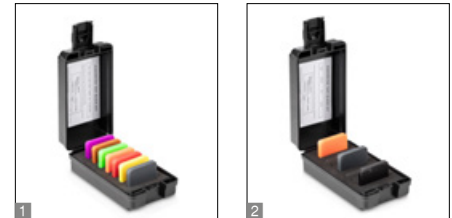


### Digital Shore hardness tester SAUTER HD



### Professional Shore hardness tester

Features	Technical data	Accessories
<ul style="list-style-type: none"> <li>To measure the hardness of plastics through penetration measurement</li> <li>Shore A: Rubber, elastomers, neoprene, silicone, vinyl, so plastics, felt, leather and similar material</li> <li>Shore 0: foam, sponge</li> <li>Shore D: Plastics, formica, epoxides, plexiglass etc.</li> <li>Delivered in a robust carrying case</li> <li>Particularly recommended for internal comparison measurement. Standard calibrations e.g. to DIN 48-4 are not possible because of very narrow standard tolerances</li> <li>Can be attached to the test stands TI-ACL (for Shore A and 0), TI-DL (for Shore D) to improve measuring uncertainty</li> <li>Large display with backlight</li> <li>Selectable: AUTO-OFF function or continuous operation, battery level indicator</li> </ul>	<ul style="list-style-type: none"> <li>Tolerance: 1 % of [Max]</li> <li>Overall dimensions W×D×H 162×65×38 mm</li> <li>Net weight approx. 0,20 kg</li> <li>Transfer via RS-232 to the PC, e.g. to Microsoft Excel®</li> <li>Battery operation, batteries standard (2×1.5 V AAA)</li> <li>Material thickness of the sample, min. 4 mm</li> </ul>	<ul style="list-style-type: none"> <li>Shore comparison plates for testing and calibration of Shore hardness testing devices. By regular comparisons the measuring accuracy increases significantly                             <ul style="list-style-type: none"> <li>7 hardness comparison plates for Shore A, tolerance up to ± 2 HA, SAUTER AHBA-01</li> <li>3 hardness comparison plates for Shore D, tolerance up to ± 2 HD, SAUTER AHBD-01</li> </ul> </li> <li>Factory calibration of the comparison plates, SAUTER 961-170</li> <li>Test stand for HDA and HD0, SAUTER TI-ACL</li> <li>Test stand for HDD, SAUTER TI-DL</li> <li>Data transfer software, interface cable included, SAUTER ATC-01</li> </ul>

STANDARD						OPTION	
PEAK	RS 232	ZERO	BATT	1 DAY	CAL EXT	SOFTWARE	

Model	Hardness scales	Measuring range	Readout
<b>SAUTER</b>		[Max]	[d]
<b>HDA 100-1</b>	Shore A	100 HA	0,1 HA
<b>HD0 100-1</b>	Shore HAO	100 HAO	0,1 HAO
<b>HDD 100-1</b>	Shore D	100 HD	0,1 HD



**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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