.9kg
Dimension		
479 X 387 X 155 mm		

### CAMERA AND PROBE

There are several lengths and diameters available in the ET-1180 series to choose from, according to specific requirements.

Particulars		
Lens	Direction	Direct view/Side view/Double view
	FOV (Ø)	120°
	(DOF)	3~70mm, 5~100mm
	Pixels	160000
	Illumination	LED Integrated lighting
Probe	Length (L)	Direct view/Side view: $4.5 \pm 0.5$ mm Double view: $9 \pm 0.5$ mm
	Diameter (D)	1.8mm to 8mm
	Articulation in 1.8mm dia	180° 2 way ( available in 2mtr & 3 mtr length)
	Articulation	360° omnidirectional (4mm and above dia)
	Bend angle (°)	170° $\pm$ 10°   140° $\pm$ 10°   110° $\pm$ 10°
	Working temperature	-20°C~70°C
Insert tube	Length	1m   2m   3m
	Materials	Flexible (tungsten braided tube)

## ET-1190 High Temperature Resistant Endoscope

### APPLICATION:

The ET-1190 high temperature endoscope is designed for inspection in high heat environments. Equipped with an air cooling system that effectively reduces the camera temperature, it ensures stable operation and clear imaging under extreme conditions. Its comprehensive functions help inspectors perform efficient and reliable inspections in demanding industrial applications.

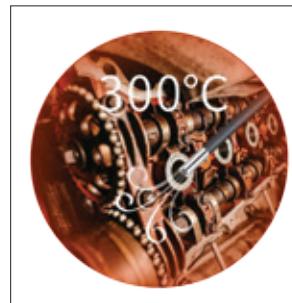
### FEATURES

- Engineered for operation in high-heat inspection environments
- Built-in air cooling system to protect the camera from excessive temperatures
- Maintains consistent image quality during prolonged inspections
- Advanced functionality to support fast and accurate inspections
- Reliable performance for demanding industrial inspection conditions



### TECHNICAL PARAMETERS

Particulars		
Host	Dimension	350 X 155 X 59mm
	Display	5 inch industrial LCD screen
	Output port	HDMI video output, Micro USB, TF card slot
	Storage	32GB
	Power	Lithium-Ion rechargeable battery
	IP grade	IP54 (Dust and Water resistance)
	Working temperature	-10°C~50°C
	Storage temperature	-20°C~60°C
	Relative humidity	Max 90%, No condensation
System	Operation system	Multifunctional operating system
	Operation method	Button navigation, dual camera and video buttons
	Support function	With freeze, zoom, photo, flip, video playback, analog ruler functions
	File format	Image: JPEG (JPG), Video: AVI
	Support language	French, English, German, Spanish, Italian, Japanese
	Packing case	Weight 3.9kg
Dimension		
479 X 387 X 155 mm		



300°C High Temperature Environment



Air cooling system design  
Reduce camera temperature

### CAMERA AND PROBE

There are several length and diameter for ET-1190 to chose according to requirement.

Particulars		
Lens	Direction	Direct view
	View angle Ø)	120°
	(DOF)	12~200mm
	Pixels	1MP
	Illumination system	Optical fiber guide, rear LED (life ≥ 3W hours)
Probe	Length (L)	13±0.5mm
	Diameter (D)	ø6mm – ø8mm (Optional)
	Bending control	Mechanical 360° omnidirectional bending
	Bending angle(°)	Minimum bending value ≤ 220°
	Working temperature	-20°C~300°C
Insert tube	Length	1m 2m 3m 4m 5m
	Materials	Flexible (tungsten braided tube)

## ET-40 Industrial Fiberscope



### APPLICATION:

The ET-40 industrial fiberscope is a flexible fiber optic inspection instrument that uses a coherent fiber bundle to transmit clear images to the inspector's eye. Its compact size and high flexibility make it ideal for remote visual inspection of narrow and hard-to-reach areas in critical equipment, engines, and infrastructure where direct access is not possible.

### FEATURES

- Enables inspection of aircraft components, engines, turbines, and other critical equipment
- Allows viewing beneath doors and around corners for concealed-area inspection
- Provides clear visibility of internal lock mechanisms, including pin positions
- Allows internal inspection of machines and assemblies without disassembly

### TECHNICAL PARAMETERS

Particulars	
Tube	Camera diameter 4.0mm Available working cable length : 1Mtr / 3Mtr Working hose surface material is nylon (polyamide) / stainless steel / tungsten braided, lens and hose waterproof, anti-oil; resistant to weak acid, weak base
Probe camera lens	View field angle: $\geq 90^\circ$ Tip articulation: 2-way DOF: 5.0mm -- 150mm
Lighting	Hose fiber optic light transmission inside, high brightness LED light source back lighting, portable integrated light source, adjustable brightness
Viewing terms	Optical eyepiece observation
Operating temperature	-20°C ~ 70°C
Battery working time	$\geq 4$ hours

## ET-180 Industrial Fiberscope

**APPLICATION:**

The ET-180 industrial fiberscope is a flexible optical inspection instrument that uses a coherent fiber bundle to transmit images to the inspector's eye. Its compact size and flexibility make it ideal for remote visual inspection of narrow and hard-to-reach areas in critical equipment, engines, and infrastructure, enabling efficient inspection where direct visual access is not possible.

**FEATURES**

- Suitable for industrial inspection of aircraft, engines, turbines, and other critical equipment
- Enables maintenance and inspection of automotive engines and aircraft components
- Supports surveillance tasks such as viewing beneath doors, around corners, and reconnaissance operations
- Useful for locksmithing applications, including inspection of pin positions
- Allows visual inspection inside machines and equipment without disassembly

**TECHNICAL PARAMETERS**

Particulars	
Tube	Diameter: 1.8mm, working cable length : 1000mm Working hose surface material is nylon ( polyamide), lens and hose waterproof, anti-oil; resistant to weak acid, weak base
Probe camera lens	View field angle: $\geq 85^\circ$ View direction angle: $0^\circ$ DOF: 2mm ~ 50mm Magnification (two optional): 60 times (positive); 65 times (reverse image)
Lighting	Hose fiber optic light transmission inside, high brightness LED light source back lighting, portable integrated light source, adjustable brightness
Viewing terms	Optical eyepiece observation
Operating temperature	-20°C ~ 70°C
Battery working time	$\geq 4$ hours



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