

Sino Age

A professional manufacturer in Quality Control & NDT fields

Since 1993



SINO AGE DEVELOPMENT TECHNOLOGY.

SADT®



**An advanced
state-of-the-
art palm sized**

**metal hard-
ness tester**

New HARTIP 1800DLTM

Company Profile



Sino Age Development Technology, Ltd. (SADT), established in 1993, is a leading manufacturer / supplier of measuring and testing instrument, specialized in NDT and quality control fields. We have our own HARTIP series portable hardness testers since 1995. Now our main products cover portable and bench type hardness tester, ultrasonic thickness gauge, roughness tester, handheld metallurgical microscope, portable vibration meter, optical tachometer, ultrasonic flaw detector and so on. Our main overseas markets are: USA, Canada, Germany, France, Netherlands, Finland, Italy, Czech Republic, Poland, Lithuania, Estonia, Serbia, Greece, Turkey, Australia, New Zealand, Korea, Taiwan, Singapore, Thailand, Indonesia, Malaysia, Vietnam, India, Pakistan, Iran, UAE, Egypt, South Africa, Mexico and Columbia, Peru and etc. All products supplied by SADT have excellent quality and competitive price with our best service.

Contents

HARTIP HARDNESS TESTER 1

SADT HARTIP2000/HARTIP2000 DL	1
SADT HARTIP1800/1800DL	2
SADT HARTIP1800B/1800B DL	3
SADT HARTIP 3000	4
SADT HARTIP1500/HARTIP1000	5

ULTRASONIC THICKNESS GAUGE 6

SADT SA40/SA40EZ/SA50	6
SADT ST5900/ST5900+	7

SADT GT SERIES GLOSS METER 8

SADT GMS/GM60 GLOSS METER 9

SADT ROUGHNESS TESTER 10

ULTRASONIC FLAW DETECTOR 11

COLOR METER 12

SC80 Precise color reader	12
SC20 portable color difference meter	13

METALLURGICAL MICROSCOPE 14

SADT SM500	14
SADT SM-3/XJP-6A	15
SADT SM400/SD300M	16

SADT HB SCALER 17

BENCH HARDNESS TESTER 18

Rockwell Hardness Tester	18
Superficial Rockwell Hardness Tester	18
Vickers Hardness Tester	19
Micro Vickers Hardness Tester	19
Brinell Hardness Tester	20
Superficial Rockwell & Vickers HDg-45	20
Brinell, Rockwell & Vickers HBRVU187.520	

SADT M SERIES PORTABLE

ROCKWELL HARDNESS TESTER 21

SADT OTHER TESTERS 22

HT225A CONCRETE HAMMER	22
EMT220 VIBRATION METER	22
EMT260 TACHOMETER	22

Sino Age Development Technology.

No. 18 Zhong Guan Cun East Road,
A1507 Haidian Beijing 100083
P. R. CHINA
Tel: +86(10)8260-0228, 5166-3600
Fax: +86(10)8260-0229

www.sadt.com.cn
www.sinoage.cn

UNIVERSAL ANGLE HARDNESS TESTER

HARTIP2000/HARTIP2000 DL™

HARTIP2000 is an innovative portable Leeb hardness tester with our new patent technology, which makes HARTIP 2000 a universal angle (UA) impact direction hardness tester. It is no need to set up impact direction when taking measurement by any angle. Therefore, HARTIP 2000 offers a linear accuracy comparing to the angle compensating method. HARTIP 2000 is also a cost saving hardness tester and has many other features.

HARTIP2000 DL is equipped with SADT unique D and DL 2-in-1 probe. ●

Advantages

- ★ Universal impact direction mode, it does not need to setup different impact direction, just take measurement at any angle
- ★ High accuracy: $\pm 2HL(0.3\% @ HL800)$
- ★ Linear accuracy for any angles
- ★ No need to setup impact direction
- ★ No compensation for impact direction
- ★ Dual values(Leeb value and one conversion value) can be displayed at the same screen
- ★ Big LCD display with backlight
- ★ Ten testing materials including forged steel,
- ★ It has strength conversion value
- ★ RS232 and blue tooth interface, it can connect micro-printer directly by cable or wireless
- ★ 999 data for memory
- ★ Customer re-calibration allowed
- ★ Power off automatically
- ★ More economic and more convenient to use



Specifications

SADT HARTIP 2000/HARTIP2000 DL		Standard Package
Principle	Leeb hardness measurement	HARTIP 2000(DL) main unit
Accuracy	$\pm 0.3\% @ HL=800$, Repeatability: $\pm 2HL$	Impact device DU/D-DL 2-in-1*
Display	Digital LCD with backlight	Test block D without certificate
Hardness scale	HL/HRC/HRB/HB/HV/HS/ob	Small support ring
Measuring range	HL170-960/ HRC17-69/ HRB13-101.7/ HB20-655/ HV80-940 / HS32-99.5 / ob(rm)255-2180N/mm ²	Cleaning brush
Impact device	DU (External) /D-DL 2-in-1*	Operation manual
Impact direction	Universal angle (UA) type	Calibration Certificate
Materials	11 common metal materials	Carrying case
Memory	999 data can be stored and re-readable	Optional accessories
Statistics	Calculated automatically	Bluetooth/RS232 Micro printer
Re-calibration	Allowed by user	Probe DU/DL/D+15/G/C
Indicator	Low battery	Standard big support ring for probe
Communication interface	RS232 to micro-printer Bluetooth (optional) to bluetooth micro-printer	Standard small support ring for probe
Auto power off	Auto	Impact body D
Power supply	1.5V AA alkaline battery x 2	Carbide ball tip D
Working environment	-10~+40°C	Test block D without certificate
Dimension (mm)	124x67x30	Test block D with certificate
Net weight (g)	240	Bluetooth Module
Standard	Conforming to ASTM A956, GB/T 17394-1998	Leather case with magnetism

*: D-DL 2-in-1 probe is only available for HARTIP2000 DL.

PORTABLE HARDNESS TESTER

HARTIP1800/1800DL

HARTIP1800 is an advanced state-of-the-art palm sized metal hardness tester with many new features. Using our patent technology, SADT HARTIP1800 is a new generation product. It has high accuracy: ± 2 HL (or 0.3% @HL800) with high contrast OLED display and wide environment temperature (-40°C - 60°C). Apart from huge memories in 400 blocks with 360k data, HARTIP1800 can download measuring data to PC and printout to mini-printer by USB port and wirelessly with internal blue-tooth module. The battery can be charged simply from USB port, also HARTIP1800 has a customer re-calibration and statics function. ●

HARTIP 1800DL is equipped with two-in-one probe. With unique two-in-one probe, HARTIP-1800DL can convert between probe D and probe DL simply by changing impact body. It's more economic than buying them individually. It has the same configuration with HARTIP1800 except two-in-one probe. ●



ADVANTAGES

- ✦ Integrated design , easy operation
- ✦ Digital with high contrast OLED display
- ✦ Wide operating environment: -40°C - 60°C
- ✦ High accuracy: ± 2 HL (or 0.3% @HL800)
- ✦ Dual values(Leeb value and one conversion value) can be displayed at the same screen
- ✦ Two display modes: single value shown in big letter or multi-values shown in batch
- ✦ Screen view displays in four different directions, more convenient to view
- ✦ Huge memories in 400 blocks with 360K data, data can be recalled easily
- ✦ USB, RS232 interface, it can connect to computer
- ✦ RS232 and blue tooth interface, it can connect micro-printer directly by cable or wireless
- ✦ Customer re-calibration allowed
- ✦ 3.7 V Li-ion rechargeable battery , it can be charged by USB or power source
- ✦ Statistics value can be calculated automatically
- ✦ With strength conversion value
- ✦ Power on/off automatically
- ✦ Packed in water-proof and rigid carrying case



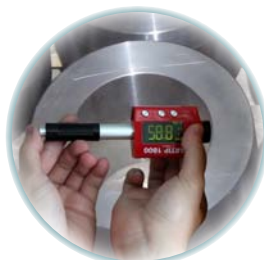
With internal Bluetooth module, HARTIP1800/DL can print measuring data wirelessly

Applications

Normal display



Flip display



Upright display



Portable Hardness Tester

Standard package

HARTIP 1800/1800DL

HARTIP 1800 main unit	1
Impact device D(1800)	1
2-in-1 impact device D/ DL(1800DL)	1
Test block D with certificate	1
Small support ring	1
Cleaning brush	1
3.7 V Li-ion rechargeable battery (internal)	1
Bluetooth module(internal)	1
USB cable	1
Data managing software	1
Operation manual	1
Calibration Certificate	1
Water-proof and rigid carrying case	1

Optional accessories

RS232 micro printer
Bluetooth micro printer
RS232 microprinter(powered by rechargeable battery)
Special support rings
Standard support ring for probe D
Small support ring for probe D
Impact body D
Carbide ball tip D
Test block D with certificate
Test block D w/o certificate
Charger
European adapter plug



Software for HARTIP1800



Standard package - HARTIP1800

PORTABLE HARDNESS TESTER HARTIP1800B/1800B DL

Standard package

HARTIP 1800B/1800B DL

HARTIP 1800B main unit	1
Impact device D(1800B)	1
2-in-1 impact device D/ DL(1800B DL)	1
Test block D w/o certificate	1
Small support ring	1
Cleaning brush	1
3.7 V Li-ion rechargeable bat- tery (internal)	1
USB cable	1
Operation manual	1
Calibration Certificate	1
Carrying case	1

Optional accessories

RS232 micro printer
Bluetooth micro printer
RS232 microprinter(powered by rechargeable battery)
Special support rings
Standard support ring for probe D
Small support ring for probe D
Impact body D
Carbide ball tip D
Test block D with certificate
Test block D w/o certificate
Charger
European adapter plug



Standard package -
HARTIP1800B

HARTIP1800B is a basic model for HARTIP1800. With most of core functions of HARTIP1800 and lower price, HARTIP1800B is a good choice for the customer who has the limited budget. HARTIP1800B also can be equipped with our unique D/DL two-in-one impact device. ●



KEY FEATURES

- ★ Integrated design , easy operation
- ★ High accuracy – $\pm 0.3\%$ @ HL=800 / Repeatability: $\pm 2HL$
- ★ Wide operating environment – $-40\sim+60^{\circ}\text{C}$
- ★ Digital with high contrast OLED display
- ★ 4000 data memory in 4 blocks, data can be recalled easily
- ★ RS232 and blue tooth interface, it can connect micro-printer directly by cable or wireless (Bluetooth is an option)
- ★ 3.7 V Li-ion rechargeable battery , it can be charged by USB or power source
- ★ With strength conversion value
- ★ Re-calibration allowed by user
- ★ Power on/off automatically



Specifications

Model	SADT HARTIP 1800/1800DL	SADT HARTIP 1800B/1800B DL
Principle	Leeb hardness measurement	
Accuracy / Repeatability	$\pm 0.3\%$ @ HL=800 / $\pm 2HL$	
Display	High contrast OLED	
Hardness scale	HL/HRC/HRB/HB/HV/HS/HRA/ob	
Measuring range	HL170-960/ HRC19-70/ HRB13-109/ HB20-655/ HV80-940/ HS32-99.5 / HRA30-88	
Impact device	D/ D-DL 2-in-1 (internal)*	
Materials	10 common metal materials	
Memory	360000 data in 400 blocks, can be saved and re-readable	4000 data in 4 blocks can be saved and re-readable
Statistics function	Average / Max. / Min. / S. value	Average / Max. / Min.
Re-calibration	Allowed by user	
Indicator	Low battery	
Interface	USB/RS232/Bluetooth to PC for transferring data or printing, USB for charging	USB for charging or printing, Bluetooth(Optional) for printing
Power on/off	Auto	
Power supply	3.7V Li-ion rechargeable battery	
Working environment	$-40^{\circ}\text{C}\sim+60^{\circ}\text{C}$	
Dimension (mm)	148x44x22	
Net weight (g)	110	
Standards	Conforming to ASTM A956, GB/T 17394-1998	

*: D-DL 2-in-1 probe is only available for DL models.

PORTABLE HARDNESS TESTER

HARTIP 3000

HARTIP 3000 is an advanced hand-held digital metal hardness tester with characters of high accuracy, wide measuring range and easy operation. It is suitable for testing the hardness of all metals especially on site for large structure or assembled components, which is widely used in the industry of power, petrochemistry, air space, vehicle, machine and so on.

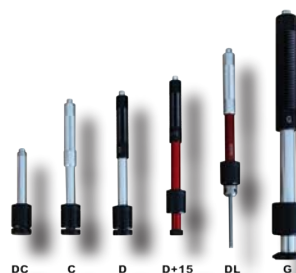
Specifications



SADT HARTIP 3000			
Principle	Leeb hardness measurement	Indicator	Low battery
Accuracy	±0.5% @ HL=800 / ±4HL	Communication	RS232/USB to PC for transferring data
Display	Large graphic LCD with EL backlight	Print	RS232/USB to micro printer
Hardness scale	HL/HRC/HRB/HB/HV/HS	Power supply	1.5V AA battery x 4
Measuring range	HL200-960/ HRC19-70/ HRB13-109/ HB20-655/ HV80-1027/ HS31.9-102.8	Working environment	-10~+45°C
Impact device	D (Standard) DC/D+15/C/G/EL (Optional)	Dimension (mm)	195x84x38
Materials	9 common metal materials	Net weight (g)	550
Memory	960 data in 8 blocks, can be saved and re-readable	Standards	Conforming to ASTM A956, GB/T 17394-1998
Statistics function	Average / Max. / Min. / S. value		

KEY FEATURES

- ✦ Wide measuring range: Rockwell B&C, Brinell, Vickers, Shore and HL
- ✦ Automatic conversion to Brinell, Rockwell, Vickers and Shore
- ✦ Test in any directions
- ✦ Impact devices: D, DC, DL, C, D+15, E, G
- ✦ All impact devices interchangeable
- ✦ Menu operation
- ✦ Large LCD display with backlight
- ✦ RS232/USB interface to PC and micro-printer
- ✦ Automatic mean, max., min. value display
- ✦ Data management software



Key Accessories

Special Support Rings	Size(mm)	Description
Z10-15 Z14.5-30 Z25-50	20x20x7.5 20x20x6.5 20x20x6.5	Cylindrical R10-15mm R14.5-30mm R25-50mm
HZ11-13 HZ12.5-17 HZ16.5-30	20x18x5 20x20x5 20x20x5	Hollow-cylindrical R11-13mm R12.5-17mm R16.5-30mm
K10-15 K14.5-30	Ø20x7.7 Ø20x6.7	Spherical R10-13mm R14.5-30mm
HK11-13 HK12.5-17 HK16.5-30	Ø17x5 Ø18x5 Ø20x5	Hollow-spherical R11-13mm R12.5-17mm R16.5-30mm
UN	Ø52x20x16	Universal

Optional Probes	
D	Universal standard unit. For the majority of hardness testing assignments.
DC	Extremely short impact device. Use in very confined spaces.
DL	Needle front section diameter 2.78mm, length 50mm. Measurements in extremely confined spaces.
C	Reduced impact energy. Test in surface hardened or impact sensitive components.
D+15	Particularly slim front section and with measuring coil moved back. Hardness measurements in grooves and on recessed surfaces.
E	Synthetic diamond test tip. For measurements in the extremely high hardness range.
G	Enlarged test tip, increased impact energy. For measurements in the Brinell range only. Use in solid components.

Portable Hardness Tester

Standard package

HARTIP 3000 main unit	1
Impact device type D	1
Small support ring	1
Test block D w/o certificate	1
Cleaning brush	1
Operation manual	1
Calibration Certificate	1
Carrying case	1

Optional accessories

Mirco-printer
Impact device D
Impact device DC
Impact device D+15
Impact device G
Impact device C
Impact device E
Impact device DL
Impact body D/DC
Impact body D+15
Impact body G
Impact body C
Impact body E
Impact body DL
Test block G / D with certificate
Test block D w/o certificate
Special support rings
Leather case
Interface cable (to PC)
Data management software



Mirco Printers for HARTIP3000/HARTIP2000



Software for HARTIP3000

PORTABLE HARDNESS TESTER HARTIP 1500/1000

Standard package

HARTIP 1500

HARTIP 1500 main unit	1
Built in impact device D	1
Test block D w/o certificate	1
Rechargeable battery	1
Battery charger	1
Cleaning brush	1
Operation manual	1
Calibration Certificate	1
Carrying case	1

Optional accessories

Special support rings
Standard big support ring for probe D
Standard small support ring for probe D
Impact body D
Test block D with certificate
Test block D without certificate
Leather pouch

Standard package

HARTIP 1000

HARTIP 1000 main unit	1
Built in impact device D	1
Leather pouch	1
Operation manual	1
Calibration Certificate	1

HARTIP 1500/1000 is an integrated handheld metal hardness tester that combines impact device (probe) and processor into one unit. The size is much shorter than normal impact device, which lets HARTIP 1500/1000 can meet not only normal measurements, but can take measurements at narrowed space as well. HARTIP 1500/1000 is suitable for testing hardness of almost all Ferrous and Nonferrous materials. With our new technology, its accuracy is improved to a higher level than normal type. HARTIP 1500/1000 is one of the most economic hardness testers. ●



KEY FEATURES

- ✦ Rugged and modular design
- ✦ High accuracy
- ✦ Palm size for narrow space
- ✦ Built-in impact device
- ✦ For all metallic materials
- ✦ Wide measuring range: Rockwell B&C, Brinell, Vickers, Shore and HL
- ✦ Test in any directions
- ✦ Comply to standard ASTM A956



Specifications

Model	SADT HARTIP 1500	SADT HARTIP 1000
Principle	Leeb hardness measurement	
Accuracy	$\pm 0.4\%$ @ HL=800 / $\pm 3\text{HL}$	$\pm \text{HRC}0.5$
Display	LCD with backlight	
Hardness scale	HL/HRC/HRB/HB/HV/HS	HL/HRC
Measuring range	HL170-960/ HRC19-70/ HRB13-109/ HB20-655/ HV80-940/ HS32-99.5	HL170-960/ HRC20-68
Impact device	D (Internal)	
Materials	9 common metal materials	Steel/Cast steel
Memory	99 data	-
Statistics function	Average / Max. / Min.	-
Re-calibration	Allowed by user	-
Indicator	Low battery	
Auto power off	Auto	
Power supply	Ni-MH 9V rechargeable battery	9V alkaline battery x 1
Working environment	$-10 \sim +45^{\circ}\text{C}$	
Dimension (mm)	100x60x33	
Net weight (g)	150	
Standards	Conforming to ASTM A956, GB/T 17394-1998	



ULTRASONIC THICKNESS GAUGE

SA40/SA40EZ/SA50

S A40 / SA40EZ are the miniaturized ultrasonic thickness gauges that can measure wall thickness and velocity.

Our intelligent gauges are designed to measure the thickness of metallic and nonmetallic materials such as steel, aluminum, brass, silver and etc. They are quite versatile model which can be easily equipped with the low & high frequency probes as well as a high temperature probe. ●



S A50 thickness meter is controlled by micro-processor based on the ultrasonic measuring principle. It is able to measure the thickness and acoustic speed of various materials transmitted ultrasonic. It is designed to measure the thickness of normal metal materials and metal materials covered with coating. ●

Specifications

Model	SA50	SA40	SA40 EZ
Display	4 digits LCD		
Backlight	Yes		
Measuring range	1.00~225.0mm in steel with standard probe (Normal mode) 3.00~20.00mm in steel Thickness for coating: <1.2mm (Coating mode)	0.8~250.0mm in steel with standard probe	1.0~250.0mm in steel with standard probe
Resolution	1.00~9.99mm ±0.05 10.00~99.99mm ±(0.5% H+0.01) 100.0~225.0 ±(1% H+0.1)	0.01mm@0.8~99.99mm 0.1mm@100.0~250.0mm	0.1mm
Unit	mm/inch		mm
Velocity	1000~9999m/s		
Coupling indicator	Yes		
Calibration	Auto		
Memory	40 data		-
Low battery indicator	Yes		
Working environment	0~40°C, 20~90%RH		
Power off	Auto		
Power supply	AA battery x 2		
Dimension (mm)	124x67x30		
Net weight (g)	245	240	
Standard probe	PT-5		
Optional probes	XT-5 / GT-5 / CT2.5		

Ultrasonic Thickness Gauges

Standard package -

SA40/SA40 EZ/SA50

SA40/SA40 EZ/SA50 main unit	1
Standard 5MHz probe PT-5 with probe holder	1
Built-in calibration block	1
Coupling paste for normal temperature	1
Operation manual	1
Carrying case	1

Optional probes

XT-5 probe
GT-5 probe
CT-2.5 probe
PT-5 probe with probe holder
Coupling paste for high temperature

**Standard package -
ST5900**

ST5900 main unit	1
Standard 5MHz probe PT-5	1
Built-in calibration block	1
Leather case	1
Operation manual	1

**Standard package -
ST5900+**

ST5900+ main unit	1
Standard 5MHz probe PT-5	1
Built-in calibration block	1
Leather case	1
Operation manual	1

Optional probe

PT-5 probe

ULTRASONIC THICKNESS GAUGE ST5900/ST5900+

S T5900/ ST5900+ are the miniaturized ultrasonic thickness gauges that can measure wall thickness.

ST5900 has a fixed velocity 5900 m/s, which is used only for measuring of wall thickness of steel. ST5900+ is able to adjust velocity so that it can measure the thickness of metallic and nonmetallic materials such as steel, aluminum, brass, silver, and etc. ●



Specifications

Model	ST5900	ST5900+
Display	4 digits LCD	
Measuring range	1.2~200mm	
Resolution	0.1mm	
Unit	mm	
Velocity	5900m/s	1000~9990m/s
Calibration	Manual	
Power off	Automatically power off after 2 minutes of non-use	
Power supply	AAA battery x 1	AA battery x 1
Dimension (mm)	107x60x15	107x60x20
Net weight (g)	100	110
Standard probe	PT-5	



Optional Probes

Probe	Frequency	Diameter	Measuring Range	Application
PT-5 (Standard)	5MHz	Ø10mm	0.8~250.0mm	For standard applications
XT-5 (Optional)	5MHz	Ø7mm	0.8~30mm	For tubes with small diameter
GT-5 (Optional)	5MHz	Ø12mm	3.0~100mm	For high temperature up to 400°C
CT-2.5 (Optional)	2.5MHz	Ø12mm	3.0~250mm	For unfavorable attenuation cast

GLOSS METER

SADT GT SERIES



GT series gloss meters are designed and manufactured according to international standards ISO2813, ASTM D523, DIN 67530 and China standards GB9754, GB9966, GB/T3891. The technical parameters is up to JJG696-2002. The GT45 gloss meter is especially designed for measuring plastic film and ceramics. The GT60S gloss meter is especially designed for measuring small areas and curvy surfaces. ●



Specifications

Model	GTS	GTS+	GT60	GT60N	GT60S	GT45	GT60L
Application	Paint, coating, printing, ceramics	Paint, coating, printing, ceramics, metal, plating layer	Paint, coating, printing, ceramics	Paint, coating, printing, ceramics, metal, plating layer	Small area, curvy surface	Plastic, porcelain enamel	Marble, Granite Terrazzo
Measuring Range(Gu)	0~199.9	0~1999	0~199.9	0~1999	0~199.9		0~199
Readout Error(Gu)	±1.2	±0.5 (0~99.9) ±0.5%(100~1999)	±1.2	±0.5 (0~99.9) ±0.5%(100~1999)	±1.2		±2
Repeatability	±0.4	±0.2 (0~99.9) ±0.2%(100~2000)	±0.4	±0.2 (0~99.9) ±0.2%(100~1999)	±0.4		±1
Aperture (mm)	20°, 60°, 85°		60°			45°	60°
Measurement Spot (mm)	10×10 @ 20° 10×20 @ 60° 8×30 @ 85°		10×20		2×2	10×14	25×50
Window Size (mm)	11×52	11×38	14×28		Ø4	14×20	26×52
Memory	-	10 data for each degree	-	10 data	-		
Communication Interface	-	USB	-	RS232/USB	-		
Software	-	My Gloss	-	My Gloss	-		
Power Supply	1.5V AA			1.5V AAA	1.5V AA	1.5V AA	1.5V AA
Dimension (mm)	143×32×64	144×32×64	114×32×64	83×46×30	114×32×64		
Net Weight(g)	390	380	285	100	285		
Standards	ISO2813, ASTM D523, DIN-67530, GB/T9754, GB/T7706, GB/T9966.6			ISO2813, ASTM D523, DIN-67530, ISO7668, GB/T9754	ISO2813, ASTM D523, GB/T9754	ASTM-C346, ASTM2767, GB/T11420, GB/T8807, GB/T3295	ISO2813, ASTM D523, GB/T9966-5

Gloss Meter

Standard package -

Gloss Meter GT Series

GT Gloss meter main unit	1
Standard board	1
Lens cloth	1
Operation manual	1
Carrying case	1



Standard boards for GTS



Standard package of GTS

GLOSS METER

GMS/GM60

Standard package -

Gloss Meter GM Series

GM Gloss meter main unit	1
Standard board	1
USB cable	1
Data software	1
Power adapter	1
Operation manual	1
Carrying case	1

Optional accessories

SD card

G M Series gloss meters are designed and manufactured according to international standards ISO2813, ISO7668, ASTM D523, ASTM D2457 and China standards GB/T9754, GB/T13891, GB/T7706 and GB/T8807. The technical parameters are up to JJG696-2002. GM Series gloss meters can be widely used to measure painting, coating, plastic, ceramics, leather products, paper, printing, floor materials and so on. ●



KEY FEATURES

- ★ Precision appearance design, more suitable for human characteristic, easy to use.
- ★ Three-angle gloss data is displayed simultaneously, can satisfy various requirements. (Only for GMS)
- ★ Large memory for measurement data.
- ★ Latest Bluetooth function and removable memory card to transmit data conveniently.
- ★ Special designed gloss software to analysis data and output.
- ★ Prompt for low battery and full memory.

With internal Bluetooth module or USB interface, GM gloss meter can transfer data with PC easily. The measuring data also can be exported to printer via printing interface. Optional SD card makes the memory as large as you want.



Specifications

Model	GMS	GM60
Application	Painting, printing, floor material, plastic, ceramics, leather, hardware, plating	
Measuring Range(Gu)	0~120, 120~2000 @ 20° 0~120, 120~1000 @ 60° 0~120, 120~160 @ 85°	0~120, 120~1000 @ 60°
Readout Error(Gu)	±1.5 (0~120) ±1.5%(120~2000)	±1.5 (0~120) ±1.5%(120~1000)
Repeatability	±0.5 (0~120) ±0.5%(120~2000)	±0.5 (0~120) ±0.5%(120~1000)
Aperture (mm)	20°, 60°, 85°	60°
Measurement Spot (mm)	10×10 @ 20° 9×15 @ 60° 5×38 @ 85°	9×15
Memory	900 data or 30 groups, CF card (optional)	
Interface	USB / printer /Bluetooth	
Software	Data managing software	
Power Supply	+5V, AA*4	
Working Environment	10~40°C, <85%RH,	
Dimension (mm)	164×58×88	
Net Weight(g)	520	
Standards	ISO2813, ISO7668, ASTM D523, ASTM D2457, GB/T9754, GB/T13891, GB/T7706, GB/T8807	



Standard package
-- GMS/GM60

SURFACE ROUGHNESS TESTER

SADT ROUGHSCAN

SADT RoughScan tester is a portable, battery-powered instrument for checking surface roughness with the measured values displayed on a digital readout. The instrument can be used in the laboratory, an inspection area, in the shop, or wherever on-site surface roughness testing is required. ●



Specifications

SADT RoughScan			
Measuring Range	Ra: 0.03μm~6.3μm/1μ"~250μ" Rz: 0.2μm~50.0μm/8μ"~999μ" Ry/Rmax: 0.2μm~25μm/8μ"~999μ"	Readout Error	±10%
		Stability	≤6%
		Sensor Type	Piezoelectric
Resolution	0.01μm/1μ"	Maximum stylus force	15.0mN/1500mgf
Cut-off	0.8mm/0.30", ANSI 2RC Filter	Working Environment	10°C~45°C
Display	3-digit LCD	Storage Temperature	0°C~60°C

Traverse length	Evaluation length	Numbers of cutoff
0.5mm	0.25mm	1
1.2mm	0.8mm	
5.5mm	5.0mm	
1.25mm	0.75mm	3
3.0mm	2.4mm	
5.5mm	5.0mm	
1.75mm	1.25mm	5
4.5mm	4.0mm	
5.5mm	5.0mm	

Optional Probes

Probe	Application	
General purpose probe SFP-2001/ SFP-2002	For most surface roughness applications. SFP-2001 has a 90° conical diamond stylus, .0004"/10μm radius per ISO standards. SFP-2002 has a 90° conical diamond stylus, .0002"/5μm radius per DIN standards.	
Transverse chisel probe SFP-2003	For gaging sharp edges or small O.D.'s where probe is aligned with (in 180° or closed position) to axis of traverse. 90° diamond chisel stylus, .0004"/10μm radius.	
Parallel chisel probe SFP-2004	For gaging sharp edges or small O.D.'s where probe is perpendicular (in 90° or 270° position) to axis of traverse. 90° diamond chisel stylus, .0004"/10μm radius.	
Small bore probe SFP-2005/SFP-2006	For measuring small bores (min. inside diameter of 5.0mm, up to a depth of 15.0mm). 90° conical diamond stylus, .0004"/10μm radius for SFP-2005; 90° conical diamond stylus, .0002"/5μm radius for SFP-2006	
Groove bottom probe	For measuring the bottoms of "O" ring grooves, recesses and holes to depth of 6.0mm. Also used for short lands and shoulders. 90° conical diamond stylus, .0004"/10μm radius.	

Roughness Tester

Standard package -

RoughScan

RoughScan main unit	1
Standard probe	1
Calibrate plate with the reference specimen	1
9-volt alkaline battery	1
Screw driver	1
Operation manual	1
Carrying case	1

Optional accessories

General Purpose Probe SFP-2001
General Purpose Probe SFP-2002
Transverse Chisel Probe SFP-2003
Parallel Chisel Probe SFP-2004
Small Bore Probe SFP-2005
Small Bore Probe SFP-2006
Groove bottom probe SFP-2007
Height Stand
Standard test block



ULTRASONIC FLAW DETECTOR

SADT SUD10

Standard package

SUD10 main unit	1
2.5MHz-Ø20 straight probe	1
4MHz 60° 8x9mm angle probe	1
Probe connection cable (Q9 to Q9)	1
Probe connection cable (Q9 to C5)	1
4A/9V power adapter	1
Data managing software	1
Interface cable	1
Operation manual	1
Carrying case	1

Optional accessories

Straight probe

5MHz-Ø20mm probe
2.5MHz-Ø20mm probe
2.25MHz-Ø20mm probe
1MHz-Ø20mm probe

Angle probe

4MHz 45° 8 x 9mm probe
4MHz 60° 8 x 9mm probe
4MHz 70° 8 x 9mm probe
4MHz 80° 8 x 9mm probe
2MHz 45° 8 x 9mm probe
2MHz 60° 8 x 9mm probe
2MHz 70° 8 x 9mm probe
2MHz 80° 8 x 9mm probe
T/R 5MHz-Ø20mm, focus 15mm probe
T/R 2.5MHz-Ø20mm, focus 15mm probe
Connection cable to probe (Q9 to Q9)
Connection cable to probe (Q9 to C5)
Connection cable to probe (C9 to Q9)
Connection cable to probe (C9 to C5)
Lithium ion battery
Power adaptor 4A/9V
Power Cable
Leather case

SUD10 is a portable, microprocessor-based instrument suitable for both shop and field use. SUD10, which is integrated with international advanced digital integration and new EL display technology, is a smart Digital Ultrasonic Flaw Detector propelled by SADT. SUD10 has almost all functions to meet requirements of professional application for nondestructive testing.

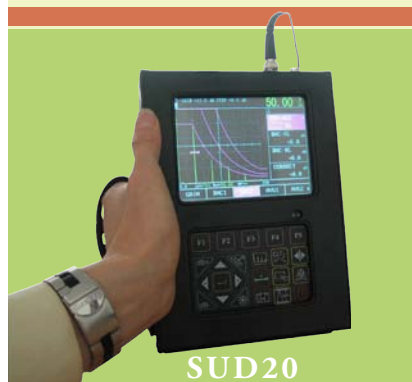
SUD20 has same functions as SUD10, but smaller and lighter. ●

Key Features

- ✓ High-speed capture and very low noise
- ✓ DAC, AVG, B Scan
- ✓ Solid metal housing (IP65)
- ✓ Automated make video of test process and play
- ✓ High contrast viewing of the waveform from bright, direct sunlight to complete darkness and easy to read from all angles
- ✓ Powerful PC software and data can be exported to Excel
- ✓ Automated calibration of transducer Zero, Offset and/or Velocity
- ✓ Automated gain, Peak Hold and Peak Memory
- ✓ Automated display precise flaw location (Depth d, level p, distance s, amplitude, sz dB, Ø)
- ✓ Automated switch three staff gauge (Depth d, level p, distance s)
- ✓ Ten independence setup, any criterion can be input freely, can work in the scene without test block
- ✓ Big memory of 300 A graph and 30000 thickness values
- ✓ A&B Scan
- ✓ RS232/USB port, Communication with PC is easy
- ✓ The embedded software can be online updated
- ✓ Li battery, continue working time up to 8 hours
- ✓ Display freeze
- ✓ Automatic echo degree
- ✓ Angles and K-value
- ✓ Lock and unlock function of system parameters
- ✓ Dormancy and screen savers
- ✓ Electronic clock calendar
- ✓ Two gates setting and alarm indication

Specifications

Measuring range (mm)	0.5~10000	Frequency range (MHz)	0.5~15	Pulse shift (µs)	-20~+3400
Vertical linearity error	≤2.5%	Gain (dB)	0~110	Zero (µs)	0.0~999.9
Horizontal linearity error	≤0.1%	Material velocity	1000~15000 m/s	Port type	BNC
Sensitivity margin	≥60dB	Measurement mode	single, dual, THRU	Operating temperature	-20~55°C
Dynamic scope	≥32dB	Reject	0~80%	Dimension & net weight	240×180×50mm, 2.2kg
Standards	JB/T 10061-1999, JJG 746-2004				



PRECISE COLOR READER SC 80

SC80 precise color reader is mainly applied to plastic, painting, design, plating, costume, printing and dyeing industries.. It can do the color analysis and color controlling. ●

KEY FEATURES

- ✦ The 2.4" colorful screen and portable design make you feel comfortable.
- ✦ 3 kinds of light sources for your selection, SCI and SCE mode switch and metamerism analysis satisfy your test needs in different working status.
- ✦ Tolerance setting, auto-judge color difference values and color deviation make you judge the color easily even you don't have any professional knowledge in color.
- ✦ Using professional color analysis software you can do the color data analysis and color difference diagrammatic outputting.
- ✦ Via optional mini printer the color data can be printed out on site.



Specifications

Model	SC 80
Accuracy	0.08 (average value of 30 times @ the standard white tabula)
Lighting/Inspecting system	8/d (8° falloff/diffuse reflection) SCI (include flat mirror light) / SCE (eliminate flat mirror light)
Light source	White light source
Inspection angle	10° angle of view in CIE
Inspection conditions	D65, D50, F11
Rectification	White board rectification Black board rectification
Storage	12 groups of standard samples, 30 groups of values for each sample
Display	L*a*b*, L*c*h* Chroma values and ΔE*ab Δ(L*a*b*), Δ(L*c*h*) color difference values
Language	English / Chinese
Aperture (mm)	Ø8
Power supply	4 pcs of alkaline batteries or nickel batteries special adaptor (DC, 5V)
Weight (g)	550g
Dimension (mm)	77x86x210

Standard accessories



Standard white tabula Standard black cavity Power adapter USB cable Software CD Carrying case

Optional accessory



Micro printer

Precise Color Reader

Standard package

SC80 main unit	1
Standard white tabula	1
Standard black cavity	1
USB cable	1
Software CD	1
Power adapter	1
Operation manual	1
Carrying case	1

Optional accessory

Micro Printer

COLOR TEST
and quality management
Software



Standard package

SC20 main unit	1
USB cable	1
Software CD	1
Power adapter	1
Operation manual	1
Leather pouch	1

PORTABLE COLOR DIFFERENCE METER SC 20

SC20 portable color difference meter is widely applied to quality control of plastic and printing industries. It makes you capture color efficiently and accurately. ●



KEY FEATURES

- + Easy operation makes you use it easily.
- + Widely applied to quality control of plastic and printing industries.
- + Display directly color difference by E^*ab , L^*a^*b , $CIE_{L^*a^*b}$, $CIE_{L^*c^*h}$.
- + Standard deviation within $E^*ab0.2$ (test condition: choose average values by 12 pcs white tabula).
- + It can be connected with computer to do the inspection by software with USB expansion interface.



Specifications

Model	SC 20
Accuracy	$<0.2 \Delta E^*ab$
Display	ΔE^*ab , CIE_{Lab} , ΔLab , CIE_{Lch}
Test range	L: 0~100, a: -128~127, b: -128~127
Test time	About 3 seconds
Test interval	2 seconds
Aperture (mm)	Ø8
Power off	Automatically in 5 min
Light source	C light source
Sensor	Silicon photodiode array
Power Supply	DC/5V (1.5A)/2 x 1.5V (AAA) battery
Working environment	0~40°C, < 85%RH
Weight (g)	204
Dimension (mm)	171x50x49
Application	Measure any color of smooth surfaces

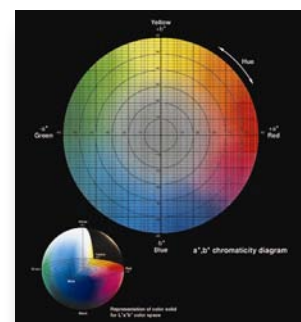
COLOR ANALYSIS
- connecting with computer



Color Difference Analysis

0~0.25ΔE	Perfect
0.25~0.5ΔE	Acceptable
0.5~1.0ΔE	Acceptable in some areas
1.0~2.0ΔE	Acceptable in some areas
2.0~4.0ΔE	Acceptable in specific applications
4.0ΔE	Not acceptable in most applications

CIE COLOR SPACE CHART





METALLURGICAL MICROSCOPE SM500

SM500 is a self-contained portable metallurgical microscope ideally used for inspecting metallography of metals in laboratory or in situ. With fully handheld design and unique magnetic stand, SM500 can be attracted directly against the surface of ferrous metal at any angles for non-destructive examination on flatness, curvature as well as other complicated surface. SM500 can also be used with digital camera or CCD image process system to download metallurgical image to PC for data transfer, analysis, storage and printout. ●

KEY FEATURES

- ✦ Portable metallurgical laboratory, with on-site sample preparation, microscope, camera. Without AC power supply in field
- ✦ Natural colors without changing light by dimming the LED lighting provides the best image observed at any time.
- ✦ Magnetic stand can be attracted against metals at any angles.

Specifications

Microscope main	100-500x (extendable 1500x)	Power supply	230V AC 50/60Hz
Eyepiece(large view)	10x, 12.5x	Stand	On-off magnetic stand
Objective	10x, 40x	Dimension(mm)	210x160x95
Slideway	X-direction 15mm Y-direction 12mm	Net weight (kg)	2.5
Illuminator(halide)	6V, 15W		

Optional accessories



E-P302 Electrolytic Polisher

- * Non-destructive polisher of large workpiece size
- * Constant voltage constant flow
- * Electrolyte does not leak, easy to clean-up
- * Digital show voltage and current values and with a timing device
- * Recommended for the in situ, non-destructive examination or in laboratory.
- * It can also be used for large samples.



SM500 with adaptor for digital camera



SM500 with CCD adaptor to PC



MP395 Mini Grinder with 2 sets of wheel heads

Metallurgical Microscope

Standard package - SM500

SM500 main body 100-500x	1
Eyepiece: 10x	1
Eyepiece: 12.5x	1
Objective: 10x	1
Objective: 40x	1
Slideway: x-direction 15mm, y-direction 12mm	1
Bulb (halide): 6v 15w	2
Power supply: 230VAC	1
On-off magnetic stand	1
Operation manual	1
Carrying case	1

Optional accessories

- Additional stand for small samples
- Digital camera
- Adapter for digital camera with eyepiece
- CCD with interface
- Eyepiece 5x/10x/15x/16x
- Objective 4x/5x/20x/25x/40x/100x
- Mini grinder
- Electrolytic polisher
- A set of wheel heads
- Polishing cloth wheel
- Replica film
- Filter (green, blue, yellow)
- Bulb

PORTABLE METALLURGRAPHIC MICROSCOPE SM-3

Standard package - SM-3

SM-3 main body	1
Eyepiece: 10x	1
Eyepiece: 20x	1
Objective: 5x	1
Objective: 10x	1
Objective: 50x	1
Portable LED illuminator	1
Power supply	1
Magnetic stand	1
Filter(green, sunlight)	1
Adaptor for digital camera 10x 1	
C-Mount 0.5x video adaptor	1
Operation manual	1
Carrying case	1

Optional accessories

Digital camera
Eyepiece 5x/10x/15x/16x
Objective
4x/5x/20x/25x/40x/100x
Mini grinder
Electrolytic polisher
A set of wheel heads
Polishing cloth wheel
Replica film
Filter
Bulb

KEY FEATURES

- ✦ Special magnetic base, fixing the unit firmly on the workpieces
- ✦ Suitable for large-scale roll test and direct observation, no cutting and sampling
- ✦ LED lighting, uniform color temperature, no heating
- ✦ Forward/backward and left/right moving mechanism for main machine, convenient for adjustment of the inspection point
- ✦ Point connecting of digital cameras, observing the records directly on PC



Specifications

Observation method	Upright	Illuminator(halide)	Build-in LED or 6V15W light source
Microscope main	50x-1000x	Power supply	230V AC 50/60Hz
Eyepiece(large view)	10x, 20x	Stand	On-off magnetic stand
Objective	5x, 10x, 50x	Dimension(mm)	550x260x380
Adaptor	digital camera adaptor with 10x eyepiece video adaptor C-mount 0.5x	Net weight (kg)	2.7

METALLURGICAL MICROSCOPE

XJP-6A

XJP-6A metalloscope can be widely used in such departments as factories, schools and science research institutions for identifying and analyzing the microstructure of all kinds of metal and alloys. It is the ideal tools for testing metal material, verifying the quality of casting and analyzing metallographic organization of the material metalized.



Standard package		Optional accessories	
Part No.	Item	Part No.	Item
XJP-6A	Main body		Digital camera
S09	Mechanical stage with a stroke of 75x50mm and size of 180x155mm	DCK	Adapter for digital camera with eyepiece
EP10	Plan eyepiece 10 ^x -18	DIG300	3 mega pixel CCD with eyepiece
EP12.5	Plan eyepiece 12.5 ^x -14	CWC	Micrometer
Epr10b	Plan reticle eyepiece 10 ^x -14		
M-OPr10	Plan achromat objective 10 ^x /0.25mm		
M-OPr20	Plan achromat objective 20 ^x /0.35mm		
M-OPr40A	Plan achromat objective 40 ^x /0.65mm		
M-OSPor100	S-plan achromat objective 100 ^x /1.25 oil		
9J-6	Stage plate(1)		
9J-7	Stage plate(2)		
9J-8	Stage plate(3)		
9J.11	Stage plate holder		
TBR03	Rotating binocular head(45 degree)		
LH01	Lamp housing		
	Halogen lamp 6V 30W		
PO02	Polarizer		
PA01	Analyzer		
CL02	Specimen holder		

INVERTED METALLOGRAPHIC MICROSCOPE

SM400



KEY FEATURES

- ✦ Economical practical design offering for inspecting grain coarsening metallurgical samples.
- ✦ Easy installation by the production line and easy to carry.
- ✦ The SM400 is suitable for colleges and factory.



An adapter for attaching an digital camera to the trinocular tube is also available. This mode needs MI of the metallographic image printing with fixed sizes.



We have a selection of CCD adapters for computer print-out with standard magnification and more than 60% observation view...

Specifications

Observation method	Inverted, bright field, polarizing	Objective	10 ^x / 0.25 20 ^x / 0.4 40 ^x / 0.65 100 ^x / 1.25 (oil, optional)
Magnification	100 ^x , 200 ^x , 400 ^x , 1000 ^x (optional)	Field diaphragm	1
Focus	Graduation: 1 μ m	Mirror	1
Illuminator	6V, 30W	Power supply	220V / 110V
Stage	180x150mm	Dimension(mm)	560x195x300
Eyeiece	10 ^x (F.N18) x 2	Net weight (kg)	12
Nosepiece	4		

INVERTED METALLOGRAPHIC MICROSCOPE

SD300M

KEY FEATURES

- ✦ Infinite focusing optics provides high resolution image.
- ✦ Objective: Long viewing distance type.
- ✦ Wide field of view: 20mm
- ✦ The three-plate mechanical stage can accept nearly all sample sizes and also allows nondestructive microscope examination of large components.



SADT optics provides high NA and long viewing distance. SADT optics delivers bright, high-resolution images. New optical coating improve dustproof and dampproof in SD300M.



The large stage surface enables observation of heavy samples. The three-plate structure gives the microscope stable and superior durability.

Specifications

Optical	SADT infinity system	Nosepiece	5
Observation method	Inverted, bright field, polarizing	Objective	5 ^x /0.13, WD11.5; 10 ^x /0.3, WD6.8 20 ^x /0.4, WD11.1; 50 ^x /0.55, WD8.2 100 ^x /0.8, WD2.0(spring)
Magnification	50 ^x , 100 ^x , 200 ^x , 500 ^x , 1000 ^x	Field diaphragm	1
Focus	Graduation: 1 μ m	Mirror	1
Illuminator	12V, 50W	Power supply	90-240V
Stage	247x270mm	Dimension(mm)	700x320x400
Eyeiece	10 ^x (F.N20)	Net weight (kg)	15

Metallurgical Microscope

Standard package - SM400

SM400 main body	1
Trinocular head	1
Mechanical stage	1
Illuminator(halide): 6V 30W	1
Power supply: 220V	1
High resolution plan achromat objective:	
10 ^x /20 ^x /40 ^x	1 for each
Eyeiece: 10 ^x	2
Operation manual	1

Optional accessories

Eyeiece: 12.5^x
Reticle eyepiece 10^x
Objective: 100^x (Oil)
C-Mount
1.3M pixel CCD

Standard package - SD300M

SD300M main body	1
Trinocular head	1
Mechanical stage	1
Stage plate	1
Lamp house	1
Bulb: 12V, 50W	4
High resolution plan achromat objective:	
5 ^x /10 ^x /20 ^x /50 ^x /100 ^x	1 for each
Eyeiece: 10 ^x	2
Filter	1
Polarizer	1
Operation manual	1

Optional accessories

C-Mount
1.3M pixel CCD

SADT HB SCALER

Standard package - HB SCALER

Measuring software	1
CCD	1
USB security dog	1
USB cable to PC	1
Standard indentation test block	1
Operation manual	1



HB Scaler is an optical measuring system which can automatically measure the size of indentation from Brinell hardness tester and gives the Brinell hardness readings. All values and indentation images can be saved in PC. With the software, all values can be processed and printout as a report. ●

KEY FEATURES

- ✦ *High accuracy: $\pm 0.01\text{mm}$*
- ✦ *Measuring automatically*
- ✦ *Read out in HBW and mm*
- ✦ *All HB readings and images can be saved as tif or Excel format*
- ✦ *Print out test report*
- ✦ *Quick respond: $< 0.001\text{s}$*

Specifications

Measuring scale: HBW10/3000, HBW10/1000, HBW5/750/, HBW5/250, HBW2.5/187.5

Measuring range: indent: 0.6~6mm

Hardness: 31~650HBW

Resolution: 0.1HBW

Respond interval: $< 0.001\text{s}$

Power: From USB port

Weight: 350g (Measuring head)

Dimension: 170xØ70mm

ROCKWELL HARDNESS TESTER

Bench Hardness Tester

HRS-150 Digital Rockwell Hardness Tester



The HRS-150 digital Rockwell hardness tester is designed for ease of use and safety in operation, and conforms with the international Rockwell standard. Depending on the combination of indenter type and applied total test force, a unique symbol is given to each Rockwell scale. The HRS-150 will automatically show your selection of a specific Rockwell scale on the LCD display, and indicate which load is being used. The integrated autobrake mechanism allows the preliminary test force to be applied manually without the possibility of an error. After application of the preliminary force, the HRS-150 will proceed with a fully automatic test: loading, dwell time, unloading, and computation of the hardness value on display. Connected to the included printer, by means of an RS232 output, it's possible to print out all results directly. ●

HRMS-45 Superficial Rockwell Hardness Tester



It serves to measure the hardness of ferrous, nonferrous metals, hard metals, carburized or nitrided layers, and other chemical treating layers. It is also used to for hardness test of thin pieces. ●

HR-150A Rockwell Hardness Tester



The manually operated HR-150A Rockwell hardness tester is highly appreciated for its perfection and very easy operation. This machine uses the standard preliminary test force of 10kgf, and main loads of 60/100/150 kilograms conform the international Rockwell standard. After each test the HR-150A shows the Rockwell B or Rockwell C hardness value directly on the dial indicator. The preliminary test force has to be applied manually, followed by applying the main load by means of the lever at the right side of the hardness tester. After unloading the dial indicates the requested hardness value directly with high accuracy and repeatability. ●

HR-150DT Motorized Rockwell Hardness Tester HRM-45DT Motorized Superficial Rockwell Hardness Tester



This series hardness testers, appreciated for their accuracy and easy operation, work entirely conform the international Rockwell standard. Depending on the combination of indenter type and applied total test force, a unique symbol is given to each Rockwell scale. HR-150DT and HRM-45DT feature both specific Rockwell scales HRC and HRB on a dial. The appropriate force should be adjusted manually, using the dial on the right side of the machine. After application of the preliminary force, the HR150DT and HRM-45DT will proceed with a full automatic test: loading, duration, unloading, and will display the hardness directly. ●

Specifications & Packing List

Model	HRS-150	HR-150DT	HR-150A	HRM-45DT	HRMS-45
Type	Rockwell hardness tester			Superficial Rockwell hardness tester	
Preliminary test force (N)	98.07			29.4	
Rockwell hardness test (N)	588.4, 980.7, 1471			-	-
Superficial Rockwell hardness test (N)	-	-	-	147, 294, 441	
Brinell hardness test (N)	-	-	-	-	-
Vickers hardness test (N)	-	-	-	-	-
Test force dwell time (s)	1~30	0~30	-	0~30	1~30
Hardness indication	Digital	Dial			Digital
Max. height of specimens (mm)	170				
Max. depth of specimens (mm)	165		160	165	
Power	AC220V, 50/60Hz		-	AC220V, 50/60Hz	
Dimension (DxWxH) (mm)	510 x 212 x 730	510 x 212 x 700	530 x 150 x 750	510 x 212 x 700	510 x 210 x 730
Net weight (kg)	85		80		
Packing List					
Main machine	1	1	1	1	1
Diamond Rockwell indenter	1	1	1	1	1
Ø1.5875mm hard metal ball indenter	1	1	1	1	1
Testing table (big, medium, V)	1 for each type	1 for each type	1 for each type	1 for each type	1 for each type
Standard Rockwell hardness block	3	3	3	-	-
Standard superficial Rockwell hardness block	-	-	-	3	3
Weight	3	3	3	3	3
Lamp	-	2	-	2	-
Power cord	1	1	-	1	1
Operation manual	1	1	1	1	1
Printer operation manual	1	-	-	-	1
Print paper	1	-	-	-	1
RS-232 cable	1	-	-	-	1

HV-10/50 Low Load Vickers Hardness Tester

HVS-10/50 Digital Low Load Vickers Hardness Tester



The low load Vickers hardness testers are new hi-tech products integrating mechanical and photoelectrical technologies. These testers are specially designed for testing minute, thin samples or parts after surface coating. For research institutes, factories labs and QC departments, these are ideal hardness testing instruments for research or measuring purposes.

Key features and functions:

Micro computer control
Adjustment of lighting source via soft keys

Adjustment of pressure holding time and LED/LCD display

High resolution optical measuring system and photoelectrical technique

Unique measurement conversion device and unique micro eyepiece one-time measurement readout device

Data processing

Printing output function, RS232 interface for PC connection

Camera for indentation photographing and metallography

The micro-Vickers hardness tester HV1000 / HVS1000 is especially well suited for high precision hardness testing of small and/or thin specimens such as sheet, foil, coatings, ceramic products, and hardened layers. To ensure a satisfactory indentation, the HV1000 / HVS1000 features automatic loading and unloading operations, a very precise loading mechanism and a robust lever system. The micro-computer controlled system ensures an absolutely precise hardness measurement with adjustable dwell time.



HV-1000



HVS-1000

HV-30 Vickers Hardness Tester

The HV-30 Vickers hardness tester is specially designed for testing minute, thin samples or parts after surface coating. For research institutes, factories labs and QC departments, these are ideal hardness testing instruments for research or measuring purposes.

Key features and functions:

Micro computer control, automatic loading and unloading mechanism
Adjustment of lighting source via hardware

Adjustment of pressure holding time (0-30s)

Unique measurement conversion device and unique micro eyepiece one-time measurement readout device, ensuring easy use and high accuracy



HV-30

Specifications & Packing List

Model	HV10		HVS10	HV30	HV50	HVS50		HV1000	HVS1000		
Type	Vickers hardness tester		Digital Vickers hardness tester	Vickers hardness tester	Vickers hardness tester	Digital Vickers hardness tester		Micro Vickers hardness tester	Digital micro Vickers hardness tester		
Testing Forces (N)	2.94 / 4.9 / 9.8 / 29.4 / 49 / 98			19.6/29.4/49/98/196/294		9.8 / 49 / 98 / 196 / 294 / 490			0.098 / 0.246 / 0.49 / 0.98 / 1.96 / 2.94 / 4.90 / 9.80		
Testing Forces	0.3 / 0.5 / 1.0 / 3.0 / 5.0 / 10.0 (kgf)			2/3/5/10/20/30 (kgf)		1.0 / 5.0 / 10.0 / 20.0 / 30.0 / 50.0 (kgf)			10 / 25 / 50 / 100 / 200 / 300 / 500 / 1000 (gf)		
Load control	Automatic loading and releasing										
Holding Time (s)	5~60			0~30		5~60					
Magnification of microscope ^x	200 ^x for measurement, objective 20 ^x eyepiece 10 ^x 100 ^x for observation, objective 10 ^x eyepiece 10 ^x			100 ^x for measurement		100 ^x for measurement, objective 10 ^x eyepiece 10 ^x			400 ^x for measurement, objective 40 ^x eyepiece 10 ^x 100 ^x for observation, objective 10 ^x eyepiece 10 ^x		
Max. measuring length	0.25mm					0.65mm			150 μm		
Micrometer resolution (μm)	0.5	0.0625		1		1	0.25		0.5	0.0625	
Testing range	8 HV _{0.3} ~2500 HV ₁₀			10 HV ₂ ~2500 HV ₃₀		5 HV ₁ ~2500 HV ₅₀			5 HV ~2500 HV		
Dimension of micro test table	-										
Travel range of micro test table	-										
Max. Height of the specimen	160mm			150mm		160mm			65mm		
Max. width of the specimen	135mm			130mm		135mm			85mm		
Hardness conversion	-	Provided		-		-	Provided		-	Provided	
Output	-	Printer, RS232C				-	Printer, RS232C		-	Printer	
Power	220V, 50Hz	220V, 50Hz, Lithium battery		220V, 50Hz		220V, 50Hz	220V, 50Hz, Lithium battery				
Dimension (mm)	650 x 540 x 270			620 x 452 x 200		650 x 540 x 270			480 x 405 x 290		
Net weight (kg)	35			38		45			25		
Standard package	HV10	HVS10		HV30	HV50	HVS50		HV1000	HVS1000		
Main machine	1			1		1			1		
Test block	High block x 1, medium block x 1			(400~500)HV ₂ x 1 (400~500)HV ₃ x 1		Medium block 5kg x 1, medium block 30kg x 1			Micro Vickers high block x 1, medium block x 1		
Micrometer eyepiece	1										
Test table	big / medium / small / V-shape, 1 for each type			big / medium / V-shape, 1 for each type		big / medium / small / V-shape, 1 for each type			X-Y stage / fine wire / fork-shaped / thin specimen, 1 for each type		
Objective	10 ^x x 1, 25 ^x x 1			10 ^x x 1							
Indenter	Vickers indenter x 1			Vickers indenter x 1							
Spare fuse	2			4		2			2		
Weight shaft	-										
Weight	3			4		4			6		
Level	-										
Spare bulb	2										
Product operating manual	1										

SUPERFICIAL ROCKWELL & VICKERS HARDNESS TESTER BRINELL HARDNESS TESTER

Bench Hardness Tester



HD₉-45 Superficial Rockwell & Vickers Optical Hardness Tester

H D₉-45 Superficial Rockwell & Vickers optical hardness tester serves the purpose of measuring the hardness of ferrous, non-ferrous metals, hard metals, carburized or nitrided layers and chemical treating layers. It is also used for the hardness test of thin pieces.

HBE-3000A Brinell Hardness Tester

H BE-3000A automatic Brinell hardness tester features a wide measuring range up to 3000 Kgf with a high accuracy conform DIN 51225/1. During the automatic test cycle the applied force will be controlled by closed loop system which guarantees a constant force on the work piece, conforming to DIN 50351. The HBE-3000A comes completely with a reading microscope with enlargement factor 20^x and a micrometer resolution of 0.005mm.



HBRVU-187.5 Brinell Rockwell & Vickers Optical Hardness Tester

This tester is used for determining the Brinell, Rockwell and Vickers hardness of ferrous, non-ferrous metals, hardmetals, carburized layers and chemical treating layers. It can be applied in the factories, scientific research institutes, laboratories and colleges.

HBS-3000 Digital Brinell Hardness Tester

H BS-300 digital Brinell hardness tester is a new generation Brinell hardness tester that is domestically advanced. It can be applied to determine the Brinell hardness for ferrous metal and non-ferrous metal. The tester adopts electronic auto loading, computer software programming, high power optical measurement, photosensor and other systems. Each operational process and test result can be displayed on large LCD. The test results can be printed by printer. This tester is also adaptive in manufacturing enterprises, colleges and scientific institutions.



Specifications & Packing List

Model	HBE-3000A	HBS-3000	HBRVU-187.5	HD ₉ -45
Type	Brinell	Digital Brinell	Brinell, Rockwell & Vickers	Superficial Rockwell & Vickers
Test range	8~650 HBW (hardmetals steel ball)			
Preliminary test force (N)	-	-	98	29.4
Rockwell hardness test (N)	-	-	588, 980, 1471	-
Superficial Rockwell hardness test (N)	-	-	-	147.1, 294.2, 441.3
Brinell hardness test (N)	612.5, 980, 1225, 1837.5, 2450, 4900, 7350, 9800, 14700, 29400			-
Vickers hardness test (N)	-	-	294, 980	49, 98, 196, 294.2
Load control	-	Automatic	-	-
Test force dwell time (s)	-	-	-	-
Magnification of microscope ^x	20 ^x for reading microscope			75 ^x , 150 ^x
Min. measuring unit	-	-	-	-
Max. height of specimens (mm)	220			160 for Rockwell, 100 for Vickers, Brinell
Max. depth of specimens (mm)	135			200
Dimension of the X-Y table (mm)	-	-	-	-
Power	AC220V, 50/60Hz			AC220V, 50/60Hz
Dimension (DxWxH) (mm)	550 x 236 x 753			546 x 300 x 767
Net weight (kg)	123	130	90	85
Packing List				
Indenter	Steel ball indenter Ø2.5mmx1 Ø5mmx1 Ø10mmx1			Diamond Rockwell x 1, Diamond Vickers x 1 Hardmetal ball indenter Ø1.5875mm x 1, Ø2.5mmx1, Ø5mm x 1
Testing table	Big / small / V, 1 for each			Big/medium/V, 1 for each Baffle/Vickers/V for microscope, 1 for each
Hardness block	HBW 3000/10 150~250 x 1, HBW 1000/10 75~125 x 1, HBW 187.5/2.5 150~250 x 1			Rockwell block x 3, Brinell block x 1 Vickers block x 1
Weight shaft	-	-	-	-
Weight	-	-	5	4
Operation manual	1	1	1	1
Microscope stand	-	-	1	1
Reading microscope	20 ^x x 1			-
Micrometer eyepiece	-	1	15 ^x x 1	15 ^x x 1
Objective	-	-	2.5 ^x x 1, 5 ^x x 1	5 ^x x 1, 10 ^x x 1

Portable Rockwell Hardness Tester

Standard package

Main unit	1
Diamond penetrator	1
Steel ball penetrator, Ø1.588mm	1
Test block	4
Flat anvil	1
V anvil	1
Extension	1
Operation manual	1
Carrying case	1

Optional accessories

Bench stand
Test block
Diamond penetrator, 120°
Steel ball penetrator, Ø1.588mm
Steel alloy ball penetrator, Ø1.588mm
Steel ball penetrator, Ø3.175mm
Flat anvil, 1/2"
Flat anvil, 1"
V anvil, 1/2"
V anvil, 1"
V anvil, 1-1/2"
Cylindrical anvil, 1/2"
Cylindrical anvil, 1"
Cylindrical anvil, 1-1/2"
Convex anvil, 1/2"
Convex anvil, 3/4"
Convex anvil, 1"
Raised flat anvil, 1/2"
Raised flat anvil, 1"
Diamond raised flat anvil, 1/2"
Extension, 1/2"
Extension, 3/4"
Extension, 1"
Extension, 2"
Lens

PORTABLE ROCKWELL HARDNESS TESTER M-SERIES

M-series portable hardness testers are high accurate and reliable for measuring hardness of metal materials, especially for the measurement of work piece on site, it makes measurement convenient and easy. The M-series hardness testers are worked on the principle of Rockwell and Brinell, which complies to the ASTM E-110 standards. With different dimension, opening and throat depth, we have several models to fit smaller or bigger workpiece.

M1 **M1S** **M1ST** **M2** **M2S**



Opening: 25mm
Depth: 25mm



(*Superficial*) for
Rockwell N and T
scales
Opening: 25mm
Depth: 25mm



For *Superficial* testing
small diameter tubing
with walls.
Anvil fits into
3/6" I.D. and larger.
Rockwell 15-T scale
only.



Opening: 50mm
Depth: 50mm



(*Superficial*) for
Rockwell N and T
scales
Opening: 50mm
Depth: 50mm

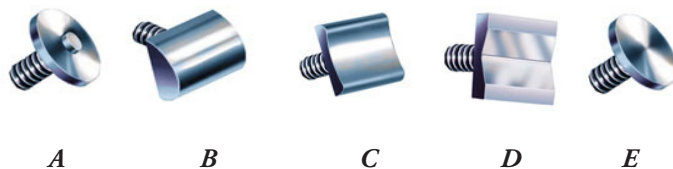
Accessories

Bench Stand



Cast iron for solid support. Holds tester at a convenient angle, freeing hands for ease of use. Inner fibre sleeve won't scuff tester handle.

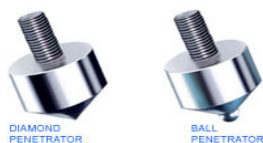
Anvils



The correct anvil helps you get the reading right the first time.

- A - Raised flat for thin workpiece
- B - Convex for tube
- C - Round for larger round rod
- D - Vee for small round stock
- E - Standard flat stock anvil

Penetrators



For each scale, you need the correct penetrator. They are interchangeable.

Extensions



Extensions allow testing thinner items with larger tester models without sacrificing stability.

Test Blocks



Traceable test specimens are essential for getting good tests. We provide only certified test blocks to users.

Standard package - HT225A

HT225A main unit	1
Grinding wheel	1
Conversion table	1
Operation manual	1
Carrying case	1

Standard package - EMT220

EMT220 main unit	1
Short feeler lever (only for integrated type)	1
Acceleration transducer (only for separate type)	1
Transducer connection cable (only for separate type)	1
Thermo electro couple transducer (only for EMT220 with temperature measuring function)	1
6F22 cell	1
Operation manual	1
Carrying case	1

Optional accessories

Long feeler lever
Earphone Leather sheath
Signal output wire

Standard package - EMT260A

EMT260A main unit	1
Reflective tape	1
Support converter	1
Battery	2
Operation manual	1
Carrying case	1

Standard package - EMT260B

EMT260B main unit	1
Contact tip assembly	1
Contact tip(concave and convex)	1
Linear contact wheel	1
Operation manual	1
Carrying case	1



CONCRETE TESTING HAMMER HT-225A

When testing the strength of concrete, the concrete test hammer uses a certain elastic force to transit the impact force of an impact hammer to the surface of concrete, its initial kinetic energy redistributes, a part of energy in the form of plastic deformation or residual deformation is adsorbed by the concrete, and another part of energy which is proportional to the surface hardness is transmitted to the impact hammer, making the hammer resile to a certain height, then the strength of the concrete is derived from the proportional relation between the height of resilience and the concrete strength. With the merits of simple structure, easy correction, maintenance and repair, and portability, the concrete test hammer is widely used in civil engineering and construction industry for testing the strength of concrete. Compared to other nondestructive testers, the concrete test hammer is an economical and practical nondestructive testing instrument. HT-225A is used for testing the strength of various concrete members (slab, beam, column, truss) of normal building strength and bridge.



- ✓ Nominal kinetic energy: 2.207J(0.225kgf.m)
- ✓ Flip tension spring rigidity: 7.84N(0.80kgf)/cm
- ✓ Punch advance for impact hammer: 75mm
- ✓ Impact surface hardness value between impact hammer and rod: HRC59-63
- ✓ Maximum breakout friction of pointer system: 0.49-0.78N(50-80g)
- ✓ Mean-value of steel-anvil rating of concrete test hammer: 80±2
- ✓ Standards: ISO/DIS 8045, EN 12504-2, ENV 206, DIN 1048 part 2, ASTM C 805, ASTM D 5873, NFP 18-417, B 15-225, JGJ/T 23-2001, JJG 817-1993
- ✓ Dimension: Ø60x280mm
- ✓ Net weight: 1kg

PORTABLE VIBRATION METER EMT220

Vibration transducer:

Integrated, annular shear type acceleration transducer (only for integrated type)

Separate, built-in electric charge amplifier, shear type acceleration transducer (only for separate type)

Temperature transducer:

Type K thermoelectric couple transducer (only for EMT220 with temperature measuring function)

Detector: Root Mean Square

Vibration measurement scale:

Displacement: 0.001-1.999 mm (peak to peak)

Velocity: 0.01-19.99 cm/s (r.m.s. value)

Acceleration: 0.1-199.9 m/s² (peak value)

Vibration acceleration: ≤ 199.9 m/s² (peak value)

Temperature measurement scale:

-20-400°C(only for EMT220 with temperature-measuring function)

Accuracy:

Vibration measurement: ±5% Measurement value; ±2 Digits

Temperature measurement: ±1% Measurement value; ±1 Digit

Vibration Frequency Range:

10-1 kHz (Normal type)

5-1 kHz (Low frequency type)

1-15 kHz (only at "HI" position for acceleration)

Display: Digits liquid crystal display

Sample period: 1 second

Vibration measurement value readout:

Displacement: Peak to peak value (r.m.s.×2/√2)

Velocity: Root mean square (r.m.s.)

Acceleration: Peak value (r.m.s.×√2)

Readout-keeping function:

Readout of vibration / temperature value can be remembered after releasing the Key (Vibration / Temperature Switch)

Output Signal:

2V AC (peak value) (load resistance above 10 kΩ at full measuring scale)

Power supply:

6F22 9V laminated cell

Battery life about 30 hours for continuous use

Power on / off:

Power up when pressing Measure Key (Vibration / Temperature Switch)

Power automatically shut off after releasing the Measure Key for one minute

Operating condition:

Temperature: 0-50°C

Humidity: ≤ 90% RH

Dimension: 185mm×68mm×30mm

Net weight: 200g



PORTABLE OPTICAL TACHOMETER EMT260

- ✓ Unique ergonomic design provides direct line-of-sight viewing of display and target
- ✓ Easy reading 5 digit LCD display
- ✓ On-target and low battery indicator
- ✓ Maximum, minimum and last measurement of rotational speed, frequency, cycle, linear speed and counter.

Specifications

Speed Ranges:

Rotational speed: 1-99999r/min

Frequency: 0.0167-1666.6Hz

Cycle: 0.6-60000ms

Counter: 1-99999

Linear speed: 0.1-3000.0m/min

0.0017-16.666m/s

Accuracy: ±0.005% of reading

Display: 5 digit LCD display

Input signal: 1-5VP-P Pulse Input

Output signal: TTL compatible Pulse Output

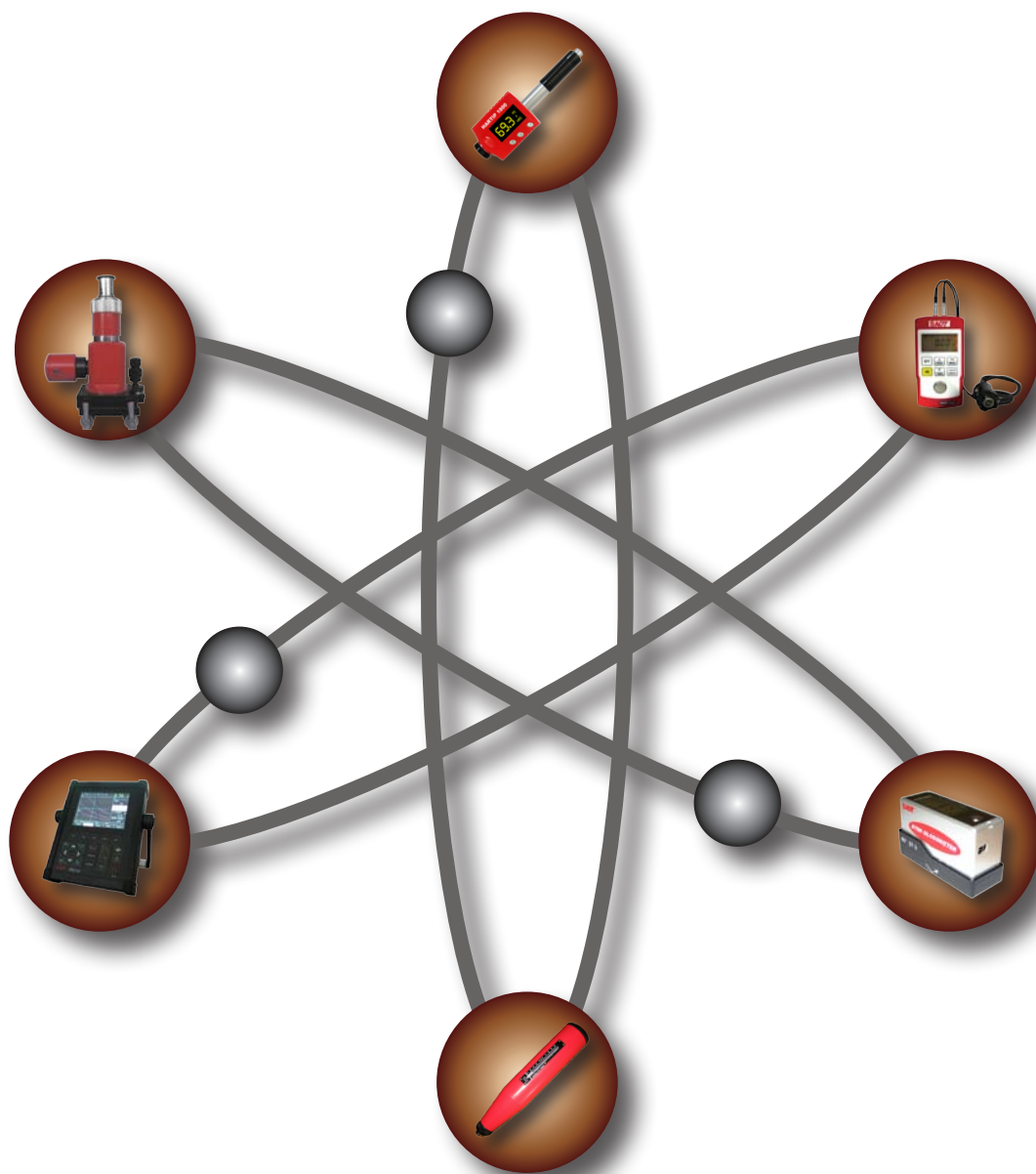
Power: 2x1.5V batteries

Dimension (LxWxH):

128mmx58mmx26mm

Net weight: 90g





SINO AGE DEVELOPMENT TECHNOLOGY.

Subject to change without notice.

No. 18 Zhong Guan Cun East Road, A1507 Haidian

Beijing 100083 P.R. CHINA

Tel: +86(10)8260-0228, 5166-3600

Fax: +86(10)8260-0229

www.sadt.com.cn

www.sinoage.cn