



HL150 Pen-type Portable Leeb Hardness Tester

Category: Leeb Hardness

HL-150 portable hardness tester, also known as pen-type hardness tester, based on Leeb hardness measuring principle, quick and easy on-site test the hardness of series metal materials, support free conversion between Brinell, Rockwell hardness scale and others, integrated compact design, small size, portable, highly integrated, stable and reliable performance, supporting data transfer and print the stored function. Widely used in failure analysis of metal processing and manufacturing, special equipment, permanent assembly, inspection, and other fields. Particularly suitable for large parts and non-removable parts of the site hardness testing. It is a professional precision instrument to improve the pass rate of production and cost savings.

Functions and Application:

- Die cavity of molds
- Bearings and other parts
- Failure analysis of pressure vessel, steam generator, and other equipment
- Heavy workpiece
- The installed machinery and permanently assembled parts.
- The 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 workpiece

Working Principle:

The energy quotient is quoted in the hardness unit HL and is calculated from comparing the impact and rebound velocities of the impact body. It rebounds faster from harder samples than from softer ones, resulting in a greater energy quotient which is defined as $1000 \times V_r / V_i$.

$$HL = 1000 \times V_r / V_i$$

Where:

HL – Leeb hardness value

V_r – Rebound velocity of the impact body

V_i – Impact velocity of the impact body

Measuring range	(170 ~ 960) HLD
Impact direction	vertically downward, oblique, horizontal, oblique, vertical upward, automatically identify
Error	Impact device D: $\pm 6HLD$
Repeatability	Impact device D: $\pm 6HLD$
Material	Steel and cast steel, Cold work tool steel, Stainless steel, Grey cast iron, Nodular cast iron, Cast alum
Hardness Scale	HL, HB, HRC, HRA, HV, HS
Min depth for harden layer	$D \geq 0.8mm$; $C \geq 0.2mm$
Display	High-contrast Segment LCD
Storage	up to 100 groups (Relative to average times 32 ~ 1)
Calibration	Single point calibration
Data printing	Connect PC to print
Working voltage	3.7V (Built-in lithium polymer battery)
Power supply	5V/500mA; recharge for 2.5 ~ 3.5 h
Standby period	About 200h (without backlight)
Communication interface	USB1.1
Working language	Chinese
Shell material	ABS engineering plastic
Dimensions	148mm×33mm×28 mm
Total weight	4.0KG
PC software	Yes

