



MATRIX

Portable Leeb Hardness Tester

MATRIX-L2 SERIES



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The Leeb hardness testing, otherwise called as Leeb Rebound Hardness Test (LRHT), is considered as one of the four commonly used methods to test the hardness of the metal. It is a type of non-destructive testing used to inspect large sized workpieces weighing above 1 kg. It also measures the coefficient of restitution.

Unlike other stationary traditional methods including Rockwell, Brinell, and Vickers which were implemented only in the laboratories or testing areas, the Leeb method proves to be portable by achieving high testing rates at a reduced cost.

The hardness tester measures the metal hardness in 5 different hardness scales which are: Rockwell, Vickers, Leeb, Brinell and Shore. In addition, the Rockwell measurement also makes a distinction between Rockwell B and C.

The abbreviations for the above hardness scales are: HRB, HRC, HV, HB, HS, HL.

It can be used on die cavity of molds, bearings and other mass produced parts on production line, failure analysis of pressure vessel, steam generator and other equipment, heavy work piece, installed machinery and permanently assembled parts, testing surface of a small hollow space, material identification in the warehouse of metallic materials, rapid testing in large range and multi-measuring areas for large-scale work piece.

Product Features: -



- Full metal shell design, sturdy, portable, high reliability;
- Test at any angle, even upside down;
- Has a starting value calibration function, ensure the data is applicable and accurate in different codes & standards.
- Seven impact devices are available for special application, automatically identify the types of impact devices.
- User calibration function.
- Battery information indicates the rest capacity of the battery and the charge status.
- Has the function of automatic alarm, pre-set tolerance limit, beyond the range has automatic alarm, especially suitable for batch testing.
- Menu operation, information rich, intuitive, the realization of arbitrary switching material and hardness system's key type, simple and convenient;
- Excellent after-sale service system for high quality products-two years warranty and all life maintenance. Easy to operate.
- Narrow space also available to use.
- Support OEM service.
- High price performance.

Technical Specification:

Measuring Materials	Steel & cast steel, alloy tool steel, stainless steel, gray cast iron, nodular cast iron, cast aluminium alloy, copper zinc alloys (brass), copper and tin alloy, copper (bronze), forged steel
Measuring Range	HLD(170-960), HB(19-683), HV(80-1042), HS(30.6-102.6), HRA(59.1-88), HRB(13.5-101.7), HRC(17.9-69.5)
Indication Error	± 6 HLD
Measuring Direction	360°
Hardness Scale	HL, HB, HRC, HRA, HV, HS
Display	128*64 digital matrix LCD
Data Memory	Max 600 groups (relative to impact times 1-32 adjustable)
Power	AA battery 2 pcs (working time 200 hours if backlight off)
Working Temperature	-20°C – 55°C
Size	125 x 68 x 24mm
Weight	0.4 kg

Packing List:



ITEM	QTY
L-2 Host	1 Nos.
Standard 'D' impact device	1 Nos.
Brush	1 Nos.
'HLD' scale hardness block	1 Nos.
User Manual	1 Nos.

Our NABL Scope of Calibration

Sr. No.	INSTRUMENT NAME	CALIBRATION METHOD	RANGE/SCALE	CMC(±)
1	Uniaxial Testing Machine	IS 1828-1, ISO7500-1 & ASTM E4	5N - 3000 kN (Compression) 20N - 1000kN (Tension)	0.25 %
2	Displacement of cross-head-travel of Uniaxial Testing Machines	ASTM E2309	0 to 600 mm	50µm
3	Speed of cross-head-travel of Uniaxial Testing Machines	ASTM E2658	0 mm to 500 mm	0.5 mm/min
4	Rockwell Hardness Testing Machine	IS1586-2,ISO6508-2 & ASTM E18	HRA, HRBW, HRC	0.65 HRA, 0.68 HRBW 0.60 HRC
5	Rockwell Superficial Hardness Testing Machine	IS1586-2,ISO6508-2 & ASTM E18	HR 15N, HR 30N, HR 45N HR 15T, HR 30T, HR 45T	0.82 HR15N, 0.82 HR30N 0.86 HR45N, 1.10 HR15T 1.10 HR30T, 1.10 HR45T
6	Brinell Hardness Testing Machine	IS1500-2, ISO6506-2 & ASTM E10	2.5/62.5, 2.5/187.5, 5/250 5/750, 10/500, 10/1000 10/3000	2.60%, 2.10%, 2.00% 1.61%, 1.40%, 1.40% 1.60%
7	Vickers Hardness Testing Machine	IS1501-2, ISO6507 & ASTM E92	HV5, HV10, HV 20, HV30	2.60%, 1.30% 1.20%, 1.20%
8	Micro Vickers Hardness Testing Machine	IS1501-2, ISO6507-2 & ASTM E384	HV0.1, HV0.2, HV0.3, HV0.5, HV 1	3.7 %, 3.0 %, 3.6 %, 3.5 %, 2.6 %
9	Test Force Verification of Hardness Tester	IS, ISO & ASTM Relevant Standard	0.1 kgf to 3000 kgf	0.4%
10	Indentation Measuring system of hardness Testers	IS, ISO & ASTM Relevant Standard	0 to 7 mm	0.4%
11	Testing Cycle of hardness Testers	IS, ISO & ASTM Relevant Standard	0 to 180 sec	0.8 Sec.
12	Leeb / Dynamic Hardness Tester (DHT)	ASTM A956	'D' scale	7 HLD
13	Durometer (Shore Hardness Tester)	ASTM D2240	Shore A & D	0.5 Shore
14	Charpy & Izod Metal Impact Testing Machine	ISO148- 2, BS131- 4, IS3766, ASTM E23	up to 750 J	0.50%
15	Charpy & Izod Plastic Impact Testing Machine	ISO13802 - 2, ASTM D256, ASTM D6110	up to 50 J	0.65%
16	Extensometer	IS12872,ISO9513 & ASTM E83	0 to 25 mm travel	2.0 µm
17	Microscope	ASTM E1951	Magnification Up to 1000 X	1%
18	Erichsen Cupping Fixture	IS10172	0 to 20 mm	10 µm
19	Profile Projector	JIS B 7184	Linear : 0 to 200 mm Magnification : 10 to 100 X Angular Scale : 0° to 360°	15 µm, 0.7%, 5.30 min of arc

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