

NauMetrics

Precision Measuring Instruments



Portable Hardness testers

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Inhoudsopgave:

Portable Hardnesstesters

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Portable Hardnesstester KH-100



Handheld metal hardness tester with hardness conversion and automatic position setting

- Digital hardness Tester is a menu driven Multi-functional unit with internal memory in a batch of 1250 average reading.
- Data output RS-232
- Wide measuring range in HL value and direct display of converted hardness values in Rockwell HRB, HRC, Vickers HV, Brinell HB and Shore HS
- High accuracy $\pm 0.5\%$
- Impact device provides testing at any angle
- Date and time display
- Lower and upper limits setting with Low-High display judge
- Six impact devices are available for special applications
- Works on standard AAA batteries;
- Auto-off after two minutes

Technical Specifications:

Display	128 X 64 Dot LCD English Menu With Backlight
Measurement Range	HL 180-960 HRC 19.6-68.5 HRB 13.5-100 HS 31.9-99.6 HB 30-680 HV 80-999
Measurement Materials	Steel, Tool Steel, Stainless Steel, Grey Cast Iron, Cast Iron, Cast Aluminum, Brass, Bronze, Copper.
Hardness Scale	HL HRC HRB HS HB HV
Resolution	± 0.5% (HLD = 800)
Storage of data	1250 groups
Data readout	●
Print	●
RS232CSerialPort	●
Battery Indicator	●
Real Clock	●
Auto-off	●
Size	108X61X25mm
Weight	108g

Note : ● means the function is available.

Standard Delivery:

Main Body	1 set
Impact Device Type D	1 set
Standard Test Block	1 pc.
Battery (AAA)	2 pcs
Data Cable	1 pc
Instruction Manual	1 pc
Carrying Case	1 set

Accessory (Optional)

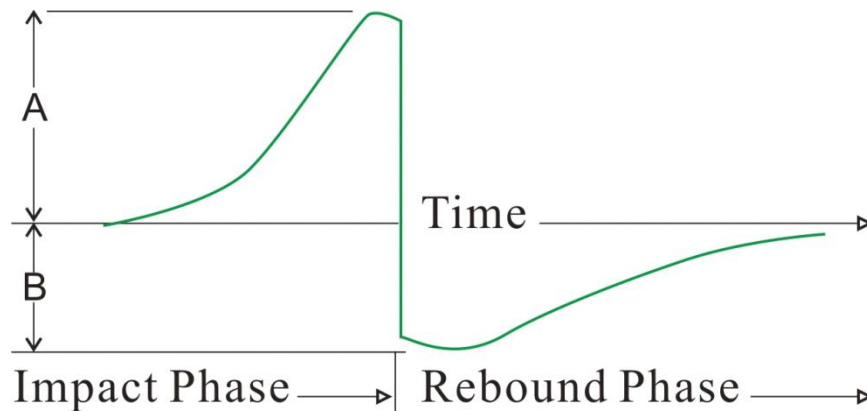
1	Impact device type DC
2	Impact device type D+15
3	Impact device type C
4	Impact device type G

Portable Hardnesstester KH-160



KH-160 Leeb`s Hardness Tester Working Principle

To use the impact body of certain weight impacts against the testing surface under certain spring force, leeb hardness means the ratio of the impacting velocity (V_a) and the rebounding velocity (V_b) of the impact body when the spherically test tip is located 1mm above the testing surface. The leeb hardness values are calculated by the following formula:



Technical Specifications

Hardness Parameter	HL, HB, HRB, HRC, HV, HS, Tensile Strength δb
Measuring Range	HLD (200-960) HRC (19.8-68.5) HRB (13.5-100) HB (30-651) HV(80-976) HS (26.4-99.5) δb (375-2639)
Standard Impact Device	D type
Optional Impact Device	C/G/DC/DL/D+15
Accuracy	± 6 HLD (HLD=800), Repeatability < 6HLD (HLD=800)
Measuring Direction	For manual setting
Resolution	1HL, 1HV, 1HB, 0.1HRB, 0.1HRC, 0.1HS
Display	LED with Backlight
Memory	100 groups (each group include 1-7 testing result and 1 AVE value)
Communication	USB
Printer (Optional)	Portable Thermal Printer (Blue Tooth)
Power	2 pcs. 1.5v AA batteries
Working Temperature	-10°C ~ +50°C
Size	153 × 76 × 37 (mm)
Weight	280g include batteries
Standard	GB/T 17394-1998, ASTM A956
Warranty	12 months

<i>Standard Delivery</i>	<i>Optional</i>
KH-160 Main body	Impact device: C/G/DC/DL/D+15
Standard Block (HLD value)	Standard Block
Rubber Protective Case	Thermal Printer (Blue Tooth)
Cleaning brush	Special Support rings (12 pcs)
Small Support ring	
User`s manual	
Suitcase	
Soft-CD & Communication cable	

Portable Hardnesstester KH-200



KH-200 PORTABLE HARDNESS TESTER

Features:

- Dynamic hardness testing; quick and reliable
- Wide measuring range in HL value and direct display of converted hardness values in Rockwell HRB, HRC, Vickers HV, Brinell HB and Shore HS
- For most metals
- Impact device provides testing at any angle, even upside down
- Data output USB port and internal memory in a batch of 1250 average readings
- Lower and upper limits setting with Low-High display judge
- Works on 3.7V rechargeable lithium-battery with working more than 16 hours continuously; auto-off after two minutes

Conforming to ASTM A 956

Technical specification:

Hardness parameter:	HL,HRC,HRB,HV,HB,HS
Measuring range / metallic materials:	See the table 1
Display:	112×64 LCD
Display functions:	Hardness scale,hardness value,average indicator and average value,impact direction,memory reference,battery power consumption
Accuracy:	Within +/- 0.5% (HLD=800)
Statistics:	Average value
Memory:	1250 groups
Output:	USB port
Impact device (standard):	D
Optional Impact Device:	DL / C
Power:	3.7V rechargeable lithium-battery with working more than 16 hours continuously.
Operating temperature:	-20°C ~ +50°C
Overall dimensions:	158×41×26mm

Table 1 (For impact device D)

Materials↕	HL↕	HRC↕	HRB↕	HB↕	HS↕	HV↕
ST & CAST ST↕	300~900↕	20.0~68.0↕	38.4~99.5↕	80~647↕	32.5~99.5↕	80~940↕
CWT STEEL↕	300~840↕	20.4~67.1↕	↕	↕	↕	80~898↕
STAINLESS↕	300~800↕	19.6~62.4↕	46.5~101.7↕	85~655↕	↕	85~802↕
GC IRON↕	360~650↕	↕	↕	90~334↕	↕	↕
NC IRON↕	400~660↕	↕	↕	131~367↕	↕	↕
CAST ALUM↕	174~560↕	↕	↕	20~159↕	↕	↕
BRASS↕	200~550↕	↕	13.5~95.3↕	↕	↕	↕
BRONZES↕	300~700↕	↕	↕	60~290↕	↕	↕
COPPER↕	200~690↕	↕	↕	45~315↕	↕	↕

Portable Hardnesstester KH-320



Features:

- Suitable for multiple impact devices and 6 types of hardness scales are available for various applications;
- Embedded thermal printer, instant test report printing;
- Large and clear digital display;
- Rechargeable Li-ion battery;
- Supporting blue-tooth transmission to PC and wireless printing;
- Optional PC software with perfect data base function. Supporting data query, system characteristics displaying and bar graph displaying

Technical Specifications:

- Hardness Scales: HL, HRC, HRB, HV, HB, HS
- Accuracy: +/- 0.5%
- Repeatability Accuracy: HLD +/-4; HRC: +/-1; HB: +/-4
- Standard impact device : Impact device of type D
- Optional impact device: D/C/DC/D+15/DL/G
- PC interface : USB 2.0
- Screen display: 128x64 dot matrix LCD, backlight and adjustable contrast
- Measuring direction: 360 degree, automatically recognize the direction
- Data memory: 100 group of readings
- Max. hardness of the measured work: 940HV (for D,DC,DL,D+15,C type impact devices)
- Radius of curvature of the measured work: Rmin=50mm (If using Alien support ring, Rmin=10mm)
- Recognition function: Recognize the type of the impact devices automatically
- Type of the printer: Embedded thermal printers
- Measurable material: Steel and cast steel, alloy tool steel, stainless steel, gray cast iron, nodular cast iron, aluminum casting alloy, copper zinc alloy (brass), copper tin alloy (bronze), fine copper
- Detecting voltage automatically: alarm automatically when working voltage is less than rated voltage.