Digital Shore hardness tester SAUTER HD

Shore D   Shore 0   Shore A

Professional Shore hardness tester

Features

- Shore A, 0 and D to measure the hardness of plastics through penetration measurement
- Shore A rubber, elastomers, neoprene, silicone, vinyl, soft plastics, felt, leather and similar material
- Shore 0 foam, sponge
- Shore D plastics, formica, epoxides, plexiglass etc.
- Delivered in a robust carrying case
- Particularly recommended for internal comparison measurement. Standard calibrations e. g. to DIN 7619-1 are not possible because of very narrow standard tolerances
- Can be attached to the test stands TI-ACL (for Shore A and 0), TI-DL (for Shore D) to improve measuring uncertainty
- Large display with backlight
- Selectable: AUTO-OFF function or continuous operation, battery level indicator

Technical data

- Tolerance: 1 % of [Max]
- Overall dimensions W×D×H 65×38×162 mm
- Net weight approx. 173 g
- Transfer via RS-232 to the PC, e.g. to Microsoft Excel®
- Battery operation, batteries standard 2× 1.5 V AAA
- Material thickness of the sample, min. 4 mm

Accessories

- 1 7 hardness comparison plates for Shore A, tolerance up to ± 2 HA, SAUTER AHBA-01
- 2 3 hardness comparison plates for Shore D, tolerance up to ± 2 HD, SAUTER AHBD-01
- Factory calibration of the comparison plates, SAUTER 961-170
- Test stand for HDA and HD0, SAUTER TI-ACL
- Test stand for HDD, see page 66, SAUTER TI-DL

STANDARD

| CAL EXT | PEAK | ZERO | BATT | 1 DAY |

OPTION

SOFTWARE

Model SAUTER	Hardness type	Measuring range [Max] HS	Readout [d] HS	
HDA 100-1	Shore A	100 HA	0,1 HA	
HD0 100-1	Shore 0	100 H0	0,1 H0	
HDD 100-1	Shore D	100 HD	0,1 HD	

Pictograms

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 at the touch of a key. 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.

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

Mains adapter:
230V/50Hz in standard version for EU. On request GB, AUS or USA version available

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

Motorised drive:
The mechanical movement is carried out by a 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:
The time required for verification is specified in the pictogram

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

Your KERN specialist dealer: