

NSK
INSTRUMENT CO., LTD.

Testing and Metrology Precision Measuring Instrument



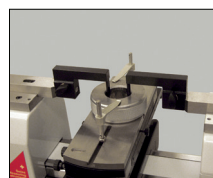
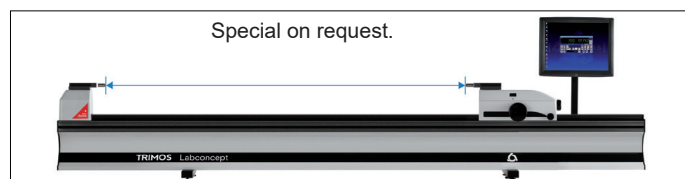
Universal Testing Machine / Universal length Machine / Coordinate Measuring and Marking Machine
Vision Measurement Machine / Height Gauges 1D 2D / Torque Wrenches / BMD Plug Gauge and Gear Gauge
Thread Plug Gauge and Thread Ring Gauge Special Gauge / Small Tool all Products / Magnifying Lamp



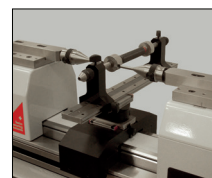


Horizontal Measuring Instrument

Labconcept / Labconcept Premium



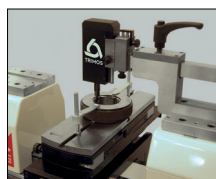
Calibration of ring gauges



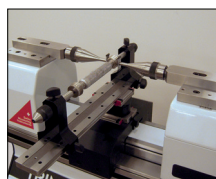
Calibration of plug gauges



Calibration of small ring gauges



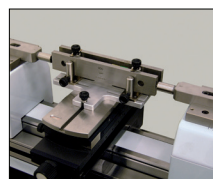
Calibration of thread ring gauges



Calibration of thread plug gauges



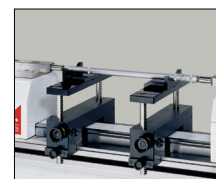
Calibration of external micrometers



Comparative checking of gauge blocks < 250 mm



Comparative checking of gauge blocks > 250 mm



Setting of 2-point internal micrometers



Checking of dial indicators



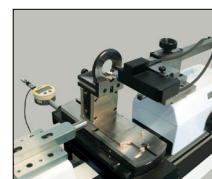
Checking of test indicators



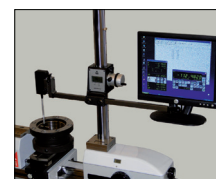
Checking of snap gauges



Temperature compensation system TempComp



Checking of taper thread ring gauges



Special design for measurement of large taper threaded gauges

Technical data:

Labconcept		500	1000	1500	2000
Measuring range	mm (in)	400 (15)	800 (31)	1200 (47)	2000 (78)
Max. permissible errors ¹⁾	µm	0.3 + L (mm) / 1500			
Repeatability (2s) ¹⁾	µm	0.1			
Resolutions	mm (in)	0.01 ÷ 0.00001(.0001 ÷ .000001)			
Max. displacement speed	mm / s	1500			
Measuring force	N	0 ÷ 12			
Operational temperature	°C	+10 ÷ +40			
Temperature of storage	°C	-10 ÷ +40			
Relative humidity		20 ÷ 80			
Weight	kg	94	123	152	181

Labconcept Premium		300	500	1000
Measuring range	mm (in)	370 (14)	550 (21)	1050 (41)
Max. permissible errors ¹⁾	µm	0.1 + L (mm) / 2000	0.15 + L (mm) / 2000	
Repeatability (2s) ¹⁾	µm	0.05		
Resolutions	mm (in)	0.01 ÷ 0.00001 (.0001 ÷ .000001)		
Max. displacement speed	mm / s	400		
Measuring force	N	0 ÷ 12		
Operational temperature	°C	+10 ÷ +40		
Temperature of storage	°C	-10 ÷ +40		
Relative humidity		20 ÷ 80		
Weight	kg	78	95	125

¹⁾ Values valid at temperature of 20 ± 0.2 °C and relative humidity of 50 ± 5%.

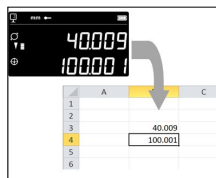
Vertical Measuring instruments

Height Gauges V5, V6 and V9



- Measuring ranges 400, 700 and 1100 mm
- Electronically adjustable measuring force
- Standard probes up to 400 mm
- All adjustments possible without tools
- Wireless data transfer (optional)

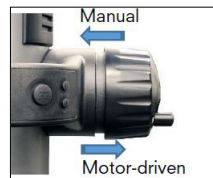
- Extremely easy to use
- Manual or motor-driven displacement
- Vast range of accessories
- RS232 et USB interfaces



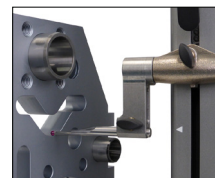
The data transfer via the USB, RS232 port or Wireless is very easy



Squareness measurements with electronic probe



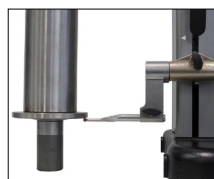
Instant switch from the manual to the motor-driven mode



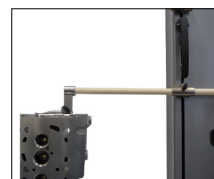
The motorization guarantees a perfectly constant measuring force



Simultaneous display of diameter and centerline



Height, thickness and chain of dimensions measurements



Standard measuring inserts up to 400 mm, with excellent repeatability

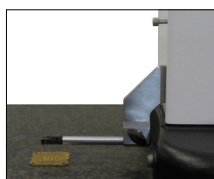


- Measuring ranges 400, 700 and 1100 mm
- Electronically adjustable measuring force
- 2d, programming, statistics
- All possible adjustments without tools
- Wireless data transfer (optional)

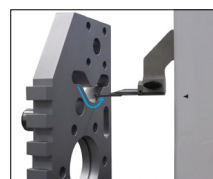
- Exceptional precision level
- Manual or motorized displacement
- Large range of accessories
- Interfaces RS232 and USB



Instrument can be remote-controlled



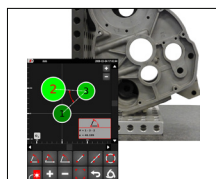
Height measurements on watch movement plate



Minimum position measurement thanks to the contour tracking in motorized mode



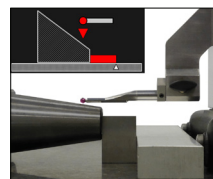
Display adjustable in every direction



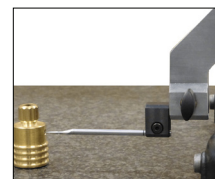
2D measurement with easy graphical interface



Perpendicularity measurements with electronic probe



Very simple measurements in 2 coordinates thanks to the graphic interface



Small diameters measurements with insert Ø 4 mm

Technical data:		V5			V6			V9		
		400	700	1100	400	700	1100	400	700	1100
Measuring range	mm (in)	407 (16.0)	711 (28)	1110 (43.7)	407 (16.0)	711 (28)	1110 (43.7)	406 (16)	710 (28)	1109 (43)
Measuring range with extension	mm (in)	719 (28.3)	1023 (40.3)	1422 (56)	719 (28.3)	1023 (40.3)	1422 (56)	724 (284)	1028 (40)	1427 (56)
Max. permissible errors, E _{MPE}	µm	2.5 + L(mm)/300			2 + L(mm)/400			1.2 + L(mm)/1000		
Repeatability, R _{MPE} (2s)	µm	2			1 (Ø: 2)			0.5 (Ø: 1)		
Frontal squareness deviation, S _{MPE}	µm	5	8	11	5	8	11	5	8	11
Resolution	mm (in)	0.001 (0.00005)						0.0001 (0.00001)		
Measuring force	N	0.75 ÷ 1.5								
Autonomy	h	40			20			12		
Interfaces		USB / RS232								
Air cushion		Yes								

Note: The above values have been determined according to ISO 13225. They are valid with the standard measuring insert (TA-MI-101), at a temperature of 20 ± 0.5 °C and relative humidity of 50 ± 5%.

Digital indicators

S_Dial **WORK** SERIES & S_Dial **PRO**



Order number	Model (S_Dial WORK)	Range (mm)	Resolution (mm)	Max. error (µm)	IP rating	Connection
805.1201	Basic	12.5	0.01	10	IP 51	USB
805.1301		12.5	0.001	4		USB
805.1401		25	0.01	10		USB
805.1501		25	0.001	5		USB
805.1601		50	0.01	20		USB
805.1621		50	0.001	7		USB
805.5201	Advanced	12.5	0.01	10	IP 54	USB
805.5301		12.5	0.001	3		USB
805.5401		25	0.01	10		USB
805.5501		25	0.001	4		USB
805.5601		50	0.01	20		USB
805.5621		50	0.001	5		USB
805.5641		100	0.01	20		USB
805.5661		100	0.001	6		USB
805.5671		150	0.01	20		USB
805.5681		150	0.001	10		USB
805.5305	Advanced IP67	12.5	0.001	3	IP 67	USB
805.5505		25	0.001	4		USB
805.5625		50	0.001	5		USB
805.6301	Bluetooth® Smart	12.5	0.001	3	IP54	Bluetooth®
805.6501		25	0.001	4		Bluetooth®
805.6621		50	0.001	5		Bluetooth®
805.6661		100	0.001	6		Bluetooth®
805.5307	Analog	12.5	0.001	3	IP54	USB
805.5507		25	0.001	4		USB
805.6307	Analog Nano Bluetooth®	12.5	0.0001	1.8	IP54	Bluetooth®
805.6507		25	0.0001	2.2		Bluetooth®
805.5306	Nano	12.5	0.0001	1.8	IP54	USB
805.5506		25	0.0001	2.2		USB
805.6306	Nano Bluetooth®	12.5	0.0001	1.8	IP54	Bluetooth®
805.6506		25	0.0001	2.2		Bluetooth®
805.7201	PLC	12.5	0.01	10	IP54	-
805.7301		12.5	0.001	4	IP67	
805.7401		25	0.01	20	IP54	
805.7501		25	0.001	5	IP67	



Order number	Model (S_Dial PRO)	Range (mm)	Measuring force (mm)	Max. error (µm)	Clamping (mm)	IP rating	Connection
805.8501	BASIC	25	0.75 - 1.00	1.3	ø8 h6	IP51	USB
805.8502		25	0.30	1.3	ø8 h6		USB
805.8601		50	0.85 - 1.2	1.5	ø8 h6		USB
805.8602		50	0.85 - 1.2	1.5	ø25 g7		USB
805.8701		50	0.40	1.5	ø8 h6		USB
805.8702		50	0.40	1.5	ø25 g7		USB
805.8661		100	0.90 - 1.30	2.2	ø8 h6		USB

Digital indicator testing stand M3

- Control thanks to a probe 10mm, 25mm or a digital indicator 25mm, 50mm
- Suitable for testing dial gauges plunger type and test indicators
- Allows the use of 2 calibrated measuring probes (like P25 and P25) (P10 calibrated on channel 1 and P50 calibrated on channel 2) (version D50S PRO)
- Control of digital instruments with direct connection
- Testing system according to ABBE principle
- Can be used in vertical and horizontal position
- Ceramic gauges blocs
- Direct status from the instrument during checking
- Integrated standards
- Creation of personalized certificates of inspection
- Fast and slow approach speeds
- Visualization at any time of the control status

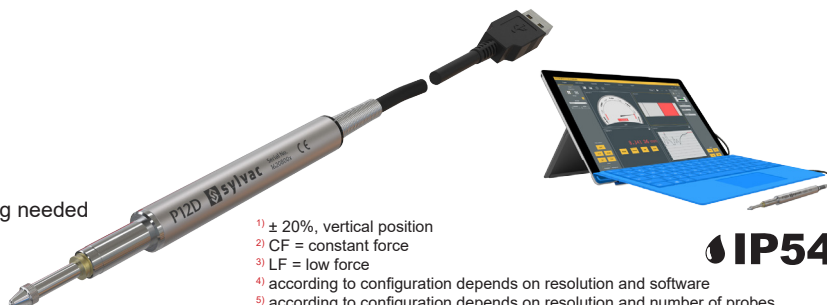


	Kit with probe and D50S PRO		Kit with digital indicator	
Model	809.1301	809.1303	809.1304	809.1305
Measuring range	M3 Kit probe 25 mm	M3 Kit probe 10 mm	M3 Kit S_Dial PRO M3 50 mm	M3 Kit S_Dial PRO M3 25 mm
Max. Error	0.8 µm	0.6 µm	1.2 µm	1.0 µm

Absolute digital measuring probes

P12D

- New very high accuracy P12D probes Series
- Measuring range 12.7mm (1/2in)
- Resolution up to 0.01 µm
- Repeatability up to 0.08 µm
- Absolute system with integrated correction, no more pairing needed
- Patented dual inductive and capacitive system
- Available in very low force version
- USB connector or M8 industrial connector



- ¹⁾ ± 20%, vertical position
- ²⁾ CF = constant force
- ³⁾ LF = low force
- ⁴⁾ according to configuration depends on resolution and software
- ⁵⁾ according to configuration depends on resolution and number of probes

IP54

Specifications	801.1012	801.1018	801.1212	801.1218	801.2012	801.2017	801.2212
Type	HR USB	HR USB CF ²⁾	HR M8	HR USB CF ²⁾	USB	USB LF ³⁾	M8
Force ¹⁾	N	0.2 - 0.3	0.06	0.2 - 0.3	0.06	0.4 - 0.8	0.2 - 0.3
Measuring range	mm	12.7					
Resolution	µm	0.01				0.1	
Max. Error	µm	0.6				1	
Repeatability	µm	0.08				0.2	
Nb measures/s		up to 300/s ⁴⁾		up to 100/s ⁵⁾		up to 300/s ⁴⁾	
Output type		USB		M8		USB	

Inductive measuring probes



Model		P2i	P2iP	P5i	P5iP
Travel	mm	±2	±2	±5	±2
Pre-travel	mm	0.15	0.8	0.15	0.3
Post-travel	mm	1.35	1.2	0.85	0.7
Resolution		Digital : user selectable to <0.1µm			
Repeatability	µm	0.15			
Moving mass	g	3.4	3.4	3.7	3.7
Accuracy of reading %		0.5			
Bodydiameter	mm	8h6			
IP rating		IP65			
Temperature	%FS/°C	0.01			

Capacitive measuring probes



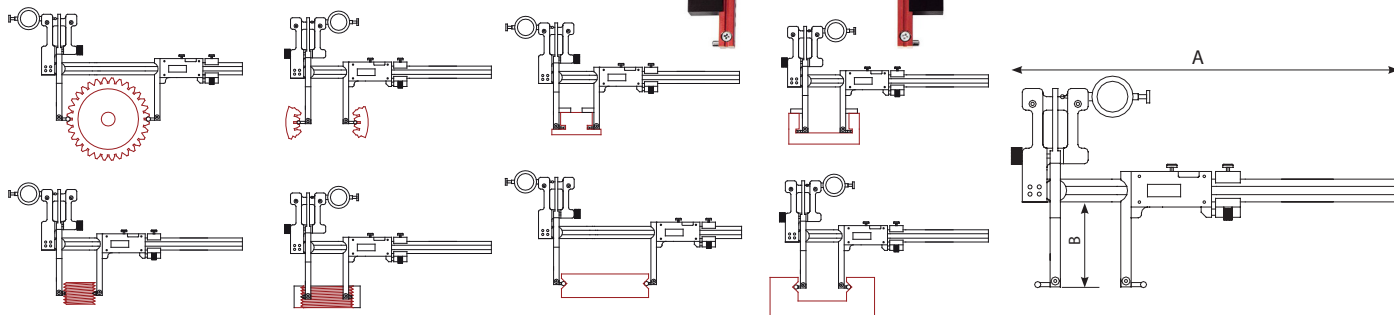
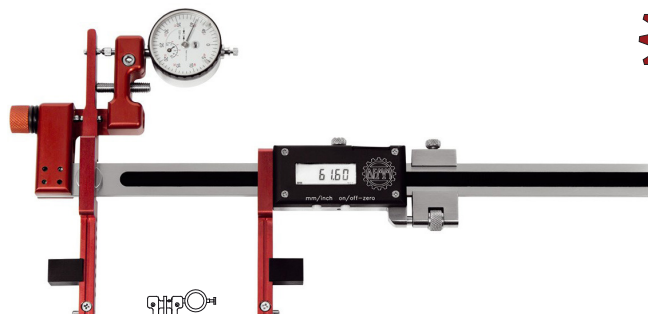
Model		P5	P10	P15
Travel	mm	5	10	25
Pre-travel	mm	0.7	0.5	0.8
Max. Error ¹⁾	µm	1	1	1.2
Repeatability	µm	0.2		
Moving mass	g	3.7	4.1	9.6

¹⁾ With Master unit. See as well the specifications of the pair Measuring probe/display unit.

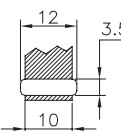
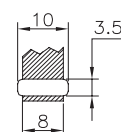
DIGI BASCOM

Caliper for inside/outside measurement

- Caliper for inside/outside measurement with dial gauge
- Lightweight caliper, in hardened stainless steel
- Easy to operate
- Electronic RS232 mm./inc. data output, water resistant
- Interchangeable rods for inside grooves
- Supplied with dial gauge 0.01 $\varnothing$ 40 mm and couple of interchangeable rods article TS 3



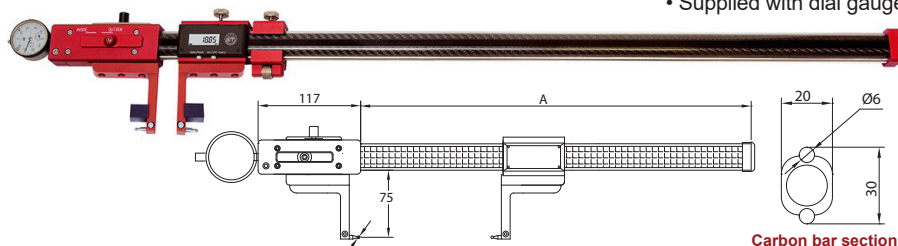
Article	Range	A	B	Bar Section	Resolution	Accuracy	Kg.
DIGI BASCOM 200/60	I	20-220	325	18 X 4	0.01	0.02	0.600
	E	0-138	325	18 X 4	0.01	0.02	
DIGI BASCOM 300/80	I	24-300	435	22 X 5	0.01	0.02	0.950
	E	0-230	435	22 X 5	0.01	0.02	
DIGI BASCOM 500/80	I	24-500	635	22 X 5	0.01	0.03	1.150
	E	0-430	635	22 X 5	0.01	0.03	



DIGI PLATON

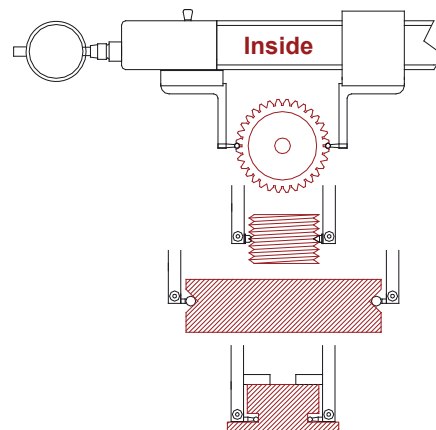
Instrument for measurement with spring system

- Digital caliper for inside/outside measurement with spring system
- Lightweight calliper (Carbon fiber)
- Electronic RS 232, mm/inch
- Supplied with dial gauge 0.01 $\varnothing$ 40 mm, adaptor and couple of disk jaws $\varnothing$ 20



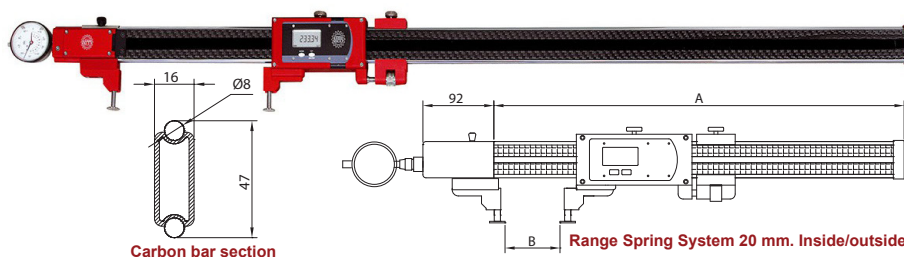
Range Spring System 20 mm. Inside/outside

Article	Range	A	Resolution	Repetibility	Kg.
DIGI PLATON I/E 400	400	550	0.01	0.03	1.400
DIGI PLATON I/E 600	600	750	0.01	0.03	1.900
DIGI PLATON I/E 800	800	950	0.01	0.04	2.400



BIG DIGI PLATON

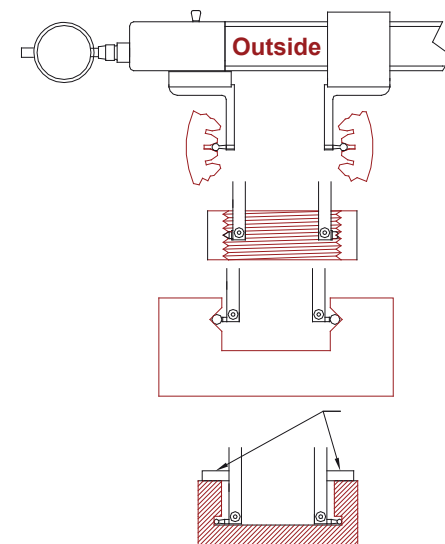
Instrument for measurement with dial gauge and spring system



Carbon bar section

Range Spring System 20 mm. Inside/outside

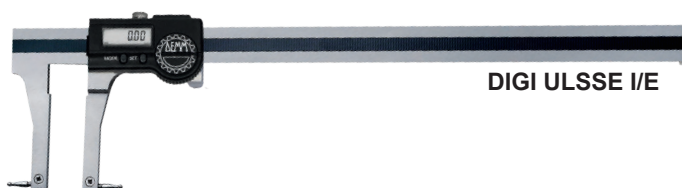
Article	Range	A	Resolution	Repetibility	Kg.
BIG DIGI PLATON I/E 1000	1000	1300	0.01	0.04	2.600
BIG DIGI PLATON I/E 1500	1500	1800	0.01	0.05	3.100
BIG DIGI PLATON I/E 2000	2000	2300	0.01	0.06	3.600
BIG DIGI PLATON I/E 2500	2500	2800	0.01	0.08	4.100
BIG DIGI PLATON I/E 3000	3000	3300	0.01	0.12	4.600



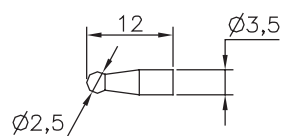
DIGI ULISSE I/E, DIGI ULISSE P I/E

Digital sliding gauge for internal/external grooves

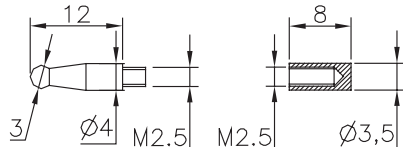
- Digital sliding gauge for internal/external grooves
- In hardened stainless steel
- Electronic IP67 mm/inc - cable connect proximity/usb
- Supplied with interchangeable rods with gauged balls 3 mm
- Interchangeable rods



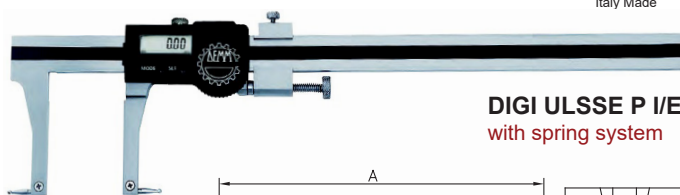
DIGI ULISSE I/E



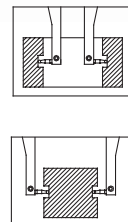
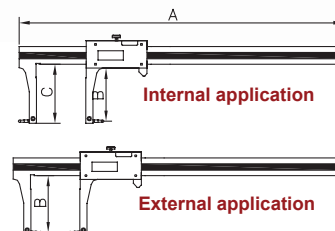
Standard for Digi Ulisse I/E 250
Standard for Digi Ulisse P I/E 200



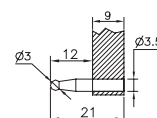
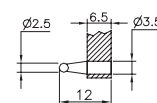
Standard for Digi Ulisse I/E 400-650
Standard for Digi Ulisse P I/E 350-450



DIGI ULISSE P I/E
with spring system



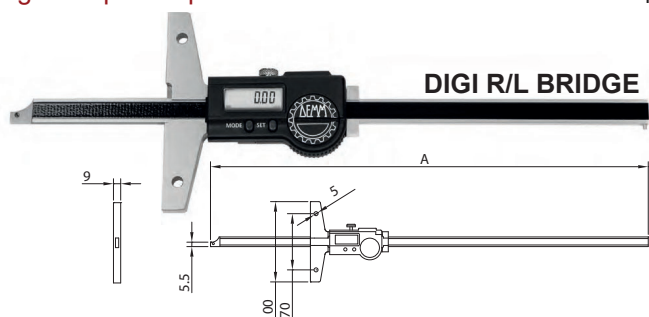
Article		Range	A	B	C	Bar Section	Resolution	Accuracy	Kg.
DIGI ULISSE I/E 250	I	24-250	332	52	64	16.5 X 4.5	0.01	0.02	0.260
	E	0-210	332	61	64	16.5 X 4.5	0.01	0.02	
DIGI ULISSE P I/E 200	I	24-220	332	52	64	16.5 X 4.5	0.01	0.02	0.295
	E	0-170	332	61	64	16.5 X 4.5	0.01	0.02	
Article		Range	A	B	B	Bar Section	Resolution	Accuracy	Kg.
DIGI ULISSE I/E 400	I	42-400	470	96	103	17 x 5	0.01	0.03	0.560
	E	0-320	470	100	103	17 x 5	0.01	0.03	
DIGI ULISSE I/E 500	I	42-500	570	96	103	17 x 5	0.01	0.03	0.650
	E	0-420	570	100	103	17 x 5	0.01	0.03	
DIGI ULISSE I/E 650 (IP65)	I	42-650	720	96	103	22 x 5	0.01	0.04	0.740
	E	0-570	720	100	103	22 x 5	0.01	0.04	
DIGI ULISSE P I/E 350	I	42-370	470	96	103	17 x 5	0.01	0.03	0.630
	E	0-280	470	100	103	17 x 5	0.01	0.03	
DIGI ULISSE P I/E 450	I	42-470	570	96	103	17 x 5	0.01	0.03	0.710
	E	0-380	570	100	103	17 x 5	0.01	0.03	



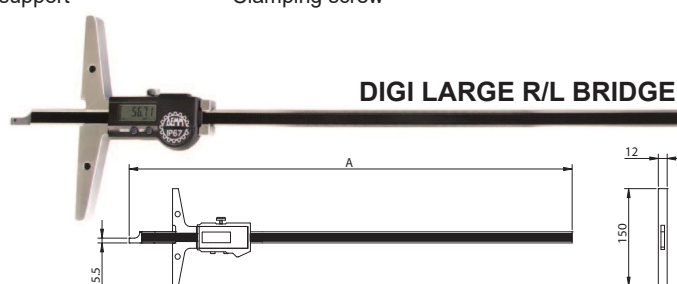
DIGI R/L BRIDGE, DIGI LARGE R/L BRIDGE

Digital depth caliper

- Electronic IP67 mm/incable connect proximity/usb
- Digital depth caliper
- Push support
- In hardened stainless steel
- Clamping screw



DIGI R/L BRIDGE



DIGI LARGE R/L BRIDGE

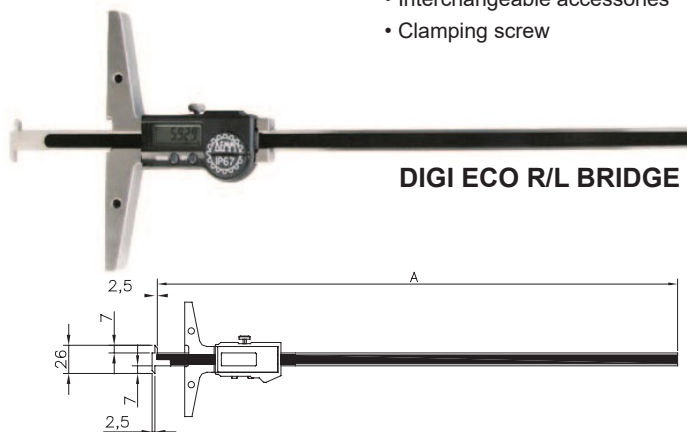
Article	Range	A	Bar Section	Resolution	Accuracy	Kg.
DIGi R/L BRIDGE 150	150	250	12 X 4	0.01	0.02	0.260
DIGi R/L BRIDGE 200	200	300	12 X 4	0.01	0.02	0.295
DIGi R/L BRIDGE 250	250	350	12 X 4	0.01	0.03	0.315
DIGi R/L BRIDGE 300	300	400	12 X 4	0.01	0.03	0.330
DIGi R/L BRIDGE 400	400	500	12 X 4	0.01	0.03	0.350
DIGi R/L BRIDGE 500	500	600	12 X 4	0.01	0.03	0.390
DIGi R/L BRIDGE 600	600	700	12 X 4	0.01	0.03	0.430
DIGi LARGE R/L BRIDGE 300	300	400	12 X 4	0.01	0.02	0.430
DIGi LARGE R/L BRIDGE 400	400	500	12 X 4	0.01	0.02	0.460
DIGi LARGE R/L BRIDGE 500	500	600	12 X 4	0.01	0.03	0.500
DIGi LARGE R/L BRIDGE 600	600	700	12 X 4	0.01	0.03	0.530

DIGI ECO R/L BRIDGE, DIGI LARGE BRIDGE

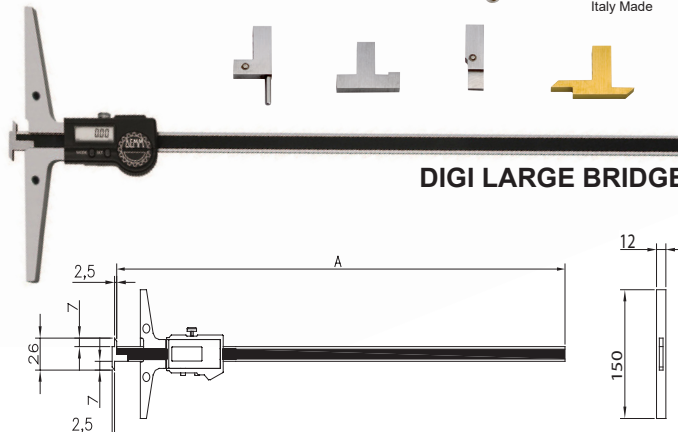
Digital depth caliper

- Electronic IP67 mm/inc - cable connect proximity/usb
- Digital depth caliper
- In hardened stainless steel
- Interchangeable accessories
- Clamping screw

Optional accessories



DIGI ECO R/L BRIDGE



DIGI LARGE BRIDGE

Article	Range	A	Bar Section	Resolution	Accuracy	Kg.
DIGi ECO R/L BRIDGE 150	150	250	12 X 4	0.01	0.02	0.260
DIGi ECO R/L BRIDGE 200	200	300	12 X 4	0.01	0.02	0.295
DIGi ECO R/L BRIDGE 250	250	350	12 X 4	0.01	0.03	0.315
DIGi ECO R/L BRIDGE 300	300	400	12 X 4	0.01	0.03	0.330
DIGi ECO R/L BRIDGE 400	400	500	12 X 4	0.01	0.03	0.350
DIGi ECO R/L BRIDGE 500	500	600	12 X 4	0.01	0.03	0.390
DIGi ECO R/L BRIDGE 600	600	700	12 X 4	0.01	0.03	0.430
DIGI LARGE BRIDGE 300	300	400	12 X 4	0.01	0.02	0.430
DIGI LARGE BRIDGE 400	400	500	12 X 4	0.01	0.02	0.460
DIGi LARGE BRIDGE 500	500	600	12 X 4	0.01	0.03	0.500
DIGI LARGE BRIDGE 600	600	700	12 X 4	0.01	0.03	0.530

IRIS E, IRIS I

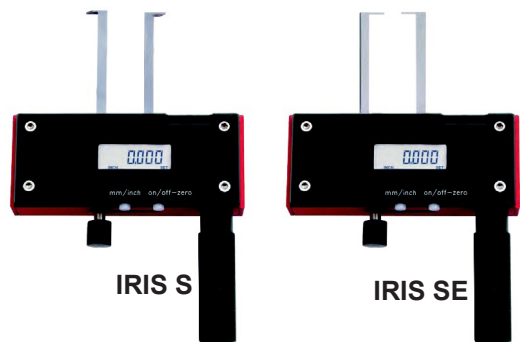
Electronic measuring gauge for internal and external measurement



Article	Range	Max Run	Resolution	Accuracy	Kg.
IRIS 50 E 0/22	0 - 22	-	0.01	0.02	0.300
IRIS 50 E 19/44	19 - 44	-	0.01	0.02	0.300
IRIS 80 E 0/24	0 - 24	-	0.01	0.02	0.300
IRIS 120 E 0/24	0 - 24	-	0.01	0.02	0.350
IRIS 50 I 22/114	22 - 114	25	0.01	0.02	0.300
IRIS 80 I 30/114	30 - 114	25	0.01	0.02	0.300

IRIS S, IRIS SE

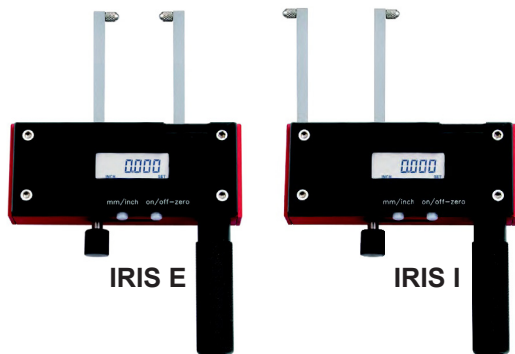
Electronic measuring gauge for internal and external segger



Article	Range	Hole Min Ø	Resolution	Accuracy	Kg.
IRIS 50 S 6/29	0 - 30	8	0.01	0.02	0.300
IRIS 50 S 8/32	8 - 32	10	0.01	0.02	0.300
IRIS 50 S 12/36	12 - 36	12	0.01	0.02	0.300
IRIS 50 S 32/56	32 - 56	32	0.01	0.02	0.300
IRIS 50 S 42/66	42 - 66	42	0.01	0.02	0.350
IRIS 50 SE 0/24	0 - 24	-	0.01	0.02	0.300
IRIS 50 SE 20/44	20 - 44	-	0.01	0.02	0.300

IRIS E, IRIS I

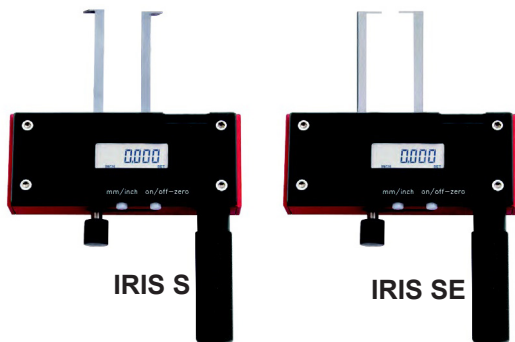
Electronic measuring gauge for internal and external measurement



Article	Range	Max Run	Resolution	Accuracy	Kg.
IRIS 50 E 0/22	0 - 22	-	0.01	0.02	0.300
IRIS 50 E 19/44	19 - 44	-	0.01	0.02	0.300
IRIS 80 E 0/24	0 - 22	-	0.01	0.02	0.300
IRIS 120 E 0/24	0 - 24	-	0.01	0.02	0.350
IRIS 50 I 22/114	22 - 114	25	0.01	0.02	0.300
IRIS 80 I 30/114	30 - 114	25	0.01	0.02	0.300

IRIS S, IRIS SE

Electronic measuring gauge for internal and external segger



Article	Range	Hole Min Ø	Resolution	Accuracy	Kg.
IRIS 50 S 6/29	0 - 30	8	0.01	0.02	0.300
IRIS 50 S 8/32	8 - 32	10	0.01	0.02	0.300
IRIS 50 S 12/36	12 - 36	12	0.01	0.02	0.300
IRIS 50 S 32/56	32 - 56	32	0.01	0.02	0.300
IRIS 50 S 42/66	42 - 66	42	0.01	0.02	0.350
IRIS 50 SE 0/24	0 - 24	-	0.01	0.02	0.300
IRIS 50 SE 20/44	20 - 44	-	0.01	0.02	0.300

IRIS FE/FI

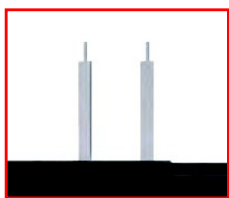
Electronic measuring gauge for internal/external thread



Article	Range	Pich	Resolution	Accuracy	Kg.
IRIS FE 0/24	0 - 24	1 - 1.25 1.5 - 1.75 2 - 2.5 - 3	0.01	0.02	0.300
IRIS FE 20/40	20 - 40		0.01	0.02	0.300
IRIS FE 40/60	40 - 60		0.01	0.02	0.300
IRIS FE 60/80	60 - 80		0.01	0.02	0.300
IRIS FI 13/27	13 - 27	1 - 1.25 1.5 - 1.75 2 - 2.5 - 3	0.01	0.02	0.350
IRIS FI 25/45	25 - 45		0.01	0.02	0.300
IRIS FI 40/65	40 - 65		0.01	0.02	0.300
IRIS FI 60/80	60 - 80		0.01	0.02	0.300

IRIS P

Electronic measuring gauge for small holes



Article	Range	Resolution	Accuracy	Kg.
IRIS 50 S 6/29	0 - 30	0.01	0.02	0.300
IRIS 50 S 8/32	8 - 32	0.01	0.02	0.300

DIGIOLFO

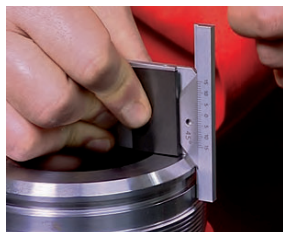
Digital key centering

- For measure the axiality centricity of a key slot from Ø 8 to Ø 100
- Adapter with different pitch
- Key 4-20 mm (optional)



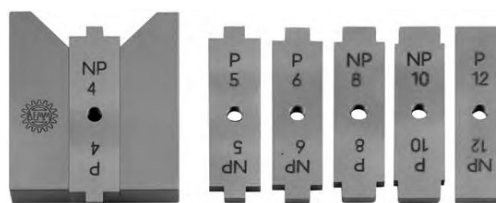
RAPID

Ventesimal plug gauge for measurement bevels from 0.5 to 10 mm. at 30° - 45° - 60°



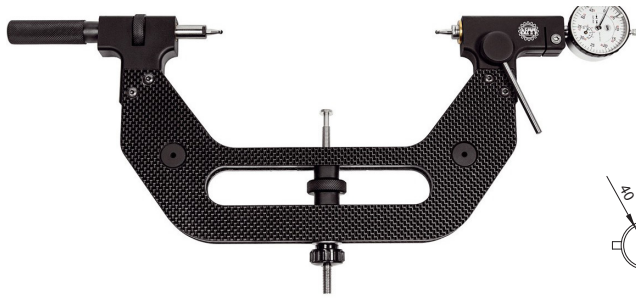
OLFO

Plug gauge for measurement the axiality, centricity of a key slot approved/not approved



APOLLO

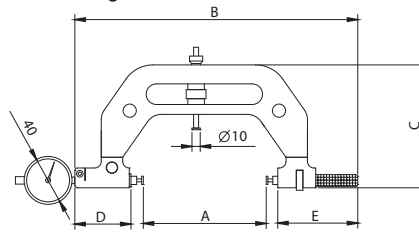
Micrometer



- Caliper in carbon fiber
- Accessories in light alloy
- Interchangeable rods $\varnothing 3,5$
- Supplied with dial gauge 0,01 and rods $\varnothing 3$
- Range: 5 mm



Steel support base



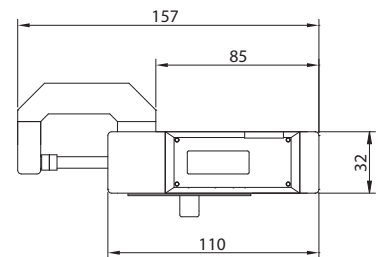
Article	A (Range)	B	C	D	E	Repetibility	Kg.
APOLLO 0-50	0-50	247	95	66	97	0.001	0.420
APOLLO 50-100	50-100	297	124	66	97	0.001	0.500
APOLLO 100-150	100-150	347	150	66	97	0.001	0.620
APOLLO 150-200	150-200	397	174	66	97	0.001	0.720
APOLLO 200-250	200-250	447	210	66	97	0.001	0.920
APOLLO 250-300	250-300	497	234	66	97	0.002	1.020
APOLLO 300-350	300-350	547	260	66	97	0.002	1.120
APOLLO 350-400	350-400	597	284	66	97	0.003	1.220
APOLLO 400-450	400-450	647	310	66	97	0.003	1.320
APOLLO 450-500	450-500	707	374	66	97	0.003	1.420
APOLLO 500-600	500-600	960	437	95	230	0.005	2.100
APOLLO 600-700	600-700	1010	487	95	230	0.005	2.400
APOLLO 700-800	700-800	1060	537	95	230	0.005	2.700

LETO

Micrometer

- Micrometer with push system
- Electronic RS 232, water resistant, mm/ inch
- Resolution 0.001 mm
- For outside measurement
- With carbide contacts

Range	Resolution	Accuracy	Kg.
0 - 25	0.001	0.002	0.252

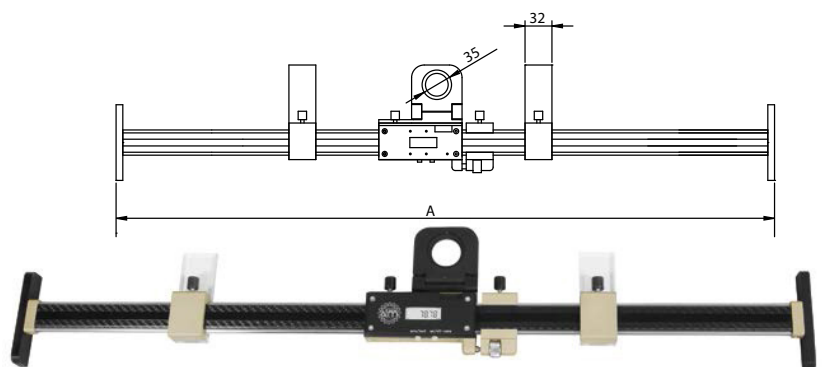


LETO

Electronic scale in carbon fiber with magnifier

- Electronic scales in carbon fiber with magnifier
- Electronic scales in carbon fiber
- Magnifier not included
- Support for fine and easy balance
- Used for measuring of distance on flat surface

Article	Range	A	Resolution	Kg
LETO 450	450	720	0.01	1.000
LETO 750	750	1020	0.01	1.900
LETO 1150	1150	1420	0.01	3.000
LETO 1450	1450	1720	0.01	3.700



HORIZONTAL LINE

Horizontal digital straight edge, electronic RS232 data output



Article	Range	Kg
HORIZONTAL LINE 200	200	0.350
HORIZONTAL LINE 300	300	0.450
HORIZONTAL LINE 500	500	0.600

VERTICAL LINE

Vertical digital straight edge, electronic RS232 data output



Article	Range	Kg
VERTICAL LINE 200	200	0.350
VERTICAL LINE 300	300	0.450
VERTICAL LINE 500	500	0.600

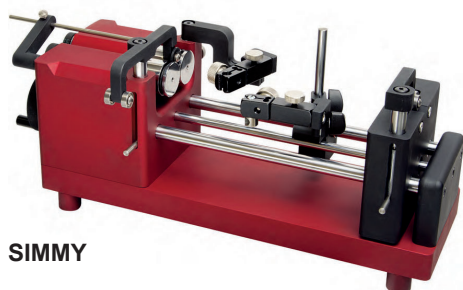


SIMMY, SIMMY DS

Concentricity gage system

- Instrument for measuring concentricity and roundness 0.002
- Light weight
- Rotor on hardened stainless steel
- Three different supports for dial gauge
- Movable supports
- Transmission by plane strap
- Dial gauge not included

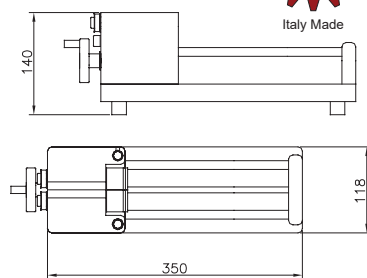
Article	Range	Prec.	Kg
SIMMY	Ø 1.5 - Ø 50	0.002	8.500
SIMMY B	Ø 10 - Ø 100	0.002	12.000
SIMMY DS	Ø 1.5 - Ø 50	0.002	8.800
SIMMY DS B	Ø 10 - Ø 100	0.002	12.000



SIMMY



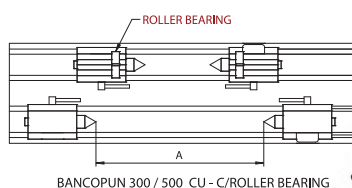
SIMMY DS
Double movable support
for long and heavy pieces



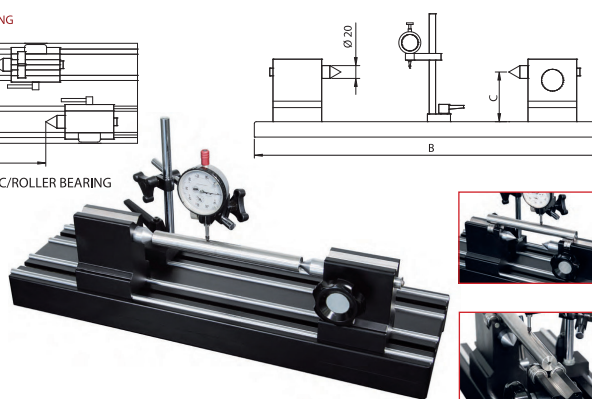
BANCOPUN

Instrument for measuring between two lips

- Arm support for gauge
- One guide fixed, other one movable
- Double guide with possibility to set extra one
- Pit quarry "V" with roller bearing for support a shaft
- Dial gauge included



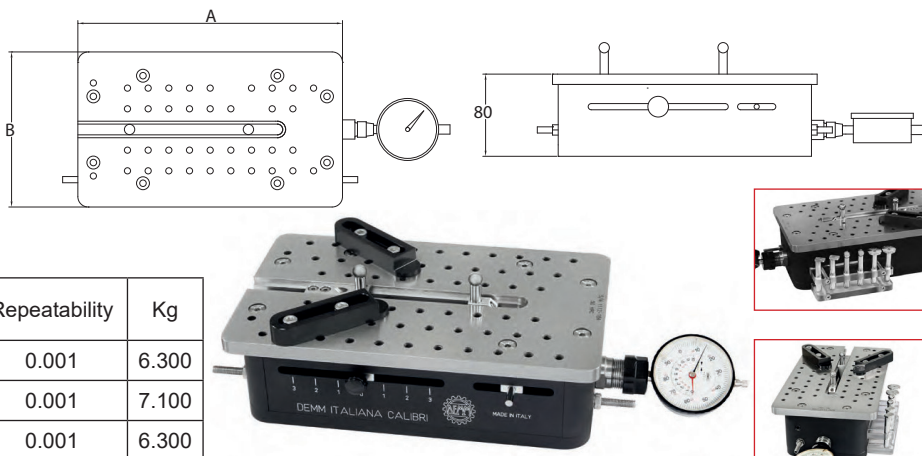
Article	A	B	C	Ø Max	Kg
BANCOPUN 300	300	540	75	150	18.000
BANCOPUN 500	500	740	75	150	25.000
BANCOPUN 300 CU - C/ROLLER BEARING	300	540	75	150	18.000
BANCOPUN 500 CU - C/ROLLER BEARING	500	740	75	150	25.000



PULSAR

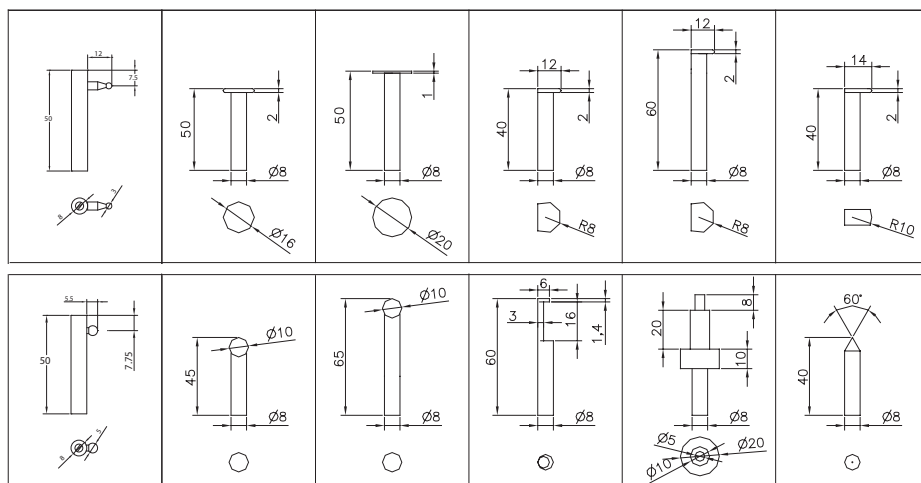
Measurement table (quick check)

- Precise and safe measurements
- Base in hardened stainless steel inox tempre
- Interchangeable accessories
- Internal and external measure
- Accuracy: 1 micron rep.
- I fixed and movable probes
- Dial gauge 0,01
- Provided couple of accessory



Article	Dimension	Measuring range	Repeatability	Kg
PULSAR 180	255 X 150	0 - 200	0.001	6.300
PULSAR 330	406 X 180	0 - 330	0.001	7.100
PULSAR 180-45°	255 X 150	0 - 200	0.001	6.300

Useful for multiple applications of measurement



Plug Gauges

Involute, Parallel & Serration



Splined Plug Gauges are used to check circular space width on an internal splined component.

Spline specialises in the manufacturing of Splined Plug Gauges and is able to offer a wide range of internationally recognised standards and any bespoke designs to meet your gauging requirements. Some of the common standards include:

- DIN
- JIS
- ANSI/A
- SAE
- GMA
- NF E
- ISO
- NAS
- BS
- RVZ

Spline is also able to supply Tapered Plug Gauges, Plain Diameter Plug Gauges & Taper Plain Diameter Plug Gauges.

Spline also have the capabilities to produce Straight or Helical splined Plug Gauges.

Spline typically manufacture plug gauges in 01 tool steel which has a hardness rockwell (HRC) of 60-62 however we can also manufacture in other materials such as high speed steel which is more durable offering extended life. Other materials we offer are:-

- A2 (61-63 HRC)
- ASP23 (64-65 HRC)
- ASP30 (65-66 HRC)

Taper Master Plug Gauges

Involute, Parallel & Serration



Splined Taper Master Plug Gauges (TMP) are taper tooth master plugs with fit and wear lines. Taper Master Plug Gauges are used to monitor the wear of Ring Gauges during component manufacture.

Spline also have the capabilities to produce Straight or Helical splined Taper Master Plug Gauges.

Helical Master Gears



Helical master gears are used for the composite checking of components, this is generally achieved by putting the master and component gears in hard mesh on a machine that records the deviation of centre distance during rotation of the gears.

Spline specialise in the manufacture of helical master gears and pride ourselves on our supreme quality. Spline is also able to offer a wide range of internationally recognised standards to meet any customer requirement. Some of the common standards include:

- DIN (Quality 3 & 4)
- AGMA (Quality 1,2,3 & 4)
- ISO (Quality 3 & 4)

Spline also have the capabilities to produce and supply bespoke helical master gears to suit customer requirements. Our manufacturing capabilities are:-

- Diameter (Min/Max) - 5mm – 400mm
- Pressure Angle (Min/Max) - 5° – 50°
- Module (Min/Max) - 0.12 – 10
- Helix Angle (Min/Max) - 0° – 50°

Spline typically manufacture helical master gears in 01 tool steel which has a hardness rockwell (HRC) of 60-62 however we can also manufacture in other materials such as high speed steel which is more durable offering extended life. Other materials we offer are:-

- A2 (61-63 HRC)
- ASP23 (64-65 HRC)
- ASP30 (65-66 HRC)

Helical Internal Master Component Replica



Helical Internal Master Component Replicas are used for setting dimension under balls. This product can also be used for setting up roll checking equipment.

Spline specialises in the manufacture of Helical Internal Master Component Replicas and pride ourselves on our supreme quality. Spline is also able to offer a wide range of internationally recognised standards to meet any customer requirement. Some of the common standards include:

- DIN (Quality 3 & 4)
- AGMA (Quality 1,2,3 & 4)
- ISO (Quality 3 & 4)

Spline also have the capabilities to produce and supply bespoke Helical Internal Master Component Replicas to suit customer requirements. Our manufacturing capabilities are:-

- Diameter (Min/Max) - 50mm – 250mm
- Pressure Angle (Min/Max) - 5° – 50°
- Module (Min/Max) - 0.5 – 4
- Helix Angle (Min/Max) - 0° – 45°

Ring Gauges

Involute, Parallel & Serration



Splined Ring Gauges are used to check tooth thickness on an external splined component. Ring Gauges can also be manufactured to fit new or existing taper master plug gauges (see taper master plug gauges for more information).

Spline specialises in the manufacturing of Splined Ring Gauges and is able to offer a wide range of internationally recognised standards and any bespoke designs to meet your gauging

requirements. Some of the common standards include:

- DIN
- JIS
- ANSI/A
- SAE
- GMA
- NF E
- ISO
- NAS
- BS
- RVZ

Spline are also able to supply Tapered Ring Gauges, Plain Diameter Ring Gauges & Taper Plain Diameter Ring Gauges.

Spline also have the capabilities to produce Straight or Helical splined Ring Gauges.

Spline typically manufacture ring gauges in 01 tool steel which has a hardness rockwell (HRC) of 60-62 however we can also manufacture in other materials such as high speed steel which is more durable offering extended life. Other materials we offer are:-

- A2 (61-63 HRC)
- ASP23 (64-65 HRC)
- ASP30 (65-66 HRC)

Spur Master Gears



Spur master gears are used for the composite checking of components, this is generally achieved by putting the master and component gears in hard mesh on a machine that records the deviation of centre distance during rotation of the gears.

Spline specialises in the manufacture of spur master gears and pride ourselves on our supreme quality. Spline is also able to offer a wide range of internationally recognised standards to meet any customer requirement.

Some of the common standards include:

- DIN (Quality 3 & 4)
- AGMA (Quality 1,2,3 & 4)
- ISO (Quality 3 & 4)

Spline also have the capabilities to produce and supply bespoke spur master gears to suit customer requirements. Our manufacturing capabilities are:-

- Diameter (Min/Max) - 5mm – 400mm
- Pressure Angle (Min/Max) - 5° – 50°
- Module (Min/Max) - 0.12 – 10

Spline typically manufacture spur master gears in 01 tool steel which has a hardness rockwell (HRC) of 60-62 however we can also manufacture in other materials such as high speed steel which is more durable offering extended life. Other materials we offer are:-

- A2 (61-63 HRC)
- ASP23 (64-65 HRC)
- ASP30 (65-66 HRC)



0015



ISO 9001:2000 FS 503702



ISO 14001:2004 EMS 525187



Variable Spline Indicator Ring Type

Involute, Parallel & Serration



Ring Type Variable Spline Indicators are used to check effective & actual tooth thickness on an external splined component. These Spline indicators are typically supplied with digital Mitutoyo indicators which display a readout of the tooth thickness.

Functional Go and NoGo Ring Gauges are perfectly adequate for some manufacturers as they confirm if a component is within or outside the required tolerance band however for some manufacturers it is necessary

to actually measure and record the tooth thickness.

- DIN
- JIS
- ANSI/A
- SAE
- ISO
- NF E
- BS
- NAS
- RVZ

Spline Gauges also have the capabilities to produce Straight or Helical Ring Type Versa Spline Gauges to suit customer requirements.

Variable Spline Indicator Plug Type

Involute, Parallel & Serration



Plug Type Variable Spline Indicators are used to check effective & actual circular spacewidth on an internal splined component. These Spline indicators are typically supplied with digital Mitutoyo indicators which display a readout of the circular spacewidth.

Functional Go and NoGo Plug Gauges are perfectly adequate for some manufacturers as they confirm if a component is within or outside the required tolerance band however for some manufacturers it is necessary

to actually measure and record the circular spacewidth.

Spline specialises in the manufacturing of Variable Spline Plug Type Indicators and is able to offer a wide range of internationally recognised standards and any bespoke designs to meet your gauging requirements. Some of the common standards include:

- DIN
- JIS
- ANSI/A
- SAE
- ISO
- NF E
- BS
- NAS
- RVZ

Spline Gauges also have the capabilities to produce Straight or Helical Ring Type Versa Spline Gauges to suit customer requirements.

Versa Indicating Ring Type Gauges

Involute & Serration



Ring Type Versa Spline Gauges are mainly used to check dimension over pins on an external splined component, however Ring Type Versa Gauges can also be used to check the Major or Minor diameter on an external splined component. These Versa gauges are typically supplied with digital Mitutoyo indicators which display readout of the dimension over pins, major diameter or minor diameter.

Ring Type Versa Spline Gauges typically has two spring loaded balls locating on the feature they are checking.

Spline specialises in the manufacturing Ring Type Versa Spline Gauges and is able to offer a wide range of internationally recognised standards and any bespoke designs to meet your gauging requirements. Some of the common standards include:

- DIN
- ANSI/A
- ISO
- BS

Spline Gauges also have the capabilities to produce Straight or Helical Ring Type Versa Spline Gauges to suit customer requirements.

Versa Indicating Plug Type Gauges

Involute & Serration



Plug Type Versa Spline Gauges are mainly used to check dimension under pins on an internal splined component, however Plug Type Versa Gauges can also be used to check the Major or Minor diameter on an internal splined component. These Versa gauges are typically supplied with digital Mitutoyo indicators which display readout of the dimension under pins, major diameter or minor diameter.

Plug Type Versa Spline Gauges typically has two spring loaded balls locating on the feature they are checking.

Spline specialises in the manufacturing Plug Type Versa Spline Gauges and is able to offer a wide range of internationally recognised standards and any bespoke designs to meet your gauging requirements. Some of the common standards include:

- DIN
- ANSI/A
- ISO
- BS

Spline Gauges also have the capabilities to produce Straight or Helical Ring Type Versa Spline Gauges to suit customer requirements.

Rotalock Mandrels

Involute, Parallel & Serration



Spined Rotalock arbors have a rotating section of teeth for clamping on internal splined components and are used for machining and inspection purposes.

Spline also design and manufacture expanding key type arbors and expanding collets. Expanding key type arbors are generally used for clamping on major diameter fitting splines for machining

or grinding purposes. Expanding spline collets utilise a split collet with a spline on the outside mounted on a ground tapered diameter mandrel.

Spline specialises in the manufacturing of Rotalock Arbors, Expanding Key Type Arbors and Expanding Spline Collets to suit customer requirements.

Lock-Up Concentricity Ring Gauges

Involute, Parallel & Serration



Spined Lock-Up Concentricity Ring Gauges are used for inspecting the concentricity of a Spline relative to another feature on a component.

The Concentricity Ring has a moving section of Splined teeth which clamp onto the component and has a ground outside diameter which is concentric to the spline. A dial indicator is then applied

to the concentric outside diameter, the component is then rotated and the indicator provides a measurement of the concentricity of the component spline.

Spline specialises in the manufacturing of Lock-Up Concentricity Ring Gauges and is able to offer a wide range of internationally recognised standards and any bespoke designs to meet your gauging requirements. Some of the common standards include:

- DIN
- ANSI/A
- ISO
- BS

Spline also have the capabilities to produce straight or helical Lock-Up Concentricity Ring Gauges.

Tapered Spline Mandrels

Involute, Parallel & Serration



Spined Tapered Mandrels are used for the inspection of the concentricity of an internal spline relative to another component feature such as a diameter. The mandrel has tapered teeth for side fits splines or tapered major diameter for major diameter fit splines.

Spline specialises in the manufacturing of Tapered Spline Mandrels and is able

to offer a wide range of internationally recognised standards and any bespoke designs to meet your gauging requirements. Some of the common standards include:

- DIN
- JIS
- ANSI/A
- SAE
- ISO
- NF E
- BS
- NAS
- RVZ

Spline also have the capabilities to produce Straight or Helical Tapered Mandrels to suit customers exact requirements.

Lead and Involute Artefacts



Highly accurate lead and involute artefacts are used for the verification of gear testing machines.

Spline specialise in the manufacture of lead and involute artefacts and pride ourselves on our supreme quality. Spline is also able to offer a wide range of internationally recognised standards to meet any customer requirement. Some of the common standards include:

- DIN (Quality 3 & 4)
- AGMA (Quality 1,2,3 & 4)
- ISO (Quality 3 & 4)

Spline also have the capabilities to produce and supply bespoke lead and involute artefacts to suit customer requirements. Our manufacturing capabilities are:-

- Diameter (Min/Max) - 10mm – 375mm
- Pressure Angle (Min/Max) - 5° – 50°
- Module (Min/Max) - 0.2 – 10
- Helix Angle (Min/Max) - 0° – 50°

BMD - Plug Gauges



Easy-to-use, self-indicating and self-centering bore gauge for the measurement of inner - and outer diameter, with highest precision and absolute accurate results.

Field of application is the production of high-precision bores within a standard range of Ø 2.0 mm (T-BMD) up to 270 mm in serial production.

Plug Gauge BMD allows:

- Static and dynamic measurement
- Detection of dimensional deviations and shape defects
- As a hand tool in bores directly at the machine
- Fitting in measuring fixtures and machines

A wide selection of basic types in the standard program, supplemented by useful accessories, ensures that nearly all bores encountered in current practice can be measured precisely. Its flexible platform allows a wide area of application:

- Standard- und Through bores: from 2.0 to 270 mm,
- Measurement of Blind Bores(Flat-Bottom): from 2,0 (T-BMD-FB) to 150 mm,
- Measurement of O.D.: from 20 to 100 mm,
- Multiplane plug gauges: from 21 mm,
- Internal gear gauges: from 10 mm cylinder diameter
- 3-Point Measurement: from 8.0 to 100 mm,
- For very small diameters from 2.0 mm to 3.0 mm
- Measurement of parallel distances: from 1.0 (T-BMD-PA) to 30 mm
- Special sizes, shapes and models, e. g. tapered bores
- Extension or limitations of the measuring range, adjustment of the measuring pressure, air supply,...

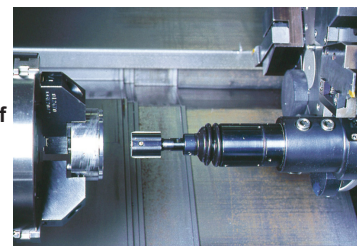
BMD (standard design) have a hard chrome coating on guiding cylinders, with approx. 1000 HV. Most of them are suitable for rough measurement conditions.

Repeatability:

- 2-point design =< 1 µm
- 3-point design =< 2 µm

The selection of gauging contact material depends on composition and design of the work piece:

- Carbide,
- Hard chrome,
- Ceramic,
- Ruby,
- Plastic,
- Diamond.



BMD for automatic measurement



BMD for crankshafts



BMD for measuring outside diameter



BMD for parallel wall gaps



BMD for tapered bores



BMD with 2 guide cylinders



BMD-PK with carbide bars



Depth stop designed for clamping to BMD guide cylinders



Multiplane plug gauges

Gear Gauges

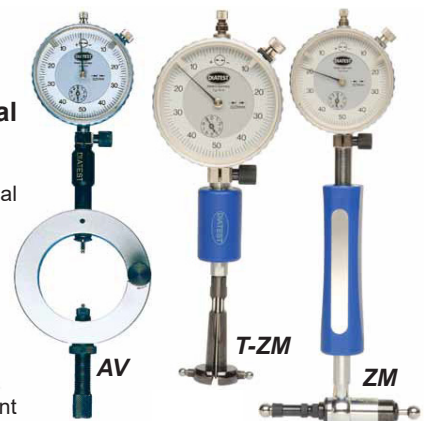
Internal & External

Flexible indicating 2-point measuring instruments for internal and External gear gauging

Measurement of internal and external gear gauges, taper and ovality. Applicable for internal and external gear gauges (straight-sided or helical) and for gears with even or odd numbered teeth.

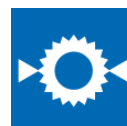
Internal Gear Gauges:

- Range between balls $M_i = 3.5$ to 333 mm
- Starting from $M_i = 9.3$ mm (T-ZM3!) the ball anvils are interchangeable
- Measuring range from 0.6 to 3 mm, depending on model
- Identical to Split-Ball and Plunger Probe system Measurement of diameter and length
- Alternative: self-centering Plug Gauge BMD-IV (starting from cylinder-Ø 10 mm) for serial measurement



External Gear Gauges:

- Range over balls $M_a = 0 - 140$ mm
- Available in four measuring ranges: $M_a = 0-30, 0-70, 30-70$ and $70-140$ mm
- Ball anvils are interchangeable
- Optional: Checking stand



Balls are made of carbide. Many ball diameters are available on stock as well as roller anvils. For zero setting, please use measured sample components or setting masters. Mechanical and digital indicators storing the MIN-value can be used. **Special designs on request.**

Gauge Block Comparator

- Provides quick and reliable calibration of Gauge Blocks from 0.5 to 100 mm as per ISO/DIN/BS Standard in Metric & Imperial
- Eminent for calibration of all grades of Gauge Blocks by comparison method.
- Specially developed user friendly software provides quick results for center deviation, parallelism and selection of grade.
- No Zero setting required as the software compares the difference between the Master and Test Gauge Block taking in to consideration the expansion in length due to temperature, type of material and deformation factor.
- Two LVDT probes connecting both the faces of Gauge Blocks allow differential measurement that gives most accurate results.
- Manual version is also available.
- Comes along with Calibration Certificate traceable to National Standard & Instruction Manual on the use and care.



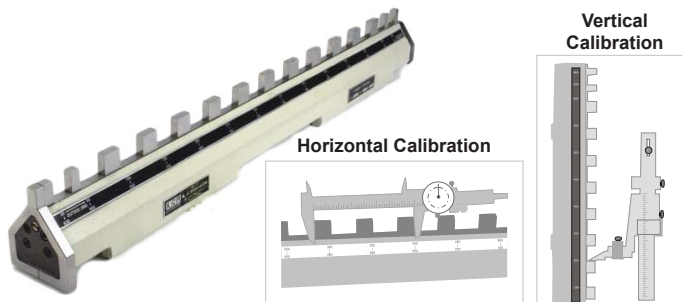
Technical Specifications:

Model No:	GBC-200
Measuring Range:	0.5 – 180mm
Resolution:	0.01µm
Work Table:	60 X 60 mm (Carbide Line Contact)
Measuring Inconsistency:	0.01 µm
Weight:	45kg



Caliper Checker

- Reliable for calibration of all types of Vernier Calipers and Vernier Height Gauges.
- Comprises of permanently wrung Gauge blocks made of KCP Class i.e. made of selected alloy steel and tungsten carbide giving high-grade super finish and greater wear resistance.



Technical Specifications

Range	External Measurement	Internal Measurement	Height Measurement	Accuracy (±)
300	360	300	360	0.003
600	660	600	660	0.005
1000	1060	1000	1060	0.007

* All figures in mm

Comparator Stand



- Manufactured in three types
 - 1) 0-150 mm with Fine adjustment
 - Mounting hole : $\varnothing$ 8 mm, $\varnothing$ 28 mm & $\varnothing$ 30mm
 - Work Table : $\varnothing$ 60 mm Plain/Serrated in steel/Carbide
 - 2) 0-200 mm and 3) 0-300 mm with Micro Fine adjustment
 - Mounting hole : $\varnothing$ 8 mm
 - Work Table : 60x60x6 mm in Plain/Serrated in steel/Carbide
80x80x16 mm in Plain/Serrated available in steel
- Spare comparator base is also available in steel/carbide in following sizes
 - $\varnothing$ 60 x 6 mm (Plain/Serrated)
 - $\varnothing$ 80 x 8 mm (Plain/Serrated)
 - 60 x 60 x 6 mm (Plain/Serrated)

Internal Micro Checker

- Just right for calibration and zero setting of Internal Micrometers up to 600 mm range.
- Comprises of permanently wrung Gauge blocks made of KCP class.



Technical Specifications

Range	Measuring Steps	Accuracy (±)
300	0.25, ... 300 step 25	0.003
600	0.25, ... 600 step 25	0.005

* All figures in mm

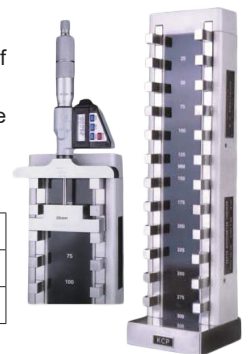
Depth Micro Checker

- Just right for calibration and zero setting of Internal Micrometers up to 600 mm range.
- Comprises of permanently wrung Gauge blocks made of KCP class.

Technical Specifications

Range	Measuring Steps	Accuracy (±)
150	0.25, ... 150 step 25	0.003
300	0.25, ... 300 step 25	0.005

* All figures in mm



Air Plug Gauge



- Range available from 3 mm to 150 mm in steel and from 6 mm to 60 mm in carbide.
- Provided with pair of Master Setting Ring (higher & lower).
- Offered for Through bore, Blind bore, Stepped bores.
- Adjustable depth collar can be provided for checking specific height.
- Offered with 2, 3 & 4 measuring jets as per requirement.
- Also offered to suit different makes, as per requirement.

Air Ring Gauge



- Range available from 4 mm to 120 mm in steel.
- Range available from 4 mm to 60 mm in carbide.
- Provided with Master Setting Plug (higher & lower).
- Offered with 2, 3 & 4 measuring jets as per requirement.
- Also offered to suit different makes, as per requirement.

Air Snap Gauge



- Range available from 10 mm to 150 mm with carbide retting pads.
- Provided with Master Setting Plug (higher & lower).
- Also offered to suit different makes, as per requirement.



Air Gauging Display Units



- Works on null balance pressure system
- Operating pressure: 43 psi-60 psi (3-4 bar)
- Available in two resolution
 - i) L.C. 0.0005 mm, Range: ± 0.02 mm
 - ii) L.C. 0.001 mm, Range: ± 0.04 mm

Air Electronic Column Unit



- Single /Tri Colour Six Digit Display
- Absolute/Comparative Measurement
- Auto Calibration Facility
- Selectable range and least count
- Metric/Imperial measurement
- RS 232 Output
- Single/ Tri Colour LED indicating component tolerance status

Air Electronic Display Unit



- Single /Tri Colour Six Digit Display
- Absolute/Comparative Measurement
- Auto Calibration Facility
- Range/LC: $\pm 2000 \mu\text{m}/1 \mu\text{m}$, $\pm 200 \mu\text{m}/0.5 \mu\text{m}$, $\pm 200 \mu\text{m}/0.10 \mu\text{m}$
- Metric/Imperial measurement
- RS 232 Output
- Single/ Tri Colour LED indicating component tolerance status

Plain Plug Gauges



- Provides Plain Plug Gauges with GO member in carbide and NOGO in steel (NOGO member can be provided in carbide)
- Both GO & NOGO in steel is also available.
- Also supplied as per customer requirement for special length.
- Possess all the required characteristic properties of KCP Class.

Technical Specifications

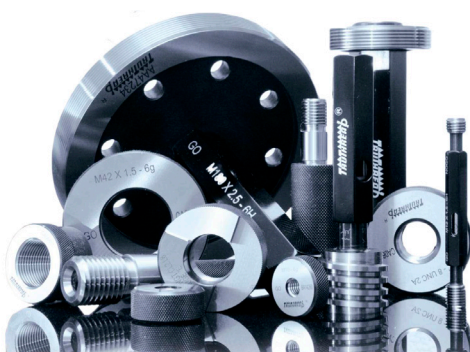
Range in mm	5-8	8-40	40-60	60-350
300	Reversible	Taper Shank	Tri Lock	Plate

Plain Ring Gauges



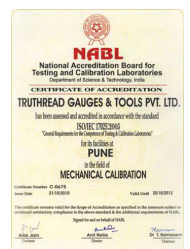
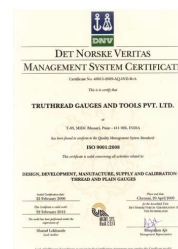
- Ring Gauges with GO member in carbide and NOGO in steel (NOGO member can be provided in carbide)
- Both GO & NOGO in steel is also available.
- Manufactured range of Ring gauges - carbide: 6-60 mm and steel : 6-100 mm.
- Ring Gauges with special length and diameter are also available.

Total Solution for Thread Gauging



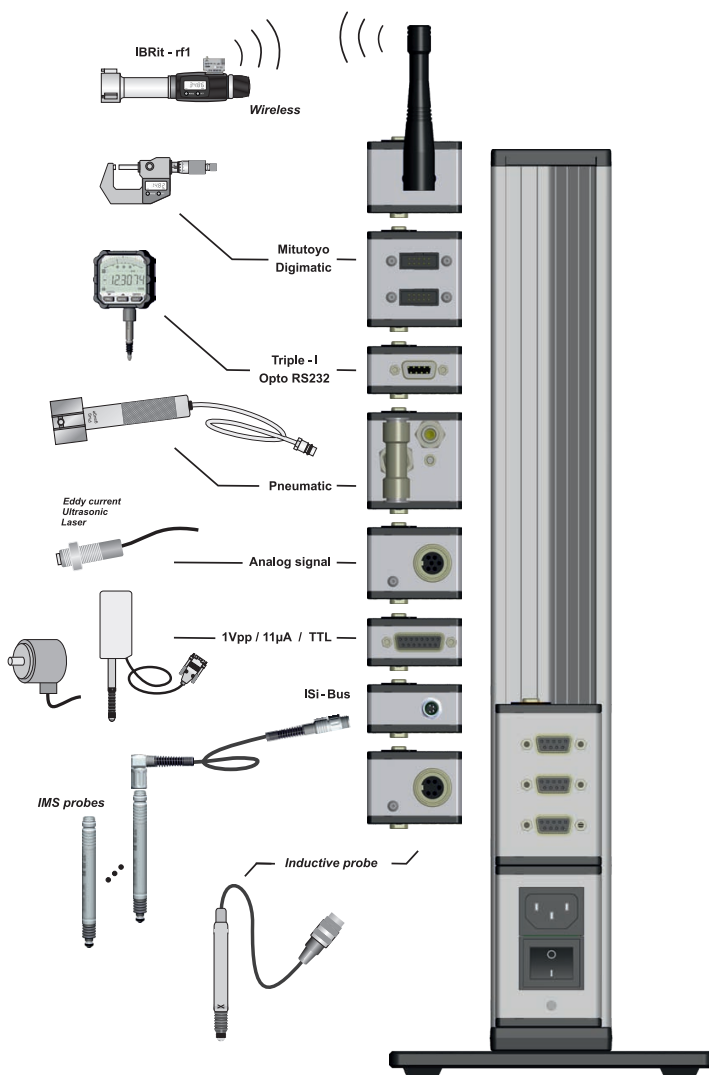
Our Product Range covers almost all types of Thread Profiles like,

- ISO Metric, Unified, BSW / BSF / Whits, BA, BS Cycle, BS Conduit, Pipe threads like G / Rp, Pg, Acme, Stub Acme, Trapezoidal, Buttress, Saw Tooth.
- Taper threads like NPT, NPTF/ PTF, BSPT_r, R/Rc, DIN 158.
- Gauges for Gas cylinders & valves used for storage & transportation of Gas.
- Gauges as per various specifications of American Petroleum Industry (API)



C200

Colum gauge



Mechanical characteristics

Case	Aluminium, plastic top and bottom parts
Base	Aluminium powder-coated
Front panel	Acryl glass (scratchproof)
Dimensions / Weight	(WxHxD) 56 x 418.5 x 86mm / 1340g

Electrical characteristics

Power supplies: IMB-ps2	Switched power supply 100 ... 240 VAC
IMB-dc1	Supply with DC voltage 9 ... 32 VDC
IMB-acc	Accu module (1850 ... 5500 mAh)
Max. power consumption	2.5 VA (without measuring modules)

Display

Column display	103 + 2 LED's for "out-of0range" display, 3-colours with auto. color selection
LED - Numeric displays	6-digit + 2-digit (7.62mm)
Programming menu LED's	17 LED's, red

Connections

IMBus	EIA RS485, 64 clients, length 1200m
Interface	EIA RS232 (4800, E, 7, 2)
Ft1 / Ft2	Trigger inputs for external contacts and outputs for tolerance adapters

Measurement parameters

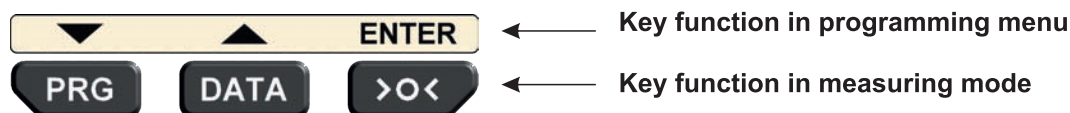
Measuring range / Resolution	±99.9999mm / 0.1 µm, ±4 / 0.00001 inch ±99.999mm / 1 µm, ±40 / 0.0001 inch
Resolution	16 Bit (analogue), 24 Bit (incremental)
Sample rate	50 measurements per second
<i>For specifications concerning measurement error, linearity, hysteresis and temperature drift please refer to the technical data of the particular IMBus module</i>	

Measurement parameters

Operation / Storage temp.	0 ... 50°C / -20 ... +60°C
Protection class	Front panel IP65 (CEI / IEC 529) Rear panel depending on the modules

Ce conformity EN50081 - 2 and EN50082 -2

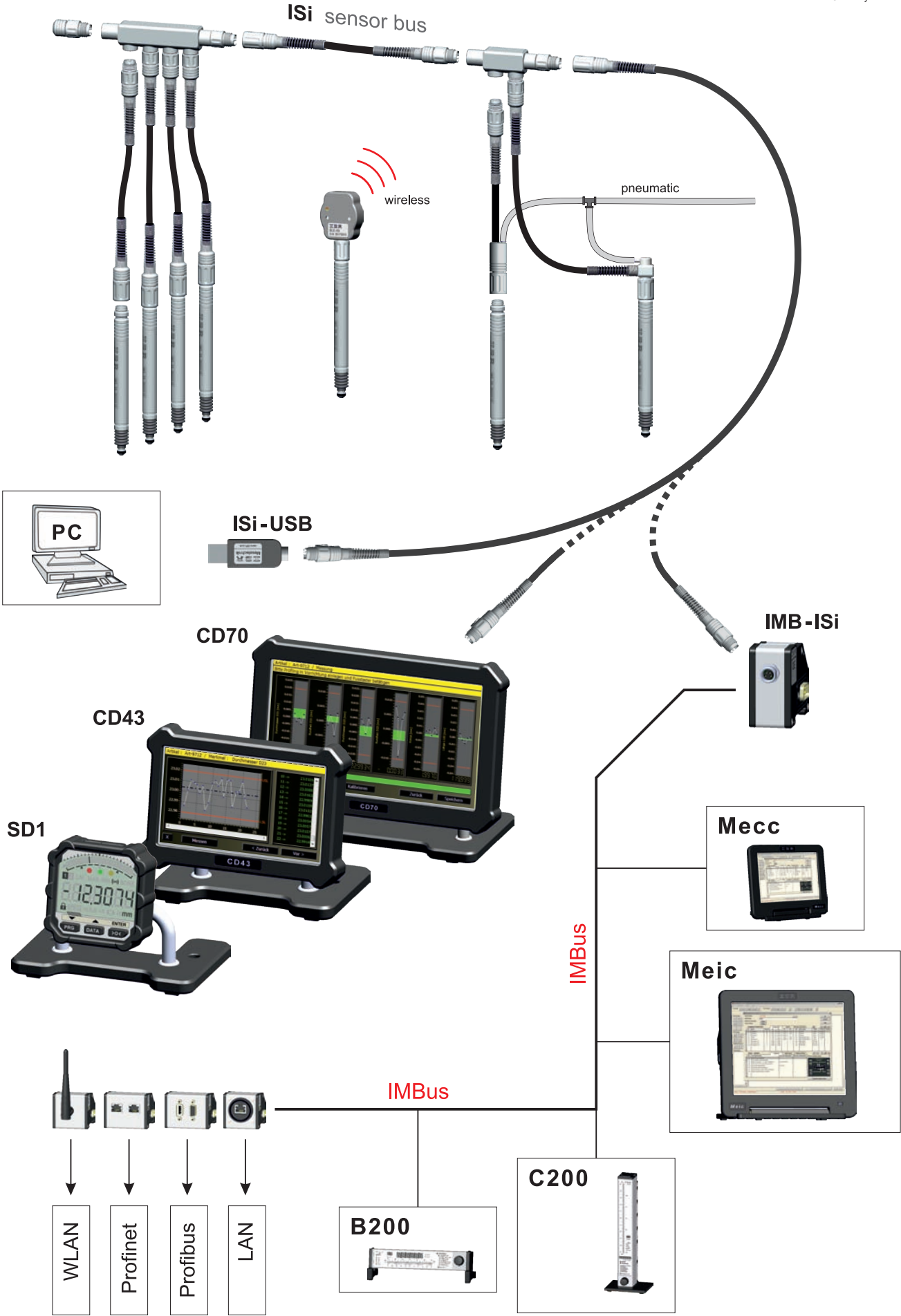
SD1 short operating instruction :



Key functions in :	Measuring mode	Programming menu
PRG	Call programming menu	Decrease flashing display (- 1)
> 2 sec.	Freely programmable favorit key	Exit programming menu
DATA	Data transfer Start / Stop dynamic measurement	Increase flashing display (- 1)
> 2 sec.	Freely programmable favorit key	- - -
>O<	Zero adjustment	ENTER Confirm flashing display
> 2 sec.	Freely programmable favorit key	Exit menu item



Capability of connection for IMS probes



Mechanical Torque Wrenches

Series 900

- With reversible 72 teeth ratchet head, universal fittings 9x12, 14x18 or 16 mm spigot end.
- Quick and precise slide adjustment by unscrewing the knob and gliding the slider on the scale to the required value.
- With graduated scale in Nm and Lbf.ft or pre-set (the desired torque must be set using a torque analyzer).
- Excellent repeatability and reliability.
- Dual signal when the set torque is reached: acoustical click and effort decrease.
- Ergonomic handle.
- Guaranteed accuracy in accordance with EN ISO 6789:2003.
- Traceable calibration certificate through accredited laboratories.

Model	Capacity			Length mm	Weight Kg
	Nm	Lbf.ft			
906	10-60	7.5-44	1/2"	380	1.00
910	20-100	15-70	1/2"	450	1.20
920	40-200	30-150	1/2"	450	1.20
930	60-350	45-260	1/2"	590	1.45
980	160-800	120-590	3/4"	1180	6.70
990	200-1000	150-750	3/4"	1340	7.40

900F with 9x12
and 14x18 head



900S with 16 mm
spigot end



900 with ratchet



Model	Capacity		Drive	Length mm	Weight Kg
	Nm	Lbf.ft			
906F	10-60	7.5-44	9 x 12	380	1.00
910F	20-100	15-70	9 x 12	445	1.10
920F	40-200	30-150	14 x 18	450	1.10
930F	60-350	45-260	14 x 18	580	1.40
906S	10-60	7.5-44	cil. ø 16 mm	375	1.00
910S	20-100	15-70	cil. ø 16 mm	435	1.10
920S	40-200	30-150	cil. ø 16 mm	440	1.10
930S	60-350	45-260	cil. ø 16 mm	570	1.40

Also available pre-set

Mechanical Torque Wrenches

Series 1000

Model	Capacity					Step Nm	Length mm	Weight Kg
	Nm	Kgfm	Lbf.ft	lbf.in				
1001	2.5-11	0.3-1.2	2-8	20-100	3/8"	0.5	300	0.56
1001CR	2.5-11	0.3-1.2	2-8	20-100	3/8"	0.5	300	0.62
1003	5-33	0.5-3.4	4-24	40-300	3/8"	1	405	0.69
1003CR	5-33	0.5-3.4	4-24	40-300	3/8"	1	410	0.75
1006S	12-68	1.2-7	10-50	100-600	3/8"	2	480	1
1006	12-68	1.2-7	10-50	100-600	1/2"	2	480	1
1015	25-150	2.5-15	20-110	200-1300	1/2"	5	575	1.70
1025	50-200	5-25	40-180	450-2200	1/2"	10	605	2.30
1040	70-350	7-35	50-260	500-3100	1/2"	10	815	3
1040S	100-400	10-40	70-300	800-3500	3/4"	10	700	3.85
1060	100-600	10-60	60-440	800-5200	3/4"	20	870	5.50
1080	140-800	14-80	120-580	1400-7000	3/4"	20	935	6.50
1100	200-1000	20-100	150-750	1500-8500	1"	25	1030	9.70
0200	500-2000	50-200	350-1500	4500-17500	1"	50	1400	18

- Wide range from 2,5 to 2000 Nm.
- Precise and constant tightening: setting the proper torque is easy using a fold-away torque adjuster.
- Thrust bearing for soft calibration purposes.
- The handle turns freely to prevent accidental slipping of the torque setting.
- Double signal when the set torque is reached: acoustical click and effort decrease.
- Wrench re-sets automatically.
- The sliding through square drive enables to effect right and left tightening.
- Four scales: Nm, Kgfm, Lbf.in, Lbf.ft.
- Guaranteed accuracy $\pm 4\%$ in accordance with EN ISO 6789:2003.
- Traceable calibration certificate through accredited laboratories.

CR = with single direction ratchet

Digital Torque Tester

BTR

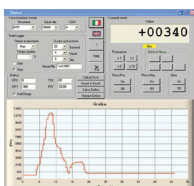


- Direct reading which allows to display the torque in real time.
- Storing of max measured force (PEAK function) ideal to make measurements of trip torque in both clockwise and anticlockwise direction.
- 200 hours autonomy without recharge.
- Measurement unit in Nm.
- Programmable resolution.
- Programmable digital filter.
- Zero function.
- Peak function (clockwise and anticlockwise).
- Accredia certificate (clockwise).
- RS232 output.
- Linearity-hysteresis $\leq \pm 0,20\%$.

Model	Nm	Decimals	Increment	
BTR5	0.5-5	3	0.001	1/4"
BTR10	1-10	3	0.002	1/4"
BTR25	2.5-25	3	0.005	3/8"
BTR50	5-50	2	0.01	3/8"
BTR100	10-100	2	0.02	1/2"
BTR250	25-250	2	0.05	1/2"
BTR500	50-500	1	0.1	3/4"
BTR1000	100-1000	1	0.2	3/4"
BTR2000	200-2000	1	0.5	1"

BTR Software

TDEMO



- RS232 protocol configuration.
- BTR remote control.
- Continuous/peak data reading with graphic display.
- Data logger.
- Recording function both in text and excel format files.
- Low system requirements.
- Italian and English languages.

BTR Software

TorqueKAI



- RS232 protocol configuration.
- BTR remote control.
- Data-base manager for first-line samples.
- Uncertainty evaluation (UNI CEI ENV 13005).
- Go/No go immediate report on the tool.
- Personalized calibration report for printing or saving.
- Italian and English languages.

Digital Torque Wrenches

Series 7000

- Peak hold and track mode direct readings.
- CW and CCW readings.
- Angle precision: $\pm 1\%$.
- 4xAA batteries, alkaline or rechargeable (charger not included).
- Tolerance range adjustment both on torque and angle.
- Nm, Kg f m, Lbf in, Lbf ft.
- Optical signals through 3 leds, and acoustical signal with buzzer.
- Memory up to 900 values.
- Data output RJ45 for data download (optional kit 7000K).
- Better than EN ISO 6789:2004.

- Torque or torque angle configurations.
- Torque precision: $\pm 1\%$ or 2% (from 10% to full scale).
- User tightening sets definition.
- Angle and Torque Preset.
- Auto switch-off.
- Different selectable languages.
- Clock.
- Wide digital display 132x32 pixels, with backlight.
- Menu driven.

Model	Torque		Torque/Angle		Capacity Nm	Resolution Nm	Drive	Length mm	Weight Kg	Accessories
	C1	C2	A1	A2						
Accuracy										
7010	$\pm 1\%$	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	1-50	0.001	Ratchet 1/4"	240	0.40	-
7050					5-50	0.01	9x12	357	0.90	Ratchet 3/8"
7100					10-100	0.01	9x12	418	1.04	Ratchet 1/2"
7200					20-200	0.1	14x18	512	1.25	Ratchet 1/2"
7350					35-350	0.1	14x18	610	1.44	Ratchet 1/2"
7800					80-800	0.1	Ratchet 3/4"	1100	4.40	-
71000					100-1000	1	Ratchet 1"	1340	6.60	-

7000SPD

Breakaway measurement

Method that allow the operator to objectify the control of breakaway measurements automatically. For torque wrenches of Series 7000A.

7000 Wi-Fi



Wireless controlled digital torque wrench with up to 30 torque / angle tightening cycles, data transmission and storage. OK/NOK automatic analysis compared to target values.

Kit composed by:

- Wi-Fi digital torque wrench.
- Manage and storage data software.
- 2,4/5 GHz access point.
- 7000D Battery charger.
- Configuration tool.

Dial Torque Wrenches

Series 2000

Model	Capacity			Step				Length mm	Weight Kg
	Nm	Lbf.ft	lbf.in	Nm	Lbf.ft	lbf.in			
2003	0-3.5	0-30	-	0.1	1	-	1/4"	270	0.72
2009	0-9	0-75	-	0.2	1	-	1/4"	270	0.72
2018	0-18	0-150	-	0.5	2	-	3/8"	270	0.72
2030	0-30	0-250	-	0.5	5	-	3/8"	270	0.72
2070	0-70	-	0-50	2	-	1	3/8"	270	0.72
2240	0-250	-	0-175	5	-	5	1/2"	560	1.40
2350	0-350	-	0-250	10	-	5	1/2"	560	1.40
2480	0-480	-	0-350	10	-	10	3/4"	675	3.20
2800	0-800	-	0-600	25	-	10	3/4"	1180	4.50
2140*	0-1400	-	0-1000	25	-	20	1"	1970	9.00
2280*	0-2800	-	0-2000	50	-	40	1"	3200	21.00



- Range from 0 to 2800 Nm.
- Left and right hand use.
- Precise tightening achieved by the torsion bar system.
- Dual needle: pointer needle and memory needle.
- The small head allows torque application even in narrow areas.
- Reading scale in Nm/Lbf.in or Nm/Lbf.ft.
- Accuracy $\pm 4\%$.
- Guaranteed accuracy in accordance with EN ISO 6789:2003.
- Traceable calibration certificate through accredited laboratories.

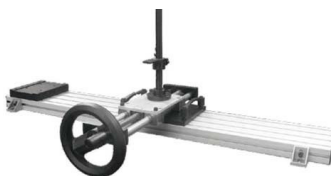
*With led and acoustical signal.

Mechanical loader for BTR

Mechanical loader, provided with a double linear binary, to control torque wrenches allowing gradual and constant application of the force, in accordance with EN ISO 6789:2003. The mechanical loader is predisposed to assembling BTR torque tester, on request can be supplied to assembling other types of tester.

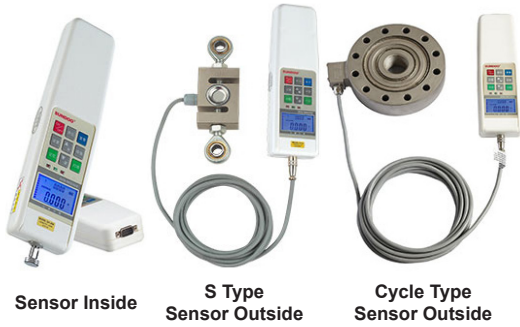
Model	Max Capacity	Dimension mm	Weight kg
BNT1000	1000 NM	1206x265x470	18.9
BNT2000	2000 NM	1506x265x470	27.7

- Monobloc aluminium profile.
- Used for all torque wrenches.
- Reducing operator fatigue and keeping constant the applied torque improves the accuracy and repeatability.



Digital Push Pull Force Gauge

SH-B Series



Model	SH-2	SH-5	SH-10	SH-20	SH-50	SH-100	SH-200	SH-500
Capacity	2N	5N	10N	20N	50N	100N	200N	500N
Resolution	0.001N	0.001N	0.005N	0.01N	0.01N	0.05N	0.1N	0.1N
Sensor type	Sensor Inside							
Test range	10% - 100% FS							
Accuracy	Within $\pm 0.5\%$							
Power	8.4V 1.2V Nickel hydride battery; Continuous use for 40 hours after charging fully; Standby time: 3 months; Battery life ≥ 300 times							
Adaptor	Input: 220V 50Hz Output: DC 12V 300mA							
Weight	About 0.7 kg							

Model	SH-1K	SH-2K	SH-5K	SH-10K	SH-20K	SH-50K	SH-100K	SH-200K	SH-500K	SH-1000K	SH-2000K
Capacity	1000N	2000N	5000N	10KN	20KN	50KN	100KN	200KN	500KN	1000KN	2000KN
Resolution	0.5N	1N	1N	0.005kN	0.01KN	0.01KN	0.05KN	0.1KN	0.1KN	0.5KN	1KN
Sensor type	S Type Sensor Outside							Cycle Type Sensor Outside			
Test range	10% - 100% FS										
Accuracy	Within ± 0.5%							Within ± 1%			
Power	8.4V 1.2V Nickel hydride battery; Continuous use for 40 hours after charging fully; Standby time: 3 months; Baterry life ≥300 times										
Adaptor	Input: 220V 50Hz Output: DC 12V 300mA										
Weight (About)	1.7 kg		1.9 kg			3.3 kg	10.6 kg	6.2kg	14.2kg	36.5kg	

Digital Push Pull Force Gauge

SH-B Series

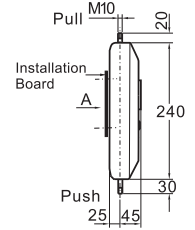
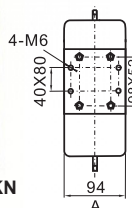
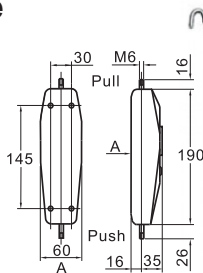
Model	SH-2B	SH-5B	SH-10B	SH-20B	SH-50B	SH-100B	SH-200B	SH-500B
Capacity	2N	5N	10N	20N	50N	100N	200N	500N
Resolution	0.001N	0.001N	0.005N	0.01N	0.01N	0.05N	0.1N	0.1N
Sensor type	Sensor Outside							
Test range	10% - 100% FS							
Accuracy	Within $\pm 0.5\%$							
Power	8.4V 1.2V Nickel hydride battery; Charging time: about 4 hours; Continuous use for 40 hours after charging fully; Standby time: 3 months; Battery life ≥ 300 times							
adapter	Input: 220V 50Hz Output: DC 12V 300mA							
Weight	About 1.2 kg							



Analog Push Pull Force Gauge

SN, SKN Series

- Hand design, compact size, easy operation.
- Pointer indication, easy reading, high accuracy.
- Peak hold function, continuous load indication.
- Tolerance zone indicator, upper and lower limit setting.
- N/kgf units display at the same time, units could be custom-made.

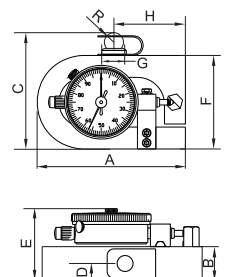


Model	SN-10	SN-20	SN-30	SN-50	SN-100	SN-200	SN-300	SN-500	SKN-1	SKN-2	SKN-3	SKN-5
Capacity	10N	20N	30N	50N	100N	200N	300N	500N	1000N	2000N	3000N	5000N
Resolution	0.05N	0.1N	0.2N	0.2N	0.5N	1N	2N	2N	5N	10N	20N	20N
Accuracy	$\pm 1\%$ FS								$\pm 2\%$ FS			
Dimension	232 x 60 x 51 mm								290 x 94 x 70 mm			
Weight	About 0.6 kg								About 3.5 kg			

Tension Force Gauge

SG

Model	SG-10KC	SG-20KC	SG-50KC	SG-100KC	SG-200KC
Capacity	10KN	20KN	50KN	100KN	200KN
Resolution	0.05KN	0.1KN	0.2KN	0.5KN	1.0KN
Accuracy	$\pm 2\%$ FS				
Load Direction	Press				
Weight (About)	1.3 kg	1.4 kg	4.6 kg	7.7 kg	11.4 kg



Digital Keystroke Force Gauge

SH-F Series



Model	SH-2F	SH-10F	SH-20F	SH-100F
Capacity	2N	10N	20N	100N
Resolution	0.001N	0.005N	0.01N	0.05N
Sensor type	Sensor Outside			
Test range	10% - 100% FS			
Accuracy	within $\pm 0.5\%$			
Weight	About 0.9 kg			

Wheel Manual Test Stand

SLJ / SLK / SLJ-B

SLJ/SLK/SLJ-B test stands, equipped with push pull force gauge, are use for compression and tension test/ insertion and extraction test/breaking test. Trapezoidal screw drive, unitary nut design, manual operation, easy and stable, dualpurpose of vertical & horizontal.

- Dimension: L*W*H (mm) 154*240*500; Weight: **SLJ-B** about 9.5kg, **SLJ** about 8.5kg, **SLK** about 10kg.
- Capacity: 500N; Stroke: 150mm.
- Can be configured (purchase additionally): SN, SH/SP (Sensor Inside) push pull force gauge, various special clamps.



Wheel Manual Test Stand

SLR

SLR test stand, equipped with push pull force gauge, is used for compression and tension test/insertion and extraction test/breaking test. Big base, good stability, easy operation. Besides, there is mobile platform on the base which can realize the move around for correct clamping.

- Dimension: L*W*H (mm) 250*355*470; Weight: about 18 kg Capacity: 500N; Stroke: 175mm.
- Can be configured (purchase additionally): SN, SH/SP (Sensor Inside push pull force gauge, digital caliper and various clamps.



Manual Test Stand

SPJ / SPJ-B

SPJ/SPJ-B test stand, equipped with push pull force gauge, are used for compression and tension test/insertion and extraction test/breaking test. Gear drive, hand press operation, adjustable by moving up and down, locator design, manual operation, easy and stable, speediness and simpleness, suitable for batch test.

- Dimension: L*W*H (mm) 152*235*425; Weight: **SPJ-B** about 10.7 kg, **SPJ** about 10.4 kg Capacity: 500N; Stroke: 70mm.
- Can be configured (purchase additionally): SN, SH/SP (Sensor Inside) push pull force gauge, various clamps.



Fastener Pull Force Test Stand

SBJ

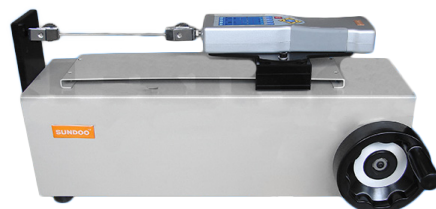
Macthed to pull force gauge, this stan is specially used to test fastenet buckle and breaking force on the ready-made clothes. The purpose of test is to define the responsibility of the ready-made clothes manufacturers to make sure the fastening of buttons. Therefore, all fasteners and other buttons must be tested by the instrument.

- Dimension: L*W*H (mm) 280*210*655; Weight: about 20.0kg.
- Patent number: ZL200720303205.2.
- Can be configured (purchase additionally): SN, SH/SP (Sensor Inside push pull force gauge, various special clamps.



Horizontal Wheel Manual Test Stand

SLH



SLH test stand, equopped with push pull force gauge, is used for compression and tension test/insertion and extraction test/breaking test. Trapezoidal screw drive, unitary nut design, manual operation, easy and stable.

- Dimension: L*W*H (mm) 542*189*278; Weight: about 21.5 kg Capacity: 1000N; Stroke: 250mm.
- Can be configured (purchase additionally): SN, SKN(1KN), SH/SP(2N-1KN) series push pull force gauge, various clamps.

Electric Horizontal Test Stand

SJH-500



SJH-500 Electric Horizontal Test Stand with double pillars, equipped with push pull force gauge, is specialized for tension/compression, insertion/withdraw and destructive test. Good stability, wide application, convenient usage. In addition, it has stepless speed uniform motion and manual & automatic control switch functions.

- Dimension: L*W*H (mm) 580*175*320; Weight: about 28.4kg Capacity: 500N; Stroke: 210mm, Testspeed: 50-500mm/min.
- Can be configured (purchase additionally): SN, SH/SP (Sensor Inside) push pull force gauge, various clamps.

Electric Vertical Test Stand

SJY

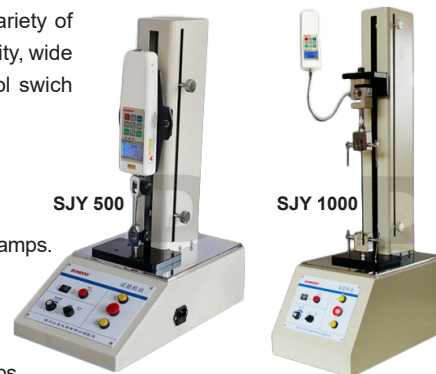
SJY Electric Vertical Test Stand, equipped with push pull force gauge, can be fitted to perform a variety of force tests, such as tension/compression test, insertion/withdraw test and destructive test. Good stability, wide application, convenient usage with stepless speed uniform motion and manual & automatic control switch functions.

SJY 500

- Dimension: L*W*H(mm) 430*240*570; Stroke: 250mm; Weight: about 24.2kg.
- Testing speed : 50-250mm/min, max load: 200N; 250-500mm/min, max load: 500N.
- Can be configured (purchase additionally): SN, SH/SP (Sensor Inside) push pull force gauge, various clamps.

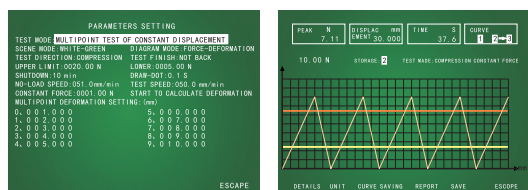
SJY 1000

- Dimension: L*W*H(mm) 410*270*940; Stroke:520mm; Weight: about 31.2kg.
- Testing speed: 50-250mm/min, max load: 500N; 250-500mm/min, max load: 1000N.
- Can be configured (purchase additionally): SN, SH/SP (2N-1KN) push pull force gauge, various clamps.



Full-Automatic Spring Tester

SDS Series



Display interface

Model	SDS-10	SDS-100	SDS-500	SDS-1000
Capacity	10N	100N	500N	1000N
Resolution	0.001N	0.01N	0.05N	0.01N
Force Accuracy	1% - 100% FS			
Force test range	±1% (test range < 10% FS), ±0.5 (test range > 10% FS)			
Test Speed	0.5-500 mm/min			
Speed Accuracy	±2% (test range < 10% FS), ±1 (test range > 10% FS)			
Replacement Resolution	0.001 mm			
Stroke	170 mm			
Max free length for spring	170 mm			
Platen Diameter	φ 50 mm			
Unit	N, kgf, lbf, ozf			
Power	AC 220V±10% 50, 60Hz			
Work temperature	20±10°C			
Work environment	No shock and causticity around			
Transportation temperature	-27°C - +70°C			
Dimention	460 x 370 x 615 mm			
Weight	About 79 kg			

Digital Dynamic Torque Meter

ST-R Series

- Select units: N.m, kgf.cm, ibf.in
- Auto-off design without operation (1-60 minutes).
- RS 232 output, connection to computer for viewing torque curve.



Model	ST-1R	ST-2R	ST-5R	ST-10R	ST-20R	ST-50R	ST-100R	ST-200R	ST-500R
Capacity	1N.m	2N.m	5N.m	10N.m	20N.m	50N.m	100N.m	200N.m	500N.m
Resolution	0.0005N.m	0.001N.m	0.002N.m	0.005N.m	0.01N.m	0.02N.m	0.05N.m	0.1N.m	0.2N.m
Connection size	φ 30mm							φ 50mm	
Accuracy	±1% FS					±2% FS			
Maximum speed	1000 rpm								
Power	220±10%V 100W								
Weight	About 4.5 kg					About 8.8 kg			

Digital Cap Torque Meter

ST-B Series

Model	ST-1B	ST-2B	ST-5B	ST-10B	ST-20B
Capacity	1N.m	2N.m	5N.m	10N.m	20N.m
Resolution	0.0005N.m	0.001N.m	0.002N.m	0.005N.m	0.01N.m
Accuracy	±0.5% FS				
Power	220±10%V 100W				
Dimention	365 x 210 x 135 mm				
Weight	About 9 kg				



Digital Dynamic Torque Tester STM



Model	STM-20
Capacity	20 N.m
Resolution	0.1 N.m
Accuracy	±1% FS
Max. rotate speed	1000rpm
Connecting shaft dimension	φ 300mm
Power	220± 10%V 100W
Dimension	660 x 350 x 450 mm
Weight	About 73.8 kg

Analog Torque Driver SFT Series

- Easy and intuitionistic to read.
- Peak holding.
- Two way operation.



Model	SFT-0.2	SFT-0.5	SFT-1	SFT-2	SFT-5
Capacity (N.m)	0.05-0.2	0.1-0.5	0.2-1	0.5-2	1-5
Resolution (N.m)	0.005	0.01	0.02	0.05	0.1
Accuracy	±5%				
Hand part (mm)	22	37.7			
Connector dimention	6.35 (hexagon)				
Dimention (mm)	152xφ91	273xφ91			
Weight (About)	0.17 kg	0.4 kg			

High Impact Torque Meter HP Series



- Peak hold, hold time setting (1-10 seconds).
- Upper and lower limit setting, red/green indicator lights and buzzer alarm.
- Torque direction display, blue background light.
- Select units: N.m, kgf.cm, ibf.in
- Auto-off time setting (1-60 minutes) without operation.
- Test curve and 10 storage value print.
- RS232C output, connection to computer could view torque curve.

Model	HP-1	HP-2	HP-5	HP-10	HP-20	HP-50	HP-100	HP-200	HP-500	HP-1000	HP-2000	HP-5000
Capacity (N.m)	1	2	5	10	20	50	100	200	500	1000	2000	5000
Resolution (N.m)	0.0005	0.001	0.002	0.005	0.01	0.02	0.05	0.1	0.2	0.5	1	2
Accuracy	±0.5% FS									±1% FS		
Frequency	2000Hz											
Testing speed	≤10000 rpm											
Power	8.4V 1.2V X 7 Nickel hydride battery; Using 40 hours when charging fully after charging fully; Standby time: 3 months; Battery life ≥300 times											
Adapter	Input: 220V 50Hz Output: DC 12V 300mA											
Dimention	185 x 110 x 41 mm											
Weight	About 2.4 kg							About 4.8 kg			About 6.4 kg	

Digital Torque Meter ST Series

Model	ST-1	ST-2	ST-5	ST-10	ST-20	ST-50	ST-100	ST-200	ST-500
Capacity (N.m)	1	2	5	10	20	50	100	200	500
Resolution (N.m)	0.0005	0.001	0.002	0.005	0.01	0.02	0.05	0.1	0.2
Sensor type	Sensor Inside					Sensor Outside			
Accuracy	±0.5% FS					±1% FS			
Testing speed	≤3000 rpm								
Power	8.4V 1.2V X 7 Nickel hydride battery; Using 40 hours when charging fully after charging fully; Standby time: 3 months; Battery life ≥300 times					220±10%V 100W			
Adapter	Input: 220V 50Hz Output: DC 12V 300mA								
Weight	About 2.4 kg					About 20 kg			



ST-1-20



ST-50-500

Torque Gauge STK



Model	STK-0.45	STK-0.9	STK-1.5	STK-3	STK-6	STK-12	STK-24	STK-36	STK-60	STK-90	STK-150
Capacity (cN.m)	0.05-0.45	0.1-0.9	0.2-1.5	0.3-3	0.6-6	1-12	2-24	4-36	6-60	10-90	20-150
Resolution (cN.m)	0.01	0.02	0.02	0.05	0.1	0.2	0.5	0.5	1	1	2
Accuracy	±5%										
Dimention	φ 44x98 mm							φ 64x130 mm			
Weight	About 0.2 kg							About 0.5 kg			

Torque Wrench Tester

SDC Series

SUNDOO



SCD-50B-500B



SCD-2-100

Model	SDC-2	SDC-5	SDC-10	SDC-20	SDC-50	SDC-100	SDC-1000	SDC-50B		SDC-500B	
Capacity	2000 N.mm	5000 N.mm	10 N.m	20 N.m	50 N.m	100 N.m	1000 N.m	0.5-5 N.m	5-50 N.m	5-50 N.m	50-500 N.m
Resolution	0.2N. mm	0.5N. mm	0.001 N.m	0.002 N.m	0.005 N.m	0.01 N.m	0.1 N.m	0.001 N.m	0.005 N.m	0.01 N.m	0.05 N.m
Accuracy	Within ±5%										
Test range	10%-100%FS							1%-100%FS			
Load type	Manual										
Adaptor	200V 50-60HZ 100W						8.4V 1.2V X 7 Nickel hydride battery	200V 50-60HZ 100W			
Dimention (mm)	600 x 400 x 280						2260 x 430 x 630	630 x 430 x 260		1270 x 450 x 365	
Weight	About 20 kg						About 140 kg	About 34 kg		About 46.5 kg	

Durometer Test Stand

SLX-A



SLX-AM



SLX-A Durometer Test Stand is specialized for Shore A Durometer, Shore AO Durometer, and LX-C Micropore material durometer with special calibration weight to test the hardness of rubber and micropore material.

SLX-A (Not include durometer)

• Dimension (L x W x H): 116x160x285 mm

• Weight quality: 1kg; Weight: 5.5kg.

SLX-AM Durometer Test Stand is specialized for LX-AM Shore Durometer with special calibration weight to test the hardness of rubber.

SLX-AM (Not include durometer)

• Dimension (L x W x H): 116x160x285 mm

• Weight quality: 0.25kg; Weight: 5.0kg.



SLX-D



SLD-A

SLX-D Durometer Test Stand is specialized for Shore D Durometer with special calibration weight to test the hardness of rubber.

SLX-D (Not include durometer)

• Dimension (L x W x H): 116x160x285 mm

• Weight quality: 5kg; Weight: 9.5kg.

SLD-A Durometer Test Stand is specialized for LD-A Digital Shore A Durometer with special calibration weight to test the hardness of rubber.

SLD-A (Not include durometer)

• Dimension (L x W x H): 116x160x370 mm

• Weight quality: 1kg; Weight: 5.7kg.

Digital Shore Durometer

LD-A



• Measuring range: 0-100HA

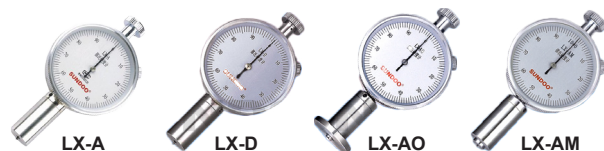
• Inaccuracy: within 20-90HA, inaccuracy $\leq \pm 1HA$

• Power: 3x1.5 LR44 fastener batteries

• Outside dimension: L172xW29xH21 mm

• Weight: 0.16kg

Shore Durometer



LX-A

• Test range: 0~100 HA.
• Dimension: 115*60*25mm.
• Tip dimension: $\phi 0.79mm$.

• Available test range: 10~90 HA.
• Stroke: 2.5mm.
• Weight: about 0.16kg.

LX-D

• Test range: 0~100HD.
• Dimension: 115*60*25mm.
• Tip dimension: SR0.1mm.

• Available test range: 20~90HD.
• Stroke: 2.5mm.
• Weight: about 0.16kg.

LX-AO

• Test range: 0~100HAO.
• Dimension: 115*60*31mm.
• Tip dimension: SR2.5mm.

• Available test range: 10~90HAO.
• Stroke: 2.5mm.
• Weight: about 0.2kg.

LX-AM

• Test range: 0~100HAM.
• Dimension: 115*60*25mm.
• Tip dimension: SR0.1mm.

• Available test range: 20~90HAM.
• Stroke: 1.25mm.
• Weight: about 0.2kg.

Material Durometer



LX-C

• Test range: 0~100 HC.

• Available test range: 10~90 HC.

• Dimension: 115*60*31mm. • Stroke: 2.5mm.

• Tip dimension: $\phi 0.79mm$. • Weight: about 0.2kg.

Rubber Long Position Thickness Gauge

LP-10-C



• Dimension: 145*195*180 mm.

• Test range: 0~100 mm.

• Resolution: 0.01 mm.

• Diameter of upper probe: $\phi 2mm$, $\phi 5mm$, $\phi 5mm$, $\phi 10mm$, $\phi 4mm$ X 1mm.

• Weight quality: 130g, 110g, 10g.

• Weight: about 0.9kg.

AnyView Microscope

Adjustable Focus & Magnification 2.0 Mega Pixel

Features:

- USB Digital Microscope
- Magnification: 5x~200x @ 17" monitor full screen view
- Field of View:
 - Min.: 2.5mm x 1.9mm @ 17mm working distance (200x)(2.8µm/pixel)
 - Max.: 100mm x 76mm @ 300mm working distance (5x)
- Image Sensor: 2.0 Mega Pixel
- Video Capture Resolution: 1600x1200, 1280x960, 640x480
- Color: 24bit RGB or YUV or MJPG
- Lens: High Precision Microscope Lens
- Focus Range: Manual from 8mm to 300mm
- White Balance: Auto
- Exposure Time: Auto
- Light Source: Integrated Adjustable LED Illumination
- Length: 122mm
- Diameter: 36mm
- Output: USB streaming video
- Power Supply: 5V DC from USB port

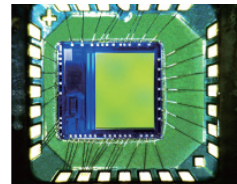


Application Scope:

- Biological anatomy observation
- Industrial inspection and quality control
- Dermatology(skin/scalp) exam
- Printing and textile inspection
- School teaching and research tool
- Medical analysis tool
- Student trial tool
- Reading aid

Package Contents:

- AnyView Digital Microscope
- Calibration ruler
- 2x transparent stand spacers
- Quick instruction guide
- CD including software "Measure and calibration functions"

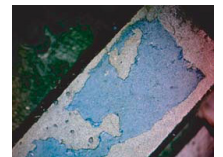
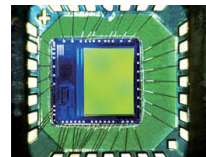


i-Views USB Camera

c mount Digital camera 3 Mega Pixel with Measurement s/w

Features:

- 1.2" CMOS Color sensor
- Image Sensor: 3 Mega pixels
 - Video Capture Resolution: 2048x1536, 640x480
 - 11fps@2048x1536 and 47.5fps@640x480
- White Balance: Auto, manual
- Exposure time: Auto, manual
- Gamma Correction: adjustable
- Numerical Aperture: adjustable
- Color Saturation: adjustable
- Flicker Avoidance: Auto
- Include Measurement software
- Software features:
 - Snapshot
 - Video recorder
 - Take time lapsed Picture
 - Additional export Excel, PDF, multi focus, stitching
 - Measurement: Length, Area, Diameter, Angle, Cal.
- Output: USB 2.0/1.1
- Power: 5V DC from USB port



Application Scope:

- Biological anatomy observation
- Industrial inspection and quality control
- Dermatology(skin/scalp) exam
- Printing and textile inspection
- School teaching and research tool
- Medical analysis tool
- Student trial tool

Package Contents:

- i-Views Digital Camera
- USB 2.0 cable
- CD including software
- Eyepiece C-Mount (option)



Model:US300

i-Measure VGA Camera

2.0 Mega Pixel Direct to LCD Screen

Leading Innovation >>>

Experiencing on screen measurement
Just a few mouse clicks, no computer required



Features:

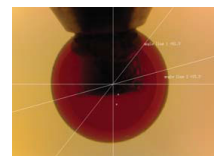
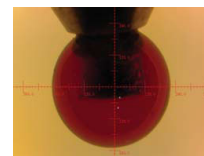
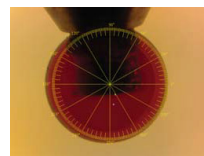
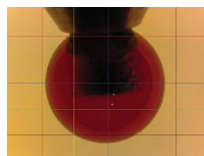
- 1/3" Color CMOS
- Resolution: 1600x1200
- Monitor resolution and frame rate
 - 1600x1200: 23 fps
 - 1680x1050: 26.5 fps
 - 1440x900 : 28 fps
 - 1366x788 : 29 fps
 - 1280x1024: 25 fps
 - 1024x768 : 23 fps
 - 800x600 : 23 fps
- Scan Method: Progressive scanning
- Exposure control: Auto / Manual
- Color: COlor, B/Wm Sepia, Negative
- Monitor interface: VGA
- Storage: support USB disk 256M-32G
- PS/2 Mouse control
- Power 5V DC 100-240V power supply

Performance capabilities:

- Support File & Freeze image, 1/2 freeze image for comparison
- Support to create Line & Mark generator
 - 12 groups movable cross hair, horizontal line, vertical line
 - create 3 groups of movable circle mark & size
 - 360° circle scale
 - 2 adjustable angle lines
 - movable screen ruler & scale adjustable
 - arrow mark
- Measurement
 - Calibration support and 5 groups memorized
 - Circle diameter, circumference and area
 - Rectangular length, width, perimeter and area
 - Linear distance
 - Polygon's perimeter and area
 - Circle Center distance
 - Ellipse's perimeter and area
 - Arc's radian and length
 - Angle

Package Contents:

- i-Measure VGA camera
- 100-240V power supply adaptor
- Calibration scale
- PS2 mouse



Digital image analysis systems for Optical Microscopy

DCE-LX Series USB2.0 Digital CMOS Camera



Model	Sensor	Size (mm)	Pixel (μm)	FPS/Resolution	Binning	Exposure
DCE-LX 1400	MT9F002(C)	1/2.3" (6.451x4.603)	1.4x1.4	1.8@4096x3288 10@2048x1644 27@1024x822	1x1, 2x2, 4x4	0.4~2000ms
DCE-LX 1000	MT9J003(C)	1/2.3" (6.44x4.616)	1.67x1.67	1.9@3584x2748 8@1792x1374 27@896x684	1x1, 2x2, 4x4	0.4~2000ms
DCE-LX 900	Special (Color)	1/2.4" (5.825x4.369)	1.67x1.67	1.9@3488x2616 8@1744x1308 27@872x654	1x1, 2x2, 4x4	0.375~2000ms
DCE-LX 800	Special (Color)	1/2.5" (5.451x4.088)	1.67x1.67	1.9@3264x2448 8@1600x1200 27@800x600	1x1, 2x2, 4x4	0.427~2000ms
DCE-LX 500	MT9P001 (Color)	1/2.5" (5.7x4.28)	2.2x2.2	5@2592x1944 18@1280x960 60@640x480	1x1, 2x2, 4x4	0.209~2000ms
DCE-LX 300	MT9T001 (Color)	1/2" (6.55x4.92)	3.2x3.2	8@2048x1536 22@1024x768 43@680x510	1x1, 2x2, 3x3	0.256~2000ms
DCE-LX 200	Special (Color)	1/2.6" (5.12x3.84)	3.2x3.2	16@1600x1200 50@800x600	1x1, 2x2	0.128~2000ms
DCE-LX 130	MT9M111 (Color)	1/3" (4.60x3.7),	3.6x3.6	15@1280x1024 26@640x512 50@320x256	1x1, 2x2, 4x4	0.07~2000ms
DCE-LX 35	MT9V011 (Color)	1/4" (3.58x2.69)	5.6x5.6	30@640x480 80@320x240	1x1, 2x2	0.11~192.46ms

DCE-LX (UCMOS) Basic Characteristic

- C-Mount camera has 25.4 mm or 1 inch diameter with 32 threads per inch;
- Scientific research grade camera with Aptina CMOS sensor;
- With hardware resolution among 0.35M to 14M;
- Integrated zinc aluminum alloy housing;
- USB2.0 interface ensuring high speed data transmission;
- Ultra-Fine™ color engine with perfect color reproduction capability;
- With advanced video & image processing application ToupView;
- Custom programmable with SDK provided;



Spectral Range	380-650nm (with IR-cut Filter)
White Balance	ROI White Balance/ Manual Temp Tint Adjustment/NA for Monochromatic Sensor
Color Technique	Ultra-Fine™ Color Engine/NA for Monochromatic Sensor
Capture/Control API	Native C/C++, C#, DirectShow, Twain and Labview
Recording System	Still Picture and Movie
Cooling System*	Natural

Gross/Net Weight	200/160Kg
Operating Temperature(in Centidegree)	-10~50
Storage Temperature(in Centidegree)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 5V over PC USB Port

Digital Vertical Profile Projector VB12 Series



Product Description:

Embedded Imaging System LX-EIS is suitable for Leica, Nikon, Olympus and other infinity optical microscope, which will not destroy the original optical system, but increase another optical channel to reach multi-optic channel so that upgrade binocular microscope till digital imaging system.

LX-EIS thickness is 42mm with standard C-Mount output and built-in 0.5X relaying lens, which will make bigger view field under microscope, beam splitter is 50%:50%

The presetted standard C-mount focal length, the synchronization is adjustable, the sensor center is adjustable.

Available Microscope Model list:

- OLYMPUS microscope: CX series

- NIKON microscope: E100, E200

- LEICA microscope: DM500



Digital image analysis systems for Optical Microscopy

DCE-LX Series USB2.0 Digital CMOS Camera

LMM3000/5000 Metallurgical Microscope Outfits

Item	Specification	LMM-3000	LMM-5000
Eyepiece	WF10X/22mm (adjustable)	•	•
	WF10X/22mm (adjustable, reticule 0.1mm)	•	•
Metallurgical LWD Infinity Plan Objective	5X/0.10 W.D=24.23 mm	•	•
	10X/0.25 W.D=18.48 mm	•	•
	20X/0.40 W.D=8.35 mm	•	•
	40X/0.65 W.D=3.90 mm	○	○
	50X/0.70(S) W.D=1.95 mm	•	•
	80X/0.80(S) W.D=0.85 mm	○	○
100X/0.60(S) W.D=1.00 mm		○	○
Seidentopf Trinocular Head	Inclined 30°, rotatable 360°, Interpupillary distance: 48-76 mm Light distribution (both): 100: 0 (100% for eyepiece) 80:20 (80% for trinocular head and 20% for eyepiece)	•	•
Nosepiece	Quintuple	•	•
Mechanical Stage	Stage size: 200mm x 150mm, Travel range: 77mm x 52mm, Stage fast lowering unit: Up-Down moving range can be increased 50mm.	•	
	Stage size: 182mm x 140mm, Travel range: 77mm x 52mm Two slid holder, Metal plate size: 200mm x 150mm		•
Polarizing Unit	Polarizer /Analyzer	•	•
Condenser	Abbe N.A.1.25, with Iris Diaphragm.		•
Coaxial Coarse and Fine Focusing Unit	Coarse stroke: 25mm, Fine stroke per rotation: 0.2mm, fine division 2 μm, Tightness adjustment, upper distance limiter.	•	•
Reflecting Illumination	12V/50W Halogen lamp (Input voltage: 100V-240V), Field diaphragm	•	•
Transmitting Illumination	6V/20W Halogen lamp (Input voltage:100V-240V), Field diaphragm, Center adjustable.		•
Filter	Blue	•	•
	Green, Amber, Grey	○	○
C-Mount	0.57X(Focus Adjustable), 1 X	○	○



Specification:

Objective	N.A.	Working distance (mm)	Outfits
LPL 5×	0.13	24.23	•
LPL 10×	0.25	18.48	•
LPL 20×	0.40	8.35	•
LPL 40×	0.66	3.90	○
LPL 50×	0.70	1.95	•
LPL 80×	0.80	0.85	○
LPL 100×	0.90	1.00	○

Note: “•” Standard, “○” Optional

Stereo Zoom Microscope

SZM-650/680/780



Main Technical Specification

Model	SZM-650	SZM-680	SZM-780
Objectives Zoom Range	0.7X-4.5X	0.68X-4.7X	0.66X-5.1X
Zoom Ratio	1 : 6.5	1 : 6.8	1 : 7.8
Field Diameter (mm)	Φ22	Φ23	Φ24
Working Distance (mm)	110	110	110
Stereo Angle (°)	12	12	12
Viewing Angle (°)	40	35	35
Interpupillary Adjustable Distance (mm)	50-75	50-75	50-75
Video Output Distribution	No	100% (0:100 standard)	
		50:50 optional	
Guide Rail Stand Focusing Distance (mm)	80		
Pillar Stand Focusing Distance (mm)	115		

SZM-650 Series Objective & Eyepiece Parameter List (0.7×-4.5×)

Additional Objective		0.5X	1X(built-in)	2X
W.D mm		189 mm	110 mm	36 mm
10XEyepiece/ Φ22mm	Magnification	3.5-22.5	7-45	14-90
	Field dia. (mm)	62.9-9.8	31.43-4.89	15.71-2.44
15XEyepiece/ Φ16mm	Magnification	5.25-33.75	10.5-67.5	21-135
	Field dia. (mm)	45.71-7.11	22.86-3.56	11.43-1.78
20XEyepiece/ Φ12mm	Magnification	7-45	14-90	28-180
	Field dia. (mm)	34.28-5.33	17.14-2.67	8.57-1.33

SZM-680 Series Objective & Eyepiece Parameter List (0.68×-4.7×)

Additional Objective		0.5X	1X(built-in)	2X
W.D mm		189 mm	110 mm	36 mm
10XEyepiece/ Φ23mm	Magnification	3.4-23.5	6.8-47	13.6-94
	Field dia. (mm)	67.65-9.79	33.82-4.89	16.91-2.46
15XEyepiece/ Φ16mm	Magnification	5.1-35.25	10.2-70.5	20.4-141
	Field dia. (mm)	47.06-6.81	23.53-3.40	11.76-1.70
20XEyepiece/ Φ12mm	Magnification	6.8-47	13.6-94	27.2-188
	Field dia. (mm)	35.294-5.11	17.65-2.55	8.82-1.28

SZM-780 Series Objective & Eyepiece Parameter List (0.66×-5.1×)

Additional Objective		0.5X	1X(built-in)	2X
W.D mm		189 mm	110 mm	36 mm
10XEyepiece/ Φ22mm	Magnification	3.3-25.5	6.6-51	13.2-102
	Field dia. (mm)	72.73-9.41	36.36-4.71	18.18-2.35
15XEyepiece/ Φ16mm	Magnification	4.95-38.25	9.9-76.5	19.8-153
	Field dia. (mm)	48.48-6.27	24.24-3.14	12.12-1.57
20XEyepiece/ Φ12mm	Magnification	6.6-51	13.2-102	26.4-204
	Field dia. (mm)	39.64-4.71	18.18-2.35	9.09-1.18

Manual Video Measuring Machine VMM Series



2.5D Model	VMM-1510	VMM-2010	VMM-2515	VMM-3020	VMM-4030
3D Model	VMM-1510P	VMM-2010P	VMM-2515P	VMM-3020P	VMM-4030P
Metal Stage Size	354X228 mm	404X228 mm	450X280 mm	506X356 mm	606X466 mm
Glass Stage Size	210X160 mm	260X160 mm	306X196 mm	246x120 mm	450X350 mm
X,Y-axis Travel	150x100 mm	200x100 mm	250x150 mm	300x200 mm	400x300 mm
Stage Travel: Z-axis	200mm (for focusing)				
Accuracy	$\leq 3+L/200(\mu m)$				
Repeatability	2 μm				
Resolution of X and Y-scale	0.0005 mm				
Measuring Software	Quick Measuring				
Video System	1/3" Color CCD Camera , 5-grades High-definition 6.5X Detented Zoom Lens				
Illumination	Adjustable 256-degree LED Cold illumination				
Power	180V~260V(AC),50HZ				
3D Measurement	3D Module and UK Renishaw MCP Touch Probe				
Net Weight(kg)	100	110	120	200	240
Dimensios (mm)	600x530x950	600x550x920	690x550x1020	780x600x1060	945x646x1096



Digital Vertical Profile Projector VB12 Series



Reverse Image	VB12-1550	VB12-2010
Metal Stage Size	340x152 mm	350x170 mm
Glass Stage Size	196x96 mm	246x120 mm
Stage Travel: X and Y-axis	150x50 mm	200 x 100 mm
Stage Travel: Z-axis	100mm (for focusing)	
Accuracy	$\leq 3+L/200(\mu m)$	
Resolution of X and Y-scale	0.0005 mm	
Screen	Diameter : $\varnothing 330mm$,Effective Range $\geq \varnothing 300$ (with "*" Reticle) Rotary Range: 0~360° ; Resolution Rotary Indicator: 1' or 0.01°	
Digital Readout	DP 300Multifunctional Data Processing System/RS232	
Illumination	24v/150w halogen lamp (adjustable)	
Cooling System	Forced Cooling (3-axis-fans)	
Power Supply	AC110V/60Hz; 220V/50Hz, 400W	
Dimension	785x 575 x 1136mm (D×W×H)	
Packing Dimension	1540 x 790 x 1500mm (L×W×H)	
Gross/Net Weight	260/220Kg	

Digital Vertical Profile Projector VB12 Series

Reverse Image	HB12-2010
Metal Stage Size	408 x 126mm
Stage Travel: X and Y-axis	200 x 100mm
Stage Travel:Y-axis	75mm (for focusing)
X and Z Linear Resolution	0.0005 mm
Sway Range	$\pm 15^\circ$
Accuracy	$\leq 3+L/200(\mu m)$
Screen	Diameter : $\varnothing 330mm$,Effective Range $\geq \varnothing 300$ (with "*" Reticle) Rotary Range: 0~360° ; Resolution Rotary Indicator: 1' or 0.01°
Digital Readout	DP 300 (561-301) Multifunctional Data Processing System
Illumination	Contour illumination:24v/150w (halogen Lamp) Surface illumination:21v/150w (Optical Fiber)
Power Supply	AC110V/60Hz; 220V/50Hz, 650W
Dimension	1160 x 600 x 960mm (D×W×H)
Packing Dimension	1300 x 880 x 1250mm (L×W×H)
Gross/Net Weight	200/160Kg



Coating Thickness Gages

PosiTector 6000 Series

Simple

- Ready to measure-no calibration adjustment required for most applications
- Enhanced one-handed menu navigation
- Flashing display-ideal in a noisy environment
- RESET feature instantly restores factory settings

Durable

- Solvent, acid, oil, water and dust resistant-weatherproof
- Wear-resistant probe tip
- Shock-absorbing, protective rubber holster with belt clip
- Two year warranty on gage body AND probe

Accurate

- Certificate of Calibration showing traceability to NIST included
- Built-in temperature compensation ensures measurement accuracy
- Hi-RES mode increases displayed resolution for use on applications that require greater precision
- Conforms to national and international standards including ISO and ASTM

Versatile

- Fully interchangeable probes are compatible with ALL gage bodies
- Multiple Calibration adjustment options including 1 point, 2 point, known thickness, average zero
- Selectable display languages
- Hi Contrast backlit display for bright or dark environments
- Flip display enables right-side-up viewing
- Extended cables available (up to 75 m/250 ft) for remote measuring
- Uses alkaline or rechargeable batteries (built-in charger)

Powerful

- Continually displays/upda tes average, standard deviation, min /max thickness and number of readings while measuring
- HiLo alarm audibly and visibly alerts when measurements exceed user-specified limits
- FAST mode-faster measurement speed for quick inspection
- USB port for fast, simple connection to a PC and to supply continuous power. USB cable included
- USB mass storage-stored readings and graphs can be accessed using universal PC/Mac web browsers or file explorers.

No software required

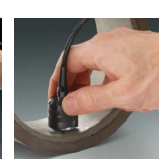
- Every stored measurement is date and time stamped
- Software updates via web keep your gage current
- Connects to PosiTector.net (see far right panel)

DeFelsko®

U.S.A. Made



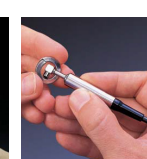
Standard model shown in Statistics Mode with shock-absorbing, protective rubber holster



High-Range Probes for thick coatings, e.g. fire proofing, tank linings, etc.



Flip Display enables right-side-up viewing



Microprobe series for small parts and hard-to-reach areas

Select Standard or Advanced Features

Standard Models

Includes ALL features as shown on left plus...

- Monochrome display
- Storage of 250 readings-stored readings can be viewed or downloaded

Advanced Models

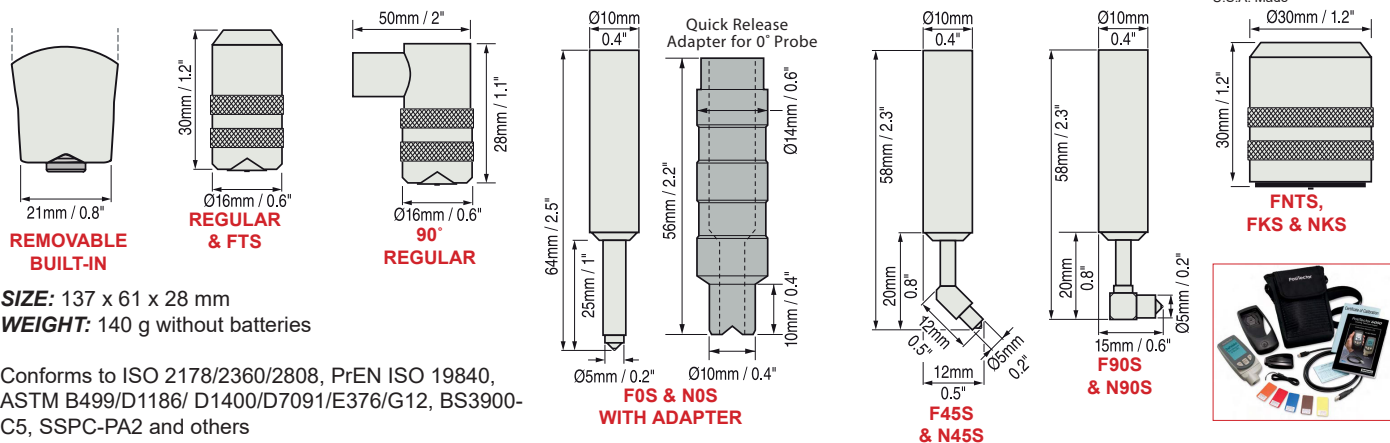
Includes ALL features as shown on left plus...

- Hi Contrast reversible color LCD
- Storage of 100,000 readings in up to 1,000 batches and sub-batches
- Onscreen help, real time graphing, picture prompting and batch notes
- Data transfer via USB to a PC or via **Bluetooth** Wireless Technology to a PC or printer
- Scan mode-take continuous readings without lifting the probe
- Multiple stored calibration adjustments for measuring on a variety of substrate conditions
- SSPC PA2 feature determines if film thickness over a large area conforms to user-specified min/max levels
- PSPC 90/10 feature determines if a coating system complies with an IMO performance standard for protective coatings

PosiTector 6000 Series ORDERING GUIDE		Our most popular Removable Built-in and Regular Separate probe models			90° Regular probe for tight spots			Ideal for anodized aluminum			Microprobes - Our smallest probes for small parts or hard-to-reach areas			Removable Built-in and Separate probes for thick protective coatings; epoxy, rubber, intumescent fire proofing and more		
Non-Magnetic Coatings over FERROUS Metals (Steel and Iron)	Standard	F1	FS1	FRS1							F0S1	F45S1	F90S1	FT1	FTS1	FKS1
	Advanced	F3	FS3	FRS3							F0S3	F45S3	F90S3	FT3	FTS3	FKS3
Non-Conductive Coatings on NON-FERROUS Metals (Aluminum, Copper, etc.)	Standard	N1	NS1	NRS1	NAS1						N0S1	N45S1	N90S1			NKS1
	Advanced	N3	NS3	NRS3	NAS3						N0S3	N45S3	N90S3			NKS3
Combination ALL METALS	Standard	FN1	FNS1	FNRS1											FNTS1	
	Advanced	FN3	FNS3	FNRS3											FNTS3	
Range		0 - 60 mils 0 - 1500 µm			Ferrous: 0 - 45 mils and 0 - 1150 µm Non-Ferrous: 0 - 25 mils and 0 - 625 µm			0 - 250 mils 0 - 6 mm			0 - 500 mils 0 - 13 mm					
Accuracy*		±(0.05 mils + 1%) 0 - 2 mils ±(0.1 mils + 1%) > 2 mils ±(1 µm + 1%) 0 - 50 µm ±(2 µm + 1%) > 50 µm			±(0.02 mils + 1%) 0 - 4 mils ±(0.1 mils + 3%) > 4 mils ±(0.5 µm + 1%) 0 - 100 µm ±(2 µm + 3%) > 100 µm			±(0.5 mil + 1%) 0-100 mils ±(0.5 mil + 3%) >100 mils ±(0.01 mm + 1%) 0-2.5 mm ±(0.01 mm + 3%) >2.5 mm			±(1 mil + 3%) 0 - 500 mils ±(0.02 mm + 3%) 0 - 13 mm					
Matching DeFelsko Calibration Standards		STDS1 STDA1			STDS2 STDA2			STDP1			STDP5					

Coating Thickness Gages

PosiTector 6000 Series



SIZE: 137 x 61 x 28 mm
WEIGHT: 140 g without batteries

Conforms to ISO 2178/2360/2808, PrEN ISO 19840, ASTM B499/D1186/ D1400/D7091/E376/G12, BS3900-C5, SSPC-PA2 and others

Dew Point Meter

PosiTector DPM



Simple

- Enhanced one-handed menu navigation
- No need to consult complex tables or use a slide rule calculator
- Audio and visual alarm - indicates when climate conditions are unsuitable for painting
- All readings are constantly updated and displayed simultaneously
- RESET feature instantly restores factory settings

Durable

- Rugged, outdoor/indoor instrument
- Solvent, acid, oil, water and dust resistant – weatherproof
- Shock-absorbing, protective rubber holster with belt clip
- Two year warranty on body and probe

Accurate

- Fast response precision sensors provide accurate, repeatable readings with high reliability and long term stability
- Smart Trend™ indicators identify rising, falling or stable readings
- Certificate of Calibration showing traceability to NIST included
- Conforms to national and international standards including ISO and ASTM

Versatile

- Internal Memory stores datasets with the simple touch of a button
- Auto Log Mode automatically records 5 parameters at user selected time intervals. Ideal for unattended operation.
- Every stored reading is date and time stamped
- Field calibratable
- Celsius/Fahrenheit switchable
- Selectable display languages
- Hi Contrast backlit display for bright or dark environments
- Flip display enables right-side-up viewing
- Uses alkaline or rechargeable batteries (built-in charger)

Powerful

- Universal body accepts all PosiTector DPM, 6000, and SPG probes
- Hold function freezes the display allowing readings to be manually recorded
- USB port for fast, simple connection to a PC and to supply continuous power.

USB cable included

- USB mass storage - stored readings and graphs can be accessed using universal PC/Mac web browsers or file explorers. No software required
- Software updates via web keep your instrument current
- Connects to PosiTector.net (see far right panel)

Select Standard or Advanced Features

Standard Models

Includes ALL features as shown on left plus...

- Monochrome display
- Storage of 2,500 datasets (RH, Ta, Ts, Td, Ts-Td). Stored readings can be viewed or downloaded
- Auto Log Mode automatically records all 5 parameters at user selected time intervals. Runs unattended on batteries for up to 50 hours or continuously via USB

Advanced Models

Includes ALL features as shown on left plus...

- Hi Contrast reversible color LCD
- Storage of 20,000 datasets (RH, Ta, Ts, Td, Ts-Td) in up to 1,000 batches and sub-batches. Stored readings can be viewed or downloaded
- Auto Log Mode automatically records all 5 parameters at user selected time intervals. Data can be streamed via USB or **Bluetooth** at each interval. Runs unattended on batteries for up to 8 months or continuously via USB
- On screen help, real time graphing, picture prompting, and batch notes
- Data transfer via USB to a PC or **Bluetooth** via Wireless Technology to a PC or printer
- User defined limits for all parameters with visible and audible warnings
- Wet Bulb temperature can be displayed
- Trend Charts graph readings in real-time

Select from 2 Probe Styles

Built-in Probe

- Includes built-in surface temperature sensor

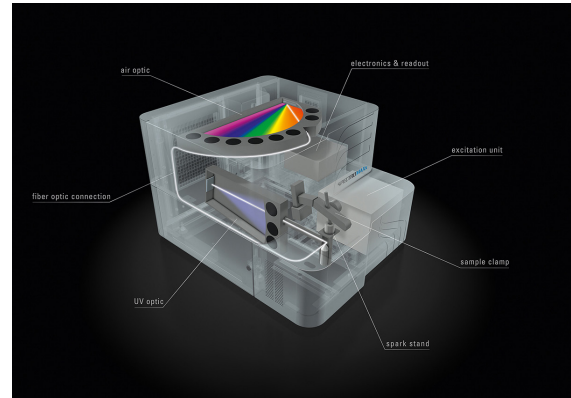
Separate Probe

- Includes magnetic surface temperature sensor with armored cable. Ideal for unattended auto logging during work shift or at night
- Includes magnetic mount for rubber holster to attach the instrument onto steel structures
- Accepts other optional K-type sensors

Probe Style	Built-in	Separate
Ordering Guide		
Standard	DPM1	DPMS1
Advanced	DPM3	DPMS3

Specifications	Range	Accuracy	Resolution
Surface Temperature	-40° to 80° C	± 0.5° C	0.1° C
	80° to 190° C	± 1.5° C	
	-40° to 175° F	± 1° F	0.1° F
	175° to 375° F	± 3° F	
Air Temperature	-40° to 80° C	± 0.5° C	0.1° C
	-40° to 175° F	± 1° F	0.1° F
Humidity	0 to 100%	± 3%	0.1%

Material Control Analysis SPECTROMAXx



Technical Specifications

CCD Optics	- High resolution CCD multi detectors - Stabilized against fluctuations in temperature - Effective wavelength range: 140-670 nm, the applicable and configured wavelength range is based on the customer's application requirements - Automated profiling	Readout System	- High speed 12 Bit ADC - DSP controller with 66 MHz - Serial Source Interface 16 inputs for 16 CCDs
Analysis Modules	- Freely selectable analysis modules - Optimized to customer requirements - Expansion of additional modules on-site possible	Spectrometer PC	External, state of the art computer PC system with Windows operating system, Keyboard and mouse, Monitor, • Printer
Spark Stand	- Open spark stand for high sample throughput and various kinds of sample geometrics - Minimized argon consumption with Argon Saver Module - Optimized argon flow - Reduced cleaning intervals - Spark stand plate easily exchangeable - Temperature absorbent design without water cooling - Integrated shutter system for optimum plasma viewing	Software	- SPECTRO SPARK ANALYZER Pro MAXx for analytical operation and calibration - Continuous automatic hardware diagnosis in the background - Automatic alloy/grade verification and identification - Result Manager - Online Maintenance Scheduler
Excitation System	- Fully digitalized plasma generator System with digital discharge definition, digital pulse generation and digital offline pulse control 32 MHz micro-controller - Energy resolution: 125 mW in 0.5 ms steps - Max. spark duration: 4000 ms - Max. spark power 4 kW	Environmental	- Room temperature: 10-30°C Conditions (50-86°F) - Relative humidity: <80 %, non-condensing - Atmosphere: free of corrosive vapors and high dust pollution
		Spectrometer Data	115 or 230 V +10 %/-15 %, 50/60 Hz - max. 400 VA during sparking - Fuse: 16 A slow-blow - Version: Benchtop Floor model - Depth: 750 mm/30" 790 mm/31" - Width: 625 mm/25" 625 mm/25" - Height: 450 mm/18" 1350 mm/53" - Weight: approx. 77 kg 127 kg

Vision Vicker Hardness Tester VicVision VH-10/30/50



Model		VH-10	VH-30	VH-50
Test Force	gf	0.3, 0.5, 1, 2, 2.5, 3, 5, 10	0.3, 0.5, 1, 2, 2.5, 3, 5, 10, 20, 30	1, 2, 2.5, 3, 5, 10, 20, 30, 50
	N	2.94, 4.9, 9.8, 19.6, 24.5, 29.4, 49.0, 98.0	4.9, 9.8, 19.6, 24.5, 29.4, 49.0, 98.0, 196, 294	9.8, 19.6, 24.5, 29.4, 49.0, 98.0, 196, 294, 490
Optical System		Observe and Measure Objectives: 10x/40x	Observe and Measure Objectives: 10X/20X	Observe and Measure Objectives: 10X/20X
Turret		Auto Rotating Turret		
Measuring Range		1HV-2967HV		
Loading Control		Auto loading dwell and unloading		
Dwell Time		5-60s adjustable		
Illumination		LED / Halogen adjustable		
Measuring System		iVicky 3.0 Auto Measuring Vickers System		
PC System		Operation System: Win10, Screen size: 10.6", CPU: Intel I3, USB: Double USB (could insert USB and soft dog), RAM: 2GB, Hard Disc: 32GB, Camera: 1.3MP Pixel, 1/2"CMOS Color Camera.		
Max Height of Specimen		170mm; Instrument Throat 130mm		
Power Supply		AC220V/50Hz; AC110V/60Hz		
Dimension		530x225x630mm; Packing Dimension 630x460x710mm.		
Gross /Net Weight		77Kg/56Kg		
Execution Standard		ISO6507, ASTM E92, JIS Z2244, GB/T4340		



Portable Universal Dynasonic Hardness Tester

SU-400



Ultrasonic Probe	Standard delivery: 2Kgf(optional Manual 1Kgf, 5Kgf, 10Kgf, motorized 0.3Kg and 1Kgf)
Impact Devices	Standard delivery: D (optional DC, DL, D+15, C, G)
Hardness Scale	HL, HV, HB, HRC, HRB, HRA, HS, etc.
Measuring Range	HV:50-1599; HRC:20-68; HB:76-650; HRB:41-105; HLD:170-960
Measuring Accuracy	HV:±3%HV; HRC:±1.5HRC; HB:±3%HB;HL: ±8HL
Resolution	0.1HR, 1HV, 1HB, 1HLD, 0.1HS
Result Display	Measurement value, Max, Min, Ave, single mode, batch mode, etc.
Data Storage	1000 group test results and 20 group calibration data
Data Transfer	Bluetooth
Continuous Working Period	10h (turn off the back light)
Operating Environment	Temperature: -10°C~50°C; Humidity: 30%~80%
Operating Voltage	4.2V
Charge Mode	USB
Dimension	160x80x31mm
Weight	≤500g (probe not included)



- One instrument two applications-Support ultrasonic probe and Leeb impact device.
- Metal shell - Metallic texture, shield electromagnetic interference effectively, improve instrument stability.
- Color screen display - Display the current measurement value, accumulative measurement value, Max, Min and Ave value.
- Bluetooth transferring-Support wireless Bluetooth print and data transferring.
- Mass storage-Save 1000 groups data.
- Calibration access - Save 20 groups calibration data without doing calibration for the same material over and over

Roller Ultrasonic Hardness Tester

SU-320R

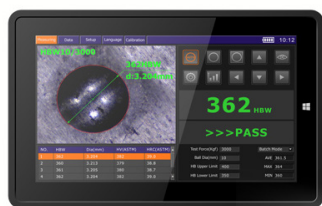


- **Perfect Accuracy** - ±3% HV, ±1.5HR, ±3%HB.
- **Microscopic Indentation** - Only high-power microscope can observe the indentation.
- **Quick Measurement** - Result in 2 seconds.
- **Large LCD Display** - Directly display measurement result, times count, maximum, minimal, average and deviation.
- **Friendly Operation** - Operate well after short training.
- **Promised Warranty** - 2-Year warranty for main unit (Excludes Probe).
- **Mass Storage** - Save 1000 groups measurement data.
- **Simple Calibration** - Save 20 groups calibration data for invoking, improve calibration efficiency.

Standard Probe	3N Motorized Probe				
Measuring Range	HV:100-1500; HRC:20-68				
Measuring Accuracy	Scales	<250HV	250~500HV	500~800HV	>800HV
	HV0.3	±3%	±3%	±3%	±3%
Hardness Scales	Vickers(HV); Rockwell C(HRC); Rockwell A(HRA); RockwellB(HRB); Brinell(HB)				
LCD	Color Screen				
Data Display	LCD Backlight, Adjustable				
Language	Chinese, English, German, Portugese, Turkish				
Data Output	RS232 Hyper Terminal/Bluetooth Printer				
Print	Bluetooth				
Data Storage	To save 1000-groups of measuring data and 20-groups of calibration data				
Word input	Letters and numerals				
Working Environment	Temperature: -10°C to 50°C ; Humidity :30%-80% R.H.				
Battery Voltage	Rechargeable lithium battery ; Voltage :4.2V, 4800mAh				
Recharger Voltage	AC220V/50Hz, 110V/60Hz				
Main unit Dimension and Weight	Main unit Dimension: 160 x 80 x 30mm (L x W x H); Manual Probe: Φ22×153mm; Weight (No Probe): 0.5Kg				
Packing Dimension and Weight	Packing Dimension 320 x 430 x 155mm (L x W x H); Packing Weight (Standard Delivery) 4.3Kg				

Brinell Optical Measurement System

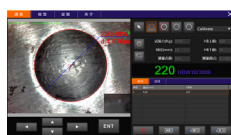
BrinScan



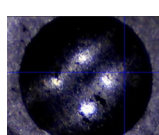
- Stylish appearance, portable and high definition USB camera, optimized ergonomic design, comfortable hand feeling.
- Convenient operation, click auto-measuring button after finding the indentation, it will simultaneously display the indentation diameter and Brinell hardness value and do data record.
- Measurement accuracy of diameter can reach 0.001mm, totally conform ASTM E-10,GBT 231,ISO_6506 and other standards.
- Available to setup tolerance (upper limit& lower limit)
- Available to realize hardness conversion according to ASTM_E140,DIN 50150, GBT_1172, etc.
- Available to setup auto-save image and corresponding measuring result files, generating reports.
- Available to setup and auto-save date, hardness parameters, hardness value, and storage location of images.
- For image files and data files, opening, saving, printing, modification, invoking can be carried out.
- Real-time statistics measuring data, display Max, Min, Ave, deviation, CP, CK, etc.



Friendly Operation Interface



Auto Identification Measurement



High Definition Indentation



Magnetic Touch

Auto-save Data and Generate Report									
No.	Material	Operator	Date	Time	Unit	Value	Unit	Unit	Unit
1	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
2	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
3	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
4	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
5	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
6	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
7	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
8	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
9	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm
10	Steel	John	2010-10-10	10:10	mm	1.00	mm	mm	mm

Auto-save Data and Generate Report



Powerful Compatibility

Manual Precision Cutting Machine

PC-200



- Close-cycle control, accurate speed control; speed adjust range: 500-3000rpm, customized rotate speed.
- Precision Cutting, accuracy: 0.01mm.
- Blades use widely, it is better match with our Diamond Blades.
- Wet or dry cutting, optional vacuum cleaner.
- Widely apply to metal material, circuit board, semiconductor, crystal, ceramic, quartz glass and rock facies.
- Equipped many fixture, accept cutting out of shape workpieces, It is suitable for company and scientific academies institution.

Y axis Feed	Cutting wheel movement	
Cutting Wheel	Φ200x12.7x0.6mm ultrathin diamond blades	Option 175, 230mm
RPM	500-3000rpm	Customized
Table Size	400x400mm	Customized
Y axis Travel	120mm	
X axis Travel	60mm	
Input Power	220V, 50/60Hz	
Motor Power	180W	600W, 1000W Option
Size DxWxH	405x 405 x 330 mm	
Weight	30kg	

Metallographic Cutting Machine

MC-300



- Schneider electric appliance, low power control, safe and reliable.
- T type workbench, double rapid clamping fixture, it is benefit for differences shape workpiece.
- High grade ballscrew and straight line slideway. Two way feed for working platform and manual push.

Cutting Material:

- Black metal, nonferrous metal.
- Casting, Thermal Treatment workpiece, Forge workpiece.
- Semiconductor, crystal, (need equip diamond blades).
- Other material.

Cutting wheel (32mm)	Standard 300mm ultrathin cutting wheel	Option diamond blades
Max Cutting	Round bar 100mm, square 100x170mm	
RPM	2800rpm	Option continuously variable
Input Power	Three phase 380V, 50/60Hz	Option single 220V, three phase 220,480V
Power	4000W	
Size	90L x 65W x 86H cm	
Weight	160kg	

SINOWON

Metallurgical Cutting Machine

MC-250



- Schneider electric appliance, low power control, safe and reliable.
- T type workbench, double rapid clamping fixture, it is benefit for differences shape workpiece.
- Super large cutting room; High efficiency; Usability.

Cutting Material:

- Black metal, nonferrous metal.
- Casting, Thermal Treatment workpiece, Forge workpiece.
- Semiconductor, crystal, (need equip diamond blades).
- Other material.

Cutting Wheel	250x32x1.2mm	Option diamond blades
Max Cutting	Round bar 80mm, Square 80x80mm	
RPM	2800rpm	Option continuously variable
Input Power	Three phase 380V, 50/60Hz	Option single 220V, three phase 220,480V
Power	2200W	600W, 1000W Option
Size	66L x 61W x 66H cm	
Weight	128kg	

Metallographic Cutting Machine

MC-400

- High grade ballscrew and straight line slideway. Two way feed for working platform and manual push.

- Schneider electric appliance, low power control, safe and reliable.

- T type workbench, double rapid clamping fixture, it is benefit for differences shape workpiece.

Cutting Material:

- Black metal, nonferrous metal.
- Casting, Thermal Treatment workpiece, Forge workpiece.
- Semiconductor, crystal, (need equip diamond blades).
- Other material.



Cutting wheel (32mm)	Standard 400mm ultrathin cutting wheel	Option diamond blades
Max Cutting	Round bar 120mm, Square 80x80mm	
RPM	2800rpm	Option continuously variable
Input Power	Three phase 380V, 50/60Hz	Option single 220V, three phase 220,480V
Power	5500W	
Size	127L x 100W x 217H cm	
Weight	545kg	

Consumable of metallographic Cutting Machine Series



Diamond Cutting Wheel

SPE.	Model	Application Material	Package (Price/Bag)
100x12.7x0.3	DIA-100	Glass, Quartz, Polycrystalline Silicon, Ceramic, Hardy Alloy	1
127x12.7x0.4	DIA-125		
150x12.7x0.4	DIA-150		
200x25.4x0.8	DIA-200		
250x32x1.0	DIA-250		
300x32x18	DIA-300		
350x32x2.0	DIA-350		
400x32x2.5	DIA-400		



Metallographical Cutting Wheel

SPE.	Model	Application Material	Package (Price/Bag)
10"	MAX-R250	Glass, Quartz, Polycrystalline Silicon, Ceramic, Hardy Alloy	10
	MAX-L250	HRC<50, Ferrous Metal	
	MAX-H250	HRC>50, Ferrous Metal	
	MAX-N250	Non Ferrous Metal	
12"	MAX-L300	HRC<50, Ferrous Metal	
	MAX-H300	HRC>50, Ferrous Metal	
	MAX-N300	Non Ferrous Metal	
14"	MAX-L350	HRC<50, Ferrous Metal	
	MAX-H350	HRC>50, Ferrous Metal	
	MAX-N350	Non Ferrous Metal	
16"	MAX-L400	HRC<50, Ferrous Metal	
	MAX-H400	HRC>50, Ferrous Metal	
	MAX-N400	Non Ferrous Metal	



Monocrystal Diamond Polishing Solution

SPE.	Package (ml/Bottle)	Model	Package (ml/Bottle)	Model
0.5	250	MC-1050-250	500	MC-1050-500
1		MC-1100-250		MC-1100-500
3		MC-1300-250		MC-1300-500
6		MC-1600-250		MC-1600-500
9		MC-1900-250		MC-1900-500

Polycrystal Diamond Polishing Solution

SPE.	Package (ml/Bottle)	Model	Package (ml/Bottle)	Model
0.5	250	PC-2050-250	500	PC-2050-500
1		PC-2100-250		PC-2100-500
3		PC-2300-250		PC-2300-500
6		PC-2600-250		PC-1600-500

Back Glue Magnetic Disk

SPE.	Package (Price/Bag)	Model
8" (200mm)	1	MD-08-R
9" (230mm)		MD-09-R
10" (250mm)		MD-10-R
12" (300mm)		MD-12-R



Magnetic Support Disk

SPE.	Package (Price/Bag)	Model
8" (200mm)	1	MD-08-F
9" (230mm)		MD-09-F
10" (250mm)		MD-10-F
12" (300mm)		MD-12-F

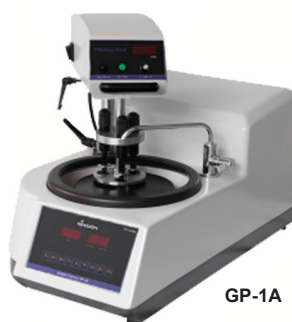


Grinding Polishing Machine GP Series

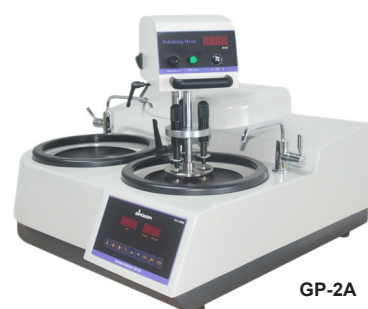
Semi-Automatic Grinder-Polisher

Technical Data fot Polishing Head

Model	GP-1A	GP-2A
Speed (rpm)	50-200rpm	
Power Supply	Single 220V	
Motor Power	100W	
Pressure	0-40N	
Size W x H x D	310x 150 x350 mm	280x 360 x450 mm
Weight	12kg	15kg



GP-1A



GP-2A

Grinding Polishing Machine

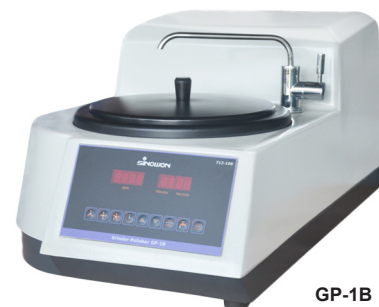
GP Series



Single/Double Wheel Grinder Polisher

- Variable speed, multiple usage, metallographic sample rough grinding, finishing grinding, rough polishing & finishing polishing, it is ideal for metallographic laboratory as well as for industrial or production applications.
- Continuously viable, use frequency control system, users custom three common speed, setting time, auto stop machine.
- Efficient and low-noise motor and controlling system, the machine running is reliable and low-noise.
- Working wheels installed for precision grinding and surface dealing can make sample surface smooth.
- Elegant GRP (glass reinforced plastic) construction, rugged and durable, anti-rust.

Model	GP-1B	GP-2B	Remark
Work Disk Dia	Standard $\phi 203\text{mm}$		Option 230, 250mm
Speed (rpm)	50-1000rpm		Can be customized
Input Power	220v50/60Hz(single phase)		Electrical specification can be customized
Motor Power	550W		
Size W x H x D	430x710x330mm	710x760x330mm	
Weight	46kg	70kg	



GP-1B



GP-2B

Automatic Grinding & Polishing Machine

- Variable speed, multiple usage, metallographic sample rough grinding, finishing grinding, rough polishing & finishing polishing, it is ideal for metallographic laboratory as well as for industrial or production applications.
- Continuously viable, use frequency control system, users custom three common speed, setting time, auto stop machine.
- Single point pneumatic load, not need specimen.
- Aluminium base, equipment operation stability and reliable.
- Elegant GRP (glass reinforced plastic) construction, rugged and durable, anti-rust.

Model	GP-1000A	GP-2000A
Work Disk Dia	Standard $\phi 200\text{mm}$, Option 230, 250mm	
Speed (rpm)	50-600rpm, Can be customized	
Grinding Head Speed/rpm	50-200rpm	
Input Power	220v 50/60Hz(single phase)	
Motor Power	550W	
Size W x H x D	710x430x640 mm	710x760x640mm
Weight	74kg	98kg



GP-2000A



GP-1000A

Automatic Pointing Machine

AMP3 Series



- Automatic operation, heat, force, keep warm, dwell, cooling and unloading. One touch operate
- Touch screen, easy operation.
- Built in 10 groups comment datas, could customized comment data.
- Multiple safety protection.
- Elegant GRP (glass reinforced plastic) construction, rugged and durable, anti-rust.

Model	AMP3-30	AMP3-40	AMP3-50
Mould Dia	$\phi 30\text{mm}$	$\phi 40\text{mm}$	$\phi 50\text{mm}$
Input Power	220v, 50/60Hz(single phase)		
Power	1800W		
Dimention	300L x 350W x 550H mm		
Weight	35kg		

Hydraulic Automatic Pointing Machine

AMP4 Series



- Automatic operation, heat, force, keep warm, dwell, cooling and unloading. One touch operate
- Touch screen, easy operation.
- Hydraulic control, Pressure up to 20MPa the margin of inset samples is compact, high quality.
- Built in 20 groups comment datas, could customized comment data.
- Multiple safety protection.
- Elegant GRP (glass reinforced plastic) construction, rugged and durable, anti-rust.

Model	AMP4-30	AMP4-40	AMP4-50
Mould Dia	$\phi 30\text{mm}$	$\phi 40\text{mm}$	$\phi 50\text{mm}$
Input Power	220v, 50/60Hz(single phase)		
Power	1800W		
Dimention	300L x 350W x 550H mm		
Weight	45kg		

Consumable of metallographic Pointing Machine Series



Heated Mould Pointing Consume Material



SPE.	Model	Applied Machine	Package (Kg/Bottle)
Black Heated Inlay Powder	PH-BK	Kinds of Heated Polishing Machine	1
Red Heated Inlay Powder	PH-RD		
Green Heated Inlay Powder	PH-GN		
Keep Side Heated Inlay Powder	PH-PE		
Transparency Heated Inlay Powder	PH-CR	UniPRESS 5000A, 5000H, Completely Transparent After Inlay	

Cold Mould Inlay Consume Material

SPE.	Model	Applied Machine	Package (Kg/Set)
Acrylic Resin Powder	CM-50	A Solid, A Liquid, Completely Transparent	1
Epoxy Resin	CM-60	Two Set Liquid, Curing Time: 30 mins, Completely Transparent	



Inlay Accessories



Product Name	SPE.	Package (Price/Bag)
Cold Inlay Mould	Diameter. $\phi 1"$, $\phi 125"$, $\phi 1.5"$, $\phi 2"$	1
Cold Inlay Soft Rubber Mould		
Silicone Oil Parting Agent		

Gauge Blocks (Sets)

Material: Hardened steel, Hardness: HV650-800



Model No.	Spec. (mm)	Step (mm)	Quantity	Model No.	Spec. (mm)	Step (mm)	Quantity
GB-9122-0 Grade: 0	1.0005	0.0005	1	GB-9047-0 Grade: 0	1.005	0.005	1
	1.001-1.009	0.001	9		1.01-1.09	0.01	9
	1.01-1.49	0.01	49		1.1-1.9	0.1	9
	1.6-1.9	0.1	4		1-24	1	24
GB-9122-1 Grade: 1	0.5-24.5	0.5	49	GB-9047-1 Grade: 1	25-100	25	4
	30-100	10	8				
	25.75	-	2				
GB-9112-0 Grade: 0	1.0005	0.0005	1	GB-9038-0 Grade: 0	1.005	0.005	1
	1.001-1.009	0.001	9		1.01-1.09	0.01	9
	1.01-1.49	0.01	49		1.1-1.9	0.1	9
	1.6-1.9	0.1	4		1-9	1	9
GB-9112-1 Grade: 1	0.5-24.5	0.5	49	GB-9038-1 Grade: 1	10-100	10	10
	30-100	10	8				
	25-100	25	4				
GB-9103-0 Grade: 0	1.005	0.005	1	GB-9020-0 Grade: 0	5-100	5	20
	1.01-1.49	0.01	49				
	0.5-24.5	0.5	49				
	25-100	25	4				
GB-9103-1 Grade: 1				GB-9010-0 Grade: 0	1.0-1.5	0.25	3
					2.0-3.0	1	2
					5.0-25.0	5	5
GB-9087-0 Grade: 0	1.001-1.009	0.001	9	GB-9010-1 Grade: 1			
	1.01-1.49	0.01	49				
	0.5-9.5	0.5	19				
	10-100	10	10				
GB-9087-1 Grade: 1				GB-9009-0 Grade: 0	1.001-1.009	0.001	9
GB-9009-1 Grade: 1				GB-9009-1 Grade: 1			

*Accuracy: according to DIN 861/ISO 3650 standard
*Full set with the calibration report of JCC (ISO 17025)



Gauge Block (Specially for outside micrometer)

For calibrating parallel and dimension accuracy of outside micrometer measuring face.

Model No.		Spec. (mm)	Step (mm)	Quantity
Material: Hardened steel	Material: Ceramic	2.5, 5.1, 7.7, 10.3, 12.9	2.6	5
GB-9012-0 Grade: 0	GB-C9012-0 Grade: 0	15, 17.6, 20.2, 22.8	2.6	4
GB-9012-1 Grade: 1	GB-C9012-1 Grade: 1	25, 50, 75	25	3

Accuracy: according to DIN 861/ ISO 3650 standard Full set with JCC calibration report



Gauge Blocks (Long)

For accuracy inspection of mid to large size measuring tools, instruments and machine tools.



Model No.	Spec. (mm)	Step (mm)	Quantity	Model No.	Spec. (mm)	Step (mm)	Quantity
GB-908S-0 Grade: 0	25, 50 75, 100 125, 150 175, 200	25	8	GB-905L-0 Grade: 0	600, 700 800, 900 1000	100	5
GB-908S-1 Grade: 1				GB-905L-1 Grade: 1			
GB-908M-0 Grade: 0							
GB-908M-1 Grade: 1	125, 150 175, 200 250, 300 400, 500	25 25 50 100	8				

*Accuracy: according to DIN 861/ISO 3650 standard
 *Full set with the calibration report of JCC (ISO 17025)
 *Material: Hardened steel Hardness: HV650~800.

Gauge Blocks (Individual)

Material: Hardened steel, Hardness: HV650-800

Model No.	Spec. (mm)	Grade
GB-0.2-0	0.2	0
GB-0.2-1		1
GB-0.3-0	0.3	0
GB-0.3-1		1
GB-0.4-0	0.4	0
GB-0.4-1		1
GB-0.5-0	0.5	0
GB-0.5-1		1
GB-0.6-0	0.6	0
GB-0.6-1		1
GB-0.7-0	0.7	0
GB-0.7-1		1
GB-0.8-0	0.8	0
GB-0.8-1		1
GB-0.9-0	0.9	0
GB-0.9-1		1
GB-1.0-0	1.0	0
GB-1.0-1		1
GB-1.0005-0	1.0005	0
GB-1.0005-1		1
GB-1.001-0	1.001	0
GB-1.001-1		1
GB-1.002-0	1.002	0
GB-1.002-1		1
GB-1.003-0	1.003	0
GB-1.003-1		1
GB-1.004-0	1.004	0
GB-1.004-1		1
GB-1.005-0	1.005	0
GB-1.005-1		1
GB-1.006-0	1.006	0
GB-1.006-1		1
GB-1.007-0	1.007	0
GB-1.007-1		1
GB-1.008-0	1.008	0
GB-1.008-1		1
GB-1.009-0	1.009	0
GB-1.009-1		1
GB-1.010-0	1.010	0
GB-1.010-1		1

Model No.	Spec. (mm)	Grade
GB-1.01-0	1.01	0
GB-1.01-1		1
GB-1.02-0	1.02	0
GB-1.02-1		1
GB-1.03-0	1.03	0
GB-1.03-1		1
GB-1.04-0	1.04	0
GB-1.04-1		1
GB-1.05-0	10.5	0
GB-1.05-1		1
GB-1.06-0	1.06	0
GB-1.06-1		1
GB-1.07-0	1.07	0
GB-1.07-1		1
GB-1.08-0	1.08	0
GB-1.08-1		1
GB-1.09-0	1.09	0
GB-1.09-1		1
GB-1.1	1.10	0
GB-1.0		1
GB-1.11-0	1.11	0
GB-1.11-1		1
GB-1.12-0	1.12	0
GB-1.12-1		1
GB-1.13-0	1.13	0
GB-1.13-1		1
GB-1.14-0	1.14	0
GB-1.14-1		1
GB-1.15-0	1.15	0
GB-1.15-1		1
GB-1.16-0	1.16	0
GB-1.16-1		1
GB-1.17-0	1.17	0
GB-1.17-1		1
GB-1.18-0	1.18	0
GB-1.18-1		1
GB-1.19-0	1.19	0
GB-1.19-1		1
GB-1.20-0	1.20	0
GB-1.20-1		1

Model No.	Spec. (mm)	Grade
GB-1.21-0	1.21	0
GB-1.21-1		1
GB-1.22-0	1.22	0
GB-1.22-1		1
GB-1.23-0	1.23	0
GB-1.23-1		1
GB-1.24-0	1.24	0
GB-1.24-1		1
GB-1.25-0	1.25	0
GB-1.25-1		1
GB-1.26-0	1.26	0
GB-1.26-1		1
GB-1.27-0	1.27	0
GB-1.27-1		1
GB-1.28-0	1.28	0
GB-1.28-1		1
GB-1.29-0	1.29	0
GB-1.29-1		1
GB-1.30-0	1.30	0
GB-1.30-1		1
GB-1.31-0	1.31	0
GB-1.31-1		1
GB-1.32-0	1.32	0
GB-1.32-1		1
GB-1.33-0	1.33	0
GB-1.33-1		1
GB-1.34-0	1.34	0
GB-1.34-1		1
GB-1.35-0	1.35	0
GB-1.35-1		1
GB-1.36-0	1.36	0
GB-1.36-1		1
GB-1.37-0	1.37	0
GB-1.37-1		1
GB-1.38-0	1.38	0
GB-1.38-1		1
GB-1.39-0	1.39	0
GB-1.39-1		1
GB-1.40-0	1.40	0
GB-1.40-1		1
GB-1.41-0	1.41	0
GB-1.41-1		1

Model No.	Spec. (mm)	Grade
GB-1.42-0	1.42	0
GB-1.42-1		1
GB-1.43-0	1.43	0
GB-1.43-1		1
GB-1.44-0	1.44	0
GB-1.44-1		1
GB-1.45-0	1.45	0
GB-1.45-1		1
GB-1.46-0	1.46	0
GB-1.46-1		1
GB-1.47-0	1.47	0
GB-1.47-1		1
GB-1.48-0	1.48	0
GB-1.48-1		1
GB-1.49-0	1.49	0
GB-1.49-1		1
GB-1.50-0	1.50	0
GB-1.50-1		1
GB-1.60-0	1.60	0
GB-1.60-1		1
GB-1.70-0	1.70	0
GB-1.70-1		1
GB-1.80-0	1.80	0
GB-1.80-1		1
GB-1.90-0	1.90	0
GB-1.90-1		1
GB-2.00-0	2.0	0
GB-2.00-1		1
GB-2.50-0	2.5	0
GB-2.50-1		1
GB-3.00-0	3.0	0
GB-3.00-1		1
GB-3.50-0	3.5	0
GB-3.50-1		1
GB-4.00-0	4.0	0
GB-4.00-1		1
GB-4.50-0	4.5	0
GB-4.50-1		1
GB-5.00-0	5.0	0
GB-5.00-1		1
GB-5.50-0	5.5	0
GB-5.50-1		1

Gauge Blocks (Individual)

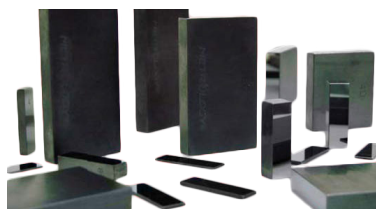
Material: Hardened steel, Hardness: HV650-800



Model No.	Spec. (mm)	Grade	Model No.	Spec. (mm)	Grade	Model No.	Spec. (mm)	Grade	Model No.	Spec. (mm)	Grade
GB-6.0-0	6.0	0	GB-14.5-0	14.5	0	GB-23.0-0	23.0	0	GB-90.0-0	90	0
GB-6.0-1		1	GB-14.5-1		1	GB-23.0-1		1	GB-90.0-1		1
GB-6.5-0	6.5	0	GB-15.0-0	15.0	0	GB-23.5-0	23.5	0	GB-95.0-0	95	0
GB-6.5-1		1	GB-15.0-0		1	GB-23.5-1		1	GB-95.0-1		1
GB-7.0-0	7.0	0	GB-15.5-0	15.5	0	GB-24.0-0	24.0	0	GB-100.0-0	100	0
GB-7.0-1		1	GB-15.5-1		1	GB-24.0-1		1	GB-100.0-1		1
GB-7.5-0	7.5	0	GB-16.0-0	16.0	0	GB-24.5-0	24.5	0	GB-125.0-0	125	0
GB-7.5-1		1	GB-16.0-1		1	GB-24.5-1		1	GB-125.0-1		1
GB-8.0-0	8.0	0	GB-16.5-0	16.5	0	GB-25.0-0	25	0	GB-150.0-0	150	0
GB-8.0-1		1	GB-16.5-1		1	GB-25.0-1		1	GB-150.0-1		1
GB-8.5-0	8.5	0	GB-17.0-0	17.0	0	GB-30.0-0	30	0	GB-175.0-0	175	0
GB-8.5-1		1	GB-17.0-1		1	GB-30.0-1		1	GB-175.0-1		1
GB-9.0-0	9.0	0	GB-17.5-0	17.5	0	GB-35.0-0	35	0	GB-200.0-0	200	0
GB-9.0-1		1	GB-17.5-1		1	GB-35.0-1		1	GB-200.0-1		1
GB-9.5-0	9.5	0	GB-18.0-0	18.0	0	GB-40.0-0	40	0	GB-250.0-0	250	0
GB-9.5-1		1	GB-18.0-1		1	GB-40.0-1		1	GB-250.0-1		1
GB-10.0-0	10.0	0	GB-18.5-0	18.5	0	GB-45.0-0	45	0	GB-300.0-0	300	0
GB-10.0-1		1	GB-18.5-1		1	GB-45.0-1		1	GB-300.0-1		1
GB-10.5-0	10.5	0	GB-19.0-0	19.0	0	GB-50.0-0	50	0	GB-400.0-0	400	0
GB-10.5-1		1	GB-19.0-1		1	GB-50.0-1		1	GB-400.0-1		1
GB-11.0-0	11.0	0	GB-19.5-0	19.5	0	GB-55.0-0	55	0	GB-500.0-0	500	0
GB-11.0-1		1	GB-19.5-1		1	GB-55.0-1		1	GB-500.0-1		1
GB-11.5-0	11.5	0	GB-20.0-0	20.0	0	GB-60.0-0	60	0	GB-600.0-0	600	0
GB-11.5-1		1	GB-20.0-1		1	GB-60.0-1		1	GB-600.0-1		1
GB-12.0-0	12.0	0	GB-20.5-0	20.5	0	GB-65.0-0	65	0	GB-700.0-0	700	0
GB-12.0-1		1	GB-20.5-1		1	GB-65.0-1		1	GB-700.0-1		1
GB-12.5-0	12.5	0	GB-21.0-0	21.0	0	GB-70.0-0	70	0	GB-800.0-0	800	0
GB-12.5-1		1	GB-21.0-1		1	GB-70.0-1		1	GB-800.0-1		1
GB-13.0-0	13.0	0	GB-21.5-0	21.5	0	GB-75.0-0	75	0	GB-900.0-0	900	0
GB-13.0-1		1	GB-21.5-1		1	GB-75.0-1		1	GB-900.0-1		1
GB-13.5-0	13.5	0	GB-22.0-0	22.0	0	GB-80.0-0	80	0	GB-1000.0-0	1000	0
GB-13.5-1		1	GB-22.0-1		1	GB-80.0-1		1	GB-1000.0-1		1
GB-14.0-0	14.0	0	GB-22.5-0	22.5	0	GB-85.0-0	85	0	Accuracy: according to DIN 861/ISO 3560 standard		
GB-14.0-1		1	GB-22.5-1		1	GB-80.0-1		1			

Gauge Blocks (Set)

Material: Tungsten carbide,
Hardness: HV1300-1600



Model No.	Spec. (mm)	Step (mm)	Quantity	Model No.	Spec. (mm)	Step (mm)	Quantity
GB-T9122-0 Grade: 0	1.0005	0.0005	1	GB-T9047-0 Grade: 0	1.005	0.005	1
	1.001-1.009	0.001	9		1.01-1.09	0.01	9
	1.01-1.49	0.01	49		1.1-1.9	0.1	9
	1.6-1.9	0.1	4		1-24	1	24
GB-T9122-1 Grade: 1	0.5-24.5	0.5	49	GB-T9047-1 Grade: 1	25-100	25	4
	30-100	10	8				
	25,75	-	2				
GB-T9112-0 Grade: 0	1.0005	0.0005	1	GB-T9038-0 Grade: 0	1.005	0.005	1
	1.001-1.009	0.001	9		1.01-1.09	0.01	9
	1.01-1.49	0.01	49		1.1-1.9	0.1	9
	0.5-24.5	0.5	49		1-9	1	9
GB-T9112-1 Grade: 1	25-100	25	4	GB-T9038-1 Grade: 1	10-100	10	10
GB-T9103-0 Grade: 0	1.005	0.005	1	GB-T9010-0 Grade: 0	1.0-1.5	0.25	3
	1.01-1.49	0.01	49		2.0-3.0	1	2
	0.5-24.5	0.5	49		5.0-25.0	5	5
	25-100	25	4				
GB-T9103-1 Grade: 1				GB-T9009-0 Grade: 0			
GB-T9087-0 Grade: 0	1.001-1.009	0.001	9	GB-T9009-1 Grade: 1	1.001-1.009	0.001	9
	1.01-1.49	0.01	49				
	0.5-9.5	0.5	19				
	10-100	10	10				
GB-9087-1 Grade: 1				*Accuracy: according to DIN 861/ISO 3650 standard *Full set with the calibration report of JCC (ISO 17025)			

*Accuracy: according to DIN 861/ISO 3650 standard
*Full set with the calibration report of JCC (ISO 17025)

Micro Height Gauge

MICRO plus I&II



Machine base



Mechanical probe



Traveling lock



Interface port



Rechargeable battery



Air bearing



Hardened aluminum column



Servomotor



Clutch



Workpiece stopper



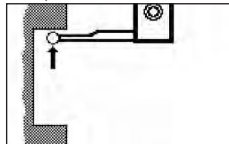
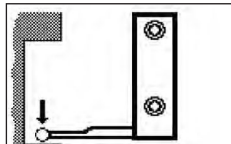
Linear bearing slider



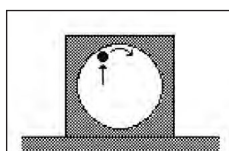
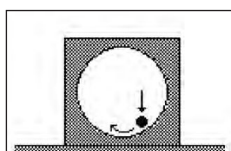
Magnetic sensor

Basic Measurements

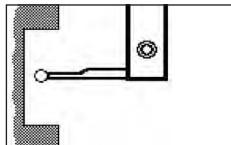
1. Surface measurement (Height, Depth, Thickness, Distance, Flatness, Parallelism)



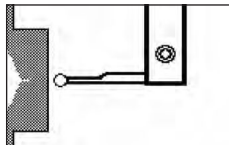
3. Bore measurement (Diameter, Concentricity)



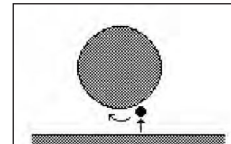
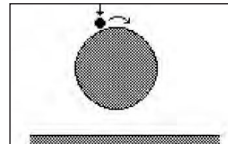
6. Groove width & Center measurement



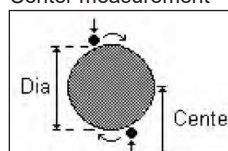
7. Ledge width & Center measurement



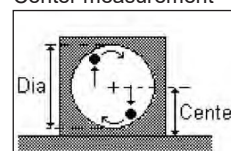
2. Shaft measurement (Diameter, Concentricity)



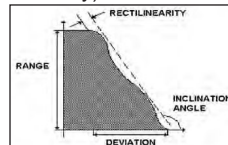
4. Shaft diameter & Center measurement



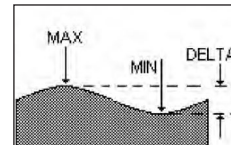
5. Bore diameter & Center measurement



8. Squareness (perpendicularity) measurement

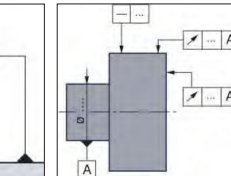
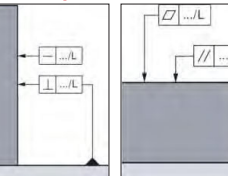
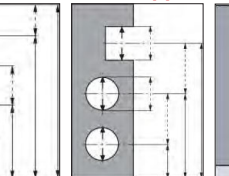
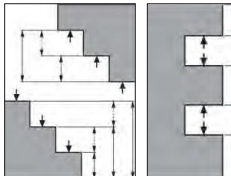


9. Min., Max., DELTA measurement



10. Offset Function (Expendable measuring range)

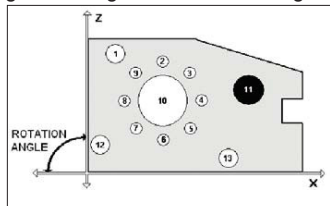
Application examples



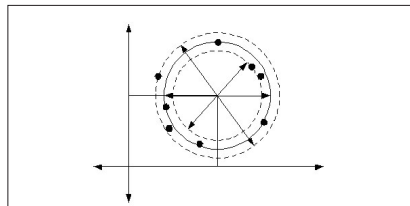
Model	MHG-E450I(II)	MHG-E600I(II)	MHG-E1000I(II)
Measuring range	450 mm	600 mm	1000 mm
Expendable range	765 mm	915 mm	1315 mm
Resolution	0.0005 mm / 0.00002 in.		
Measuring accuracy	1D : 3+L/400um (2D: 2+L/400um) L=length in mm		
Repeatability (2σ)	plane : 0.0015 mm bore : 0.003 mm		
Squareness	1D : 6um (2D : 4um)	1D : 9um (2D : 6um)	1D : 13um (2D : 8um)
MAX. counting speed	600mm/sec		
Measuring force	1 N ± 0.2N		
Battery charging time	1D : 8 hours 2D : 4 hours		
Battery operation life	1D : 16 hours 2D : 8 hours		
AC Adapter Specification	Input 100 – 240 VAC , 50/60 Hz Output 24 VDC , 2.5A		
Weight of instrument	23kg	25kg	30kg

2D Dimension Measurement

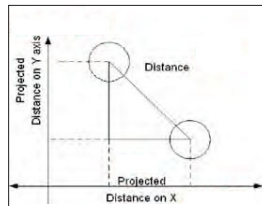
1. 2D measuring of bore, shaft, groove, ledge, line, distance, angle.



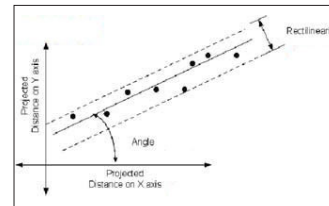
2. PCD (pitch circle diameter) function DMIN, DMAX, PCD of the XY center coordinates



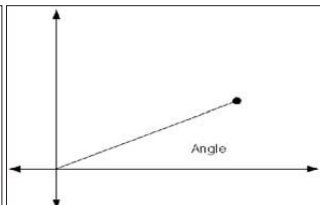
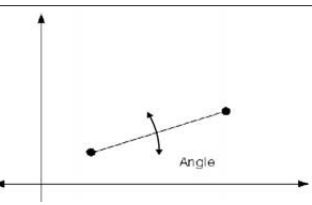
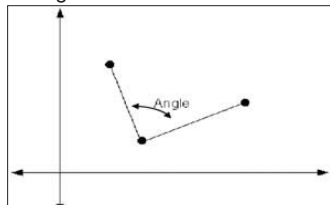
3. Distance function



4. Line function



5. Angle function



Other functions and settings

- Programming & Replay
- Tolerance mode
- Report Generation using PC utility
- Printer settings and operation
- Statistical Analysis of the results

Electronic Dial & Gauge Calibrator

Indicator calibration, Measuring gauge calibration, Length measurement



- For calibrating varies types of dial indicators, bore gauges, pin gauges, plug gauge, thread plug gauges, inside micrometers, standard bar, and measuring concentric, thickness, length of parts.
- Hardened tool steel, heat treated, precision grinding, and surface coating rust resistant.
- Easy to operate, by simply moving concentric slide to set distance and to lock position, then proceed to measuring or calibration.
- Full set includes wooden case, operational manual, quality warranty, and JCC calibration report comply with ISO 9001 measuring traceability & ISO/IEC 17025 accreditation.

Model No.	Direct Calibration	Comparison Calibration	Resolution	Accuracy (mm)	Combination Sets
D&G-9001	0-25mm/0-1"	200mm	0.001mm/0.00005"	0.003	BS1+CS1+EM1+TJ+UC
D&G-9001	0-25mm/0-1"	200mm		0.002	BS2+CS2+EM1+TJ+UC
D&G-9001	0-50mm/0-2"	300mm		0.004	BS3+CS3+EM2+TJ+UC
D&G-9001	0-25mm/0-1"	200mm	0.0001mm/0.000005"	0.001	BS4+CS4+EM1H+TJ+UC

*Accuracy: Max Permissible Error



Germany invention patent Taiwan invention patent

Standard Accessories

Calibrator standard Base



Model No.	Max.measuring Length	Materials
D&G-BS1	200mm	Hardened Chromed Steel
D&G-BS2	200mm	Hardened Tool Steel
D&G-BS3	300mm	Hardened Chromed Steel
D&G-BS4	200mm	Hardened Tool Steel

Concentric slide



Model No.	Center Height	Concentricity	Materials
D&G-CS1	85mm 2pcs/pair	2μm	Hardened Chromed Steel
D&G-CS2		1μm	Hardened Tool Steel
D&G-CS3		2μm	Hardened Chromed Steel
D&G-CS4		1μm	Hardened Tool Steel

Digital micrometer head



Model No.	Specification
D&G-EM1	0-25mm/0.001mm/0.00005"
D&G-EM2	0-50mm/0.001mm/0.00005"
D&G-EM1H	0-25mm/0.0001mm/0.000005"

*Tungsten carbide measuring anvil

Universal clamp



Model No.	Specification
D&G-UC	Length: 133mm Dia.Φ8mm

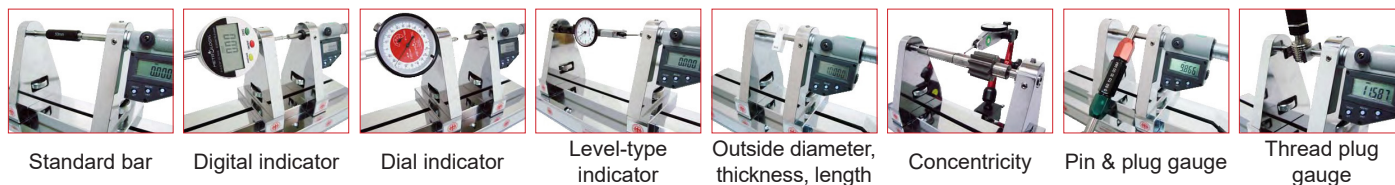
*Steel

Two-way measuring jaws



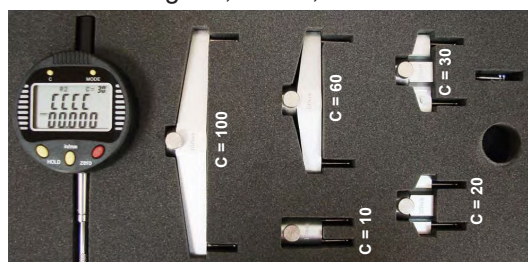
Model No.	Specification
D&G-TJ	Dia.Φ6.5 / Φ8mm (2 Step)

*Hardened tool steel



Arc Radius Measuring Gauge

For measuring arc, radius, diameter of inner & outer circular workpiece.



Outer ARC	The best measuring range	Inner ARC	The best measuring range
C = 10	R = 5-15mm	C = 10	R = 6.5-15mm
C = 20	R = 11-26mm	C = 20	R = 14-30mm
C = 30	R = 22-100mm	C = 30	R = 27-100mm
C = 60	R = 94-260mm	C = 60	R = 94-260mm
C = 100	R = 255-700mm	C = 100	R = 255-700mm

* C : center distance R : radius of arc

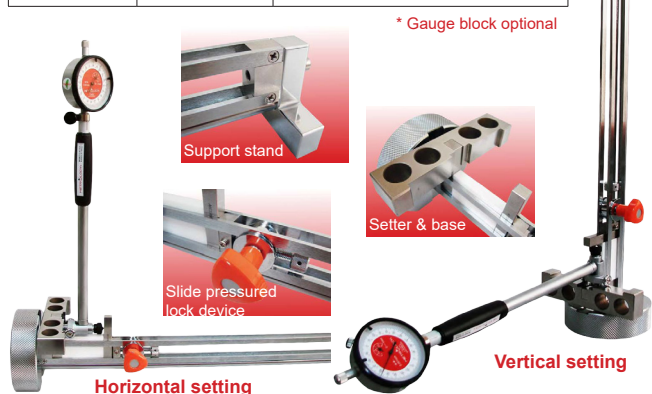
Digital indicator Measuring range: 0-13mm, Resolution: 0.01mm.

Radius Measuring range : 5-9999.9mm.

Bore Gauge Checkmaster

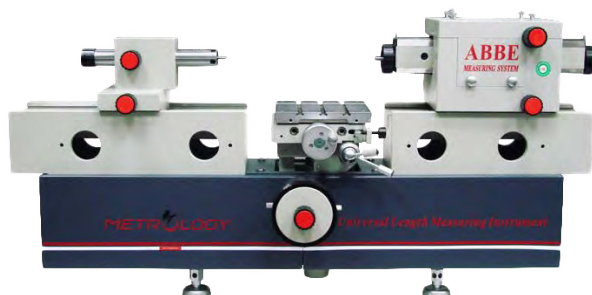
For dimension set zero & calibration of bore gauge.

Model No.	Set Range	Uncertainty of measurement
BGC-9200	0-200mm	MAX : 0.002mm
BGC-9300	0-300mm	
BGC-9600	0-600mm	



Universal Length Measuring Instrument

ABBE Principle - Foundation of modern precision measurement



Measuring software functions

- English interface
- External comparison measurement
- Double yoke internal measurement
- Internal thread gauge measurement
- Preset value
- Internal accuracy compensation
- Report settings
- Temperature compensation
- External absolute measurement
- Magic eye internal measurement
- External thread gauge measurement
- Data input
- External accuracy compensation
- Color settings
- Section correction

Measuring range

External direct measuring range	0-100mm
External comparison measuring range	0-700mm
Internal direct measuring range	1-60mm
Internal comparison measuring range	10-450mm
External thread measuring range	till 200mm
Internal thread measuring range	M13 - M90
Expandable	M6 - M200 (optional)

Work table

Vertical distance	0-100mm/1mm
Horizontal distance	0-25mm/ 0.01mm
Left-right swivel angle	±4°
Up-down tilt angle	±3°
Resolution	0.0001mm/0.000001"
Measuring accuracy	±(0.5+L/200)μm
Uncertainty of measurement	(0.2+L/200)μm
Measuring force	0, 1.5, 2.5N
The best temperature of measurement	20°C ± 1°C
Power	220V±10%
Instrument weight	100KG
Instrument dimension	000x380x450mm

METROLOGY

Squareness Checkmaster



Taiwan patent



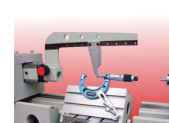
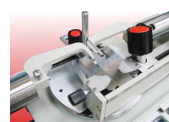
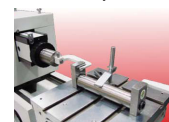
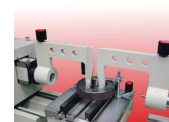
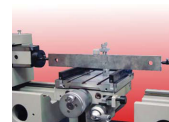
EU 28 countries international patented

Model No.	Measuring Range	Max.error
SCM-G300	300mm	0.003mm
SCM-G600	600mm	0.004mm
SCM-G900	900mm	0.005mm

*Custom specifications available as per client's request



Measuring software functions



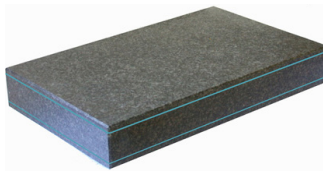
DHARLA Low cost granite surface plates - DH/DP

Art. DH				
Code	Size mm	DIN Grade	∇ μm	Net KG
500	500X315X70	DIN 876/0	6.00	32
630	630X400X80	DIN 876/0	6.52	58
800	800X500X100	DIN 876/0	7.20	114
1000	1000X630X140	DIN 876/0	8.00	252
1200	1200X800X160	DIN 876/0	8.80	438
1600	1600X1000X180	DIN 876/0	10.40	821

Art. DP				
Code	Size mm	DIN Grade	∇ μm	Net KG
500	500X315X70	DIN 876/00	3.00	32
630	630X400X80	DIN 876/00	3.26	58
800	800X500X100	DIN 876/00	3.60	114
1000	1000X630X140	DIN 876/00	4.00	252
1200	1200X800X160	DIN 876/00	4.40	438
1600	1600X1000X180	DIN 876/00	5.20	821



Lightened precision granite surface plates



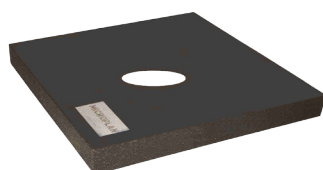
Art. PA	Size (mm) L x W x T	Class 1	∇ μm	Class 0	∇ μm	Class 00	∇ μm	Class 000	∇ μm	Weight KG
	2000 x 1000 x 240 / 260	0100	19	0101	9.5	0102	4.7	0700	3.3	596 / 613
	2000 x 1500 x 260 / 290	0103	20	0104	10	0105	5	0701	3.5	877 / 910
	2500 x 1000 x 280 / 320	0106	22	0107	11	0108	5.5	0702	3.7	788 / 832
	2500 x 1500 x 310 / 340	0109	23	0110	11.5	0111	5.8	0703	4.0	1165 / 1205
	3000 x 1000 x 330 / 390	0112	24	0113	12	0114	6	0704	4.2	988 / 1061
	3000 x 1500 x 350 / 390	0115	25	0116	12.5	0117	6.4	0705	4.4	1423 / 1482
	3000 x 2000 x 380 / 420	0118	27	0119	13.5	0120	6.8	0706	4.7	2557 / 2678
	3500 x 1000 x 380 / 430	0121	27	0122	13.5	0123	6.8	0707	4.7	1625 / 1737
	3500 x 1500 x 400 / 450	0124	28	0125	14	0126	7.1	0708	4.9	2335 / 2475
	3500 x 2000 x 420 / 470	0127	30	0128	15	0129	7.4	0709	5.1	3238 / 3432
	4000 x 1500 x 450 / 500	0130	31	0131	15.5	0132	7.7	0710	5.3	3034 / 3183
	4000 x 2000 x 470 / 530	0133	32	0134	16	0135	8	0711	5.5	4561 / 4810

Granite set square (90°)

Art. SQ	Code	Size mm	Holes no.	Holes ø (mm)	Use	∇ μm	⊥ μm	Weight KG
	0196	300X200X40	1	80	Workshop	6.4	6.0	5.6
	0197	400X250X50	2	80	Workshop	7.2	8.0	10.4
	0198	500X315X60	2	100	Workshop	8.0	10.0	20
	0199	630X400X60	3	125(2x) + 100(1x)	Workshop	9.0	12.6	27
	2000	200x150x30	-	-	Laboratory	2.4	1.0	2.2
	2001	300x200x40	1	80	Laboratory	2.6	1.5	5.2
	2002	400x250x50	2	80	Laboratory	2.8	2.0	11
	2003	500x315x60	2	100	Laboratory	3.0	2.5	20
	2004	630x400x60	3	125(2x) + 100(1x)	Laboratory	3.2	3.2	27
	2005	800x500x80	3	150	Laboratory	3.6	4.0	64
	2006	1000x630x100	5	150	Laboratory	4.0	5.0	122
	2007	1200x800x140	6	150	Laboratory	4.4	6.0	210
	2008	1500x1000x160	9	150	Laboratory	5.0	7.2	498

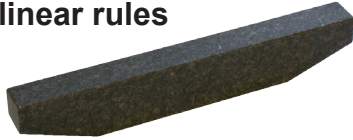


Granite parallelepiped



Art. PL	Code	Size mm	Holes no.	Holes ø (mm)	∇ μm	⊥ μm	Weight KG
	0243	500x250x50	3	100	3.0	2.5	15
	0244	750x350x60	3	150	3.5	3.8	36
	0245	250x250x40	1	100	2.5	1.2	7
	0246	350x350x50	1	100	2.7	1.8	14
	0247	500x500x50	1	150	3.0	2.5	34
	0248	750x750x60	1	250	3.5	3.8	88
	0249	1000x1000x80	5	250(1x) + 100(4x)	4.0	5.0	214
	0250	1000x500x80	3	150	4.0	5.0	70

Granite linear rules



Art. RL							
SIZE in mm	Class 1	∠ Tol.	Class 0	∠ Tol.	Class 00	∠ Tol.	Net KG
300X30X50	0150	6.4	0151	3.2	0152	2.6	1.3
400X40X60	0153	7.2	0154	3.6	0155	2.8	2.6
500X50X80	0156	8.0	0157	4.0	0158	3.0	5.6
630X50X80	0159	9.0	0160	4.4	0161	3.2	7.0
800X50X100	0162	10.5	0163	5.2	0164	3.6	10.5
1000X60X120	0165	12.0	0166	6	0167	4.0	20
1400X60X150	0168	15.2	0169	7.6	0170	4.8	33
1600X80X180	0171	16.8	0172	8.4	0173	5.2	60
2000X80X200	0174	20.0	0175	10.0	0176	6.0	83

Granite plane parallel rules



Art. RP							
SIZE in mm	Class 1	∠ // Tol.	Class 0	∠ // Tol.	Class 00	∠ // Tol.	Net KG
500X50X80	0180	8.0	0181	4.0	0182	3.0	5
750X50X100	0183	10.0	0184	5.0	0185	3.5	8.7
1000X60X140	0186	12.0	0187	6.0	0188	4.0	19.5
1500X80X180	0189	16.0	0190	8.0	0191	5.0	47
2000X100X220	0192	20.0	0193	10.0	0194	6.0	95

Normachek // Granite column for squareness testing

Art. PT			
Code	0330	0331	0332
Height	612	1092	1632
Width	250	345	450
Thickness	100	100	100
Run	500	1000	1500
Angle error	2"	2"	2"
Straightness	0.005	0.010	0.015
Repeatability	0.002	0.002	0.002
KG	27	64	120



PERTEST // Granite column for squareness testing

Art. PT			
Code	0333	0334	0335
Height	743	1320	1380
Width	315	350	450
Thickness	165	165	165
Run	500	1000	1500
Angle error	1"	1"	1"
Straightness	0.002	0.004	0.005
Repeatability	0.001	0.001	0.001
Air power (Bar)	4.5	4.5	4.5
KG	45	100	180



MICROPLAN
Italy Made

Rotating table // Rotary stage



Art. TR			
Disc Ø (mm)	300	400	500
Net weight (kg)	36	62	106
Pressure (Bar)	4.5	4.5	4.5
Rotary axis precision (µm)	1	1	1
Horizontal disc precision (µm)	2.0	2.5	3.0
Max. load (kg)	60	100	170

Electronic level with analogue display - LE050/ Analogue and digital electronic level - LE051



LE050



LE051

LE050 ELECTRONIC LEVEL MAIN FEATURES

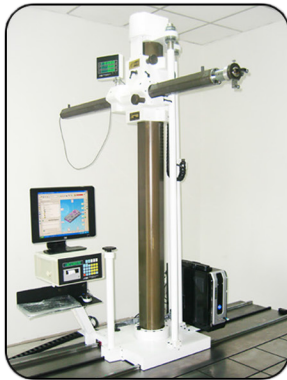
Resolution:	A: 250 µm/m B: 50 µm/m C: 10 µm/m D: 5 µm/m E: 1 µm/m for division
Measure field:	A: 5000 µm/m B: 1000 µm/m C: 200 µm/m D: 100 µm/m E: 20 µm/m
Zero setting:	± 1500 µm/m
Materials:	Aluminum / Granite base / Wood handle
Reaction time:	3 sec typical
Linearity:	± 1%
Reference temperature:	20°C - 50% U.R.
Power:	Rechargeable batteries
Battery charger power:	220 V - 50 Hz
Autonomy:	10 hours continuous
Recharge time:	about 15 hours
Weight:	3.5 Kg
Overall dimensions:	220x50x250 mm
Interface:	RS-232 for PC connection

LE051 ELECTRONIC LEVEL MAIN FEATURES

Analogue Resolution:	A: 250 µm/m B: 50 µm/m C: 10 µm/m D: 5 µm/m E: 1 µm/m for division
Digital Resolution:	0.1 sec / 0.5 µrad / 0.0005 mm/m
Measure field:	A: 5000 µm/m B: 1000 µm/m C: 200 µm/m D: 100 µm/m E: 20 µm/m
Zero setting:	± 1500 µm/m
Materials:	Stabilized cast iron / Wood handle
Reaction time:	3 sec typical
Linearity:	± 1%
Squareness:	1"
Reference temperature:	20°C - 50% U.R.
Power:	Rechargeable batteries
Battery charger power:	110 / 220 VAC - 20 mA (USB port)
Autonomy:	10 hours continuous
Recharge time:	about 15 hours
Weight:	4.4 Kg
Overall dimensions:	220x220x50 mm
Interface:	RS-232 for PC connection

Coordinate Measuring and Marking Machine

CHXY Series



- With the high-IP protection grade to the precision displacement transducer, it is especially suitable to application on the site.
 - The vertical post and cantilever are made of high strength aluminium alloy.
- With the special process treating of vibration aging and strong hardness anodization, the quality of unit stability, wearability and legerity is guaranteed. The hard aluminium allow is applied to the magnetic grid sensor system, stopping the field loss caused by iron and steel.
- Y-direction uses the centre steel sustaining and trimming instructure. It makes the cantilever more rigid and effectively eliminates the deflection distorted of Y-direction.
 - With the special purpose linear guide rail for guide way of X-axis. There are many advantages, for example, small coefficient of friction, high precision, easy installation, keep precision at long time, and so on.
 - With the scratch awl part, meeting the convenient need for marking and measuring

Main technical index

Unit : mm

Measuring height	800	1000	1200	1500	2000	2500	3000	3500
Measuring width	800	1000		1200	1400		1400 - 2200	
Measuring length	0 - 15000							
Orientation precision	± (0.03+0.03L), L unit : m							
Repeat precision	0.03							
Remark	The specifications can be made according to the requirements of customers							

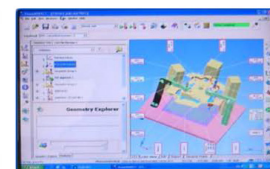
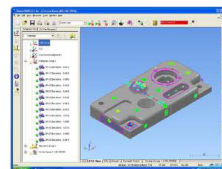
PowerINSPECT SOFTWARE

- Comparison against all mainstream CAD formats
- Rapid alignment even for complex freeform shapes
- Inspection of user-defined sections
- The ability to inspect along the edge of a part
- Full Geometric Inspection capabilities
- Automatic creation of inspection features from CAD nominals
- A step by step Geometric Dimensioning & Tolerancing (GD&T) Wizard
- Point, wireframe and surface export for measured entities
- CAD manipulation - including surface offsetting (e.g. reverse side for sheet metal, spark gap for electrodes)



Quality Reporting

- Comparison against all mainstream CAD formats
- Reports are presented graphically so that any discrepancies can be identified at a glance
- Customisable reports can be created to meet the exact requirements of the operator, customer or external quality bodies
- Anything from onscreen images to full reports can be printed



T-SLOT BASE PLATES



Automotive

We offer T-slot Base Plates for the Automotive Testing and Machine Tool industry.

The base plates are very stiff by using a rib-pattern which eliminates the need of grouting the plate except for high dynamic loading.

T-slots are machined according to DIN 650 and can be ordered in any size pattern.

Despite the high quality standards the plates comes with a competitive price and short delivery times.

Measurement

The company today is one of the largest supplier for measuring plates in the field of horizontal arm measuring devices. All well known measuring machine manufacturers in Europe are our clients.

We provide the measuring plate for your individual guiding system. Guiding systems or even various guiding systems integrated in the same plate are possible.

Please contact us with your request. We will work out an individual offer for you.



Machine Tool

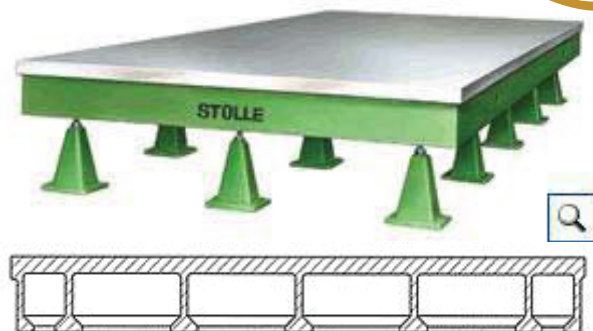
We offer the widest variety of products for the modern machine tool industry.

Clamping plates in any sizes and shapes, machine tables, box tables, angle plates and more are available.

SURFACE PLATES



Approx. plate size mm	Approx. plate thickness mm	Approx. rib height mm	Approx. plate height mm	Approx. weight kg	Number of supports required
2000 x 1250	50	200	250	1.600	6
2000 x 1500	50	200	250	2.040	5
2000 x 2000	50	200	250	2.530	5
2500 x 1000	50	200	250	1.730	6
2500 x 1250	50	200	250	2.020	6
2500 x 1500	50	200	250	2.470	8
2500 x 2000	50	200	250	3.050	8
3000 x 1000	50	200	250	2.100	6
3000 x 1500	50	200	250	2.980	8
3000 x 2000	50	250	300	3.940	8
3000 x 2500	50	250	300	5.100	9
3500 x 1000	50	200	250	2.460	8
3500 x 1500	50	200	250	3.500	11
3500 x 2000	50	250	300	4.630	11
3500 x 2500	50	250	300	5.970	12
4000 x 1000	50	200	250	2.820	8
4000 x 1500	50	200	250	4.000	11
4000 x 2000	50	250	300	5.300	11
4000 x 2500	50	250	300	6.850	12
4500 x 1500	50	200	250	4.450	11
4500 x 2000	50	250	300	5.850	11
4500 x 2500	50	250	300	7.600	12
5000 x 1000	50	250	300	3.780	10
5000 x 1500	50	250	300	5.330	14
5000 x 2000	50	250	300	6.540	14
5000 x 2500	50	250	300	8.500	15
6000 x 1500	50	250	300	6.340	14
6000 x 2000	50	250	300	7.770	14
6000 x 2500	50	250	300	10.100	15
7000 x 1500	50	250	300	7.350	17



Approx. plate size mm	Approx. plate thickness mm	Approx. rib height mm	Approx. plate height mm	Approx. weight kg	Number of supports required
7000 x 2000	50	250	300	9.050	17
7000 x 2500	50	250	300	11.650	18
3000 x 3000	50	300	350	6.190	13
3500 x 3000	50	300	350	13.210	23
4000 x 3000	50	300	350	8.320	18
4500 x 3000	50	300	350	9.200	18
5000 x 3000	50	300	350	10.230	23
5500 x 3000	50	300	350	11.300	23
6000 x 3000	50	300	350	12.250	23
7000 x 3000	50	300	350	14.180	23
7500 x 1500	50	300	350	8.500	20
7500 x 2000	50	300	350	10.280	20
7500 x 2500	50	300	350	13.240	21
7500 x 3000	50	300	350	15.240	28
8000 x 1500	50	300	350	9.150	23
8000 x 2000	50	300	350	10.940	23
8000 x 2500	50	300	350	14.180	24
8000 x 3000	50	300	350	16.360	28

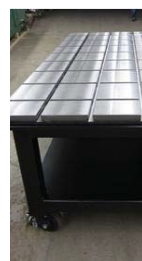
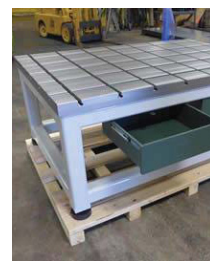
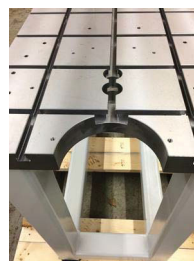
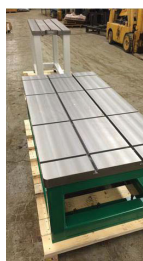
Prices and other sizes on request.

T-SLOT TABLES

We manufacture T-slotted tables on support frames to your special request.

For design purposes please provide the following information:

- Table Top size (length x width) - Working height (usually 32")
- No. of T-slots (slot opening or bolt size) - Special payload condition (for example load on the table 5 tons)
- Adjustable feet with or without vibration dampers
- Any special stiffness requirements
- Special paint colors - Any other additional information and requirements



WDW Common Electromechanical Universal Testing System



Model		WDW-S1/2/5	WDW-0.5/1/5/10/20	WDW-25/30	WDW-50/100	WDW-200/250/300	WDW-500/600	WDW-1000
Max. load	kN	1/2/5	0.5/1/5/10/20	25/30	50/100	200/250/300	500/600	1000
	kgf	100/200/500	50/100/500/ 1,000/2,000	2,500/3,000	5,000/10,000	20,000/25,000/ 30,000	50,000/60,000	100,000
Load measuring range		0.4%(1/250) ~100%(1/1)FS; 0.2%(1/500) ~100%(1/1)FS (option)						
Load accuracy		±0.5% Class 0.5 (better than ASTM E4, ISO 7500-1, EN 10002-2, BS1610, DIN51221)						
Deformation measuring range		0.4%(1/250) ~100%(1/1)FS;						
Deformation accuracy		±0.5% Class 0.5 (better than ASTM E83, ISO 9513, BS 3846, EN 10002-4)						
Position resolution		0.025 μm						
Position accuracy		±0.2 mm or 0.1 of displacement (whichever is geater)						
Crosshead moving speed (mm/min)		0.001-500/0.005-1000 (option)				0.001-250/0.001-500 (option)		0.001-250
Crosshead moving speed accuracy		±0.5 of set speed (zero or constant load)						
Vertical test space (mm) ¹⁾		990	1270	1330	1450	1500		2260
Total crosshead travel (mm)		900	1180	1230	1350	1400		1960
Column spacing (mm)		/	420	500	570	590	650	600x400
Max. tensile space (mm) ²⁾		560	750	640	650	500		1000
Max. compression space (mm) ³⁾		740	990	1070	1050			800
Tensile jaw for round specimen (mm)		/ ⁴⁾	Ø4~Ø14	Ø4~Ø20		Ø8~Ø32	Ø12~Ø40	Ø20~Ø60
Tensile jaw for flat specimen (mm)		0~8	0~14	0~21		0~27	0~30	0~40
Width x height of jaw (mm)		40 x 60	35 x 55	40 x 55		50 x 75	70 x 90	110 x 110
Compression platen diameter (mm)		Ø50	Ø100					Ø150
Bending fixture span (mm)		/ ⁵⁾	10-240	20-320	20-400	30-420	30-450	50-500
Length of bending roller (mm)		/	70		100	140		160
Diameter of bending roller (mm)		/	Ø10	Ø20		Ø30		Ø50
Hight of bending supporter (mm)		/	55	90		100		180
Power supply		1 phase, 220V/110V, 50Hz/60Hz				3 phase, 380V/220V, 50Hz/60Hz		
Power (kW)		0.4		0.7	0.8/1.5	2/3	5	28
Dimension (mm) ⁶⁾		385x550x1415	780x500x1737	840x600x1944	970x630x2070	1100x730x2390	1210x880x2560	1420x870x3590
Weight (kg)		55	140	230	700	1500	2400	5000
Shipping dimension		1600x900x500	1930x900x700	2120x1160x1050	2240x1450x1000	2650x1250x1100	3150x1500x1250	4200x1800x1100

Note: ¹⁾ Vertical test space means the distance from bottom surface of moving crosshead to top surface of lower working table, which can be referred when adding other fixtures;

²⁾ Max. Tensile space means the tensile distance when equipping with standard tensile grip;

³⁾ Max. Compression space means compression distance when equipping with standard platens;

⁴⁾ Single column machine equips with screw action parallel grip for flat specimens;

⁵⁾ Bending fixture is not included in standard supply, It can be specially offered;

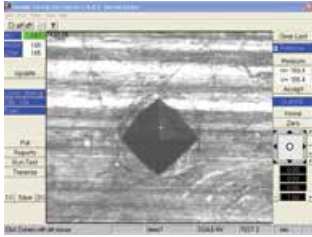
⁶⁾ Frames with other dimensions (extra height or width) & capacities can be offered upon request.

Appearance and specifications are subject to change without prior notice.

Upgrade for Micro Vicker Hardness all brands

C.A.M.S.

Computer Assisted Microhardness System



On-screen Impressions for Greater Accuracy

Seeing is believing. Exceptional user-friendliness without compromising accuracy or testing sophistication.

Modular Design

Get the right system for your application and your budget. Protect your initial investment-add functionality as your needs grow. Immediate return on your investment.

Exceptional Analysis and Data Management

A unique interplay of automatic and manual control so users can override functions for select operations such as focusing.

Upgrade Competitive Microhardness Testers

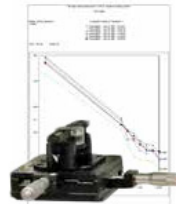
Maintain your current microhardness tester while adding the C.A.M.S. software benefits.



Start with a standard microhardness tester



Basic on-screen measurement system



Manual positioning traverse system



Upgrade competitive microhardness testers

Upgrade for Profile Projector and Microscope all brands

M2 Measuring Solution Features

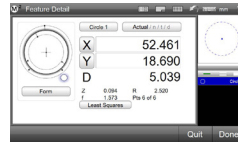
Supporting popular measuring microscope and optical comparator systems worldwide.



Your M2 is available in either a portrait or landscape format.



Use popular navigation moves including pinch zoom and swipe pan to increase feature construction efficiency.



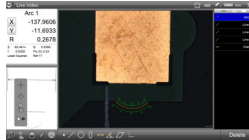
Scroll through your measured features list from this view for a feature by feature display of Actual, Nominal, Tolerance, Deviation, and Data Fit Type information.

M3 Measuring Solution Features

Supporting industry-leading, video-based metrology equipment worldwide.



On-screen controls let you adjust your light output.



Feature measurements may be performed using common touchscreen operations such as pan and pinch zoom. Or use conventional mouse operations like point and click.



Complex edges are no problem for your M3 software. You have options for probing including our exclusive MeasureLogic and Vtouch probes.

MetLogix

U.S.A. Made

Feature	M2 Series	M3 Series
Optical Edge Detection	•	•
Video Edge Detection		•
Advanced Probe Group		•
Geometric Functions	•	•
Multi-UCS Datuming		•
Tolerancing	•	•
Data Export/Reporting	•	•
User Account Control	•	•
Part View Display	•	•
Feature Annotation	•	•
Video Image Archiving		•
Image Markup		•
Multi-Language Support	•	•
3/4 Axis Digital Readout	•	•

Upgrade for Tensile Testing all brands

NRI-Testing Machine V-4

software includes software components - Single, Cycle and Visualized step. This allows you to purchase only the components that meet your specific testing needs. When multiple software components are purchased, easily switch between modes at a single touch, without starting up separate software.

Software : Can be installation 4 load cells

Single software : Performs general single-direction testing. Include tensile, compression, bending, shear, peeling, plunger tests.

This program consists of four parts.

Testing control is a controlled rate by a factor of four types of motion.

Stress : Rate of stress change on time.

Force : Rate of force change on time

Strain : Rate of strain change on time

Stroke : Crosshead speed control of a millimeter per minute

Sensor

Force Range setting (Can be use without re-calibration.)

Force Limit : Testing Machine stop automatically when test load is equal to force limit

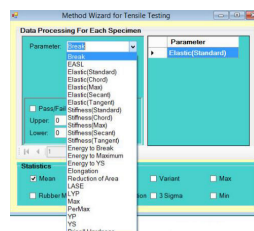
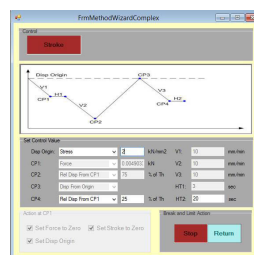
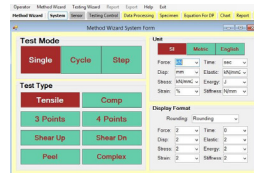
Stroke Limit : Testing Machine stop automatically when test stroke test is equal to stroke limit

Available to the Extensometer and Width sensor

Software prepare for external input (Similar to stroke limit)

Cycle Control software

- Cycle stroke control - Cycle stress control
- Cycle strain control - Period of accrual setting
- Number of cycles setting
- Setting check point value fore changing step for defined control



Software : Complex test

Software : Tension or compression test and accrual time requirements
- Can be setting check point value fore changing step for defined control
- Can be take action on the check point such as
- Set ofrc to Zero - Set Stroke to Zero - Set Displacement to Origin

Software : Visual step control

This software is capable to define any control pattles, which mix
Can be setting check point value fore action as defined control such as
- It is able compressing or tensioning with any speed to desingnate load
- It is able to hole the specimen at any load or any stroke with the
- Can be design the test pattern at requirement

Software is used for testing adhesion tape peeling.

First Peak , Peak force, Peak stress , Mean , Peak Mean , Node Mean
Test method setting program (Test speed, Stress rate, Strain rate, Sample information, Data processing etc.) record and run no limit

Graph: Display the real-time : Auto range

Stress – Strain, Load – Elongation, Load – Time, Strain – Time
Stress – Time, Elongation – Time etc.

Software : Data Processing

Measures the texture of each specimen & Statistic analysis

- Young modulus, Tangent modulus, chord modulus
- Elastic modulus, Max.stress, Strain, Yield point
- Yield strength, Elongation, Energy, Braek load, Stiffness,
- n- value , r-value , Poisson's ratio, Brinell hardness, reduction of area

Statistic analysis

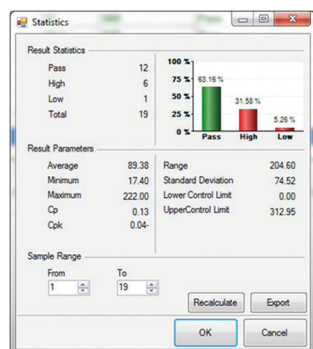
Max, Min, Mean, Median, Standard deviation, Variant, Rubber mean, 3-Sigma
- Customizable to improve data

Show the significant value

Max.stress, Max.load, Yp stress, Yp,load, Break stress, Break load , Break elongation etc.) on the graph line.

Upgrade for Micro Vicker Hardness all brands

DataView Hardness Testing Software



DataView Software is an easy-to-use data acquisition utility that is compatible with all Newage or competitive hardness testers having an RS232 serial data output and capable of ASCII transmission.

» Seamless integration

- results transmitted from hardness tester to PC for data analysis and documentation

» Comprehensive documentation

- direct export of test data to Microsoft Excel or other OLE-2-compatible files

» Security

- secure access using USB key

» Flexibility

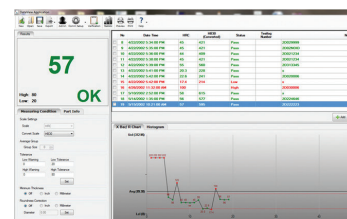
- upload test data from any digital tester upon request or automatically

» Customizable

- choose display views (up to three test result files)

» Powerful analysis

- Average, Min/Max, Range, Std Dev, CpK, Lcl, Ucl



Surface Roughness Tester

KR210 and KR220



Main feature: KR210 and KR220

- Electromechanical integration design, small volume, light weight, easy to use;
- Using DSP chip to control and data processing, high speed, low power consumption;
- 128 x 64 OLED dot matrix display, digital / graphic display; highlight no perspective;
- Intuitive and rich display information, can display all the parameters and graphics;
- Compatible with ISO, DIN, ANSI, JIS national standards;
- Residual quantity icon, prompting the user to charge;
- Continuous working time: more than 20 hours.
- Real-time clock settings and display, convenient data recording and storage
- With automatic dormancy, automatic shutdown and power saving function
- Reliable control motor to go dead circuit and software design
- Measurement information display, menu prompt information, false information and switch machine and other tips that information;
- Full metal shell design, sturdy, compact, portable, high reliability.
- Can be connected to a computer and printer;
- Optional different sensor, measuring platform, mini printer, extension rod and other accessories.

KR220

- Plastic shell, inspired by "TRANSFORMERS" stylish design, portable, high reliability.
- Optional bluetooth function.
- High price performance.

Surface Roughness Tester

KCT300

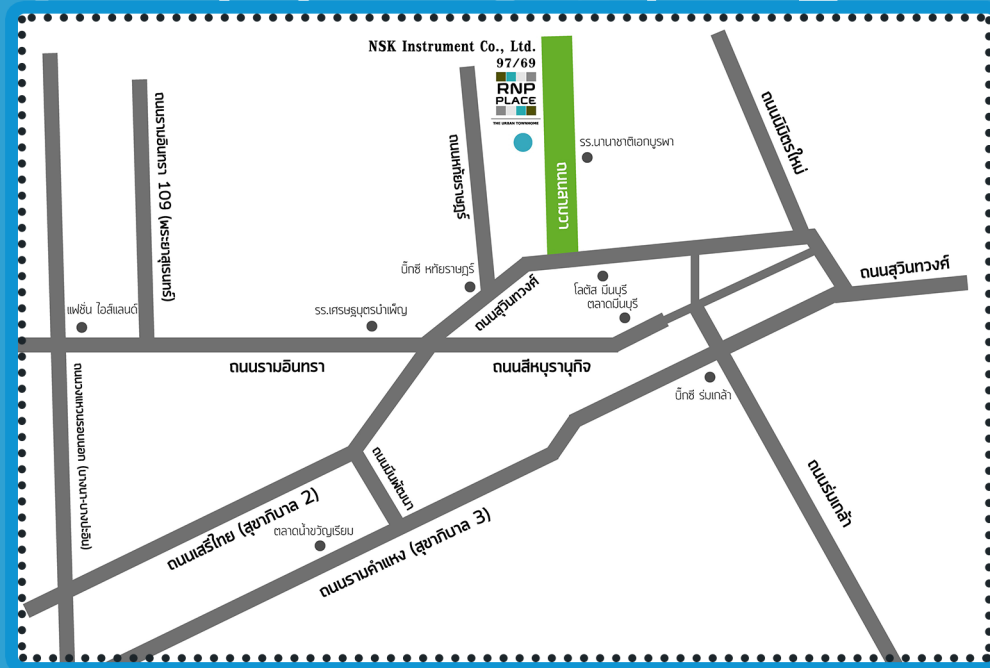


Main feature:

- Various probes optional, probe auto matching.
- Durable ruby probe, more wear and precise.
- Full metal shell design, sturdy, portable, high reliability.
- Alarm function when overrun the settable limiting range.
- Five statistics values (MEAN, MAX, MIN, NO., S.DEV) higher measurement accuracy.
- Large storage, easy to delete single or multiple saved values..
- PC software optional, convenient the data transmission, analysis, printing etc.

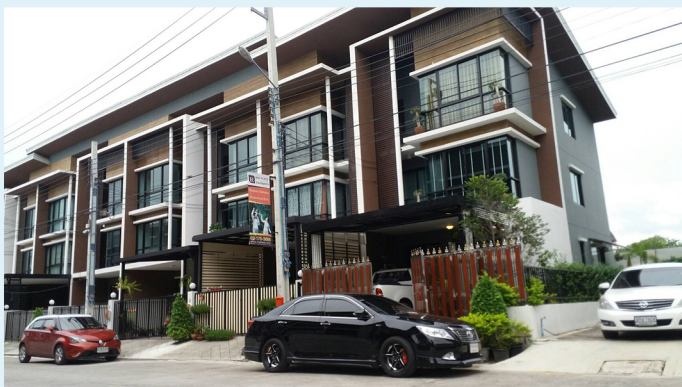
Model	KR210	KR220
Testing parameters	Ra, Rz, Rq, Rt, Rp, Rv, R3z, R3y, RzJIS, Rsk, Rku, Rsm, Rmr, Rx;	
Measuring range (μm)	Ra: 0.005-16.000 Rz: 0.02-160.00	
Sample length (mm)	0.25, 0.80, 2.50	
Evaluation length (mm)	(1-5)L	
Maximum drive stroke	17.5mm/0.7inch	
Indication accuracy	0.001	
Indication error	±(7-10)%	
Variability	<6%	
Data Storage	100 groups	
Power	Rechargeable li-battery	
Working temperature	-20°C - 40°C	
Relative humidity	<90%	
Size (mm)	141x55x40	158x63.5x46
Weight of Host	0.4kg	0.3kg

Model	KCT300
Measuring range	0-1250μm, depends on probes, MAX 10mm for the probe F10.
Working principle	Magnetic & Eddy
Substrate	FE / NFE base
Resolution	0.1μm
Display	128x64 LCD with backlight
Accuracy	±2%H+1μm Note: H is thickness reading
Memory	5 files x 100 values
Unit switch	Metric (μm) Imperial (mil)
Working temperature	Operation Temp. : -10~50°C Storage Temp. : -30~70°C
Power	AA battery 2pcs
Weight	340g
Size	115*67*31mm



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