

PROFESSIONAL MEASURING



HARDNESS TESTING OF PLASTICS (SHORE)

23

KERN Pictograms

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

Do you have questions about our products? Our customer consultants will be pleased to assist you:

Product Specialist Measuring Technology



Irmgard Russo
Tel. +49 7433 9933-208
info@sauter.eu

Product Specialist Measuring Technology



Helga Biselli
Tel. +49 7433 9933-188
info@sauter.eu

Product Specialist Measuring Technology



Ralf Gutbrod
Tel. +49 7433 9933-306
info@sauter.eu

Product Specialist Measuring Technology



Andreas Vossler
Tel. +49 7433 9933-243
info@sauter.eu

FR, Maghreb, GB, IE, IS, BE, LU



Maren Möwert
Tel. +49 7433 9933-132
Mobil +49 151 46143240
maren.moewert@kern-sohn.com

DK, SE, FI, NO, PL, LV, LT, EE



Mark Hauder
Tel. +49 7433 9933-310
Mobil +49 160 3378426
mark.hauder@kern-sohn.com

GR, CY, BG, HU, RO, SK, CZ, AL, Ex-Yugoslavia, CIS



Ariana Sevcenco
Tel. +49 7433 9933-203
Mobil +49 151 72434692
ariana.sevcenco@kern-sohn.com

North America, Africa, Asia, Middle East, Oceania, TR:



Corinna Matthes
Tel. +49 7433 9933-215
Mobil +49 151 44568364
corinna.matthes@kern-sohn.com

Germany (PC 4, 7), NL



Taras Mikitisin
Tel. +49 7433 9933-143
Mobil +49 171 5590115
mikitisin@kern-sohn.com

Technical Service



Stefan Rothmund
Tel. +49 7433 9933-179
rothmund@kern-sohn.com

DAKKS Calibration Service Balances & Measuring Instruments



Karl-Richard Fuchs
Tel. +49 7433 9933-401
recalibration-instruments@
kern-sohn.com

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from Monday to Friday
from 8:00 am to 5:00 pm



Compact handheld durometer with drag indicator



Features

- Typical application: measurement of penetration (Shore)
- Particularly recommended for internal comparison measurement. Standard calibrations e.g. to DIN 48-4 are not possible because of very narrow standard tolerances
- Shore A: Rubber, elastomers, neoprene, silicone, vinyl, so plastics, felt, leather and similar material
- Shore D: Plastics, formica, epoxides, plexiglass etc.
- Shore 0: Foam, sponge etc.
- Max mode: Records the peak value indication by drag pointer
- Can be attached to the test stands SAUTER TI-AC (for Shore A and 0), SAUTER TI-D (for Shore D)
-  Delivery in a plastic box
- The measuring tips are not interchangeable

Technical data

- Measuring precision: 3 % of [Max]
- Overall dimensions W×D×H 115×60×25 mm
- Net weight approx. 0,15 kg
- Screws to screw on to the TI: M7 fine thread
- Material thickness of the sample, min. 4 mm

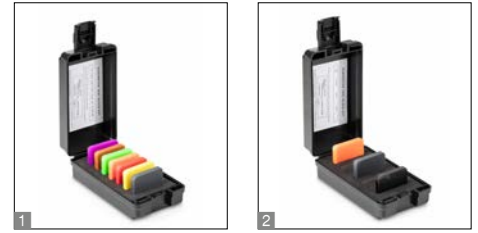
Accessories

- Shore comparison plates for testing and calibration of Shore hardness testing devices. By regular comparisons the measuring accuracy increases significantly:
 -  7 hardness comparison plates for Shore A, tolerance up to ± 2 HA, SAUTER AHBA-01, € 105,-
 -  3 hardness comparison plates for Shore D, tolerance up to ± 2 HD, SAUTER AHBD-01, € 86,-
- Factory calibration of the comparison plates, SAUTER 961-170, € 119,-
- Test stand for HBA and HBO, SAUTER TI-AC, € 270,-
- Test stand for HBD, SAUTER TI-D, € 355,-

STANDARD



Model	Hardness scales	Measuring range	Readout	Price excl. of VAT ex works €
SAUTER		[Max]	[d]	
HBA 100-0	Shore A	100 HA	1 HA	121,-
HBO 100-0	Shore 0	100 H0	1 H0	146,-
HBD 100-0	Shore D	100 HD	1 HD	167,-



Professional Shore hardness tester

Features

- To measure the hardness of plastics through penetration measurement
- Shore A: Rubber, elastomers, neoprene, silicone, vinyl, so 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 48-4 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 162×65×38 mm
- Net weight approx. 0,20 kg
- 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

- Shore comparison plates for testing and calibration of Shore hardness testing devices. By regular comparisons the measuring accuracy increases significantly
- 1 7 hardness comparison plates for Shore A, tolerance up to ± 2 HA, SAUTER AHBA-01, € 105,-
- 2 3 hardness comparison plates for Shore D, tolerance up to ± 2 HD, SAUTER AHBD-01, € 86,-
- Factory calibration of the comparison plates, SAUTER 961-170, € 119,-
- Test stand for HDA and HD0, SAUTER TI-ACL, € 365,-
- Test stand for HDD, SAUTER TI-DL, € 445,-
- Data transfer software, interface cable included, SAUTER ATC-01, € 100,-



Model	Hardness scales	Measuring range	Readout	Price excl. of VAT ex works €
SAUTER		[Max]	[d]	
HDA 100-1	Shore A	100 HA	0,1 HA	420,-
HD0 100-1	Shore HA0	100 HA0	0,1 HA0	420,-
HDD 100-1	Shore D	100 HD	0,1 HD	420,-



Lever operated test stand for hardness testing with base plate made of glass

Features

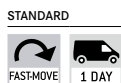
- For Shore hardness testing of plastics, leather etc.
- **1** Glass plate: high measurement accuracy by means of superior hardness of the glass plate
- **2** Mechanical construction: Robust design enables accurate measuring movements
- **3** Level adjustment: For the precise levelling of the base plate, e.g. for the correction of inhomogeneous test objects
- **4** TI-DL: with exchangeable longer column for use with digital hardness tester HD
- Hardness measuring device is not included in delivery

• Operation:

1. The SAUTER hardness testing device HB/HD is fitted in a suspended position
 2. The test object is placed on the round testing table right under the durometer measuring tip
 3. By pressing the lever down, the test weight will be released, and this then presses the measuring tip into the test object with its own weight (see table)
- The accuracy of the displayed result is about 25 % higher than in a manual operated test

Technical data

- Stroke length: 15 mm
- Maximum test object height: 63 mm
- Base plate \varnothing 75 mm
- Overall dimensions WxDxH
 TI-AC: 150x110x330 mm
 TI-D: 150x110x400 mm
 TI-ACL: 150x110x380 mm
 TI-DL: 150x110x380 mm



Model	Suitable for	Length of column	Poids de contrôle	Net weight approx.	Price excl. of VAT ex works €
SAUTER		mm	kg	kg	
TI-AC	HBA, HBO	250	1	4,6	270,-
TI-D	HBD	250	5	9	355,-
TI-ACL	HDA, HDO	300	1	4,6	365,-
TI-DL	HDD	300	5	4,6	445,-

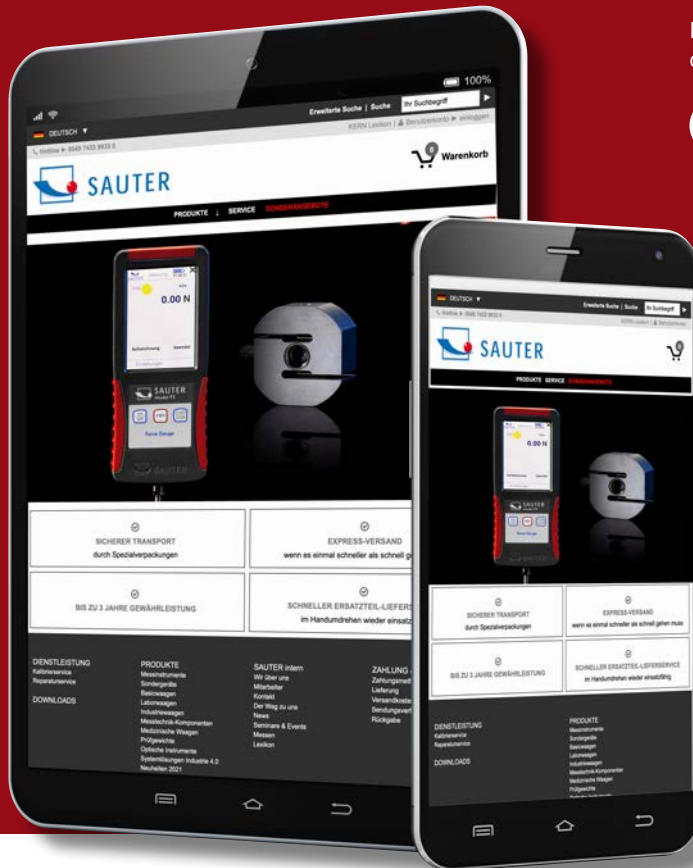
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Sauter GmbH
 c/o KERN & SOHN GmbH
 Ziegelei 1
 72336 Balingen
 Germany
 Tel. +49 7433 9933-0
 info@sauter.eu



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