

Mobile Leeb hardness tester SAUTER HN-D



“Pen type” Leeb hardness tester for mobile hardness testing of metals

Features

- User-friendly operation: The compact version enables the product to be used in a significantly wider range of applications compared with traditional devices
- The measuring device has been designed for one-hand operation and this allows the user to work more quickly and flexibly
- Modern LCD display: Optimised for industrial applications: increased luminosity and backlight can be switched on, that way the display can be read from any angle
- All measurement directions possible (360°) thanks to an automatic compensation function
- Internal impact sensor included (Type D)
- Measurement value display: (B & C), Vickers (HV), Brinell (HB), Leeb (HL)
- Standard block for calibration not included in scope of delivery
- Internal data memory for up to 500 measurements with date and time
- Data interface USB, including USB interface cable
- Delivered in a robust carrying case

Technical data

- Measurement uncertainty ± 4 HLD
- Minimum sample weight on a solid and stable support: 2 kg with fixed coupling
- Thinnest measurable material thickness: 3 mm, with coupling on fixed base
- Overall dimensions W×D×H 22×35×147 mm
- Rechargeable battery pack integrated, as standard, operating time up to 16 h without backlight, charging time approx. 3 h
- Mains adapter external, standard
- Net weight approx. 0,20 kg

Accessories

- Plug-In for data transfer of measuring data from the measuring instrument and transfer to a PC, e.g. in Microsoft Excel®, SAUTER AFI-2.0
- Impact body Type D, net weight approx. 0,05 kg, hardness ≥ 1600 HV, tungsten carbide, Impact ball $\varnothing 3$ mm, in accordance with the standard ASTM A956-02, SAUTER AHMO D01
- Test block Type D/DC, $\varnothing 90$ mm (± 1 mm), net weight < 3 kg, hardness range 790 ± 40 HL, SAUTER AHMO D02 630 ± 40 HL, SAUTER AHMO D03 530 ± 40 HL, SAUTER AHMO D04
- Factory calibration certificates for SAUTER AHMO D02, AHMO D03, AHMO D04, SAUTER 961-132

STANDARD



OPTION



Model	Sensor	Measuring range	Readout	Option
		[Max] HL	[d] HL	Factory calibration certificate
SAUTER				KERN
HN-D	D	170-960	1	961-131



Adjusting program (CAL):
For quick setting of the instrument's accuracy. External adjusting weight required



Calibration block:
Standard for adjusting or correcting the measuring device



Peak hold function:
Capturing a peak value within a measuring process



Scan mode:
Continuous capture and display of measurements



Push and Pull:
The measuring device can capture tension and compression forces



Length measurement:
Captures the geometric dimensions of a test object or the movement during a test process



Focus function:
Increases the measuring accuracy of a device within a defined measuring range



Internal memory:
To save measurements in the device memory



Data interface RS-232:
Bidirectional, for connection of printer and PC



Profibus:
For transmitting data, e.g. between scales, measuring cells, controllers and peripheral devices over long distances. Suitable for safe, fast, fault-tolerant data transmission. Less susceptible to magnetic interference.



Profinet:
Enables efficient data exchange between decentralised peripheral devices (balances, measuring cells, measuring instruments etc.) and a control unit (controller). Especially advantageous when exchanging complex measured values, device, diagnostic and process information. Savings potential through shorter commissioning times and device integration possible



Data interface USB:
To connect the measuring instrument to a printer, PC or other peripheral devices



Bluetooth* data interface:
To transfer data from the balance/measuring instrument to a printer, PC or other peripherals



WLAN data interface:
To transfer data from the balance/measuring instrument to a printer, PC or other peripherals



Data interface Infrared:
To transfer data from the measuring instrument to a printer, PC or other peripheral devices



Control outputs (optocoupler, digital I/O):
To connect relays, signal lamps, valves, etc.



Analogue interface:
To connect a suitable peripheral device for analogue processing of the measurements



Analog output:
For output of an electrical signal depending on the load (e.g. voltage 0 V - 10 V or current 4 mA - 20 mA)



Statistics:
Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.



PC Software:
To transfer the measurement data from the device to a PC



Printer:
A printer can be connected to the device to print out the measurement data



Network interface:
For connecting the scale/measuring instrument to an Ethernet network



KERN Communication Protocol (KCP):
It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems



GLP/ISO record keeping:
Of measurement data with date, time and serial number. Only with SAUTER printers



Measuring units:
Weighing units can be switched to e.g. non-metric. Please refer to website for more details



Measuring with tolerance range (limit-setting function):
Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model



Protection against dust and water splashes IPxx:
The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999+A2:2013



ZERO:
Resets the display to "0"



Battery operation:
Ready for battery operation. The battery type is specified for each device



Rechargeable battery pack:
Rechargeable set



Plug-in power supply:
230V/50Hz in standard version for EU. On request GB, AUS or USA version available



Integrated power supply unit:
Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or USA on request



Motorised drive:
The mechanical movement is carried out by an electric motor



Motorised drive:
The mechanical movement is carried out by a synchronous motor (stepper)



Fast-Move:
The total length of travel can be covered by a single lever movement



Verification possible:
Models with type approval for construction of verifiable systems



DAkKS calibration possible:
The time required for DAkKS calibration is shown in days in the pictogram



Factory calibration:
The time required for factory calibration is specified in the pictogram



Package shipment:
The time required for internal shipping preparations is shown in days in the pictogram



Pallet shipment:
The time required for internal shipping preparations is shown in days in the pictogram

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