

Measuring Instruments

Vernier Calipers



Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy (±)
102-130	130mm/5"	0.03mm
102-180	180mm/7"	0.03mm
102-280	280mm/11"	0.03mm
102-450	450mm/18"	0.05mm
102-600	600mm/24"	0.05mm

Heavy Duty Vernier Calipers



Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy (±)
111-300	300mm/12"	0.04mm
111-450	450mm/18"	0.05mm
111-450 BLISS	450mm/18"	0.05mm
111-600	600mm/24"	0.05mm
111-600 BLISS	600mm/24"	0.05mm
111-625	625mm/25"	0.05mm
111-1000	1000mm/40"	0.08mm
111-1000 BLISS	1000mm/40"	0.08mm
111-1500	1500mm/60"	0.12mm
111-2000	2000mm/80"	0.14mm

Dial Calipers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
121-150	150mm	0.03mm
121-200	200mm	0.03mm
121-300	300mm	0.04mm

Graduation: 0.02mm

Order No.	Range	Accuracy (±)
122-150	150mm	0.03mm
122-200	200mm	0.03mm
122-300	300mm	0.04mm

Graduation: 0.05mm

Order No.	Range	Accuracy (±)
123-150	150mm	0.03mm
123-200	200mm	0.03mm
123-300	300mm	0.04mm

Graduation: 0.001"

Order No.	Range	Accuracy (±)
124-006	6"	0.0012"
124-008	8"	0.0012"
124-012	12"	0.0016"



Graduation: 0.02mm

Order No.	Range	Accuracy (±)
125-450	450mm	0.08mm
125-600	600mm	0.08mm
125-1000	1000mm	0.12mm

Remark: Nib type jaw, without upper jaw

Vernier Calipers without Fine Adjustment



Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy (±)
101-150	150mm/6"	0.03mm
101-200	200mm/8"	0.03mm
101-300	300mm/12"	0.03mm

Heavy Duty Solid Type Vernier Calipers



Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy (±)
112-450	450mm/18"	0.05mm
112-600	600mm/24"	0.05mm
112-1000	1000mm/40"	0.08mm
112-1500	1500mm/60"	0.12mm
112-2000	2000mm/80"	0.14mm

Dial Calipers with New Design Golden Dial



Graduation: 0.02mm

Order No.	Range	Accuracy (±)
125-150	150mm	0.03mm
125-200	200mm	0.03mm

Digimatic Calipers



Resolution: 0.03mm

Order No.	Range	Accuracy (±)
130-150	150mm/6"	0.03mm
130-200	200mm/8"	0.03mm

Digimatic Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
131-150	150mm/6"	0.03mm
131-200	200mm/8"	0.03mm
131-300	300mm/12"	0.03mm

Digimatic Calipers with Carbide Jaws



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
133-150	150mm/6"	0.03mm

Vernier Calipers with Carbide Jaws



Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy (±)
103-130	130mm/5"	0.03mm
103-180	180mm/7"	0.03mm
103-280	280mm/11"	0.03mm

Long Jaw Vernier Calipers



Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy (±)
113-300	300mm/12"	0.05mm
113-450	450mm/18"	0.06mm
113-600	600mm/24"	0.06mm
113-1000	1000mm/40"	0.08mm

Digimatic Calipers with Dust/Water Protection Confirming to IP65 Level



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
132-150	150mm/6"	0.03mm

Digimatic Calipers with Dust & Water proof confirming to IP67 Level



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
136-150	150mm/6"	0.03mm

Heavy Duty Digimatic Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
145-450	450mm/18"	0.05mm
145-600	600mm/24"	0.06mm
145-1000	1000mm/40"	0.09mm

Heavy Duty Digimatic Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
146-1500	1500mm/60"	0.11mm

Fraction Digimatic Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
134-150	150mm/6"	0.03mm

Digimatic Inside Point Type Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
155-150	24-150mm	0.04mm
155-200	25-200mm	0.04mm
155-300	50-300mm	0.06mm

Measuring Instruments

Digimatic Inside Flat Point Type Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
156-150	22-150mm	0.05mm
156-200	25-200mm	0.06mm
156-300	30-300mm	0.06mm

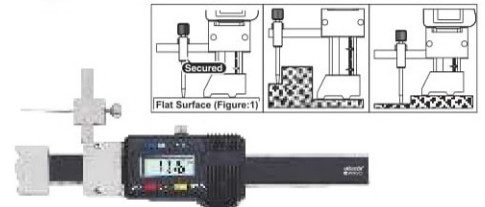
Digimatic Inside Knife Edge Point Type Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
157-150	14-150mm	0.05mm
157-200	15-200mm	0.05mm
157-300	17-300mm	0.06mm

Digimatic Gap & Step Gauges



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
158-030	-10-30mm	0.02mm

Vernier Depth Calipers



Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy (±)
185-150	150mm/6"	0.03mm
185-200	200mm/8"	0.03mm
185-300	300mm/12"	0.04mm
185-600	600mm/24"	0.05mm
185-1000	1000mm/40"	0.06mm

Digimatic Depth Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
186-150	150mm/6"	0.03mm
186-200	200mm/8"	0.03mm
186-300	300mm/12"	0.04mm

Digimatic Double Hook Depth Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
187-150	0-150mm/0-6"	0.03mm
187-200	0-200mm/0-8"	0.03mm
187-300	0-300mm/0-12"	0.04mm

Gear Tooth Vernier Calipers

Graduation: 0.02mm



Order No.	Range	Accuracy (±)
104-026	M1-26mm	0.04mm

Vernier Height Gauges



Graduation: 0.02mm/0.001"

Order No.	Range	Accuracy (±)
201-300	300mm/12"	0.04mm
201-450	450mm/18"	0.05mm
201-600	600mm/24"	0.05mm
201-1000	1000mm/40"	0.07mm

Digimatic Gear Tooth Calipers



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
135-25	M1-25mm	0.04mm

Digit Dial Height Gauges



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
225-300	300mm	0.04mm
225-600	600mm	0.05mm

Digimatic Double Beam Height Gauges



Resolution: 0.01mm/0.0005"

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

Single Beam Digimatic Height Gauges with hand wheel



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
252-300	300mm/12"	0.04mm
252-600	600mm/24"	0.05mm

Single Beam Digimatic Height Gauge



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
253-1000	1000mm/40"	0.07mm

Measuring Instruments

Digimatic Outside Micrometers Outside Micrometers



Resolution: 0.001mm/0.00005"

Order No.	Range	Accuracy (±)
351-025	0-25mm	2μm
351-050	25-50mm	2μm
351-075	50-75mm	3μm
351-100	75-100mm	3μm



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
301-025	0-25mm	4μm
301-050	25-50mm	4μm
301-075	50-75mm	5μm
301-100	75-100mm	5μm
301-125	100-125mm	6μm
301-150	125-150mm	6μm
301-175	150-175mm	7μm
301-200	175-200mm	7μm
301-225	200-225mm	8μm
301-250	225-250mm	8μm
301-275	250-275mm	9μm
301-300	275-300mm	9μm

Graduation: 0.001"

Order No.	Range	Accuracy (±)
301-01	0-1"	0.00015"
301-02	1-2"	0.00015"
301-03	2-3"	0.0002"
301-04	3-4"	0.0002"
301-05	4-5"	0.00024"
301-06	5-6"	0.00024"
301-07	6-7"	0.00028"
301-08	7-8"	0.00028"

Digit Micrometers



Counter Graduation: 0.01mm
Sleeve Graduation: 0.001mm

Order No.	Range	Accuracy (±)
331-025	0-25mm	4μm
331-050	25-50mm	4μm

Graduation: 0.001mm

Order No.	Range	Accuracy (±)
302-025	0-25mm	4μm
302-050	25-50mm	4μm
302-075	50-75mm	5μm
302-100	75-100mm	5μm

Graduation: 0.0001"

Order No.	Range	Accuracy (±)
302-01	0-1"	0.00015"
302-02	1-2"	0.00015"
302-03	2-3"	0.0002"
302-04	3-4"	0.0002"
302-05	4-5"	0.00024"
302-06	5-6"	0.00024"
302-07	6-7"	0.00028"
302-08	7-8"	0.00028"

Interchangeable Outside Micrometers



TYPE 1

Graduation: 0.01mm

Order No.	Range	Type	Accuracy (±)
311-050	0-50mm	1	4μm
311-100	0-100mm	1	5μm
311-150	0-150mm	1	6μm
311-151	50-150mm	1	6μm
311-200	100-200mm	1	7μm
311-300	150-300mm	1	9μm
311-301	200-300mm	1	9μm

Graduation: 0.0001"

Order No.	Range	Type	Accuracy (±)
311-002	0-2"	1	0.00015"
311-004	0-4"	1	0.0002"
311-006	0-6"	1	0.00024"
311-026	2-6"	1	0.00024"
311-048	4-8"	1	0.00028"
311-612	6-12"	1	0.00035"



TYPE 2

Graduation: 0.01mm

Order No.	Range	Type	Accuracy (±)
311-400	300-400mm	2	11μm
311-500	400-500mm	2	13μm
311-600	500-600mm	2	14μm
311-700	600-700mm	2	16μm
311-800	700-800mm	2	18μm
311-900	800-900mm	2	20μm
311-1000	900-1000mm	2	22μm

Adjustable Outside Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
312-400	300-400mm	11μm
312-500	400-500mm	13μm
312-600	500-600mm	14μm
312-700	600-700mm	16μm
312-800	700-800mm	18μm
312-900	800-900mm	20μm
312-1000	900-1000mm	22μm
312-1200	1000-1200mm	22μm
312-1400	1200-1400mm	24μm
312-1600	1400-1600mm	28μm
312-1800	1600-1800mm	31μm
312-2000	1800-2000mm	34μm

Digimatic Interchangeable Outside Micrometers



TYPE 1

IP54

Resolution: 0.001mm/0.0001"

Order No.	Range	Type	Accuracy (±)
361-050	0-50mm	1	2μm
361-100	0-100mm	1	3μm
361-150	0-150mm	1	3μm
361-151	50-150mm	1	3μm
361-200	100-200mm	1	4μm
361-300	150-300mm	1	5μm
361-301	200-300mm	1	5μm



TYPE 2

Resolution: 0.001mm/0.0001"

Order No.	Range	Type	Accuracy (±)
361-400	300-400mm	2	6μm
361-500	400-500mm	2	7μm

Disc Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
321-025	0-25mm	4μm
321-050	25-50mm	4μm
321-075	50-75mm	5μm
321-100	75-100mm	5μm
321-125	100-125mm	6μm
321-150	125-150mm	6μm
321-175	150-175mm	7μm
321-200	175-200mm	7μm

Measuring Instruments

Screw Thread Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
322-025	0-25mm	4μm
322-050	25-50mm	4μm

5(mm/TPI) set of Matching Anvils/Spindle included
0.4-05/64-48, 0.6-0.9/44-28, 1-1.75/24-14, 2-3/13-9,
3.5-5/8-5

Blade Outside Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
323-25A	0-25mm	4μm
323-50A	25-50mm	4μm
323-75A	50-75mm	5μm
323-100A	75-100mm	5μm
323-25B	0-25mm	4μm

Crimp Height Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
326-025	0-25mm	4μm

Groove Micrometers



Graduation: 0.01mm

Order No.	Range Outside	Range Inside	Accuracy (±)	Flange Ø
327-25A	0-25mm	1.6-26.5mm	10μm	6.5mm
327-25B	0-25mm	1.6-26.5mm	10μm	13mm

Tube Outside Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)	Remark
324-025S	0-25mm	4μm	Single Ball
324-025D	0-25mm	4μm	Double Ball

Point Outside Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)	Degree
325-25A	0-25mm	4μm	15°
325-25B	0-25mm	4μm	30°

Tubular Inside Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
329-300	50-300mm	(3+n+L/50)μm
329-500	50-500mm	n= No. of Rods
329-1000	50-1000mm	L= Maximum Measuring Length
329-1500	50-1500mm	
329A-2100	100-2100mm	

Inside Dial Caliper Gauges



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
463-025	5-25mm	0.03mm
463-030	10-30mm	0.03mm
463-040	20-40mm	0.03mm
463-050	30-50mm	0.03mm
463-060	40-60mm	0.03mm

Depth Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
391-025	0-25mm	4μm
391-150	0-150mm	4μm
392-025	0-25mm	4μm
392-050	0-50mm	4μm
392-100	0-100mm	5μm
392-150	0-150mm	5μm

Digimatic Depth Micrometers



Resolution: 0.001mm/0.00005"

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

Inside Micrometers Rod Type



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
330-050	25-50mm	(6+L/50)μm
330-200	50-200mm	L= Maximum measuring Length(mm)
330-300	50-300mm	

Jaw Type Inside Micrometers



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
328-030	5-30mm	7μm
328-050	25-50mm	8μm

Micrometer Stands



Order No.
6001

Micrometer Head



Graduation: 0.01mm

Order No.	Range	Accuracy	Spindle Ø
5001	0-25mm	3μm	6.5mm
5002	0-25mm	3μm	8mm

Outside Pistol Caliper Gauges



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
465-020	0-20mm	0.04mm

Inside Pistol Caliper Gauges



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
464-035	15-35mm	0.04mm
464-055	35-55mm	0.04mm
464-075	55-75mm	0.04mm
464-095	75-95mm	0.04mm
464-115	95-115mm	0.04mm
464-135	115-135mm	0.04mm

Measuring Instruments

Double Face Dial Indicators



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
406-010	0-10mm	20μm

Digital Indicators



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
415-010	12.7mm/0.5"	20μm

Resolution: 0.001mm/0.00005"

Order No.	Range	Accuracy (±)
415-001	12.7mm/0.5"	5μm

Lever Dial Holders



Graduation: 0.01mm

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

Dial Test Indicators



Graduation: 0.01mm

Order No.	Range	Accuracy (±)	Remark
445-08	0.8mm	13μm	Dial Ø30mm
446-08	0.8mm	13μm	Dial Ø37.5mm

Graduation: 0.002mm

Order No.	Range	Accuracy (±)	Remark
447-02	0.2mm	6μm	Dial Ø37.5mm

Dial Indicators



Order No.	Range	Accuracy (±)
401-001	1mm x 0.001mm	5μm
402-010	10mm x 0.01mm	17μm
403-005	5mm x 0.01mm	16μm
404-025	25mm x 0.01mm	35μm
405-010	10mm x 0.01mm	17μm

Durometers



Order No.	Range	Accuracy
661-100	0-100 HA	Shore A

Magnetic Stands



Order No.	Magnetic Force
7010S	80kgf
7011S	80kgf
7014S	40kgf
7012	80kgf

Order No.	Magnetic Force
7019B	80kgf
7027	80kgf
7018	80kgf

P Type Dial Caliper Gauges



Graduation: 0.05mm

Order No.	Range	Accuracy (±)	Remark
461-040	10mm	0.1mm	Arm Length 40mm
461-070	10mm	0.1mm	Arm Length 70mm
461-040B	10mm	0.1mm	Bezel Arm

Dial Bore Gauges



Ceramic Tip

Repeatability: 0.003mm

Order No.	Range	Accuracy (±)	Indicator
431-010	6-10mm	0.012mm	5mm x 0.01mm
432-018	10-18.5mm	0.012mm	5mm x 0.01mm
433-035	18-35mm	0.015mm	10mm x 0.01mm
433-060	35-60mm	0.018mm	10mm x 0.01mm
433-160	50-160mm	0.018mm	10mm x 0.01mm
433-250	160-250mm	0.018mm	10mm x 0.01mm
433-450	250-450mm	0.018mm	10mm x 0.01mm

Bore Gauge Checker



Order No.	Range	Technical Data
440-400	18-400mm (7"-16")	1μm (Flatness of the parallel Jaw)

Dial Thickness Gauges



Graduation: 0.01mm

Order No.	Range	Accuracy (±)
662-10	10mm	0.02mm

Measuring Instruments

Quick Mini Thickness Gauges Digimatic Welding Seam Gauges Combination Square Sets



Resolution: 0.01mm/0.0005"

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



Resolution: 0.01mm/0.0005"

Order No.	Range	Accuracy (±)
800-020	0-20mm	0.03mm



Graduation: 5min (0°-90°-0°)

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

Bevel Protractors



Graduation: 5'

Order No.	Range	Accuracy (±)
511-360	0-360°	5'
511-360 BLISS	0-360°	5'

Digimatic Pye Tapes



Resolution: 0.005mm/0.00005"

Order No.	Range	Accuracy (±)
651-700	5-700mm/0.2-27.5"	0.01R

R being the radius to be measured

Digimatic Bevel Protractors



Resolution: 0.01°

Order No.	Range	Accuracy (±)
512-360	0-360°	0.07°

Digital Protractors



Resolution: 0.05°

Order No.	Range	Accuracy (±)
513-360	0-360°(90°x4)	0.15°

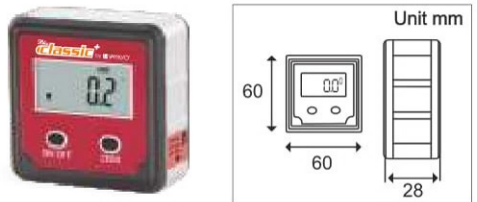
Digital Angle Finder



Resolution: 0.1°

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

Digital Levels

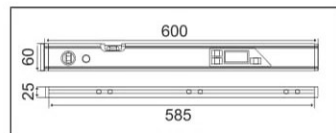


Resolution: 0.1°

Order No.	Range	Accuracy (±)
532-90	4x90°	0.2°

Remark: Magnetic Bottom

Digital Levels



Resolution: 0.1°(=1.745mm/m)

Order No.	Range	Accuracy (±)
533-360	0-360°(90°x4)	0° and 90°: 0.1° Rest: 0.2°

Remark: Magnetic Bottom

Gauge Block Set



Order No.	Grade	Blocks Per set
621-1120	0	112 pcs
621-1122	2	112 pcs
621-870	0	87 pcs
621-872	2	87 pcs
621-830	0	83 pcs
621-832	2	83 pcs

Linear Levels



Order No.	Size	Sensitivity
531-150	150mm	0.02mm/m (=0.001°)
531-200	200mm	0.02mm/m (=0.001°)
531-300	300mm	0.02mm/m (=0.001°)

Angle Gauge Set



Order No.	Range	Set of	Accuracy (±)
601-18	5°-90°	18 pcs	30'

Radius Gauges



Order No.	Range	Set of	Accuracy (±)
602-26	0.5-15mm	26 pcs	0.05mm

Measuring Instruments

Small Hole Gauges



Order No.	Set of	Range
611-013	4 pcs	3-13mm

Telescoping Gauges



Order No.	Set of	Range
612-150	6 pcs	8-150mm

Steel Rulers



Order No.	Size
701-015	15cm/6"
701-030	30cm/12"
701-060	60cm/24"
701-100	100cm/40"
701-120	120cm/48"
701-200	200cm/80"

Straight Edge



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

Plumbobs



Order No.	Size	Remark
100B	100mm	Brass Plumbob
100SS	100mm	Stainless Steel Plumbob
150B	150mm	Brass Plumbob
150SS	150mm	Stainless Steel Plumbob

Oil Tape Refills



Order No.	Size Length Width	Order No.	Size Length Width
10MSR	10mts 13mm	10SSR	10mts 13mm
15MSR	15mts 13mm	15SSR	15mts 13mm
20MSR	20mts 13mm	20SSR	20mts 13mm
30MSR	30mts 13mm	30SSR	30mts 13mm
50MSR	50mts 13mm	50SSR	50mts 13mm
100MSR	100mts 13mm	100SSR	100mts 13mm
200MSR	200mts 13mm	200SSR	200mts 13mm

Carbon Steel Refill

Stainless Steel Refill

Oil Tapes



With 100mm Brass Plumbob			With 100mm Brass Plumbob		
Order No.	Size Length Width		Order No.	Size Length Width	
10MS	10mts 13mm		10SS	10mts 13mm	
15MS	15mts 13mm		15SS	15mts 13mm	
20MS	20mts 13mm		20SS	20mts 13mm	
30MS	30mts 13mm		30SS	30mts 13mm	
50MS	50mts 13mm		50SS	50mts 13mm	
100MS	100mts 13mm		100SS	100mts 13mm	
200MS	200mts 13mm		200SS	200mts 13mm	

Carbon Steel Blade

Stainless Steel

Steel Tapes



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

Spirit Levels



Order No.	Size (Length)
Trio	200mm
Trio	300mm
Trio	450mm
Trio	600mm
Trio	1000mm
Trio	1200mm
Trio	1500mm
Trio	2000mm
Piccolo	450mm
Piccolo	600mm

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TH-130 *Plus*⁺ Portable Hardness Tester



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 aluminum alloys	170-570	23-84	-	19-164	-	-
Brass	200-550	13-95	-	40-173	-	-
Bronze	300-700	-	-	60-290	-	-
Copper	200-690	-	-	45-315	-	-

TH-270 Metal Hardness Tester



Technical Parameters	
HL display range: 0 ~ 999HLD	Min. weight of test object: 5kg (less than 5kg to 0.1kg must be coupled on solid support)
Accuracy: ± 6 HL(at 800HLD)	
Repeatability: ± 6 HL	Min. thickness of test object: 5mm (less than 5mm upto 3mm must be coupled)
Testing direction: Any direction	
Display: Large LCD with back light	Min. thickness of layers: 0.8mm
Scales: HRB, HRC, HB, HV, HSD, MPa	Min. Radius of curved surface: 30mm (with optional support rings : 11mm)
Power: dry cell (3 x1.5V AAA)	
Operating temperature: 0°C ~ +50°C (32°F ~ 122°F)	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
Storage temperature: 10°C ~ +60°C (14°F ~ 140°F)	
Humidity: 5% ~ 95%	
Dimensions: 150mm*80mm*24mm (5.9 x 3.1 x 0.9 inches)	Standard accessories: Main Unit, Impact Device D, Test Block, Mini IR Printer, Charger, Little supporting, Clearing Brush, Printer cable
Weight: Approx.200g (display unit)	

TH-370 Metal Hardness Tester



Technical Parameters	
HL display range: 170~960HLD	Min. weight of test object: 5kg (less than 5kg to 0.1kg must be coupled on solid support)
Repeatability: ± 6 HLD	
Testing direction: Any direction	Min. thickness of test object:5mm (less than 5mm upto 3mm must be coupled)
Scales: HRB, HRC, HB, HV, HSD, HLD, MPa	
Display: 3.9inch 240*320 (with touch screen) Bright and clear LCD display with back light	Min. thickness of layers: 0.8mm
Operating voltage: 3.7V (rechargeable lithium-ion battery)	Min. Radius of curved surface:30mm (with optional support rings : 11mm)
Charging power supply: DC5.5V/1A	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
Operating environment: Temperature: 0°C ~ +50°C, Humidity: 20%~85%	
Storage environment: Temperature: 10°C~+60°C, Humidity:5%~95%	Standard accessories:Main Unit, Impact Device D, Test Block, Mini-printer, Charger, Little Support Ring, Cleaning Brush, Printer Cable
Dimensions: 135mm*83mm*24mm	
Weight: 276g (includes impact device)	

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TH-170 Leeb Hardness Tester



Measuring Range / Materials							
	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	-	-	-	-	-

TT-100C Ultrasonic Thickness Gauge



Technical Parameters

Display type: 4-digits, 10mm LCD

Range: 1.0 - 200mm

Resolution: 0.1mm/0.001 inch

Accuracy: +/- (0.5%n+0.1)

Sound velocity: 500-9000 m/s

Power supply: 4x 1.5V AAA (UM-4) Alkaline cells

Operating temperature: 0-50°C Humidity <80%

Dimensions: 120x62x30mm (4.7x2.4x1.2inch)

Weight: 164gms (without batteries)

Standard Accessories: Carrying case: 1pc, Operation manual: 1pc, Main unit: 1pc, Sensor probe: 1pc

Optional accessories: Cable & Software for RS232C

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TT-100 *Plus*⁺ Ultrasonic Thickness Gauge



Technical Parameters

Display type: LCD	Operating temperature: 0-50°C Humidity < 80%
Range: 0.75-400mm (45# Steel) (Depend on Probe Type)	Dimensions: 140 x 72 x 34mm
Resolution: 0.1mm / 0.01mm / 0.001 inch	Weight: 185gms (without batteries)
Accuracy: $\pm(0.5\%n+0.1)$	Standard Accessories: Carrying case: 1pc, Operation manual: 1pc, Main unit: 1pc, Sensor probe : 1pc
Sound velocity: 1000-9999m/s	Optional accessories: Cable & software for RS232C
Power supply: 4 x 1.5V AAA (UM-4) Alkaline cells	

TR-110 Advance Surface Roughness Tester



Technical Parameters

Testing parameters(μm): Ra,Rz,Rq,Rt	Degree: S
Stroke length(mm): 6	Battery: 3.7V Li
Sample length(mm): 0.25 ,0.80 ,2.50	Size: 106 mm×70 mm×24 mm
Evaluation length(mm): 1.25 ,4.0	Weight: 200g
Measuring range(μm):	Working conditions:
Ra: 0.05 ~ 10.0	Temperature: -20°C~40°C
Rz: 0.1 ~ 50	Relative humidity: < 90%
Error: $\pm 15\%$	No shake and corrosivity around
Variability: <12%	Standard Accessories: Main Unit: 1pc, Battery Charger: 1pc
Transducer contacting pin round diameter and angle:	USB Cable: 1pc, Standard Test Block: 1pc.
Contacting pin round diameter: $10\mu\text{m}\pm 1\mu\text{m}$	

TR-200 (ADVANCE) Surface Roughness Tester



Adjustable stand
(included)

Probe cover
(included)



Technical Parameters

Parameters: Ra, Rz, Ry, Rp, Rm, Rt, R3z, Rmaz, Sk, S, Sm, tp	Output: USB
Range: $160\mu\text{m}$	Power: built-in rechargeable battery
Accuracy: $\pm 10\%$	Dimension (L x W x H): 140x52x48mm
Resolution (Ra): $0.001\mu\text{m}$	Weight: 440g
Probe:	Standard Accessories: Main unit: 1pc, Calibration Block: 1pc, Calibration support: 1pc, Adjustable stand: 1pc, Probe cover: 1pc, USB cable and software: 1pc, AC/DC adaptor: 1pc, Presurf Mobile 1.0: 1pc.
Type: inductive	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)
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	

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TR-310 Surface Roughness Tester



- 1) Main Unit 2) Calibration Block 3) Calibration Support
4) USB Cable 5) Instructions Manual

OLED Screen



Start Measuring



Wireless Control

Wireless and simultaneous operations by mobile phone

Sensor Probe

Technical Parameters

Recharge parameter: Ra, Rz, Rt, Rq	Repeatability: <12%
Tracing length: 6mm	Radius and angle of the stylus point: 3.7V Li-ion battery
Tracing speed: 1.0mm/sec	Recharging time: 3 hours
Cut-off lengths: 0.25mm/ 4.0mm/ 5.0mm	Operating temperature: -20-40°C
Measuring range: Ra, Rq: 0.05-10.0μm and Rz, Rt: 0.1-50μm	Relative humidity: <90%
Accuracy: 0.01m	Dimensions (L x W x H) : 110mm x 81mm x 32mm
	Weight: 150g

TH-250 Coating Thickness Gauge



Technical Parameters

Product Info: In Built Probe(s)	Metric / Imperial: Convertible
Operating Principle: Magnetic induction / eddy current (F/NF)	Power Supply: 4x1.5V AAA(UM-4) battery, Auto power off
Measuring Range: 0-1250um/0-50mil	Operating Conditions: 0 to 45°C
Resolution: 0.1/1	Dimensions: 126x65x27mm
Accuracy: ±1-3% or ±2.5μm	Weight: 81g(not including battery)
Min. Measuring: Area 6mm	Standard Accessories: 2 substrate samples (steel, aluminum), 4 calibrated thickness samples, carry case, batteries and operation manual.
Min. Sample Thickness: 0.3mm	With Optional Accessories: Range 0-200um to 15000um
Battery Indicator: Low Battery Indicator	

TH-400 Shore Hardness Tester



Technical Parameters

Product Info: Digital durometer for shore hardness testing pocket size model with integrated probe	Resolution: 0.1 Auto switch off With RS232C interface
Test Scale: Shore Hardness A	Operating Condition: 0 to 40°C
Standards: DIN53505, ASTM D2240, ISO7619, JISK7215	Power Supply: 4x1.5V AAA (UM-4) battery
Parameters Display: Hardness result, Average value, Max. value	Battery Indicator: Low Battery Indicator
Measurement Range: 0-100 HA	Dimensions: 162 X 65 X 38mm
Measurement Deviation: <1%H	Weight: 173gm (not including probe)
	Standard Accessories: Main Unit, Test Specimen, Carry bag, Manual and Quality Certificate