



# INSTRUMENT

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BORN IN ITALY, RAISED BY THE WORLD

# SHORE DUROMETER



SHORE A

- Widely applied in the medium and low hardness plastic, all kinds of rubber, multidimensional fat, leather, wax hardness test and etc
- The product refers to ISO868 and the ISO7619 international standard production
- 

Code	1804-1090
Type	Shore A
Measuring Range	0-100HA
Pressure Needle Range	2.5mm
Pressure Head Diameter	0.79mm
Outline Dimension	115*60*25mm



SHORE C

- Used in measuring the hardness of oak model micro porous material, which includes vesicant, when the compression ratio is 50%, the stress above 0.5kg/cm<sup>2</sup>
- It also can be used in other similar hardness materials
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Code	1804-1095
Type	Shore C
Measuring Range	0-100HC
Pressure Needle Range	2.5mm
Pressure Head Diameter	2.5mm
Outline Dimension	115*60*25mm



SHORE D

- Suitable for hardness test of high degree, such as common hard rubber , hardened resin, acryl plexiglas, thermos plastic rubber, printing plate, fiber
- The product conforms to HG/2489 and other related standard request
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Code	1804-1100
Type	Shore D
Measuring Range	0-100HD
Pressure Needle Range	2.5mm
Pressure Head Diameter	0.1mm
Outline Dimension	115*60*25mm

# DIGITAL SHORE DUROMETER



- Testing the hardness of soft rubber,printer roller and other elastomer material
- | • Portable device, rugged plastic housing,front plate made of rugged polyamide
- Large LED display for clear and easy reading
- | • ON/OFF button and data hold button for one-hand-use
- 

- Testing the hardness of hard rubber,such as thermoplastic plastic, bowling,plastic floor and so on
- | • Portable device, rugged plastic housing,front plate made of rugged polyamide
- Large LED display for clear and easy reading
- | • ON/OFF button and data hold button for one-hand-use
- 

Code	1804-1035
Type	Shore A
Resolution	0.5HA
Measuring Range	0-100HA
Pressure Needle Range	2.5mm
Accuracy	2HA

Code	1804-1045
Type	Shore D
Resolution	0.5HD
Measuring Range	0-100HD
Pressure Needle Range	2.5mm
Accuracy	2HD

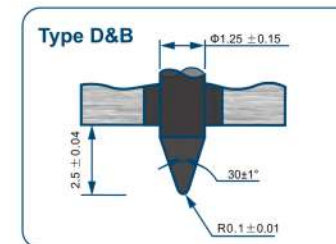
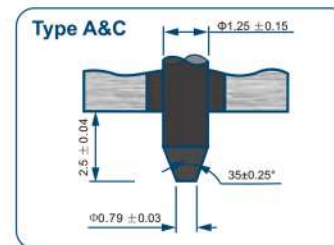


## DIGITAL DUROMETER



- This model is Suitable for measuring the hardness of rubber, plastic and other non-metallic materials.  
Calibration certificate Included
- With a large, easy-to-read LCD display with backlight. Conforms to ASTM D 2240, ISO7619-1,  
Wireless mini-printer is available
- Measurement data can be stored, browsing and batch printing, printing upload to PC
- Measurement mode: Averaging mode, Max Mode, Max-Average mode

Accuracy	$\leq \pm 1 H$
Display:	128*64 dot matrix LCD with Backlight
Measuring Mode:	AVE, MAX, Timing
Power	Ni-MH Chargeable Battery
Dimensions	150X50.5X29mm
Resolution	0.1H
Memory	500 readings
Communication	USB to PC
Operating Environment	-10 to 40°C, 20 to 80%RH
Weight:	170g
Optional	mini printer, test stand, HAS test block, HSD test block



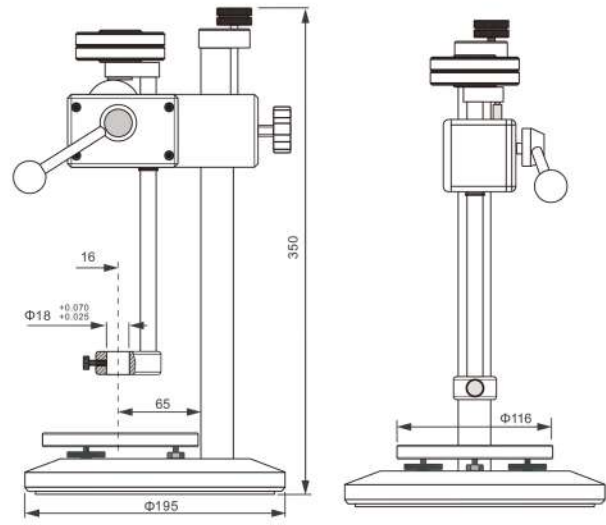
Code	Type	Intenter	Applications
1804-1008	A		Soft vulcanized rubber, natural rubber, nitriles, thermoplastic elastomers, flexible polyacrylics and thermosets, wax, felt, and leathers
1804-1009	C		Medium-hard rubber, thermoplastic elastomers, medium-hard plastics, and thermoplastics
1804-1007	D		Hard rubber, thermoplastic elastomers, harder plastics, and rigid thermoplastics





# DUROMETER OPERATING STAND

- For digital shore durometers
- Reduce the deviation caused by manual operation, improve the measurement accuracy and repeatability
- Special structure for stable measuring




Code	1804-1061	1804-1085
Operating Type	Indentor to specimen	Indentor to specimen
Loading Method	Cam loading	Cam loading
Loading Stroke	18 mm	18 mm
Specimen Thickness	60 mm	60 mm
Throat Depth	65 mm	65 mm
Support Table (dia.)	φ116 mm	φ116 mm
Lifting Adjustment	Screw adjustment	Screw adjustment
Table Adjustment	Three-point leveling	Three-point leveling
Net Weight	5.6kg(excluding S weight)	5.6kg(excluding S weight)
Package Weight	7.6kg(excluding D weight)	7.6kg(excluding D weight)
Applicable durometer	Shore A,B,E,O,OO	Shore D,DC,DO

# ROCKWELL HARDNESS TESTER

This hardness tester is used for determining Rockwell hardness of hard alloys, quenched and unquenched steels.



-  • The high quality casting and fine craftsmanship ensure accurate, consistent readings
-  • Manual testing process, no need for electric controlling

Code	1804-3607
Maximum load	150 kg (1471N)
Load range	60,100,150,kg(588.4N,980.7N,1471N)
Initial range load	10 kg (98.07N)
Maximum test height	108m/m(4-1/4")
Depth of throat	135m/m(5-1/4")
Maximum depth of spindle below base	50m/m(2")
Size of base	180 × 465m/m(7"-18")
Machine height	630m/m(24-1/2")
Weight (approx)	65 kg (150lbs)

STANDARD ACCESSORIES	
Large testing tableφ150m/m(5-3/4")	1
Small testing tableφ62m/m(2-3/8")	1
V-block anvilφ58(2-3/16")	1
Diamond penetrator 120°	1
Steel ball penetrator 1/16"	1
Replacement steel ball 1/16"	5
Rockwell A standard test block	1
Rockwell B standard test block	1
Rockwell C standard test block	1
Rockwell C standard test block	1
Rockwell C standard test block	1
Screwdrivers	2
Level adjusting leg	3
Accessory box	1
Dustproof plastic cover	1
Operation manual	1

# ROCKWELL HARDNESS TESTER



- Half automatic hardness tester except loading initial force and change force knob. Operation is very convenient and fast
- Color touch screen, displays loading force, indenter type, dwell time, and conversion scale
- Motorized control loading, dwell and unloading, eliminates error by manual operation
- Built-in micro processor auto compute max, min, mean and deviation value, resolution is 0.1HR, largely improve accuracy
- Auto hardness conversion to others scales, no need to check table and improve working efficiency
- Support Multiple languages, English, Turkish, German, etc. Convenient for local customers operation
- Save 2000 single testing results and 1000 group results for reviewing and analysis
- Optional blue tooth mini printer is available

Code	1804-3609
Rockwell scale	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
Preliminary Test Force	10Kgf(98.07N) Permitted Error: $\pm 2.0\%$
Total force	60Kgf(588.4N), 100Kgf(980.7N), 150Kgf(1471N) Permitted Error: $\pm 1.0\%$
Duration time	Adjustable 1-60s
Hardness Indication	5.2" Touch Screen, Resolution:640x480
Resolution	0.1HR
Loading Control	Auto Loading/Dwell/Unloading
Hardness Conversion	HRC, HV, HBS, HBW, HK, HRA, HRD, HR15N, HRB, HR30N, HR45N, HS, HRF, HR15T, HR30T, HR45T,
Conversion Standards	ASTM, DIN
Language Option	Chinese, English, German, Portuguese, Turkish, Czech, Korean
Correction Range	-3.0HR to +3.0HR, Step 0.1HR
Data Memory	2000 Single Measuring Result, Curve Analysis, Results Reviewing And Analysis
Data Output	Optional Blue Tooth Mini Printer
Instrument Throat	165mm
Maximum test height of Brinell and Vickers	175mm
Power supply	AC220V/50Hz;AC110V/60Hz
Dimension(LxWxH)	546x182x755mm
Gross/Net Weight	110Kg/90Kg

# HEIGHT GAUGE



Code	3000-0300	3000-0600
Measuring Range	300	600
Expanded Measuring Rang(mm)	570	870
Dia. of Probe Holder(mm)	φ8	
Resolution(mm)	0.01/0.001/0.0001	
MPE(μm)	±(2.6+5) μm (L in [m])*	
Repeatability(μm)	Of Plane≤1μm* Of Aperture≤3μm*	
CSTN	VGA, 6.4"	
Max Speed of Clicking Driver(mm/s)	75	
Device Driver	Machinery	
Measuring Force(N)	1.5±0.5	
Working Temperature(°C)	10 to 40 (°C)	
Storage Temperature(°C)	-10 to 60 (°C)	
Water Proof Grade	IP40	
Unit	mm/in	
Certificate	√	
Height(mm)	709	1009
Weight(kg)	20	22

\*In test condition and with standard probe



# PORTABLE LEEB HARDNESS TESTER

This model is a small, light and portable tester, which is most suitable for testing of heavy, big or outdoor metal parts. It is easy to be used and accurate on curved test surfaces. Especially, it can automatically compensate effect of weight which according to the test direction, can be operated with touch screen and test data could be linked into PC. D.

- Measure in any direction
- Uses wireless IR to communicate with printer
- Conforms to the Standard
- ASTM A956-02 & DIN 50156



Code	1804-4605	1804-4606
HL display range	170~960HLD	
Repeatability	6HLD	
Testing direction	All direction	
Optional Impact Device	D, DC, DL, D+15, C, G	
Display	3.9" 2.40*320(with touch screen), Bright and clear LCD display with back light	
Operating voltage	3.6V (rechargeable Ni-MH battery)	
Charging power supply	DC5V/1A	
Printer	With mini wireless printer	Without mini wireless printer
Operating environment	Temperature -20°C~+50°C; Humidity 20%~85%	
Storage environment	Temperature -30°C~+70°C; Humidity 5%~95%	
Dimensions	130mm*86mm*28mm	
Weight	300g (include D type impact device)	
Accessories	Display Unit, Impact Device D, Test Block, Mini-printer, Charger, Little Support Ring, Cleaning Brush USB Cable, PC Software CD.	
Communication	USB to PC for transfer data	
Certificate	CE	
Options Impact Device	DC; DL; D+15; c; G	

# PORTABLE LEEB HARDNESS TESTER



- This Portable Hardness Tester is a small, light and portable tester
- It is most suitable for testing of heavy, big or outdoor metal parts
- It conforms to the Standard ASTM A956-02 & DIN 50156

Code	1804-4610	1804-4611
Accuracy	± 6 HL	
Scales	HRC, HRB, HB, HV, HSD, MPa	
Display	Bright and clear LCD display with backlight	
Testing direction	All direction	
Optional Impact Device	D, DC	
Printer	With mini wireless printer	Without mini wireless printer
Operating voltage	4.5V (3 AAA batteries)	
Operating environment	Temperature -10~+40°C, Humidity 20%~85%	
Storage environment	Temperature -30~+80°C, Humidity 5%~95%	
Dimensions	152mm*83mm*27mm	
Weight	Approx.190g	
Accessories	Display Unit, Impact Device D, Test Block, Mini-printer, Charger, Little Support Ring, Cleaning Brush	
Certificate	CE	



# PORTABLE LEEB HARDNESS TESTER

- This mode is recommended for the exclusive measurement of solid and heavy components in the Brinell range.
  - Unit G places low demands on measuring location surface finish.
  - Typical applications: forgings or solid castings.
- Impact Device integrated.  
 Direction sensor integrated  
 Highly accurate ( $\pm 6HL$ ) in any impact direction(360°) – automatically  
 Integrated display of results for HB, HRB hardness scales.  
 Large, high contrast LCD for optimum viewing in all conditions.  
 Easy calibration.  
 Full USB communication with PC, software included free of charge.  
 Internal storage of data with day and time.  
 Intelligent sleep mode.



Code	1804-4615	1804-4616
Battery	Rechargeable Li ion, charges through device USB port.	
Standards and Guidelines applied	DIN 50156 (2007), DGZfP Guideline MC 1 (2008), VDI / VDE Guideline 2616 Paper 1 (2002), ISO 18625 (2003), ASTM A956 (2006), GB/T 17394 (1998), JB/T 9378 (2001), JJG 747(1999), CNAL T0299 (2008), JIS B7731 (2000).	
Printer	With mini wireless printer	Without mini wireless printer
Operating environment	Temperature: -10~+60°C; Humidity: 20%~85%.	
Storage environment	Temperature: -30~+80°C; Humidity: 5%~95%.	
Dimensions	254 x 52 x 32 mm	
Weight	230g	

Material	HLG	HRB	HB
Steel	300-750	/	90-646
Grev cast iron	340-600	/	92-326
Ductile Iron	340-600	/	127-364

# ULTRASONIC HARDNESS TESTER

Designed for rapid non-destructive testing of hardness:

1. metals and alloys on standardized international scales of hardness: Rockwell (HRC), Brinell (HB), Vickers (HV);
2. metals with distinctions in properties of steel (e.g., non-ferrous metals, alloys of iron and others) and using five additional scales for calibration;
3. use of the scale of tensile strength (Rm) for determining the tensile strength of carbon steel products pearlitic by automatically converting from the scale of hardness Brinell (HB).



- UCI probe
- Testing of products with thickness over 1mm
- Wide range of hardness value
- Ease in operation
- Minimum number of imprints
- Automatic recognition of probe
- Graphical display with backlight
- Control of the batteries
- New, intuitive menu with tips on the buttons
- Extended temperature range (cold-resistant, down to -20 °C)
- Internal memory and connection with PC
- Rubber protective housing-case

Code	1804-5005
UCI probe types	1kgf (10N) 2.2 lbf, 5kgf (50N) 11lbf
Indenter	UCI (diamond Indenter)
Measuring direction	Any direction 360°
Measurement hardness range	- Rockwell, HRC 20 - 70
	- Brinell, HB 90 - 450
	- Vickers, HV 230 - 940
	- temporary resistance (tensile strength)Mpa 370 - 1740
Accuracy	HV+ / - 3%;
	HRC+ / - 1,5%;
	HB+ / - 3%
Hardness scale	HRC, HB, HV, MPa
Materials	- UCI probe - pre-calibrated for steel.
	- Additional custom materials for calibration.
Operating temperature	-20 to +50 °C
Dimension	120x60x25mm
Weight	Weight of electronic unit with batteries, no more than 0.2kg
Power supply	2 AA batteries



# COATING THICKNESS GAUGE

- Very compact size with integrated probe.
- Magnetic induction method (ISO 2178, ASTM 07091),
- Measurement of non-magnetic coatings on magnetic substrates.
- Data memory is up to 500 readings.
- Ready to measure immediately without calibration.
- Easy to perform zero-point correction provides correct measurement results for measuring applications with little changes in shape and substrate material.
- The one-point calibration function allows for an adaptation in cases of several changes in shape or substrate material and enables high-precision measurements in selected measurement ranges.
- Statistic function allows for evaluation of a measurement series and display of the most significant characteristic statistical values.



# COATING THICKNESS GAUGE

- Very compact size with integrated probe.
- Magnetic induction method (ISO 2178, ASTM 07091),
- Measurement of non-magnetic coatings on magnetic substrates.
- Quick one-hand operation.
- Place instrument on specimen and see the measured value.
- Ready to measure immediately without calibration.
- Easy to perform zero-point correction provides correct measurement results for measuring applications with little changes in shape and substrate material
- The one-point calibration function allows for an adaptation in cases of severe changes in shape or substrate material.
- Data transmitting to PC via USB cable. Statistic function allows for evaluation of a measurement series and display of the most significant characteristic statistical values.



Code	1804-2005
Test method	Magnetic induction
Measuring Range	0- 1250µm (0 -50 mil)
Resolution	0 - 999µm: 0.1µm, ≥1000µm: 1µm
Accuracy	0- 100µm: ± 2.0 µm, 101-1250µm≤2.5%
Data Memory	500 readings
Display	Graphic LCD with
Power Supply	1.5V*3 (AAA alkaline batteries)
Operating Temperature	0-50°C
Dimension	150X50.5X29mm
Weight	110g
Certificate	CE
Accessories	Thickness gauge, Substrate, Certification foils set , User 's manual,Manufacturer's certificate.

Code	1804-2010	1804-2011
Test method	Magnetic induction	
Measuring Range	0- 1500µm (0 -60 mil)	
Resolution	0 - 999µm: 0.1µm, ≥1000µm: 1µm	
Accuracy	0- 100µm: ± 1.5 µm, 101-1500µm≤1.5%	
Data Memory	Upto 1500 readings	
Display	Graphic LCD with backlight	
Power Supply	1.5V*3 (AAA alkaline batteries)	
Operating Temperature	0-50°C	
Dimension	88x67x30mm	
Weight	120g	
Printer	Without mini wireless printer	With mini wireless printer
Accessories	Thickness gauge, Substrate, Certification foils set , Data cable,Data logger software, Sheath, User 's manual, Manufacturer's certificate.	

# ULTRASONIC THICKNESS GAUGE

- Two display units: metric and imperial
- Automatic calibration to zero: automatically correct the system errors
- Automatic non-linear compensation: within the full range, computer
- Software is used to correct the non-linear errors of the probe for the purpose of improving the accuracy
- The upward and downward adjustment keys enable prompt selection of sound velocity, thickness, and check the thickness memory units
- Prompt for coupling state: provide coupling indication and the observation of the stability of the indication can tell if the coupling is normal
- Ten thickness values can be stored without loss after turn-off, which is very convenient for measuring in field and high platform
- Measuring sound velocity: according to the test block's thickness, sound velocity can be measured directly needless to search in the conversion table
- Sound velocity of five different materials can be stored
- Low voltage indication
- Automatic turn-off
- All keys enclosed----oil proof for longer service life



Code	1804-2015	1804-2020
Measuring range	1.2~225.0mm	
Minimum display unit	0.1mm	0.01mm
Display type	4-digit	
Sound velocity range	1000m/s~9999m/s	
Measuring error	±(1%H+0.1) mm, H is the actual thickness of the object to be measured	
Power supply	two AAA alkaline cells 1.5V	
Power consumption	working current is smaller than 20mA(3V)	
Range of operating temperature	0°C~ 40°C	
Dimensions (mm)	124×68×27	
Weight (g)	120	

Standard Delivery	
Main unit	1
5PΦ10 probe	1
Couplant	1
AAA battery	1
TIME certificate	1
Warranty card	1
Instruction manual	1

Optional Accessory	5P 10/90 probe (1.2~225.0mm)
	SZ2.5P probe (3.0~300.0mm)
	7PΦ6 probe (0.75~60mm)

# DIGITAL SURFACE ROUGHNESS GAUGE

- Electro mechanical 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
- Can be connected to a computer and printer
- Optional different sensor, measuring platform, mini printer, extension rod and other accessories
- Plastic shell, portable, high reliability
- Optional bluetooth function

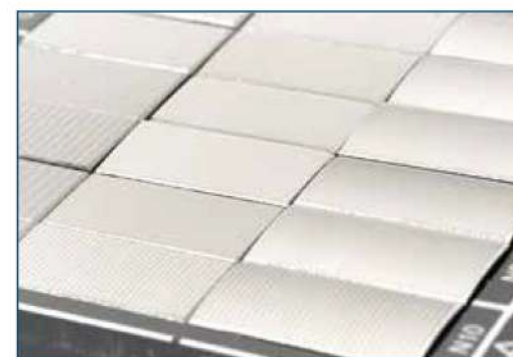


Code	1804-6305
Testing parameters	Ra, Rz, Rq, Rt, Rp, Rv, R3z, R3y, RzJIS, Rsk, Rku, Rsm, Rmr, Rx;
Measuring range (um)	Ra: 0.005-16.000 Rz: 0.02-160.00
Sample length (mm)	0.25, 0.80, 2.50
Evaluation length(mm)	(1-5)L
Maximum drive stroke	17.5mm/0.7inch
Indication accuracy	0.001
Indication error	± (7-10)%
Variability	<6%
Data Storage	100 groups
Power	Rechargeable li-battery
Working temperature	-20°C~40°C
Relative humidity	<90%
Size	158mmx63.5mmx46mm
Weight of Host	0.3kg

Standard delivery	
Host	1
Standard Sensor	1
Calibration block and bracket	1
Bracket	1
Charger	1
Adjustable support	1
Operating manual	1
Warranty card	1
Certificate of approval	1
Instrument case	1

# SURFACE ROUGHNESS GAUGE SET

- All standard roughness gauge included together with comparison chart
- Easy to checking all surface roughness.
- Set include gauge as below:  
 consist of 30 specimens .size: 7/8x3/8", including:
  - 2 specimens checking Flat lapping 2 and 4  $\mu$ " AA
  - 4 specimens checking External grinding 8,16,32 and 63  $\mu$ " AA
  - 6 specimens checking surface grinding 2,4,8,16,32 and 63  $\mu$ " AA
  - 6 specimens Turing 16,32,63,125,250 and 500  $\mu$ " AA
  - 6 specimens checking Vernical milling 16,32,63,125,250 and 500  $\mu$ " AA
  - 6 specimens checking Horizontal milling 16,32,63,125,250 and 500  $\mu$ " AA



Code	Pieces
1804-6310	30





# DIGITAL FORCE GAUGE

- Ergonomic, durable, heavy-duty metal construction
- Touchpad to minimized disturbance
- Automatic reversible display
- Automatic display direction converting
- Variety of alarm output function
- USB port for upload to PC
- 10N,20N,50N,100N,200N,500N available



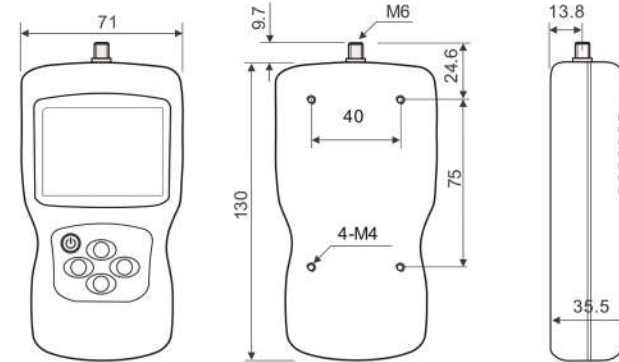
Accuracy	±0.2% FS
Display	160*128 matrix LCD with LED Backlight
Units	N, gf, kgf, ozf, and lbf
Measuring Mode:	Track, Peak, AutoPeak
Overload Capacity	120% F.S
Sampling Rate	2000 Hz
Memory	1000 data
Temperature Effects	<0.03% FS/ °C
Power	3.6VDC Ni-MH batteries
Charger / Adaptor	USB/BM charger, 110~240VAC
Outputs	USB, Set point output, RS232C
Operating Environment	-10 to 40°C , 20 to 80%RH
Selectable Units	N, kgf, lbf, ozf and/or gf
Dimensions	160*73*34mm
Weight	0.7 kg (1.5 lb)

MiniPrinter	Rs232 Cable	Ergonomics measuring kit
Motorised Test Stand	Manual Test Stand	

Code	Capacity / Resolution					
	N	Kgf	Lbf	Ozf	Gf	mN
1804-1105	10/0.001	1/0.0001	2.2/0.0005	35/0.01	1000/0.1	10000/1
1804-1115	1000/0.1	100/0.001	220/0.05	3500/1	-	-



# DIGITAL FORCE GAUGE



- Ergonomic, durable, heavy-duty metal construction
- Lighter weight, more suitable for handheld operation
- Reversible display
- Charger with US/EUR/UK Plugs selectable
- 50N,100N,500N available

Accuracy	± 0.3% F.S
Display	160*128 matrix LCD with LED Backlight
Units	N, gf, kgf, ozf, and lbf.(Selectable)
Measuring Mode:	Track, Peak, Preset
Overload Capacity	120% F.S
Sampling Rate	1000 Hz
Memory	500 data
Temperature Effects	<0.03% FS/ °C
Power	Ni-MH rechargeable batteries
Charger / Adaptor	USB charger, Input:110~240VAC
Outputs	USB, Set point output, RS232C
Operating Environment	-10 to 40°C , 20 to 80%RH
Selectable Units	N, kgf, lbf, ozf and/or gf
Dimensions	150*72*33mm
Weight	0.45 kg (1 lb)



Code	Capacity / Resolution				
	N	Kgf	Lbf	Ozf	Gf
1804-1120	10/0.01	1/0.001	2.2/0.001	35/0.01	1000/1
1804-1125	1000/1	100/0.01	220/0.1	3500/1	-



# FORCE GAUGE



Analog Force Gauge with compact size, high accuracy, they are easy to operate and handy to carry out, and can show the unit of newton and kilogram at the same time. The PEAK/TRACK knob of it can switch between the peak value load test and the continuous load test. They are excellent products which can take the place of the old style force gauges, and widely applied in electric, high & low voltage electric appliance, hardware, automobile parts, lighter and ignition system, light industry, mechanical, textile and so on industries for test of pull or push load test insertion force or pull and destructive experiment.

- The compact design, easy to carry
- The operation is simple and can be used combining with all kinds of fixture;
- The peak value holding function and duration test function switch freely;
- Newton and kg, according to two units at the same time do not need to unit conversion;
- Can be installed on a variety of test the machine as a dedicated tester use
- 10N,100N,500N available

Code	Capacity(N)	Graduation(N)
1804-1130	10	0.5
1804-1131	50	0.25
1804-1132	500	2.5

# VISION MACHINE SYSTEM MANUAL



## APPLICATION

Widely used in the field of electronics, machinery, instrument and plastic, G series video measuring system is used in two dimension measuring.

- High resolution imported color camera
- By availing the auxiliary light adjusting function of the software, the user knows whether the light is saturated.
- The laser indicator can quickly locate the target workpiece, which is suitable for measuring sophisticated workpiece.
- Auxiliary height measuring can be achieved.
- "T" groove type worktable can house various fixtures
- The resolution of the linear scale is 0.5um
- Foot switch and software facilitate operation of the machine

Code	1804-7006
Metal worktable size(mm)	500x330
Glass worktable size(mm)	350x250
Travel(mm)	300x200
X,Y, Z axis resolution	0.5μm
Accuracy(μm)	E1XY=(2.5+L/100)μm
Weight (kg)	140
Z axis travel (mm)	200
Camera	1/3" color CCD camera
Zoom lens:	0.7X-4.5X
Total magnification:	26.6X -171X
Field view	8.1mm -1.3mm
Power	AC 100-240V 50/60Hz
Spare parts	1.0X lens cone (standard )
Optional	Crosshair, DC3000 digital display, Renishaw MCP probe,coaxial light lens.

# SEMIAUTOMATIC VISION MACHINE SYSTEM

Widely used in the field of machinery, electronics, instrument and plastic CNC video measuring system is used in two dimension measurement, especially in non-contact measuring, quick batch measuring, and measuring of sophisticated workpiece.



- Automatic focusing, automatic edge detection, powerful programming and automatic measuring function
- Sub pixel subdivision technology helps improve edge resolution
- The machine can be operated by either the joystick or the software programming
- SPC data processing contributes to fixture measurement in large scale
- Servo motor control in X, Y, and Z axis leads to quick and high precision positioning and stable operation
- Independently developed embedded module control system ensures more stable operation by integrating the sophisticated control system within the instrument
- The five- ring-eight-section surface cold light source is suitable for measuring sophisticated workpiece
- The laser indicator can quickly locate the position of the workpiece

Code	1804-7005
Metal worktable size(mm)	500x330
Glass worktable size(mm)	350x250
Travel(mm)	270x170
X,Y, Z axis resolution	0.5μm
Accuracy(μm)	E1XY=(2.5+L/100)μm
Weight (kg)	168
Z axis travel (mm)	150
Camera	1/2" color CCD camera
Zoom lens	0.7X-4.5X
Total magnification:	20X -128X
Object view	11.1mm -1.7mm
Power	AC 100-240V 50/60Hz
Spare parts	0.5X lens cone (standard )
Optional	Auto zoom lens, laser shifter, MCP probe

## DIGITAL MICROSCOPE

- ⚙️
 • The instrument has a long working distance, wide field of view, and high-definition Image quality
- 🔍
 • Designed with 0.3X 0.5X, 0.75X 1.5X 2X series of auxiliary objective lenses and 0.35X, 0.5X, 0.75X, 1X, 1.5X, 2X series of photographic eyepieces
- 🏆
 • According to the requirements of users in different occasions, there are a variety of lighting devices specially designed. You can choose to use upper and lower double halogen lamps, upper and lower halogen lamps, single halogen or single fluorescent lamps, ring fluorescent lighting, optical fiber cold light source lighting, and Optional image analysis device for external processing of image analysis
- The brackets are available in column type, mirror arm type and universal bracket



Code	1804-7010
Zoom scale of objective	0.7×—4.5×
Photography Eyepiece	0.5×
Round working stage diameter	φ95mm
Knob adjustable range	60mm
Eleveator adjustment Range	250mm

## STEREO ZOOM MICROSCOPE

- ⚙️
 • Image always in focus throughout zoom range
- |
 • Stereo-tube can be rotated a full 360°for viewing at any angle
- 🔍
 • Bilateral zoom control knob adds convenience and increases operator efficiency
- |
 • Diopter adjustment for both eyepieces
- 🏆



Code	1804-7015
Zoom scale of objective	0.7×—4.5×
Eyeiece and view field diameter	WF10X , 20mm
Total magnification	0.7×—4.5×
Working distance	95mm
Interpupillary adjustment distance	55-75mm
Round working stage diameter	50 mm
Dioptic adjustment range	±5diopter
Illumination	Input voltage :AC 110V or 220V
Output	Oblique illumination:12V,10W halogen lamp (with cup)Transmitted illumination:12V,10W halogen lamp(altermative lamp:5 W fluorescent lamp )

# TABLE MAGNIFIER WITH ILLUMINATION

- The LED magnifying lamp is portable and can be used whenever you want
- Lens size: 5"(127mm)
- Diopter: 3diopter/5diopter/8diopter for choice
- Optional with switching power
- Life of the LED: 20000h
- Luminance: 1000Lux
- Colour available: white



Code	1030-2005
magnification	2.25x
Lens	3D/5D/8D
Lens size	5"(127mm)
Illumination	60pcs LED, 12W
Power	100-240V~; 50/60Hz
Product size	226x56x1185mm

# DIGITAL POCKET SCALE

- Material:ABS engineering plastic housing and stainless steel table-boa
- Display: LCD display with blue backlight
- Equipped with a high precision strain gauge sensor system for accurate weighing
- Stainless Steel platform and Ultra-thin (19mm thickness)
- Multiple weighing units : G/ CT/OZT/OZ/ /DWT / GN
- Zero setting and tare function, counting and weighing function, auto zero tracking
- Low battery indication and overload warning
- 2\*AAA battery, easy to change and long stand-by time
- Auto power off, when there is on operation for a certain time
- Self-test when turned on



Code	1030-2010
Scale Size	16.4X10X2cm
Platform Size	11.3X9cm
Display size	4.6X4.8X0.11cm
Product net weight	300g

# WEIGHING SCALES

- Rechargeable battery inside ,low power consumption RS-232 interface for option
- RS-232 interface for option
- Display: LCD display with blue backlight
- Capacity:6kg,15kg,30kg
- Precision 1/6000, 1/15000,1/30000



Code	1030-2015	1030-2017	1030-2019
Capacity	6KG	15KG	30KG
Display	LED/LCD		
Counting scale	16 keys /24keys with 7 memory		
Weighing scale	8 keys(LCD), 6 keys/8 keys		
Pan size	210mm/270mm (19 mold/queen mold) 325*225mm (king mold)		
Precision	1/6000	1/15000	1/30000

# WEIGHT SETS

- Made with stainless steel material
- With inspection certificate.



Code	1030-2020	1030-2025	1030-2030
Range	1mg-100g	1mg-200g	1mg-500g
Weight			1x 1mg weights
		1x 1mg weights	2x 2mg weights
	1x 1mg weights	2x 2mg weights	1x 5mg weights
	2x 2mg weights	1x 5mg weights	1x 10mg weights
	1x 5mg weights	1x 10mg weights	2x 20mg weights
	1x 10mg weights	2x 20mg weights	1x 50mg weights
	2x 20mg weights	1x 50mg weights	1x 100mg weights
	1x 50mg weights	1x 100mg weights	2x 200mg weights
	1x 100mg weights	2x 200mg weights	1x 500mg weights
	2x 200mg weights	1x 500mg weights	1x 1g weights
	1x 500mg weights	1x 1g weights	2x 2g weights
	1x 1g weights	2x 2g weights	1x 5g weights
	2x 2g weights	1x 5g weights	1x 10g weights
	1x 5g weights	1x 10g weights	2x 20g weights
	1x 10g weights	2x 20g weights	1x 50g weights
	2x 20g weights	1x 50g weights	1x 100g weights
1x 50g weights	1x 100g weights	2x 200g weights	
1x 100g weights	2x 200g weights	1x 500g weights	
		1x 1kg weights	



# MULTIFUNCTION VIDEO SCOPE



This Multifunction video inspection has been designed as a user friendly and economical way of solving hidden problems and increasing productivity (eg. Inspect vent pipe and system of air conditioner, machine equipment, engine and so on)

It is widely applied for maintenance of the industry, the building, the aviation, the vehicles also easy to inspect the pick up small objects, record image

- 3.5" color LCD with high visibility
- Flexible probe with memory
- Fully adjustable LED lights
- With function of taking photos, video, rotation, partial zoom,
- TF memory card and USB interface
- The monitor can be apart from the grip to transmit image wirelessly
- Four wireless frequency for your choice

Code	1030-2035
Viewable angle	60°
Focal length	10mm
Outer diameter of camera head	5.5mm (accessories: mirror, ball guide and screw thread protector)
Probe length for choice	1m/2m/3m or customized (max length 15m including extension)
Extension for choice	1m, 2m, 3m
Image display	3.5" TFT/LCD
Image storage media	Micro SD card (Support up to 16G)
Image resolution	640 × 480 pixels
LCD Resolution	320 × 240 pixels
Image zooming	4 times
TV output format	NTSC/PAL
Wireless transmission frequency	2414MHz, 2432MHz, 2450MHz, 2468MHz
Wireless transmission distance	Up to 10M; If no obstacles, will more than 10M
Attachment	Micro SD card, one into two cable, Micro SD to SD transition pocket, TV cable, USB cable
Probe length	100cm or your required length
Probe and camera head protection	IP67

# INFRARED THERMOMETER

- ⚙️ • It is widely applied for measuring temperature in the automobile, the electric power, the chemical industry, the food processing and so on
- ✂️ • Measure the surface temperature at a safe distance
- 🏆 • Auto power off



# INFRARED THERMOMETER WITH LARGE RANGE

- ⚙️ • During the measurement, the max. reading will be displayed beside the "MAX" icon
- ✂️ • LASER EMITTER: Class IIIa Laser ( American Standard ), or Class II Laser ( European standard )
- 🏆 • Laser pointer
- 🏆 • Easy to read digital LCD display with blue backlight





Code	1030-2001
Range	-20°C~320(°C-4°F~608)°F
Pixel	8:1 optical resolution
Temperature Unit	°C or °F selectable
Accuracy	+/- 40F(20C)

Code	1030-2003
Range	-40°C~580°C(-40°F~1076°F)
Resolution	±0.1°C
Display resolution	630~660nm
Optical ratio (D: S)	12: 1
Spectral Response	8~14µm
Response Time	500mSec, 95% response
Repetition	1% of reading or 1°C

# INFRARAED THERMAL IMAGER



- 
  - This instrument is a handheld thermal imager, which is powered by four 1.5V AA ( or equivalent ) batteries
- 
  - This instrument image display resolution is 320 x 240 pixels. The temperature of the center point of the displayed measured surface and the highest and lowest temperature of the displayed measured surface can be displayed. You can select any of the three image modes: infrared image, visible image, fusion image
- 
  - Captured images can be saved in the TF card, and you can view them through menu and can edit the image files on a computer via USB port



Code	1030-2002
Range	-20~+400°C
Image display resolution	320 x 240 pixels
Display	2.4 inches
Color Palettes	3
Detector resolution	32x32
Infrared Spectral Band	8um-14um
Emissivity correction	0.01-1 (adjustable)
Response time	200ms
Built-in Digital Carema	640*480
Storage medium	TF Card
Power supply	4x1.5V AA ( or equivalent ) batteries

## NON-CONTACT DIGITAL TACHOMETER

- The streamlined appearance design, the body and the palm perfectly match, to ensure more convenient and comfortable use
- Wide application range, large measuring range, high resolution and small error
- Large screen display, clear reading, no parallax
- Automatically memorize the maximum, minimum, final value and 500 instantaneous values
- When the battery voltage is lower than the specified value, it will automatically indicate



Code	1030-2051
Measuring Range	2.5~99999RPM
Resolution	0.1 RPM (0.5~999.9 RPM) 1 RPM (above 1000 RPM)
Measuring distance	50~500mm
Product Size	160mm×74mm×37mm
Product Weight	180g (including battery)
Range Selection	Automatic switching
Accuracy	±(0.05%+1digit)
Power supply	3×1.5V AA UM-4 batteries
Operating Temperature	0~40°C

## CONTACT DIGITAL TACHOMETER




- The tachometer uses microcomputer (CPU) technique; anti-jamming technique for contact measurement of rotation speed (RPM), surface speed (m/min), and contact length (m)
- Wide measuring range and high resolution
- Large screen LCD display provides clear reading
- White back light guarantee reading in any light environment
- Low battery voltage indication
- Surface speed wheel with groove to test surface speed or length of wire, cable, or rope conveniently
- Smooth housing design, comfortable to hold and use



Code	1030-2056
Measuring Range	0.5~19999 RPM; 0.05~1999.9 m/min; 0.05~99999 m
Resolution	Rotation Speed: 0.1 RPM (0.5~999.9RPM) 1 RPM (above 1000RPM) Surface Speed: 0.01m/min (0.05~99.99m/min) 0.1m/min (above 100m/min)
Contact Length	0.02m (0.05~99999m)
Product Size	170mm x 70mm x 35mm
Accuracy	± (0.05%+1digital)
Sampling Time	0.8second (over 60RPM)
Power supply	3x1.5V AA battery
Time Base	6MHz Quartz crystal






# DIGITAL SOUND LEVEL METER

-  • Altitude up to 2000 meters
-  • Relative humidity 75% max
-  • Operation temperature from 0 - 40°C
- Operation Environment:  
0 - 40°C (32 - 104°F) 10 - 75%RH
- Storage Environment:  
-10 - 50°C (14 - 122°F) 10 - 90%RH



	1030-2061
Measuring Range	(28)30dB -130dB
Resolution	0.1dB
Accuracy	±1.5dB(reference conditions 94dB@1kHz)
Response time	FAST 125ms / SLOW 1sec
Display Update	2 times / second
Frequency Range	31.5Hz - 8KHz
Frequency Weighting	A / C
Battery Life	Approximately 110 hours
Power supply	One 9V battery
Product Size	185(L)x65(W)x35(H)mm
Product Weight	150g (including battery)
Accessories	9V battery, instruction manual

# BATTERY ACID AND ENGINE COOLANT REFRACTOMETER

-  • The refractometer measures the freeze point of automotive coolants (propylene glycol and ethylene glycol) from 32°F to -60°F
-  • It also indicates the specific gravity of battery acid and provides a quick reference of battery charge condition
-  • It only requires a sample of 2 or 3 drops for fast and accurate readings
- Automatic Temperature Compensation provides repeatable results
- Comes complete with storage case and a screwdriver and vial of distilled water used for calibration



Code 1030-2065



# HIGH ACCURACY DIGITAL HEIGHT GAUGE

- High accuracy for more accurate measuring
- Small in size and easy to move
- Wide applicable temperature range, can be used normally during 0-40°C
- High durability and the maximum measuring height up to 100mm



Normal  
7712-0035



Classic  
7712-0040



Pro  
7712-0045

# HIGH ACCURACY DIGITAL HEIGHT GAUGE

Code	7712-0045	7712-0040	7712-0035
Measuring Range	0-50mm		
Accuracy (20°C)	≤1μm	≤1.5μm	≤3μm
Repeatability (20°C)	0.2μm	0.5μm	1μm
Min. Readout	0.1μm	0.5μm	1μm
Response Speed	Max. up to 5000mm/s		
Measuring Force	1.0-1.5N	0.8-1.2N	
External Output	USB		
Display	8 Bits Green LED	7 Bits Green LED	
Probe	Ball Probe, Flat Probe, Conical Probe		
Unit	mm/inch		
Proper Working Environment	Temperature:0°C-40°C ; Humidity:20%-80%		
Table Size/mm	130x130	130x130	200x250
Power Adapter	Input: AC100-240V 50/60Hz ; Output:DC 5V/1A		
Accessories	Stand, Ball Tip, Flat Tip, Conical Tip, Handle , Power Adaptor		
Optional Accessories	Data Transmission Kit, Special Tips, Portable Battery		
Size/mm	200x138x397	200x138x397	250x200x387
Weight	11.6kg	11.6kg	25kg