PROFESSIONAL MEASURING
SINCE 1844

KERN

Product brochure

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SAUTER HO 5K

Premium UCI hardness testing device for Rockwell, Brinell and Vickers

ENGLISH



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FEATURES

- Application: This ultrasound hardness testing device is ideally suited for mobile hardness testing, where the main emphasis is on obtaining rapid and precise results
- Principle: The SAUTER HO measures by using a vibrating rod which vibrates at ultrasonic frequency and is pressed onto the sample at a defined test force. At the lower end there is a Vickers indenter. Its resonant frequency increases, as soon as an indentation is created when it comes into contact with the sample. Through appropriate adjustment of the device, the resulting change in resonant frequency is matched with the corresponding Vickers hardness
- Examples: The SAUTER HO ultrasound hardness testing system is primarily used for measuring small forgings, castings, welding points, punched parts, casting tools, ball bearings and the flanks of gear wheels as well as for measuring the influence of warmth or heat
- Advantages compared with Rockwell and Brinell: Almost non-destructive testing by smaller test force and thus only microscopic indentation craters
- Advantages compared with Vickers: Demanding optical measuring is not required. You can therefore carry out measurements directly on-site, for example, on a permanently installed workpiece
- Advantages compared with Leeb: The high requirements concerning the proper weight of the test object can be widely omitted
- Standards: The device meets following technical standards: DIN 50159-1; ASTM-A1038-2005; JB/T9377-2013
- Measurement data memory saves up to 1000 measurement groups each with 20 individual values
- Mini statistics function: Display of the measuring result, the number of measurements, the maximum and minimum value as well as the average value and the standard deviation
- Calibration: The device can be set to both standard hardness test blocks as well as to up to 20 reference calibration values. When doing this it is possible to measure different materials quickly, without having to re-adjust the device to the individual materials
- Scope of delivery: Standard block for calibration (approx. 61 HRC), USB cable, display unit, UCI sensor unit, transport case, protective case (turquoise), further accessories

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TECHNICAL DATA

- Measuring ranges: HRC: 20,3–68; HRB: 41–100; HRA: 61-85,6; HV: 80–1599; HB: 76–618; Tensile strength: 255–2180 N/mm^2
- Measurement precision: ± 3 % HV; ± 1,5 HR; ± 3 % HB
- Display units: HRC, HV, HBS, HBW, HK, HRA, HRD, HR15N, HR30N, HR45N, HS, HRF, HR15T, HR30T, HR45T, HRB.
- Rechargeable battery pack integrated, as standard, operating time up to 12 h without backlight, charging time approx. 8 h
- Minimum weight of the test object: 300 g for direct measurement with the sensor (included); 100 g with supporting ring (optional)
- Minimum thickness of the test object: 2 mm
- Minimum dimensions the test surface size around: approx. 5×5 mm (recommended)
- Overall dimensions W×D×H
- Net weight approx. 0,95 kg

MAIN SCOPE OF APPLICATIONS

- Mechanical engineering and precision engineering
- Automotive industry
- Toolmaking and mould production
- Aerospace engineering
- Research and development
- Medical technology

PICTOGRAMS

Standard



Option



MODEL OVERVIEW

Model		Hardness scale	Test object minimum weight	Test object thickness [Min]
HO 1K	•	HV 1	300 g	2 mm
HO 2K	•	HV 2	300 g	2 mm
HO 5K	•	HV 5	300 g	2 mm
HO 10K	•	HV 10	300 g	2 mm

ACCESSORIES

Model	Description
AHMO D	External recoil sensor (Type D) AHMO DSAUTER
HMO-A04	Cable HMO-A04
HO-A01	UCI Probe HO-A01 (HV 1)
HO-A02	UCI Probe HO-A02 (HV 2)
HO-A04	Support ring, flat HO-A04
HO-A05	Support ring, small cylinder HO-A05
HO-A06	Support ring, large cylinder HO-A06
HO-A07	Deep hole protective cover HO-A07
HO-A08	Test stand HO-A08
HO-A09	Hardness comparison plate HO-A09 (28–35 HRC)
HO-A10	Hardness comparison plate HO-A10 (38–43 HRC)
HO-A11	Hardness comparison plate HO-A11 (48–53 HRC)
HO-A12	Hardness comparison plate HO-A12 (58–63 HRC)
HO-A14	UCI Probe HO-A14 (HV 10)
HO-A15	Motorized UCI probe HO-A15 (HV 0,3)
HO-A21	Transport case HO-A21
HO-A23	Hardness comparison plate HO-A23
RHO-7001	Rechargeable battery pack RHO-7001
YKA-31	Power adapter YKA-31

SERVICES

Model	Description
961-270	Factory calibration certificate 961-270
970-116	Warranty extension (+2 years) 970-116

KERN Pictogram Overview

	Calibration block: standard for adjusting the measuring device
	Memory: Device-internal memory capacity, e.g. for article data, measuring data, tare weights, PLU etc.
	Data Interface USB: For connection to printers, PCs or other peripheral devices
	Statistics: using the saved values, the device calculates statistical data, such as average value, standard deviation etc.
	PC Software: to transfer the measurements from the device to a PC
	Units can be switched to e.g. non-metric units
	Rechargeable battery pack: Rechargeable set
	Plug-in power supply: 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available
	Package shipment by courier service: The duration of internal product provision is one day
	Factory calibration (ISO): Factory calibration takes 4 working days

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