

MU200

ULTRASONIC HARDNESS TESTER

Professional manufacturer, best quality with competitive price ●
 Recommended by the world UT NDT inspection association for training and examination ●
 Core technology with independent intellectual property rights, certificate of CE, GOST and etc.. ●



Overview

MITECH MU200 non-destructive ultrasonic hardness tester, based on the principle of ultrasonic vibration sensor rod, can easily detect a variety of metal materials hardness without damage. Its measurement speed and precision is high and there will be no indentation. It uses advanced sensing system and single chip technology, better than the traditional ultrasonic hardness testers in structure and function. MU200 support value conversion among HRC, HB, HV and others and the multi-point measurement can be averaged. It can also accurately display and print the test results if possible. The product is widely used in hardness testing of finished workpiece, metal foil, metal thin layer (nitriding layer, carburizing layer, electroplating layer, etc.), difficult to move large parts, easy to dismantle the parts and special shape parts. It is one precision testing equipment to improve production pass rate and cost savings.

Technical Parameters

Technical Parameters	Technical indicators
Measurement scope	HRC(10-80) ;HB (200-550) ;HV (200-999)
Display precision	0.1HRC
Measurement precision	±1.5HRC
Measurement direction	360 ° (vertical, horizontal and slant)
Hardness	HB\HRC\ HV
Recharge time	5h
Roughness	Ra≤3.2
Measurement head	136 °diamond pyramid
Contact pressure	evenly contact pressure 12N±1N(adjustable)
Adaptable Power	AC220V ±10%, DC 5V chargeable batteries
Size	204*100*35mm
Weight	280g (main detector)

Working Principle

Ultrasonic hardness tester consists of hand-held host and probe connected with the cable. Inside the probe is a vibration bar to connect the Vickers pressure head. After the boot, the vibrating bar produces ultrasonic vibration, the vibration frequency is fixed to the sensor on the vibrating bar to sense, when the lower end of the probe head pressed into the material surface tightly, the micro-vibration rod to the shock to the material Microcrystal, so that the grain began to vibrate at different frequencies, when the two vibration frequency tends to synchronize will produce resonance, so the sensor can detect the resonance frequency before and after. According to the elastic modulus of the material and the amount of change in frequency, the material hardness value can be calculated.

Features

- Based on the principle of ultrasonic resonance, no damage to the workpiece surface, suitable for measuring product with high requirements of the surface;
- Internal protection circuit makes perfect protection against interference;
- Mainly used to measure HRC, freely to switch among HB, HV and HRC;
- For detection of different materials, just use the same elastic modulus or similar material to do the test block to adjust, no need to replace the probe;
- Built-in rechargeable lithium battery power supply, long standby; Even if without AC power, measurement can still be done;
- Available for more measurements and calculate the average if hardness varies;
- No need to set the direction of the probe, just keep the probe vertical to the surface;
- Optional plats are suitable for small workpiece detection. The detection speed can be greatly improved;
- Small size, light weight, simple operation, easy to carry;
- Widely used in gears, bearings, all kinds of metal coating (such as nitriding layer, carburizing layer, plating layer, chrome layer, etc.), metal sheet, sheet metal, shaped workpiece, immovable large workpiece, Friction parts, all kinds of molds that need to test the hardness of the product.

Applications

- Machining
- Bolts
- Drill bit
- Agricultural machine
- Military accessories
- Auto parts
- Printing machine
- Research
- Bearing steel
- Aerospace
- Shipbuilding
- Petrochemical
- Power
- Heat treatment
- Supervision and inspection

Applicable conditions

- The workpiece surface can not overheat, the temperature should not exceed 120 °C;
- Metal surface must be exposed to metallic luster, and smooth without oil;
- For the surface of the hardened layer of the workpiece, hardened layer depth should meet the relevant standards;
- The workpiece itself should be less than 30 gauss;

Probe types

Name	Type	Accuracy	Range	Scope of Applications
Standard Probe	A-Probe	±1.5HRC	10-50N	For regular shape workpiece.
High precision Probe	B-Probe	±1HRC	5-50N	For regular shape workpiece, together with device for stability to achieve accurate results.
Probe for gear and hole	TC-Probe	±1.5HRC	10-30N	Diameter 6mm For irregular shape workpiece.
Probe for inner hole	TN-Probe	±1.5HRC	10-30N	Mini Length 72mm For irregular shape workpiece such as inner hole.

Instrument configuration

Configuration	NUM.	Name	QTY.	Tips
Standard config	1	Main unit	1	
	2	Probe	1	
	3	Cable	1	
	4	Standard Block	2	
	5	Battery	1	Placed in the main unit
	6	AC adapter	1	
	7	ABS case	1	
	8	Booklet	1	
Optional config	9	B-Probe	1	Other customized probes are also available.

