Digital force gauge SAUTER FH-S


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Save with our practical bundles of test stand, force gauge and matching clamps, e.g. SAUTER FH 500S71, consisting of:
- 1× FH 500
- 1× AE 500 **(Details, see P. 39)**

Universal digital force gauge for tensile and compressive force measurements with integrated measuring cell

Features

- Turnable display with backlight
- 1 Can be mounted on all SAUTER test stands up to 5 kN
- Data interface RS-232 standard
- 2 Standard attachments: as shown below, extension rod: 90 mm
- 3 Delivered in a robust carrying case
- Selectable measuring units: N, kgf, lbf
- Peak-Hold function to capture peaks (measurement result will be “frozen” for a short time) or Track function mode for a continuous measurement indication
- Measuring with tolerance range (limit-setting function): Upper and lower limit adjustable, in pull and push direction. The process is supported by an audible and visual signal.
- Auto-Power-Off
- Internal memory for up to 10 measurement values
- Mini Statistics Kit: calculates the average result from up to 10 stored measured values, as well as min., max., n

Technical data

- Transfer rate to PC: approx. 25 measured values per second
- Measuring precision: 0,5 % of [Max]
- Overload protection: 150 % of [Max]
- Overall dimensions W×D×H 66×36×230 mm
- Thread: M6
- Rechargeable battery pack integrated, standard, operating time up to 12 h without backlight, charging time approx. 4 h
- Net weight approx. 0,64 kg

Accessories

- Data transfer software with graphic display of the measurement process, SAUTER AFH FAST
  Force-displacement only in combination with SAUTER LD, SAUTER AFH LD
  Force-displacement only in combination with SAUTER LB, SAUTER AFH FD
- RS-232/PC connection cable to connect models from the SAUTER FH range to a PC, SAUTER FH-A01
- 2 Standard attachments, as standard, set can be reordered, SAUTER AC 43
- For further accessories see page 35 onwards or our website

STANDARD

OPTION

Model SAUTER	Measuring range [Max] N	Readout [d] N		Option DAkkS calibration certificate					
				Tensile force		Compressive force		Tensile/Compressive force	
				DAkkS KERN		DAkkS KERN		DAkkS KERN	
FH 2	2	0,001		–		–		–	
FH 5	5	0,001		–		–		–	
FH 10	10	0,005		963-161		963-261		963-361	
FH 20	20	0,01		963-161		963-261		963-361	
FH 50	50	0,01		963-161		963-261		963-361	
FH 100	100	0,05		963-161		963-261		963-361	
FH 200	200	0,1		963-161		963-261		963-361	
FH 500	500	0,1		963-161		963-261		963-361	

! Further calibration options on request

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. 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 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

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