پترو فرهان گستر جنوب

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Product Overview

MH320 portable Leeb hardness tester is based on Leeb hardness measurement principle, it can be quickly and easily used for on-site testing hardness of metallic materials and support free conversion between Leeb, Brinell, Rockwell hardness and other scales. It uses 128 × 64 dot matrix LCD screen, rich information, intuitive, stable performance and integrated high-speed thermal printer, which enables printing with instant measurement results.It can be widely used in metal processing and manufacturing, special equipment, permanent component failure analysis, inspection and other fields. It is particularly suitable for large parts and non-removable part of the on-site hardness testing. It is to improve production efficiency and pass rate and is a wise choice to save the cost of production.

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Technical Specifications

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Measuring Range	(170 ~ 960) HLD	
Error And Repeatability	Impact device D 760±30HLD , ±6HLD,	530±40HLD , ±10HLD
	Impact device DC 760±30HLDC , ±6HLDC,	530±40HLDC , ±10HLDC
	Impact device DL 736±40HLDL , ±12HLDL,	878±30HLDL , ±12HLDL
	Impact device D+15 766±30HLD+15 , ±12HLD+15,	544±40HLD+15 , ±12HLD+15
	Impact device G 590±40HLG , ±12HLG,	500±40HLG , ±12HLG
	Impact device C 822±30HLC , ±12 HLC,	590±40HLC , ±12 HLC
Impact Direction	Vertically downward, oblique, horizontal, oblique, vertical upward, automatically identify	
Material	Steel and cast steel,Cold work tool steel,Stainless steel,Grey cast iron,Nodular cast iron, Cast a luminum alloys,BRASS(copper-zinc alloys),BRONZE(copper-aluminum/tin alloys), Wrought copper alloys	
Hardness Scale	HL、HB、HRB、HRC、HRA、HV、HS	
Paper Roll	Width (57.5 ± 0.5) mm, diameter: 30mm,imported paper to ensure long-term date storage	
Display	128×64 dots, adjustable backlight	
Integrated Data Memory	500 measurement series.(Relative to average times 32 ~ 1)	
Battery	6V Ni-MH battery pack	
Power Supply	9V/500mA	
Recharge Time	2.5-3.5hours	
Standby Time	About 150 hours (with default brightness)	
Communication Interface	USB1.1	

Features

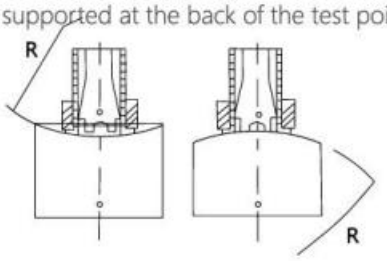
- Based on the principle of Leeb hardness testing theory. It can measure the Leeb hardness of all metallic materials.
- One main unit can match to 6 impact devices.
- Support Steel ,when using D/DC sensor to test steel,it can show HB directly.
- Preset on up and low limit of hardness value lower limits, it will alarm automatically if it is out of range alarm, which is convenient for the user to do more testings.
- Chinese-English converting, simple menu-driven operation, and convenient.
- High brightness, easy to use in dimly lit environments and intense sunlight.
- 500 groups (impact times 32 ~ 1) hardness measurements, each set of data includes single testing value, average value, measurement date / time, impact direction, frequency, material, hardness, and other information.
- Integrated thermal printer with the instrument as a whole, and quiet operation, fast print speeds, you can print the test report on-site.
- Software calibration automatically.
- Built-in NI-MH ,it can work for not less than 150 hours; standby with automatic screen, automatic sleep, automatic shutdown and other power-saving features.
- Real-time display the remaining battery power, charging progress is displayed while charging.
- USB interface can do transmission measurements, the measured value storage management, statistical analysis of the measured value, the measured value of the print report and batch set the instrument parameters through the PC data processing software, to meet the higher demand for quality assurance and management.
- Small size, portable, highly integrated, stable and reliable performance, suitable for harsh environment field operations, prevent from vibration, shock and electromagnetic interference.
- Dimension : 212mm×80mm×32mm.

Applications Fields

- Die cavity of molds.
- Bearings and other parts.
- Failure analysis of pressure vessel, steam generator and other equipment.
- Heavy work piece.
- The installed machinery and permanently assembled parts.
- Testing surface of a small hollow space.
- Requirements of formal original record for test results.
- Material identification in the warehouse of metallic materials.
- Rapid testing in large range and multi-measuring areas for large-scale work piece.

Application Conditions

- Surface temperature can't be overheat, less than 120 °C.
- Surface roughness should not be too large, otherwise it will cause errors. The surface of the work piece must be exposed metallic luster, smoothing and polish, without oil.
- The specimens with 2-5kg or thin-walled specimens overhangs should be supported with some object in order to avoid the specimen deformation ,bending and movement caused by impact , for medium-sized work piece ,it shall be placed on a flat and hard surface, the sample must be placed absolutely smoothly, without any shake, for heavy samples more than 5kg, it can be measured directly without any support.
- Portable Leeb hardness tester has strict requirements for sample thickness , the minimum thickness shall comply with regulatory(see instructions).
- For work piece with hardened layer on surface,the depth of hardened layer should conform to regulatory.
- For lighter parts,please make it tightly coupled with support, two coupled surface must be flat and smooth, the coupling gel should not be too much, the direction of the test shall be perpendicular to the coupling plate; if the work piece is a large plate, pole or bending material, even if the weight and thickness is ok ,it may still cause deformation and instability, resulting in test values error, it should be reinforced or supported at the back of the test points.
- Magnetic of work piece should be less than 30 gauss.
- For artifact surface : The work piece surface is preferably flat. When the curvature radius R of measured surface is less than 30mm,the work pieces should be tested with the small support ring or the shaped support rings.

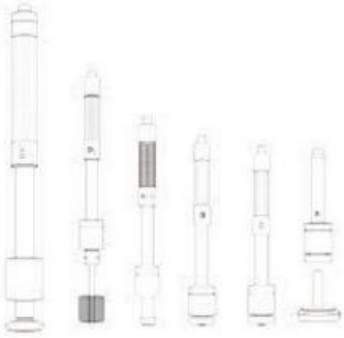


Working Conditions

- Working temperature : -10℃ ~ + 50℃,
- Storage temperature : -30℃ ~ + 60℃,
- Relative humidity : ≤90%,
- The surrounding environment should avoid of vibration, strong magnetic field, corrosive medium and heavy dust.

Impact Devices

D	:	Stand configuration,for normal testing
D C	:	Test hole or hollow cylindrical
D L	:	Test slender narrow groove or hole
D+15	:	Test groove or concave surface
G	:	Test large, thick,heavy and rough surface steel
C	:	Test small,light,thin parts and surface of hardened layer



Other Supporting rings

No	Type	Remarks	Sketch
1	Z10-15	For testing cylindrical outside surface R10 ~ R15	
2	Z14.5-30	For testing cylindrical outside surface R14.5 ~ R30	
3	Z25-50	For testing cylindrical outside surface R25 ~ R50	
4	HZ11-13	For testing cylindrical inside surface R11 ~ R13	
5	HZ12.5-17	For testing cylindrical inside surface R12.5 ~ R17	
6	HZ16.5-30	For testing cylindrical inside surface R16.5 ~ R30	
7	K10-15	For testing spherical outside surface SR10 ~ SR15	
8	K14.5-30	For testing spherical outside surface SR14.5 ~ SR30	
9	HK11-13	For testing spherical inside surface SR11 ~ SR13	
10	HK12.5-17	For testing spherical inside surface SR12.5 ~ SR17	
11	HK16.5-30	For testing spherical inside surface SR16.5 ~ SR30	
12	UN	For testing cylindrical outside surface Radius adjustable R10 ~ ∞	

Configurations

	No.	Item	Quantity	Remarks
Standard Configuration	1	Main unit	1	
	2	D type impact device	1	
	3	Standard test block	1	
	4	Power adapter	1	
	5	Cleaning brush (A)	1	
	6	Small support ring	1	
	7	Ni-MH battery pack	1	In the product
	8	Manual	1	
	9	ABS instrument package case	1	
	10	Printer paper roll	1	
Optional Configuration	1	Other type of impact devices and support rings		
	2	Other impact device		
	3	Cleaning brush(B)		For G sensor
	4	Communication cable		
	5	Data-pro software		

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