

Mobile Leeb Hardness Tester SAUTER HN-D



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

Features	Technical data	Accessories
<ul style="list-style-type: none"> <li>• User-friendly operation: The compact version enables the product to be used in a significantly wider range of applications compared with traditional devices</li> <li>• The measuring device has been designed for one-hand operation and this allows the user to work more quickly and flexibly</li> <li>• 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</li> <li>• All measurement directions possible (360°) thanks to an automatic compensation function</li> <li>• Internal impact sensor included (Type D)</li> <li>• Measurement value display: (B &amp; C), Vickers (HV), Brinell (HB), Leeb (HL)</li> <li>• Standard block for calibration not included in scope of delivery</li> <li>• Internal data memory for up to 500 measurements with date and time</li> <li>• Data interface USB, including USB interface cable</li> <li>•  Delivered in a robust carrying case</li> </ul>	<ul style="list-style-type: none"> <li>• Measurement uncertainty <math>\pm 4</math> HLD</li> <li>• Minimum sample weight on a solid and stable support: 2 kg with fixed coupling</li> <li>• Thinnest measurable material thickness: 3 mm, with coupling on fixed base</li> <li>• Overall dimensions W×D×H 22×35×147 mm</li> <li>• Rechargeable battery pack integrated, as standard, operating time up to 16 h without backlight, charging time approx. 3 h</li> <li>• Mains adapter external, standard</li> <li>• Net weight approx. 0,20 kg</li> </ul>	<ul style="list-style-type: none"> <li>• 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, see internet</li> <li>• Impact body Type D, net weight approx. 0,05 kg, hardness <math>\geq 1600</math> HV, tungsten carbide, impact ball <math>\varnothing 3</math> mm, in accordance with standard ASTM A956-02, SAUTER AHMO D01</li> <li>•  Test block Type D/DC, <math>\varnothing 90</math> mm (<math>\pm 1</math> mm), net weight <math>&lt; 3</math> kg, hardness range 790 <math>\pm 40</math> HL, SAUTER AHMO D02 630 <math>\pm 40</math> HL, SAUTER AHMO D03 530 <math>\pm 40</math> HL, SAUTER AHMO D04</li> <li>• Factory calibration certificates for SAUTER AHMO D02, AHMO D03, AHMO D04, SAUTER 961-132</li> </ul>

STANDARD	OPTION

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

 <p><b>Adjusting program (CAL)</b> For quick setting of the instrument's accuracy. External adjusting weight required</p>	 <p><b>Bluetooth* data interface</b> To transfer data from the balance/measuring instrument to a printer, PC or other peripherals</p>	 <p><b>Measuring units</b> Weighing units can be switched to e.g. non-metric. Please refer to website for more details</p>	 <p><b>Conformity assessment</b> Models with type approval for construction of verifiable systems</p>
 <p><b>Calibration block</b> Standard for adjusting or correcting the measuring device</p>	 <p><b>WIFI data interface</b> To transfer data from the balance/measuring instrument to a printer, PC or other peripherals</p>	 <p><b>Measuring with tolerance range (limit-setting function)</b> Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model</p>	 <p><b>DAkkS calibration possible</b> The time required for DAkkS calibration is shown in days in the pictogram</p>
 <p><b>Peak hold function</b> Capturing a peak value within a measuring process</p>	 <p><b>Data interface infrared</b> To transfer data from the measuring instrument to a printer, PC or other peripheral devices</p>	 <p><b>Protection against dust and water splashes IPxx</b> The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989 +A1:1999+A2:2013</p>	 <p><b>Factory calibration (ISO)</b> The time required for factory calibration is specified in the pictogram</p>
 <p><b>Scan mode</b> Continuous capture and display of measurements</p>	 <p><b>Control outputs (optocoupler, digital I/O)</b> To connect relays, signal lamps, valves, etc.</p>	 <p><b>ZERO</b> Resets the display to "0"</p>	 <p><b>Package shipment</b> The time required for internal shipping preparations is shown in days in the pictogram</p>
 <p><b>Push and Pull</b> The measuring device can capture tension and compression forces</p>	 <p><b>Analogue interface</b> To connect a suitable peripheral device for analogue processing of the measurements</p>	 <p><b>Battery operation</b> Ready for battery operation. The battery type is specified for each device</p>	 <p><b>Pallet shipment</b> The time required for internal shipping preparations is shown in days in the pictogram</p>
 <p><b>Length measurement</b> Captures the geometric dimensions of a test object or the movement during a test process</p>	 <p><b>Analogue output</b> For output of an electrical signal depending on the load (e.g. voltage 0 V - 10 V or current 4 mA - 20 mA)</p>	 <p><b>Rechargeable battery pack</b> Rechargeable set</p>	
 <p><b>Focus function</b> Increases the measuring accuracy of a device within a defined measuring range</p>	 <p><b>Statistics</b> Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.</p>	 <p><b>Plug-in power supply</b> 230V/50Hz in standard version for EU. On request GB, AUS or US version available</p>	
 <p><b>Internal memory</b> To save measurements in the device memory</p>	 <p><b>PC Software</b> To transfer the measurement data from the device to a PC</p>	 <p><b>Integrated power supply unit</b> Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or US on request</p>	
 <p><b>Data interface RS-232</b> Bidirectional, for connection of printer and PC</p>	 <p><b>Printer</b> A printer can be connected to the device to print out the measurement data</p>	 <p><b>Motorised drive</b> The mechanical movement is carried out by an electric motor</p>	
 <p><b>Profibus</b> 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</p>	 <p><b>Network interface</b> For connecting the scale/measuring instrument to an Ethernet network</p>	 <p><b>Motorised drive</b> The mechanical movement is carried out by a synchronous motor (stepper)</p>	
 <p><b>Profinet</b> 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</p>	 <p><b>KERN Communication Protocol (KCP)</b> 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</p>	 <p><b>Fast-Move</b> The total length of travel can be covered by a single lever movement</p>	
 <p><b>Data interface USB</b> To connect the measuring instrument to a printer, PC or other peripheral devices</p>	 <p><b>GLP/ISO record keeping</b> of measurement data with date, time and serial number. Only with SAUTER printers</p>		

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