KERN 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

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.

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 to a printer, PC or other peripherals

WLAN data interface:
To transfer data from the balance 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 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

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

*The *Bluetooth*® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by KERN & SOHN GmbH is under license. Other trademarks and trade names are those of their respective owners.

NEW PREMIUM ★★★

Premium force gauge with integrated measuring cell (optional) and connection possibility for up to 4 external measuring cells

Can be mounted on all SAUTER test benches, illustration shows optional accessories, see page www.sauter.eu, and the manual test bench SAUTER TVL-XS, see page 20

Simultaneous measurement on up to four channels. External sensors with sensor data memory optionally available

Compact force gauge with internal measuring cell (up to max. 500 N) for fast and mobile force measurements. Illustration shows optional accessories SAUTER AE 500 screw tension clamp

Connections for up to four external measuring cells and Ethernet (optional)

Supplied in a high-quality and robust system case (systainer® T-LOC) including mains adapter and USB cable type C

Measurement of forces in different and dimensions possible with only one measuring device

Use with integrated measuring cell

The SAUTER FS premium force gauge has an integrated measuring cell for tensile and compressive force applications. Whether mobile for rapid testing or stationary integrated into a test stand or production line, the multifunction display allows all the values recorded to be read off at a glance in real time. Via the (optionally) integrated interfaces, the data can be sent to a PC, laptop, smartphone or network for further processing.

Use with external measuring cells

The SAUTER FS premium force gauge is compatible with all SAUTER strain gauge measuring cells, see page 11–18. Up to 4 external measuring cells can be connected simultaneously. If all available external measuring channels are used, the internal measuring cell is deactivated as long as an external measuring cell is connected on channel 1.

Order example SAUTER FS force gauge with 2 measuring cells:

1x	**FS 2-5O**	2-channel force gauge with integrated measuring cell for tension/compression force measurements
1x	**963-361**	DAkkS calibration certificate tension/compression force up to 500 N
1x	**CO 100-Y1**	Miniature compression load cell up to 1 kN
1x	**FS 403**	Two-point adjustment up to 2 kN, incl. plug and TEDS memory for SAUTER FS
1x	**963-262**	DAkkS calibration certificate compression force up to 2 kN
1x	**CS 500-3P2**	Stainless steel “S” measuring cell for tension/compression force up to 5 kN
1x	**963-363**	DAkks calibration certificate tension/compression force up to 5 kN
1x	**FS 410**	Multi-point adjustment up to 5 kN, incl. connector and TEDS memory for SAUTER FS

Features

- 3,5" Touchscreen
- Standard version with 2 or 4 measuring channels for external force sensors (subsequently expandable from 2 to 4)
- An internal measuring cell is possible (is deactivated if an external measuring cell is plugged into slot 1)
- Suitable for 4-wire and 6-wire sensors with strain gauges
- Bridge supply voltage adjustable
- Two-point or multi-point adjustment with weights or numerical adjustment possible
- **Connection of TEDS sensors (Transducer Electronic Data Sheet)** possible
- **USB interface** for programming, data transfer and power supply as standard
- Optional interfaces: WLAN, Ethernet, Bluetooth, analogue current output (only possible individually)
- **Integrated SD card memory**
- Adjustable SI units kg, N, kN, Nm, kNm
- **Tolerance function**
- Storage of raw measured values for external evaluation
- **Peak hold function** for recording the peak value or **track function** for continuous measurement display
- **Peak value measurement**
- Module for length measurement optional (then only use of 2 force sensors possible)
- Mountable on SAUTER test benches

Technical data

- High resolution: up to 10000 points per measurement channel
- Internal measuring frequency: 1000 Hz per measuring channel
- Measurement accuracy:
  - with internal measuring cell: 0.1 % of [Max]
  - with external measuring cell: among other things from the measuring cells used
- Overall dimensions W×D×H 71×31×180 mm
- Overload protection: 150 % of [Max] with internal measuring cell
- Thread on load receptor: M6 (outside)
- Battery operation internal, standard, operating time up to 8 h without backlight,
- Charging time approx. 8 h
- External mains adapter, for connection to the USB-C socket, standard
- Net weight approx. 0,4 kg

Accessories

- **Force/displacement data transmission software** with graphic display of the measuring curve, only in conjunction with SAUTER LD, SAUTER AFH FSLD, price on request!
- **Force/time data transmission software** with graphic display of the measurement curve, SAUTER AFH FS, price on request!
- **Module for length measurement** with SAUTER LD length measuring device, factory option, SAUTER FS LD, price on request!
- **Analogue output** for outputting an electrical signal as a function of load, current strength 4 mA–20 mA, not retrofittable, SAUTER FS SA, price on request!
- **Ethernet data interface,** for connection to an IP-based Ethernet network, not retrofittable, SAUTER FS ETH, price on request!
- **WLAN interface,** SAUTER FS WLAN, price on request!
- **Bluetooth data interface** for wireless data transmission to PC or tablets, not retrofittable, SAUTER FS BT, price on request! Please note: only one optional interface can be installed at a time
- **Standard attachments,** SAUTER AC 43, **€ 45,-**
- Suitable measuring cells see page 11–18
- For holders for object fixation and other accessories see www.sauter.eu

! Optional calibration see page 31. Calibration is recommended for each measuring cell!

Assembly and adjustment of measuring cell, connector and TEDS sensors must be ordered separately, please enquire.

STANDARD: MEMORY, USB, KCP PROTOCOL, ACCU, 230 V, 1 DAY

OPTION: BT, WLAN, ANALOG, LAN, DAkkS +4 DAYS, ISO +4 DAYS

Model **SAUTER**	Measuring range internal measuring cell [Max] N	Readability internal measuring cell [d] N	Internal measuring cell	Number of measuring channels	**Price** excl. of VAT ex works €
FS 2	–	–	–	2	on request
FS 2-20	20	0,005	•	2	on request
FS 2-50	50	0,01	•	2	on request
FS 2-100	100	0,02	•	2	on request
FS 2-200	200	0,05	•	2	on request
FS 2-500	500	0,1	•	2	on request
FS 4	–	–	–	4	on request
FS 4-20	20	0,005	•	4	on request
FS 4-50	50	0,01	•	4	on request
FS 4-100	100	0,02	•	4	on request
FS 4-200	200	0,05	•	4	on request
FS 4-500	500	0,1	•	4	on request

Adjustment	Measuring range [Max] kN	Model SAUTER incl. connector and TEDS sensors	**Price** excl. of VAT ex works €
Numeric	–	FS 401	**120,-**
Two-point	0,5	FS 402	**140,-**
	2	FS 403	**150 ,-**
	5	FS 404	**170,-**
	20	FS 405	**180,-**
	50	FS 406	**180,-**
	120	FS 407	**200,-**
Multipoint	0,5	FS 408	**180,-**
	2	FS 409	**210,-**
	5	FS 410	**240,-**
	20	FS 411	**270,-**
	50	FS 412	**270,-**
	120	FS 413	**300,-**


1


2

Robust, digital force gauge for for tensile and compressive force measurements

Features

- **Turnable display:** automatic direction identification
- **Secure operability** due to the ergonomic design
- **Peak-Hold function** to capture peaks (value is “frozen” for approx. 10 seconds) or **Track function** mode for a continuous measurement indication
- **Selectable measuring units:** N, lb, kg, oz
- **Auto-Power-Off**
- 1 Standard attachments: as shown below, extension rod: 90 mm
- Can be mounted on all SAUTER test stands up to 10 kN

Technical data

- Measuring precision: 0,5 % of [Max]
- Internal measuring frequency: 1000 Hz
- Overload protection: 200 % of [Max]
- Overall dimensions W×D×H 195×82×35 mm
- Thread: M8
- Ready for use: Batteries included, 6×1,5 V AA
- Net weight approx. 0,72 kg

Accessories

- 2 With one of the two optional attachments for tensile strength testing, the SAUTER FK can become a tensiometer for testing the material tension characteristics of cables, threads, wires, twine etc. (up to ⌀ 5 mm): Illustration shows accessories SAUTER FK-A02
- **Tensiometer attachment with Safe-insert function:** Pull and release to insert the running cable in between the rolls, for tensile strength testing up to 250 N, aluminium attachment, rolls can be adjusted inwards, SAUTER FK-A01, **€ 210,–**
- **Tensiometer kit for high-capacity tensile strength testing** up to 1000 N, steel attachment and steel rolls, rolls cannot be adjusted, SAUTER FK-A02, **€ 295,–**
- 1 **Standard attachments,** SAUTER AC 430, **€ 45,–**
- Further accessory see www.sauter.eu

STANDARD: PEAK, PUSH/PULL, ZERO, BATT, 230 V, 1 DAY — OPTION: ISO +4 DAYS

Model SAUTER	Measuring range [Max] N	Readout [d] N	Price excl. of VAT ex works €	Option **Factory calibration certificate**					
				Tensile force		**Compressive force**		**Tensile/Compressive force**	
				KERN	€	KERN	€	KERN	€
FK 10.	10	0,005	**250,–**	961-161O	135,–	961-261O	135,–	961-361O	245,–
FK 25.	25	0,01	**250,–**	961-161O	135,–	961-261O	135,–	961-361O	245,–
FK 50.	50	0,02	**250,–**	961-161O	135,–	961-261O	135,–	961-361O	245,–
FK 100.	100	0,05	**250,–**	961-161O	135,–	961-261O	135,–	961-361O	245,–
FK 250.	250	0,1	**250,–**	961-161O	135,–	961-261O	135,–	961-361O	245,–
FK 500.	500	0,2	**250,–**	961-161O	135,–	961-261O	135,–	961-361O	245,–
FK 1K.	1000	0,5	**250,–**	961-162O	165,–	961-262O	165,–	961-362O	300,–

! Further calibration options on request

NEW PREMIUM ★★★

Note: The shown measuring cell is not included in the scope of delivery! Combine the FL TM with a measuring cell suitable for your application from the SAUTER program, such as CR P1, CR Q1, CS P1 or CS Q1

Digital Premium force gauge with graphics display for tensile and compressive force measurements, prepared for external measuring cells

Features

- **Premium force-measuring** for connection of external measuring cells (measuring cell, tension loops and pressure plates not included with delivery)
- **Adjustable nominal loads:** 5 N, 10 N, 25 N, 50 N, 100 N, 250 N, 500 N, 1 kN, 2.5 kN, 5 kN, 10 kN, 20 kN, 50 kN
- Maximum resolution 2500 d
- **Peak-Hold function** to capture peaks (measurement result will be “frozen” for a short time) or **Track function** mode for a continuous measurement indication
- **Metal housing** for durable usage in harsh environmental conditions
- **Capacity display:** A bar lights up to show how much of the measuring range is still available
- **Measuring with tolerance range (liwith-setting function):** Upper and lower liwithing can be programmed individually, in pull and push direction. The process is supported by an visual signal.
- **Internal memory** for up to 500 measurement values
- **Continuous analogue output:** Linear voltage signal in dependence to the load (-2 to +2 V)
- **Data interface USB** standard
- **Data interface RS-232 standard,** only for connection to the printer
- **Selectable measuring units:** N, kN, kg, oz, lbf

Technical data

- Internal measuring frequency: 1000 Hz
- Transfer rate to PC: approx. 25 measured values per second
- Measuring precision: 0,2 % of [Max]
- Overload protection: 120 % of [Max]
- Overall dimensions: W×D×H 175×75×30 mm
- Rechargeable battery pack integrated, standard, operating time up to 10 h without backlight, charging time approx. 8 h
- Net weight approx. 0,5 kg

Accessories

- **Plug-In for data transfer of measuring** data from the measuring instrument and transfer to a PC, e.g. in Microsoft Excel®, SAUTER AFI-1.0, **€ 90,–**
- **Force-displacement data transfer software** with graphic display of the measurement process, only in combination with SAUTER LD, SAUTER AFH LD, **€ 250,–**
- **Force-time data transfer software** with graphic display of the measurement process, SAUTER AFH FAST, **€ 115,–**
- **Force-displacement data transfer software** with graphic display of the measurement process, only in combination with SAUTER LB, SAUTER AFH FD, **€ 650,–**
- **USB cable,** SAUTER FL-A01, **€ 46,–**
- **RS-232 adapter cable,** SAUTER FL-A04, **€ 46,–**
- **Option FL-C01:** Solder connector for FL TM to measuring cell and adjusting the device, SAUTER, **€ 95,–**

STANDARD: PEAK, PUSH/PULL, MEMORY, RS 232, USB, ANALOG, GLP PRINTER, UNIT, TOL, ACCU, 230 V, 1 DAY

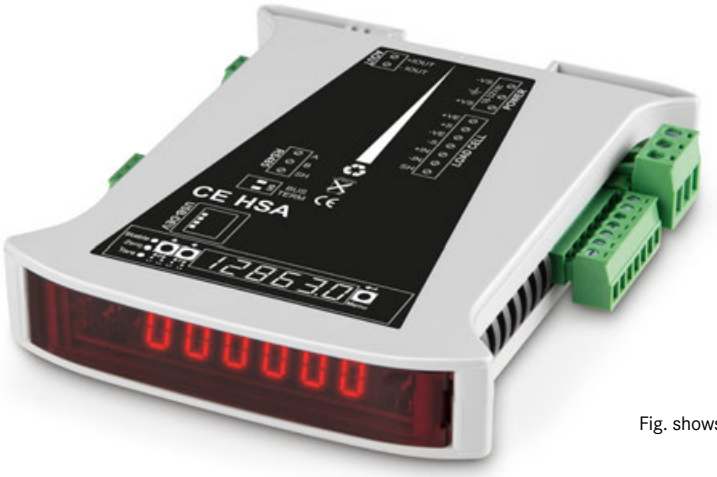
OPTION: SOFTWARE, DAkkS +4 DAYS, ISO +4 DAYS

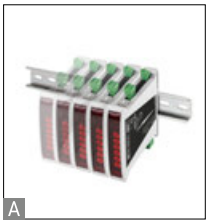
Model SAUTER	Price excl. of VAT ex works € €
FL TM	470,–

Option Load cell	Measuring range optional load cell	Option DAkkS calibration certificate (≤ 5 kN)/Factory calibration certificates (> 5 kN)					
		Tensile force		Compressive force		Tensile/Compressive force	
		KERN	€	KERN	€	KERN	€
Load cells see page S. 11–18	≤ 500 N	963-161	135,–	963-261	135,–	963-361	245,–
	≤ 2 kN	963-162	165,–	963-262	165,–	963-362	300,–
	≤ 5 kN	963-163	225,–	963-263	225,–	963-363	405,–
	≤ 20 kN	961-164	295,–	961-264	295,–	961-364	440,–
	≤ 50 kN	961-165	295,–	961-265	295,–	961-365	440,–
	≤ 120 kN	961-166	325,–	961-266	325,–	961-366	485,–

! Further calibration options on request

NEW





A

Fig. shows KERN CE HSA

Super compact display device (rail-mounted module) for installation in switch cabinets

Features

- Compact display unit for recording weighing data using strain gauge load cells, e.g. in industrial applications
- A Due to its small size, it is particularly space-saving to install in switch cabinets
- Thanks to the many interface variants, the modules can be ideally integrated into existing infrastructures and systems
- The modules can be used either individually or as a Buslink system with a total of up to 332 DIN rail modules
- The configuration of the module can be carried out conveniently via a connected PC with the supplied software
- Bright LED display for optical control and settings
- Time-saving G-Cal™ (Geographic Calibration) technology for fast and accurate calibration without weights conveniently over a network or the Internet worldwide
- Convenient communication via remote devices
- Backup and restore function via USB port
- Can handle various industrial protocols such as Ethernet IP, Modbus TCP, Modbus RTU, FINS and Profibus DP
- Extremely high measurement frequency possible, up to 1600 data records/s
- Internal resolution 24 Bit

Technical Data

- LCD display, digit height 7,6 mm
- Overall dimensions W×D×H 101×120×22,5 mm
- Permissible ambient temperature -10 °C/40°C

Accessories

- Mains adapter for power supply of the KERN CE HSx, mountable on DIN rail, KERN CE HSS, **€ 80,–**

STANDARD: CAL EXT · USB · UNIT · 1 DAY

OPTION: RS 232 · SWITCH · ANALOG · LAN · PROFIBUS

Features	Model KERN			
	CE HSA	CE HSE	CE HSP	CE HSR
Power supply	18-32 Vdc; 4 W max.	18-32 Vdc; 4 W max.	18-32 Vdc; 4 W max.	18-32 Vdc; 4 W max.
Load cell power supply	5 Vdc	5 Vdc	5 Vdc	5 Vdc
Sensitivity	0,1 µV/d	0,1 µV/d	0,1 µV/d	0,1 µV/d
Adjustable nominal sensitivity	1; 1.5; 2; 2.5; 3 mV/V	1; 1.5; 2; 2.5; 3 mV/V	1; 1.5; 2; 2.5; 3 mV/V	1; 1.5; 2; 2.5; 3 mV/V
Input voltage Unipolar @3mV/V	-1 mV to +16 mV	-1 mV to +16 mV	-1 mV to +16 mV	-1 mV to +16 mV
Input voltage Bipolar @3mV/V	-16 mV to +16 mV	-16 mV to +16 mV	-16 mV to +16 mV	-16 mV to +16 mV
A/D Conversion speed	1600/s	1600/s	1600/s	1600/s
Max. load cell impedance	1200Ω	1200Ω	1200Ω	1200Ω
Min. load cell impedance	43,75 Ω	43,75 Ω	43,75 Ω	43,75 Ω
Max. no. of load cells 350 Ω	8	8	8	8
Max. no. of load cells 1000 Ω	22	22	22	22
Max. number of d	10.000	10.000	10.000	10.000
Display steps	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200
Communication/Interfaces	USB	USB, Ethernet	USB, Profibus	USB, RS232/422
Analog output	0/4-20/24mA	-	-	-
Dimensions W×D×H	120×110×22 mm	120×110×22 mm	120×110×22 mm	120×110×22 mm
Net weight g	150	150	150	150
Price excl. of VAT ex works **€**	**480,–**	**540,–**	**540,–**	**510,–**

NEW at SAUTER and in the KERN calibration laboratory:
We can optionally supply measuring cells with a digital D7 or analogue ALMEMO® measuring connector for your Ahlborn measuring device. In addition, you can choose between numerical, two-point or multi-point adjustment. We can also supply the required DAkkS calibration certificate (up to 120 kN tension/compression) [2]

Example:

CR Q1

analog measuring connector ALMEMO® D26 [1]

Calibration certificate [2]

or

CD P1

digital measuring connector ALMEMO® D7 [1]

Calibration certificate [2]

In order to be able to calibrate your electrode with analog measuring connector ALMEMO® D26 according to your requirements, please inform us when ordering and send us your Ahlborn device. This is not necessary for digital measuring connector ALMEMO® D7!
1) Measuring device is not included with the delivery, measuring connector only !
2) Possible calibration services please see table on page 8

STANDARD: CAL EXT, UNIT, 3 DAYS
OPTION: DAkkS +3 DAYS *, ISO +4 DAYS **

Calibration	Measuring range [Max] kN	analog measuring connector ALMEMOR D26 TEDS +/-26mV, mounted on measuring cell		Digital connector D7 ALMEMO® mounted on measuring cell	
		Model SAUTER	**Price** excl. of VAT ex works **€**	Model SAUTER	**Price** excl. of VAT ex works **€**
Numerical		CE D26401	**190,–**	CE D7401	**390,–**
Two-point adjustment	0,5	CE D26402	**210,–**	CE D7402	**400,–**
	2	CE D26403	**210,–**	CE D7403	**400,–**
	5	CE D26404	**210,–**	CE D7404	**400,–**
	20	CE D26405	**210,–**	CE D7405	**400,–**
	50	CE D26406	**210,–**	CE D7406	**400,–**
	120	CE D26407	**210,–**	CE D7407	**400,–**
Multi-point adjustment	0,5	CE D26408	**260,–** ↓	CE D7408	**450,–**
	2	CE D26409	**260,–** ↓	CE D7409	**450,–**
	5	CE D26410	**260,–** ↓	CE D7410	**450,–**
	20	CE D26411	**260,–** ↓	CE D7411	**450,–**
	50	CE D26412	**260,–** ↓	CE D7412	**450,–**
	120	CE D26413	**260,–** ↓	CE D7413	**450,–**

↓ Price reduction

* up to max. 500 kg/5 kN, ** up to max. 12 t/120 kN

CP P4

Single-point load cells made of anodised aluminium

STANDARD: IP 65, 1 DAY
OPTION: DAkkS +3 DAYS, ISO +4 DAYS

- CE and RoHS compliant
- Accuracy class L
- Dust and spray protection to IP65 (in accordance with EN 60529)
- Aluminium, anodised
- Suitable for price-computing scales, bench scales, platform scales, etc.
- Maximum platform size 200×200 mm
- 4-wire connection
- Nominal sensitivity: 0,9 mV/V

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CP 300-0P4	0,3	60,–
CP 600-0P4	0,6	60,–

CP P1

Single-point load cells made of anodised aluminium

STANDARD: IP 65, M, 1 DAY
OPTION: DAkkS +3 DAYS, ISO +4 DAYS

- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP65 (in accordance with EN 60529)
- Aluminium, anodised
- Suitable for price-computing scales, bench scales, platform scales, etc.
- Maximum platform size 250×350 mm
- 4-wire connection
- Nominal sensitivity: 2 mV/V
- Note: Version in accordance with OIML R60 C4 or C5 on request

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CP 3-3P1	3	50,–
CP 5-3P1	5	50,–
CP 6-3P1	6	50,–
CP 8-3P1	8	50,–
CP 10-3P1	10	50,–
CP 15-3P1	15	50,–
CP 20-3P1	20	50,–
CP 30-3P1	30	50,–
CP 35-3P1	35	50,–
CP 40-3P1	40	50,–
CP 50-3P1	50	50,–

CP P3

Single-point load cells made of anodised aluminium

STANDARD: IP 65, 1 DAY
OPTION: DAkkS +3 DAYS, ISO +4 DAYS

- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP65 (in accordance with EN 60529)
- Suitable for price-computing scales, bench scales, platform scales, etc.
- Maximum platform size 350×400 mm
- 4-wire connection
- Nominal sensitivity: 2 mV/V
- Note: Version in accordance with OIML R60 C4 on request

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CP 50-3P3	50	65,–
CP 75-3P3	75	65,–

Tip: Further details and technical data sheet as well as extensive accessories can be found at www.sauter.eu

CP P2

Single-point load cell of aluminium

STANDARD: IP 65 · 1 DAY

OPTION: DAkkS +3 DAYS · ISO +4 DAYS

- Accuracy in accordance with OIML R60 C3
- Dust and spray protection to IP65 (in accordance with EN 60529)
- Aluminium, anodised
- Suitable for price-computing scales, bench scales, etc.
- Maximum platform size 100–300 kg: 400×400 mm
- Maximum platform size 400–500 kg: 450×450 mm
- Nominal sensitivity: 2 mV/V
- Note: Version in accordance with OIML R60 C4 or C5 on request

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CP 100-3P2	100	70,–
CP 150-3P2	150	70,–
CP 200-3P2	200	70,–
CP 300-3P2	300	70,–
CP 400-3P2	400	70,–
CP 500-3P2	500	70,–

CP P9

Single-point load cells of stainless steel

STANDARD: IP 68 · IP 69K · M · 1 DAY

OPTION: DAkkS +3 DAYS · ISO +4 DAYS

- Accuracy in accordance with OIML R60 C3
- Dust and spray protection to IP68/IP69K (in accordance with EN 60529), welded to create a hermetic seal
- Stainless steel
- Area of application: Measuring mass as well as compressive force in harsh environments
- Suitable for platform scales, checkweighers
- Maximum platform size 10–50 kg: 400×400 mm
- Maximum platform size 100–500 kg: 800×800 mm
- 4-wire connection (10–50 kg)
- 6-wire connection (100–500 kg)
- Nominal sensitivity: 2 mV/V
- Note: Version in accordance with OIML R60 C4 or C5 on request

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CP 10-3P9	10	330,–
CP 20-3P9	20	330,–
CP 50-3P9	50	330,–
CP 100-3P9	100	500,–
CP 200-3P9	200	500,–
CP 300-3P9	300	500,–
CP 400-3P9	400	500,–
CP 500-3P9	500	500,–

Tip: Further details and technical data sheet as well as extensive accessories can be found at www.sauter.eu

Fig. shows optional accessory, mounting kit
1 SAUTER CE P4136

CD P1

Load cells made of stainless steel

STANDARD: IP 68, M, 1 DAY
OPTION: ISO +4 DAYS *

- Accuracy class C3
- Dust and spray protection to IP68 (in accordance with EN 60529), hermetically encapsulated
- Stainless steel
- Area of application: Measuring mass as well as compressive force
- Suitable for vehicle scales, weigh hoppers, vehicle testing equipment, test benches
- Note: EX version or accuracy class C4 on request
- Nominal sensitivity: 2 mV/V

Model SAUTER	Nominal load	Price excl. of VAT ex works €
CD 10-3P1	10 t/100 kN	**350,–**
CD 20-3P1	20 t/200 kN	**350,–**
CD 40-3P1	40 t/400 kN	**350,–**
CD 50-3P1	50 t/500 kN	**350,–**

* up to max. 12 t/120 kN

CD P2

Load cells made of stainless steel

STANDARD: IP 68
OPTION: ISO +4 DAYS *

- Accuracy in accordance with OIML R60 C2
- Dust and spray protection to IP68 (in accordance with EN 60529), hermetically encapsulated
- Stainless steel
- Area of application: Tensile and compressive force measurement
- Suitable for vehicle scales, weigh hoppers, vehicle testing equipment, test benches, suspended scales
- Nominal sensitivity: 1,5 mV/V
- Please ask for delivery time

Model SAUTER	Nominal load	Price excl. of VAT ex works €
CD 10-2P2	10 t/100 kN	**990,–**
CD 20-2P2	20 t/200 kN	**990,–**
CD 30-2P2	30 t/300 kN	**1550,–**
CD 50-2P2	50 t/500 kN	**1700,–**
CD 100-2P2	100 t/1000 kN	**2700,–**

* up to max. 12 t/120 kN

Accessories CD P1:

- Pressure piece, steel, rustproof, suitable for CD 10-3P1, CD 20-3P1, SAUTER CE P10330, **€ 75,–**
- Pressure piece, steel, rustproof, suitable for CD 40-3P1, CD 50-3P1, SAUTER CE P10350, **€ 75,–**
- 1 Mounting kit, steel, rustproof, suitable for CD 10-3P1, CD 20-3P1, SAUTER CE P41430, **€ 580,–**
- Mounting kit, steel, rustproof, suitable for CD 40-3P1, CD 50-3P1, SAUTER CE P14150, **€ 590,–**

Tip: Further details and technical data sheet as well as extensive accessories can be found at www.sauter.eu

Fig. shows accessories, load corner 1 SAUTER CE Q42901, for further accessories please visit our online shop

CR Q1

Load cells made of stainless steel

STANDARD: IP 68, 1 DAY
OPTION: ISO +4 DAYS **

- Accuracy class C1
- Dust and spray protection to IP68 (in accordance with EN 60529), hermetically encapsulated
- Stainless steel
- Area of application: Measuring mass as well as compressive force
- Suitable for vehicle scales, weigh hoppers, vehicle testing equipment, test benches
- Nominal sensitivity: 2 mV/V

Model SAUTER	Nominal load	Price excl. of VAT ex works €
CR 2500-1Q1	2,5 t/25 kN	260,–
CR 5000-1Q1	5 t/50 kN	260,–
CR 10000-1Q1	10 t/100 kN	260,–
CR 20000-1Q1	20 t/200 kN	460,–
CR 30000-1Q1	30 t/300 kN	460,–

** up to max. 12 t/120 kN

CR P1

Load cells made of stainless steel

STANDARD: IP 68, 1 DAY
OPTION: DAkkS +3 DAYS *, ISO +4 DAYS **

- Accuracy in accordance with OIML R60 C3
- Dust and spray protection to IP68 (in accordance with EN 60529), hermetically encapsulated
- Stainless steel
- Area of application: Measuring mass as well as compressive force
- Suitable for truck scales, suspended scales, silo scales and other diverse scales, test benches, etc.
- Nominal sensitivity: 1–2 mV/V

Model SAUTER	Nominal load	Price excl. of VAT ex works €
CR 60-3P1	60 kg/0,6 kN	760,–
CR 130-3P1	130 kg/1,3 kN	760,–
CR 250-3P1	250 kg/2,5 kN	760,–
CR 500-3P1	500 kg/5 kN	760,–
CR 1000-3P1	1000 kg/10 kN	760,–
CR 2000-3P1	2000 kg/20 kN	760,–

* up to max. 500 kg/5 kN
** up to max. 12 t/120 kN

Accessories CR Q1:

- 1 Load corner, steel, galvanised, suitable for CR Q1 with nominal load ≤ 10 t, SAUTER CE Q42901, **€ 220,–**
- Load corner, steel, galvanised, suitable for CR Q1 with nominal load ≥ 20 t, SAUTER CE Q42902, **€ 360,–**
- Load corner, steel, rustproof, suitable for CR Q1 with nominal load ≤ 10 t, SAUTER CE RQ42901, **€ 430,–**
- Load corner, steel, rustproof, suitable for CR Q1 with nominal load ≥ 20 t, SAUTER CE RQ42902, **€ 730,–**

Accessories CR P1:

- Load corner for CR 1000-3P1, CR 250-3P1, CR 500-3P1 Steel, incl. pressure piece, SAUTER CE P244011, **€ 510,–**
- Pressure piece for CR 1000-3P1, CR 250-3P1, CR 500-3P1 steel, SAUTER CE P244012, **€ 99,–**
- Load corner for CR 2000-3P1 steel, rustproof, incl. pressure piece, SAUTER CE P244021, **€ 620,–**
- Pressure piece for CR 2000-3P1 steel, rustproof SAUTER CE P244022, **€ 105,–**

Tip: Further details and technical data sheet as well as extensive accessories can be found at www.sauter.eu

Fig. shows accessories, base plate 1 SAUTER CE Q30903 and bearings 2 SAUTER CE Q30904, for further accessories please visit our online shop

Fig. shows optional accessory load corner 3 SAUTER CE P4022

CB Q1 · CB Q2

Bending beam and shear beam measuring cells made from stainless steel

STANDARD: IP 68 · IP 69K · 1 DAY

OPTION: DAkkS +3 DAYS · ISO +4 DAYS *

- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP68/IP69K (in accordance with EN 60529), welded to create a hermetic seal
- Stainless steel
- Area of application: Measuring mass as well as compressive force in harsh environments
- Suitable for platform scales, weigh hoppers, floor scales and other weighing devices
- 4-wire connection
- Nominal sensitivity: 2 mV/V
- Note: Accuracy class OIML R60 C6 or EX version on request

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CB 5-3Q1	5	185,–
CB 10-3Q1	10	185,–
CB 20-3Q1	20	185,–
CB 30-3Q1	30	185,–
CB 50-3Q1	50	185,–
CB 75-3Q1	75	185,–
CB 100-3Q1	100	195,–
CB 150-3Q1	150	185,–
CB 200-3Q1	200	185,–
CB 250-3Q1	250	185,–
CB 300-3Q1	300	185,–
CB 500-3Q1	500	185,–
CB 750-3Q2	750	195,–
CB 1000-3Q2	1000	195,–
CB 1500-3Q2	1500	195,–

* up to max. 500 kg

CT P1

Measuring cells made from stainless steel

STANDARD: IP 67 · M · 1 DAY

OPTION: DAkkS +3 DAYS · ISO +4 DAYS

- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP67 (in accordance with EN 60529), hermetically encapsulated
- Nickel-plated steel
- Area of application: Measuring mass as well as compressive force in harsh environments
- Suitable for platform scales, silo scales, bed scales and other diverse scales
- 4-wire connection
- Nominal sensitivity: 3 mV/V

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CB 100-3P1	100	100,–
CB 250-3P1	250	100,–

Accessories CB Q1 · CB Q2:

- Traction device, steel, galvanised, suitable for CB Q1, SAUTER CE Q30901, **€ 75,–**
- Traction device, steel, rustproof, suitable for CB Q2, SAUTER CE Q34905, **€ 80,–**
- 1 Base plate, steel, galvanised, suitable for CB Q1, SAUTER CE Q30903, **€ 90,–**
- Base plate, steel, rustproof, suitable for CB Q1, SAUTER CE RQ30903, **€ 175,–**
- Base plate, steel, rustproof, suitable for CB Q2, SAUTER CE Q34903, **€ 85,–**
- 2 Bearing, steel, rustproof, suitable for CB Q1 (nominal load 5 kg–50 kg), SAUTER CE Q30904, **€ 105,–**
- Bearing, steel, rustproof, suitable for CB Q1 (nominal load 75 kg–300 kg), SAUTER CE Q30905, **€ 105,–**
- Bearing, steel, rustproof, suitable for CB 500-3Q1, SAUTER CE Q30906, **€ 180,–**
- Bearing, steel, rustproof, suitable for CB 750-3Q2, CB 1000-3Q2, CB 1500-3Q2, SAUTER CE Q34906, **€ 165,–**
- Load corner, steel, galvanised, suitable for CB Q1, SAUTER CE Q30907, **€ 195,–**
- Load corner, steel, rustproof, suitable for CB Q1, SAUTER CE RQ30907, **€ 280,–**
- Adjustable foot, steel, rustproof, suitable for SAUTER CE Q34901, **€ 60,–**

Accessories CB P1:

- Adjustable foot, steel, nickel-plated, load base M12 for CT 500-3P1, CT 1000-3P1 and CT 1500-3P1, SAUTER CE P2012, **€ 22,–**
- 3 Load corner, steel, nickel-plated for CT 500-3P1, CT 1000-3P1 and CT 1500-3P1, SAUTER CE P4022, **€ 115,–**
- Spacer plates for bending beam CB P1 made from steel, SAUTER CE P3012, **€ 8,–**

Tip: Further details and technical data sheet as well as extensive accessories can be found at www.sauter.eu

Fig. shows optional accessory load corner 1 SAUTER CE RQ35903

Fig. shows optional accessory load corner 2 SAUTER CE P4022

CT Q1

Shear beam made from stainless steel

STANDARD: IP 68 · IP 69K · 1 DAY

OPTION: DAkkS +3 DAYS * · ISO +4 DAYS **

- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP68/IP69K (in accordance with EN 60529), welded to create a hermetic seal
- Stainless steel
- Area of application: Measuring mass as well as compressive force in harsh environments
- Suitable for platform scales, weigh hoppers, flush-mounted floor scales and other weighing devices
- 6-wire connection
- Nominal sensitivity: 2 mV/V
- Note: EX version on request

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CT 300-3Q1	300	**180,–**
CT 500-3Q1	500	**180,–**
CT 750-3Q1	750	**180,–**
CT 1000-3Q1	1000	**180,–**
CT 1500-3Q1	1500	**180,–**
CT 2000-3Q1	2000	**180,–**
CT 3000-3Q1	3000	**340,–**
CT 5000-3Q1	5000	**340,–**
CT 7500-3Q1	7500	**450,–**
CT 10000-3Q1	10000	**450,–**

* up to max. 500 kg
** up to max. 12 t

CT P1 · CT P2

Measuring cells made from stainless steel

STANDARD: IP 67 · M · 1 DAY

OPTION: DAkkS +3 DAYS * · ISO +4 DAYS **

- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP67 (in accordance with EN 60529), welded to create a hermetic seal
- Nickel-plated steel
- Area of application: Measuring mass as well as compressive force in harsh environments
- Suitable for platform scales, weigh hoppers, flush-mounted floor scales and other weighing devices
- 4-wire connection
- Nominal sensitivity: 3 mV/V
- Note: EX version, 6-wire connection and accuracy class C4 or C5 on request
- **CT P2:** Delivery with calibrated characteristic value, if several cells are ordered

Model SAUTER	Nominal load kg	Price excl. of VAT ex works €
CT 500-3P1	500	**90,–**
CT 1000-3P1	1000	**90,–**
CT 1500-3P1	1500	**90,–**
CT 2500-3P1	2500	**110,–**
CT 3000-3P1	3000	**110,–**
CT 5000-3P1	5000	**110,–**
CT 10000-3P1	10000	**160,–**
CT 500-3P2	500	**95,–**
CT 1000-3P2	1000	**95,–**
CT 3000-3P2	3000	**115,–**
CT 5000-3P2	5000	**115,–**
CT 10000-3P2	10000	**165,–**

* up to max. 500 kg
** up to max. 12 t

Accessories CT Q1:

- Base plate, steel, rustproof, suitable for CT Q1, SAUTER CE RQ35911, **€ 185,–**
- Base plate, steel, rustproof, suitable for CT 3000-3Q1, CT 5000-3Q1, SAUTER CE RQ35912, **€ 355,–**
- Base plate, steel, rustproof, suitable for CT 7500-3Q1, CT 10000-3Q1, SAUTER CE RQ35919, **€ 780,–**
- Bearing, steel, rustproof, suitable for CT Q1, SAUTER CE RQ35909, **€ 135,–**
- Bearing, steel, rustproof, suitable for CT 3000-3Q1, CT 5000-3Q1, SAUTER CE RQ35910, **€ 260,–**
- Bearing, steel, rustproof, suitable for CT 7500-3Q1, CT 10000-3Q1, SAUTER CE RQ35918, **€ 600,–**
- Load corner, steel, rustproof, suitable for CT Q1, SAUTER CE RQ35902, **€ 350,–**
- 1 Load corner, steel, rustproof, suitable for CT 3000-3Q1, CT 5000-3Q1, SAUTER CE RQ35903, **€ 515,–**

Accessories CT P1:

- Load corner, steel, rustproof, suitable for CT 10000-3P1, CT 10000-3P2, SAUTER CE P40210, **€ 385,–**
- 2 Load corner, steel, nickel-plated, suitable for CT 500-3P1, CT 1000-3P1, CT 1500-3P1, SAUTER CE P4022, **€ 115,–**
- Load corner, steel, nickel-plated, suitable for CT 2500-3P1, CT 3000-3P1, CT 5000-3P1, SAUTER CE P4025, **€ 200,–**
- Adjustable foot, steel, rustproof, suitable for CT 500-3P1, CT 1000-3P1, CT 1500-3P1, SAUTER CE P2012, **€ 22,–**
- Adjustable foot, steel, rustproof, suitable for CT 2500-3P1, CT 3000-3P1, CT 5000-3P1, SAUTER CE P2018, **€ 29,–**
- Adjustable foot, steel, rustproof, suitable for CT 10000-3P1, SAUTER CE P2024, **€ 85,–**
- Spacer plate for CT 500-3P1, CT 500-3P2, CT 1000-3P1, CT 1000-3P2 and CT 1500-3P1, SAUTER CE P3012, **€ 8,–**
- Spacer plate for CT 2500-3P1, CT 3000-3P1, CT 3000-3P2, CT 5000-3P1 and CT 5000-3P2 SAUTER CE P3015, **€ 8,–**
- Spacer plate for CT 10000-3P1 and CT 10000-3P2 SAUTER CE P30110, **€ 8,–**

Tip: Further details and technical data sheet as well as extensive accessories can be found at www.sauter.eu

Fig. shows optional accessory 1 SAUTER CE R20, for further accessories please visit our online shop

Fig. shows optional accessory traction device 2 SAUTER CE Q12, for further accessories please visit our online shop

CS P1

4-wire “S” measuring cells made of nickel-plated steel for force and mass measurement

STANDARD: IP 67, 1 DAY

OPTION: DAkkS +3 DAYS *, ISO +4 DAYS **

- Accuracy in accordance with OIML R60 class C3
- Dust and spray protection to IP67 (in accordance with EN 60529), welded to create a hermetic seal
- Nickel-plated steel
- Scope of application: for tensile and compressive force measurement
- Suitable for handing scales, weigh hoppers and other weighing devices as well as force measurement devices and test benches
- 4-wire connection
- Note: EX version and accuracy class C4 on request
- Nominal sensitivity: 2 mV/V

Model SAUTER	Nominal load	Price excl. of VAT ex works €
CS 25-3P1	25 kg/250 N	160,–
CS 50-3P1	50 kg/500 N	160,–
CS 100-3P1	100 kg/1 kN	175,–
CS 150-3P1	150 kg/1,5 kN	160,–
CS 250-3P1	250 kg/2,5 kN	160,–
CS 500-3P1	500 kg/5 kN	160,–
CS 600-3P1	600 kg/6 kN	160,–
CS 750-3P1	750 kg/7,5 kN	160,–
CS 1000-3P1	1 t/10 kN	180,–
CS 1500-3P1	1.5 t/15 kN	180,–
CS 2000-3P1	2 t/20 kN	200,–
CS 2500-3P1	2.5 t/25 kN	200,–
CS 5000-3P1	5 t/50 kN	200,–
CS 7500-3P1	7.5 t/75 kN	390,–
CS 10000-3P1	10 t/100 kN	390,–
CS 15000-3P1	15 t/150 kN	560,–
CS 20000-3P1	20 t/200 kN	570,–
CS 30000-3P1	30 t/300 kN	1490,–

* up to max. 500 kg/5 kN,
** up to max. 12 t/120 kN

CS Q1

6-wire “S” measuring cells made of nickel-plated steel for force and mass measurement

STANDARD: IP 67, 1 DAY

OPTION: DAkkS +3 DAYS *, ISO +4 DAYS **

- Accuracy class C3
- Dust and spray protection to IP67 (in accordance with EN 60529), hermetically encapsulated
- Nickel-plated steel
- Scope of application: for tensile and compressive force measurement
- Suitable for handing scales, weigh hoppers and other weighing devices as well as force measurement devices and test benches
- 6-wire connection
- Nominal sensitivity: 2 mV/V

Model SAUTER	Nominal load	Price excl. of VAT ex works €
CS 50-3Q1	50 kg /500 N	180,–
CS 100-3Q1	100 kg /1 kN	180,–
CS 150-3Q1	150 kg /1,5 kN	180,–
CS 200-3Q1	200 kg /2 kN	180,–
CS 300-3Q1	300 kg /3 kN	180,–
CS 500-3Q1	500 kg /5 kN	180,–
CS 750-3Q1	750 kg /7,5 kN	180,–
CS 1000-3Q1	1 t /10 kN	180,–
CS 1500-3Q1	1.5 t /15 kN	200,–
CS 2000-3Q1	2 t /20 kN	200,–
CS 3000-3Q1	3 t/30 kN	300,–
CS 5000-3Q1	5 t/50 kN	300,–
CS 6000-3Q1	6 t/60 kN	300,–

* up to max. 500 kg/5 kN,
** up to max. 12 t/120 kN

Accessories CT P1:

- Traction device, steel, galvanised, suitable for CS P1, SAUTER CE Q12, **€ 145,–**
- Rod end, steel, galvanised, suitable for CS 25-3P1, CS 50-3P1, SAUTER CE R8, **€ 17,–**
- Rod end, steel, rustproof, suitable for CS 25-3P1, CS 50-3P1, SAUTER CE RR8, **€ 45,–**
- Rod end, steel, rustproof, suitable for CS 100-3P1, CS 150-3P1, SAUTER CE RR10, **€ 55,–**
- Rod end, steel, galvanised, suitable for CS 100-3P1, CS 150-3P1, SAUTER CE R10, **€ 19,–**
- Rod end, steel, galvanised, suitable for CS P1, CS P2 with 50 kg ≥ nominal load ≤ 1 t, SAUTER CE R12, **€ 40,–**
- Rod end, steel, rustproof, suitable for CS P1, CS P2 with 50 kg ≥ nominal load ≤ 1 t, SAUTER CE RR12, **€ 65,–**
- 1 Rod end, steel, galvanised, suitable for CS 2000-3P1, CS 2500-3P1, CS 5000-3P1, SAUTER CE R20, **€ 80,–**
- Rod end, steel, rustproof, suitable for CS 2000-3P1, CS 2500-3P1, CS 5000-3P1, SAUTER CE RR20, **€ 125,–**

Accessories CT Q1:

- 2 Traction device, steel, galvanised, suitable for CS P1, SAUTER CE Q12, **€ 145,–**
- Traction device, steel, galvanised, suitable for CS 1500-3Q1, CS 2000-3Q1, SAUTER CE Q16, **€ 300,–**
- Traction device, steel, galvanised, suitable for CS 3000-3Q1, CS 5000-3Q1, CS 6000-3Q1, SAUTER CE Q24, **€ 430,–**
- Rod end, steel, galvanised, suitable for CS P1, CS P2 with 50 kg ≥ nominal load ≤ 1 t, SAUTER CE R12, **€ 40,–**
- Rod end, steel, rustproof, suitable for CS P1, CS P2 with 50 kg ≥ nominal load ≤ 1 t, SAUTER CE RR12, **€ 65,–**
- Rod end, steel, galvanised, suitable for CS 1500-3Q1, CS 2000-3Q1, SAUTER CE R16, **€ 60,–**
- Rod end, steel, rustproof, suitable for CS 1500-3Q1, CS 2000-3Q1, SAUTER CE RR16, **€ 100,–**
- Rod end, steel, galvanised, suitable for CS 3000-3Q1, CS 5000-3Q1, CS 6000-3Q1, SAUTER CE R24, **€ 95,–**
- Rod end, steel, rustproof, suitable for CS 3000-3Q1, CS 5000-3Q1, CS 6000-3Q1, SAUTER CE RR24, **€ 150,–**

Tip: Further details and technical data sheet as well as extensive accessories can be found at www.sauter.eu


NEW

CS P2 0,5–7,5 t


NEW

CS Y1


NEW

CO Y1


NEW

CO Y2/CO Y3


NEW

CS P2 50–250 kg


NEW

CO Y4

CS P2

"S" measuring cells/load cells made of stainless steel

STANDARD: IP 68, 1 DAY
OPTION: DAkkS +3 DAYS, ISO +4 DAYS *

CS P2:
- Accuracy in accordance with OIML C3
- RoHS compliant
- Dust and spray protection to IP68
- Stainless steel
- Scope of application: measuring mass as well as force
- Suitable for handing scales, silo scales, force test benches and other diverse scales
- Nominal sensitivity: 2.0 mV/V

CS Y1

Miniature "S" measuring cells/load cells made of stainless steel

STANDARD: IP 65, 1 DAY
OPTION: ISO +4 DAYS

CS Y1:
- RoHS compliant
- Dust and spray protection to IP65
- Stainless steel
- Scope of application: for tensile and compressive force measurement, measuring mass as well as force
- Suitable for force test benches, handing scales, silo scales and other diverse scales
- Nominal sensitivity: 1,3 – 2 mV/V

CO Y1 – Y4

Miniature button-type measuring cells made of stainless steel

STANDARD: IP 65 (CO Y1, CO Y2), IP 66 (CO Y3), IP 67 (CO Y4), 1 DAY
OPTION: DAkkS +3 DAYS, ISO +4 DAYS **

CO Y1/CO Y4:
- RoHS compliant
- Dust and spray protection to IP65 and IP67 respectively
- Scope of application: compressive force appl.
- Suitable for measuring mass as well as force and force test benches
- Nominal sensitivity: 1.0 – 1.5mV/V

CO Y2/Y3:
- RoHS compliant
- Dust and spray protection to IP65 and IP66 respectively
- Scope of application: for tensile and compressive force measurement
- Suitable for measuring mass as well as force and force test benches
- Nominal sensitivity: 1,5 – 2 mV/V

Model SAUTER	Nominal load	**Price** excl. of VAT ex works €
CS 50-3P2	50 kg (≈500 N)	**395,–**
CS 100-3P2	100 kg (≈1 kN)	**395,–**
CS 250-3P2	250 kg (≈2,5 kN)	**395,–**
CS 500-3P2	500 kg (≈5 kN)	**305,–**
CS 1000-3P2	1 t (≈10 kN)	**305,–**
CS 2000-3P2	2 t (≈20 kN)	**305,–**
CS 5000-3P2	5 t (≈50 kN)	**365,–**
CS 7500-3P2	7.5 t (≈75 kN)	**365,–**

* up to max. 500 kg/5 kN

Model SAUTER	Nominal load	**Price** excl. of VAT ex works €
CS 1-Y1	1 kg (≈10 N)	**290,–**
CS 2-Y1	2 kg (≈20 N)	**290,–**
CS 5-Y1	5 kg (≈50 N)	**290,–**
CS 10-Y1	10 kg (≈100 N)	**290,–**
CS 20-Y1	20 kg (≈200 N)	**290,–**

Model SAUTER	Nominal load	**Price** excl. of VAT ex works €
CO 10-Y1	10 kg (≈100 N)	**155,–**
CO 20-Y1	20 kg (≈200 N)	**155,–**
CO 50-Y1	50 kg (≈500 N)	**155,–**
CO 100-Y1	100 kg (≈1 kN)	**155,–**
CO 200-Y1	200 kg (≈2 kN)	**155,–**
CO 500-Y1	500 kg (≈5 kN)	**180,–**
CO 1000-Y1	1000 kg (≈10 kN)	**180,–**
CO 2000-Y1	2000 kg (≈20 kN)	**205,–**
CO 10-Y2	10 kg (≈100 N)	**220,–**
CO 20-Y2	20 kg (≈200 N)	**220,–**
CO 50-Y2	50 kg (≈500 N)	**220,–**
CO 100-Y2	100 kg (≈1 kN)	**275,–**
CO 200-Y2	200 kg (≈2 kN)	**275,–**
CO 500-Y2	500 kg (≈5 kN)	**275,–**
CO 1000-Y2	1000 kg (≈10 kN)	**275,–**
CO 2000-Y2	2000 kg (≈20 kN)	**300,–**
CO 5-Y3	5 kg (≈50 N)	**330,–**
CO 10-Y3	10 kg (≈100 N)	**330,–**
CO 5-Y4	5 kg (≈50 N)	**205,–**
CO 10-Y4	10 kg (≈100 N)	**205,–**

** 200 kg/2 kN up to 500 kg/5 kN


CK P1


CK P2


CJ P4


CK P3


CK P4


CJ P6


CJ P4PG

CK P1-4

Miniature load cells made of aluminium

STANDARD: IP 65, 1 DAY

OPTION: DAkkS +3 DAYS, ISO +4 DAYS

- Dust and spray protection to IP65 (in accordance with EN 60529)
- Aluminium
- High level of accuracy
- Suitable for small scales and kitchen scales and force-measuring devices
- 4-wire connection

Model **SAUTER**	Nominal load kg	**Price** excl. of VAT ex works **€**
CK 600-0P1	0,6	**27,–**
CK 1-0P1	1	**27,–**
CK 2-0P1	2	**27,–**
CK 3-0P1	3	**28,–**
CK 5-0P1	5	**27,–**
CK 6-0P1	6	**27,–**
CK 300-0P2	0,3	**41,–**
CK 600-0P2	0,6	**41,–**
CK 1000-0P3	1	**24,–**
CK 100-0P4	0,1	**35,–**
CK 120-0P4	0,12	**35,–**
CK 300-0P4	0,3	**35,–**
CK 500-0P4	0,5	**35,–**

CJ P

Junctionbox CJ P for connecting several measuring cells to one evaluation unit

STANDARD: IP 65, 1 DAY

- Prepared for 4-wire and 6-wire measuring cells
- Models available for 2, 4, 6 or 8 load cells
- Robust aluminium die-cast housing with protection against dust and spray to IP65

Model **SAUTER**	Number of connection options	**Price** excl. of VAT ex works **€**
CJ P2	2	**75,–**
CJ P4	4	**75,–**
CJ P4PG	4	**80,–**
CJ P6	6	**95,–**
CJ P8	8	**95,–**

Tip: Further details and technical data sheet as well as extensive accessories can be found at www.sauter.eu

NEW


1


2

Manual test bench for precise compressive force measurement in the range up to 100 N

Features

- 1 The redesigned, superfine spindle enables exact testing in a force-measurement range up to 100 N in particularly fine steps and, in conjunction with the fine-dosing crank, ensures safe, reliable operation
- 2 Main areas of application: Testing of low levels of force with short distances, such as, for example, testing keyboard overlays, biological samples (e.g. strength of leaves, etc.), blister packs (e.g. force required to push tablets out, etc.)
- For vertical and horizontal use
- **High level of security** with repeated measurements
- **Large base plate** with various holes for fixture mountings
- Suitable for all SAUTER force measuring device up to 100 N (not included with the delivery)

Technical data

- Travel distance per knob rotation (one turn): 2 mm
- Overall dimensions W×D×H 160×280×380 mm
- Net weight approx. 6 kg

STANDARD

1 DAY

Model SAUTER	Measuring range [Max] N	Price excl. of VAT ex works €
TVL-XS	100	650,–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3

Ergonomic design and external sensor for highest ease of use

Features

- **External sensor** for difficult-to-access measurements
- **Data interface RS-232,** included
- **Base plate and calibration foils** included
- 1 **Delivered in a robust carrying case**
- **Offset-Accur:** This function allows you to adjust the instrument precisely on the locally measured range by a two-point calibration. This results in a superior accuracy of approx. 1 % of the measured value
- **Selectable measuring units:** µm, mil
- **Auto-Power-Off**

Technical data

- Measuring precision:
  - Standard: 3 % of measured value or ± 2,5 µm
  - Offset-Accur: 1 % of measured value or ± 1 µm
- Smallest sample surface (radius)
- Type F:
  - Convex: 1,5 mm
  - Flat: 1,5 mm
  - Concave: 25 mm
- Type N:
  - Convex: 3 mm
  - Flat: 5 mm
  - Concave: 50 mm
- Minimum thickness of base material: 300 µm
- Dimensions W×D×H 65×28×131 mm
- Battery operation, batteries standard 4× 1.5 V AAA
- Net weight approx. 81 g

Accessories

- **Data transfer software,** interface cable included, SAUTER ATC-01, **€ 90,–**
- **Calibration foils** for increased measuring accuracy (covers the range from 20 up to 2000 µm, with < 3 % tolerance), SAUTER ATB-US07, **€ 105,–**
- 2 **External sensor,** TypeF, SAUTER ATE 01, **€ 105,–**
- 3 **External sensor,** TypeN, SAUTER ATE 02, **€ 110,–**

STANDARD: CAL BLOCK, FOCUS, RS 232, ZERO, BATT, 1 DAY

OPTION: SOFTWARE, ISO +4 DAYS

Model SAUTER	Measuring range [Max] µm	Readout [d] µm	Test object	Price excl. of VAT ex works €	Option Factory calibration certificates KERN	 €
TE 1250-0.1F.	100 | 1250	0,1 | 1	Non-magnetic coatings on iron, steel (F)	**360,–**	961-110	120,–
TE 1250-0.1N.	100 | 1250	0,1 | 1	Insulating coatings on non-magnetic metals (N)	**400,–**	961-110	120,–
TE 1250-0.1FN.	100 | 1250	0,1 | 1	Combination instrument: F/N	**460,–**	961-112	170,–

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3

Material thickness gauge for ultrasonic material thickness testing in Echo-Echo principle

Features

- **Premium** thickness gauge device using ultrasonic technology: New **NT measuring technology** generation with automatic sensor adjustment (V-path correction for improved accuracy and more rapid display speed)
- **Dual measuring modes** to determine material thickness:
  - Pulse-Echo mode (up to 600 mm)
  - Echo-Echo mode (up to 100 mm)
- **Echo-Echo measurements:** Determining the actual thickness of materials regardless of any existing coating, such as, for example, paint or an anti-corrosion coating on the base metal. In this way, the wall thickness of pipes, for example, can be determined in a non-destructive manner, without having to remove the coating and the measurement can be shown on the display, with the adjustment for the coating thickness already taken into account
- Can be used on these materials, as well as others: Metals, plastics, ceramics, composite materials, epoxy, glass and other materials
- **High-precision mode:** Readout accuracy can be switched from 0.1 mm to 0.01 mm
- 1 **Premium display** with colour TFT display (320×240) with adjustable brightness so that it can be read easily in any environmental conditions
- Large **internal data memory** for up to 100 data sets each with 100 individual values
- **Energy-saving** operation with 2× AA batteries and an operating time of at least 100 hours, adjustable power-off time (sleep mode) and adjustable display switch-off (standby mode)
- 2 **USB data output** for easy data download from the device memory to the PC, as standard
- **Adjustment options:** 0-point adjustment, 1-point adjustment, 2-point adjustment by measuring material of different thicknesses
- **3 different measurement modes** with standard measuring (single measurement), scan mode (for continuous measurement and display of the ACTUAL value, the MIN and MAX value of the measuring sequence) and DIFF mode with calculation of the difference between the ACTUAL measured value and a manually defined nominal thickness
- **Limit alarm function:** Upper and lower limit adjustable. The measurement process is supported by an audible and visual signal
- **Menu languages:** GB, DE, FR, ES, IT
- Date and time can be adjusted. It is possible to store the measurement values with a time stamp
- Standard measuring probe ATU-US12 included with delivery
- 3 **Delivered in a robust carrying case**

Technical data

- Measuring precision: 0,5 % of [Max] ± 0,04 mm
- Dimensions W×D×H 70×31×130 mm
- Battery operation, batteries standard 2× 1.5 V AA, AUTO-OFF function to preserve batteries
- Net weight approx. 245 g
- Maximum thickness of coating (paints, lacquers or similar coatings which shall be eliminated): 3 mm

Accessories

- **External sensor,** 5 MHz, ⌀ 10 mm, for echo-echo measuring, SAUTER ATU-US12, **€ 310,–**
- **Ultrasound contact gel,** standard, can be reordered, approx. 60 ml, SAUTER ATB-US03, **€ 30,–**
- Further sensors on request
- **Note:** Further details and plenty of further accessories see www.sauter.eu

STANDARD: CAL BLOCK, SCAN, MEMORY, USB, TOL, ZERO, BATT, 1 DAY

OPTION: SOFTWARE, ISO +4 DAYS

Model SAUTER	Measuring range Echo-Echo mm	Measuring range Pulse-Echo mm	Readout [d] mm	Speed of sound m/s	Sensor	Price excl. of VAT ex works €	Option Factory calibration certificates KERN	 €
TO 100-0.01EE	3–100	0,7–600	0,1/0,01	100–19999	5 MHz | ⌀ 10 mm	**1390,–**	961-113	120,–


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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 7619-1 are not possible because of very narrow standard tolerances
- **Shore A** rubber, elastomers, neoprene, silicone, vinyl, soft plastics, felt, leather and similar material
- **Shore D** plastics, formica, epoxides, plexiglass etc.
- **Shore A0** 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 A0), TI-D. (for Shore D)
- 1 Delivery in a plastic box
- The measuring tips are not interchangeable

Technical data

- Measuring precision: 3 % of [Max]
- Dimensions W×D×H 60×25×115 mm
- Net weight approx. 160 g
- Screws to screw on to the TI: M7 fine thread
- Material thickness of the sample, min. 4 mm

Accessories

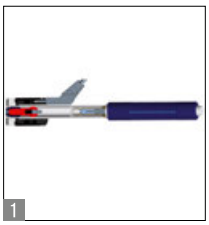
Shore comparison plates for testing and calibration of Shore hardness testing devices. By regular comparison, the measuring accuracy increases significantly.

- 2 **7 hardness comparison plates** for Shore A, tolerance up to ± 2 HA, SAUTER AHBA-01, **€ 95,–**
- 3 **3 hardness comparison plates** for Shore D, tolerance up to ± 2 HD, SAUTER AHBD-01, **€ 75,–**
- **Factory calibration of the comparison plates,** SAUTER 961-170, **€ 95,–**
- **Test stand** for HBA and HB0, SAUTER TI-AC., **€ 240,–**
- **Test stand** for HBD, SAUTER TI-D., **€ 300,–**

STANDARD

PEAK 1 DAY

Model **SAUTER**	Hardness type	Measuring range [Max] HS	Readout [d] HS	**Price** excl. of VAT ex works **€**
HBA 100-0.	Shore A	100 HA	1,0 HA	**105,–**
HB0 100-0.	Shore A0	100 HA0	1,0 HA0	**135,–**
HBD 100-0.	Shore D	100 HD	1,0 HD	**140,–**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5

Advanced features for demanding applications

Features

- 1 **Impact (rebound) sensor:** The bounce module is accelerated by a spring against the item being tested. Depending on how hard the object is, the kinetic energy of the module will be absorbed. The speed reduction will be measured and converted to Leeb hardness values.
- **External impact sensor** (Type D) included
- **Mobility:** In comparison with stationary table-top devices and testing devices with an internal sensor, using the SAUTER HMM. offers the highest level of mobility and flexibility
- **All measurement directions possible (360°)** thanks to an automatic compensation function
- 2 **Standard block for calibration** included (approx. 790 ± 40 HL)
- 3 **Delivered in a robust carrying case**
- **Internal memory** for up to 9 measured values
- **Mini statistics function:** displays the measured result, the average value, the impact direction, date and time
- SAUTER HMM-NP: identical product features as the SAUTER HMM. model, but comes without the printer
- **Measurement value display:** Rockwell (B & C), Vickers (HV), Brinell (HB), Shore (HSD), Leeb (HL), tensile strength (MPa)
- **Automatic unit conversion:** The measuring result is automatically converted into all specified hardness units

Technical data

- Measuring precision: 1 % at 800 HLD (± 6 HLD)
- Measuring range tensile strength: 375–2639 MPa (steel)
- Min. sample weight on a solid and stable support: 3 kg
- Minimum sample material thickness: 8 mm
- Minimum sample radius (concave/convex): 50 mm (with support ring: 10 mm)
- Dimensions W×D×H 80×30×150 mm
- SAUTER HMM.: External mains adaptor for printer, as standard
- Ready for use: Batteries included, 3× 1.5 V AAA, block, operating time up to 30 h, AUTO-OFF function to preserve battery life
- Net weight approx. 0,2 kg

Accessories

- Connection cable, without impact sensor, SAUTER HMM-A02, **€ 105,–**
- 5 **Attachment rings** for secure positioning, SAUTER AHMR 01, **€ 320,–**
- 4 **Impact body,** SAUTER AHMO D01, **€ 115,–**
- **Test block** Type D/DC, ø 90 mm (± 1 mm), net weight < 3 kg, hardness range
  790 ± 40 HL, SAUTER AHMO D02, **€ 190,–**
  630 ± 40 HL, SAUTER AHMO D03, **€ 190,–**
  530 ± 40 HL, SAUTER AHMO D04, **€ 190,–**
- **Paper roll,** 1 piece, SAUTER ATU-US11, **€ 15,–**
- **Factory calibration certificates** for SAUTER AHMO D02, AHMO D03, AHMO D04, SAUTER 961-132, **€ 120,–**

STANDARD: CAL BLOCK · MEMORY · IR · STATISTIC · PRINT · BATT · 1 DAY

OPTION: ISO +4 DAYS

Model SAUTER	Sensor	Measuring range [Max] HL	Readout [d] HL	Price excl. of VAT ex works €	Option Factory calibration certificates KERN	 €
HMM.	Typ D	170–960	1	1090,–	961-131	120,–
HMM-NP	Typ D	170–960	1	870,–	961-131	120,–

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2

Compact photometer, optimised for accurate light measurement, including LED light measurement

Features

- For measuring illumination of office workstations, production workstations, etc.
- **Photo sensor:** Silicon diode, filtered
- **Cosine correction** for incidence of light at an angle
- **Data-hold function,** to freeze the current measurement
- 1 **Rotatable sensor unit** (+90 and -180°) for optimum alignment to the light source
- **Sturdy protective cover** for the photo sensor
- 2 **Increased service life:** Impact protection by means of delivery in a soft box with light protection
- **TRACK function** for continuous recording of variable environmental conditions
- **Peak hold function** to capture the peak value
- **Selectable units:** fc (foot-candle), lux
- Easy to toggle between units by a keypress
- Option of fitting a stand on the rear of the housing, ¼" thread

Technical data

- Measuring precision up to 20.000 Lux: ± (4 % of the result + 10 scale intervals)
- Measuring precision from 20,000 Lux: ± (5 % of the result + 10 scale intervals)
- Repeatability: ± 2 % of [Max]
- Temperature error: ± 0,1 % of [Max]/°C
- Measuring frequency: 2 Hz
- Dimensions W×D×H 185×68×38 mm
- Ready to use: Battey included, 9 V block, operating time up to 200 hours
- Net weight approx. 130 g

STANDARD

OPTION

Model SAUTER	Measuring range [Max] lx	Readout [d] lx	Price excl. of VAT ex works €	Option Factory calibration certificates KERN	 €
SP 200K	0–200	0,1	95,–	961-190	165,–
	200–2000	1			
	2000–20000	10			
	2000–200000	100			


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2

Professional sound level meter

Features

- **Professional sound level meter** for measuring noise in areas such as, environment, mechanical applications, car industry and much more
- Measures the sound intensity in the workplace
- Helps in differentiating between normal noise influences, and excessive noise, nuisances e.g. in a production hall
- 1 **Data interface RS-232,** included
- 2 **Delivered in a robust carrying case**
- **Multi measuring functions:**
  - Lp: Standard sound level measuring function
  - Leq: Energy equivalent sound level measuring mode (type A)
  - Ln: Shows the deviation from a pre-defined limit in %
- Selectable methods of evaluation:
  - A: As sensitive as the human ear
  - C: Sensitive for noisier environmental conditions, where there are machines, plant, motors etc.
  - F: For areas with constant sound intensity
- **Limit value function:** Programmable target value for go/no-go test values
- **Track function** for continuous recording of changing environmental conditions
- **Peak Hold Mode** to capture peaks
- **Internal memory for measured values,** for 30 measurements. Can be displayed on the PC

Technical data

- Measuring precision: 3 % of [Max]
- Dimensions W×D×H 236×63×26 mm
- Battery operation, batteries standard 4× 1.5 V AAA
- Net weight approx. 170 g

Accessories

- **Data transfer software,** interface cable included, SAUTER ATC-01, **€ 90,–**
- **Adjustment device** for regular adjustment of the sound level meter, SAUTER ASU-01, **€ 260,–**
- **Foam windshield,** SAUTER ASU-02, **€ 5,–**

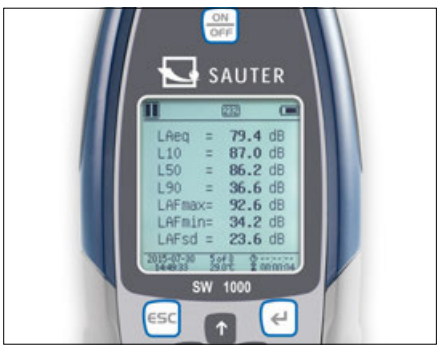
STANDARD: PEAK, MEMORY, RS 232, TOL, BATT, 1 DAY

OPTION: SOFTWARE

Model SAUTER	Type	Measuring range [Max] dB	Readout [d] dB	Price excl. of VAT ex works €
SU 130.	Lp A	30–130	0,1	110,–
	Lp C	35–130		
	Lp F	35–130		

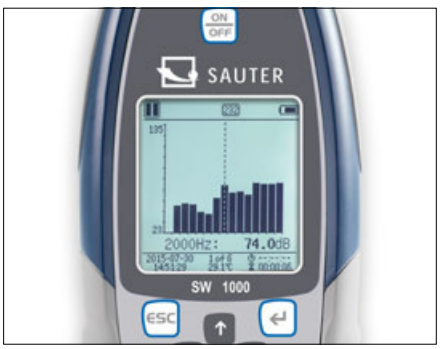
PREMIUM
★★★

Professional sound level meters of class I and class II in premium quality



Data logging function with date and time in the device...

... and data transfer using MicroSD (4G) memory card (included in delivery), RS-232 or USB



Different sound pressure levels can be selected, such as, Laeq, LcPeak, LaF, LaFMax, LaFMin, SD, SEL, E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Features

- Ideal for measurements for workplaces outdoor, e.g. at airports, on building sites, in road traffic etc. with broad access to spectrum thanks to the highly-accurate 24-Bit A/D converter
- **Floating point evaluation** for higher level of accuracy and better stability
- The **optimised analogue frontend switch** reduces the ambient noise and increases the linear measuring range
- A specially-developed algorithm permits a compliant **dynamic range of more than 120 dB!** (SW 1000: > 123 dB; SW 2000: > 122 dB)
- Three profiles and 14 user-defined measurements can be calculated in parallel with different frequency and time weighting
- **LN statistics and display of the graph showing the progression of time**
- **User-defined integral interval measurement** up to a maximum of 24 hours is possible
- **Frequency weighting** (filter) A, B, C, Z
- **Time interval** during measurement: F (fast), S (slow), I (pulse)
- Freely-definable limits for the output of an optical alarm signal
- **Peak hold function** to capture the peak value
- **Octavo function** for targeted sound analysis
- **TRACK function** with graphic display of a measurement
- Calibration mode (with optional calibrator)
- **Trigger mode:** external start/stop of measurement via 3.5 mm connector
- **Automatic measurement for timer function** is possible
- **Selectable frequency for recording measurements**: 10, 5, 2 Hz
- **Operating languages:** GB, DE, FR, ES, PT
- 1 Delivery in robust transport case
- 2 Option of fitting a stand on the rear of the housing, ¼" thread

Technical data

- Applicable standards:
  IEC61672-1:2014-07
  GB/T3785.1-2010
  1/1 Octave in accordance with IEC 61260:2014
- ½" microphone
- Permissible ambient temperature range -10 °C/50 °C
- Output (direct or alternating current) AC (max 5 VRMS), DC (10 mV/DB)
- Mains operation as standard
- Battery operation, 4× 1.5 V AA, not included, operating time up to 10 h
- Dimensions W×D×H 80×36×300 mm
- Net weight approx. 400 g

Accessories

- **Plug-In for data transfer of measuring data** from the measuring instrument and transfer to a PC, e.g. in Microsoft Excel®, SAUTER AFI-1.0, **€ 90,–**
- 2 Stand, W×D×H 430×90×90 mm, 1250×750×750 mm (moved out), SAUTER SW-A05, **€ 60,–**
- SD-memory card, storage capacity 4 GB, SAUTER SW-A04, **€ 45,–**
- 3 **Calibrator for regular adjustment of the sound level meter,** class 1, as well as testing the linearity of sound level meters
  - Applicable standards: IEC60942:2003 Class 1, ANSI S1.40-1984, GB/T 15173-1994.
  - Output frequency 1 kHz (+/- 0,5 %)
  - Output of acoustic pressure, can be selected at 94 dB or 114 dB (± 0.3 dB)
  - Distortion factor < 2 %
  - Stabilisation time < 10 s
  - Permissible ambient temperature range -10 °C/50 °C
  - The calibrator is designed for ½" as well as ¼" microphones (adapter included in the delivery) in accordance with the IEC 61094-4 standard
  - Battery operation, 2× 1.5 V AA, not standard, operating time up to 40 hours
  - Dimensions W×D×H 70×70×48 mm
  - Net weight approx. 137 g
  - SAUTER BSWA-01, **€ 710,–**
- **Foam windshield,** SAUTER SW-A03, **€ 40,–**

STANDARD: PEAK, MEMORY, RS 232, USB, ANALOG, STATISTIC, TOL, BATT, 230 V, 1 DAY

OPTION: SOFTWARE, ISO +10 DAYS, DAkkS +10 DAYS

Model SAUTER	Accuracy class	Measuring range Linear dB	Frequency range kHz	Sensitivity mV/Pa	Price excl. of VAT ex works €	Option DAkkS calibration certificate DAkkS KERN	€	Option Factory calibration certificates KERN	€
SW 1000	1	20–134	0,01–20	50	**1750,–**	963-281	270,–	961-281	190,–
SW 2000	2	25–136	0,02–12,5	40	**960,–**	963-281	270,–	961-281	190,–

SAUTER

KERN CALIBRATION

Your force gauge in the quality management system

Do you already use all the modules of the KERN & SAUTER precision package for maximum accuracy and reliability of your force gauge?

KERN & SAUTER precision package

As per ISO 9001, TS 16949, VDA 6.x, FDA, GLP, GMP, ...

SAUTER force gauge	+	DAkkS calibration certificate for the force gauge	+	Regular check with KERN test weights (also available in Newton)	+	DAkkS calibration certificate for the test weight	=	Maximum reliability for your measurements
	+						=	*Force gauge traceable, not checked regularly*
	+		+				=	*Force gauge traceable and checked regularly, weight not traceable*
			+		+		=	*Force gauge not traceable, checked regularly with traceable weight*
	+		+		+		=	*Force gauge checked regularly, completely traceable*

Information & ordering: www.kern-sohn.com/qmf
Please contact your specialist dealer, who will be happy to provide you with the comprehensive advice.

The DAkkS calibration (DAkkS = German accreditation authority) documents traceability to the national standards and thus meets the specific normative requirements of QM systems.

International recognition: DAkkS/DKD · COFRAC · UKAS · ACCREDIA · SAS · ENAC · PCA · AA uvm.

Accredited calibration with DAkkS calibration certificate for force gauges

The KERN calibration laboratory is at your side when you need to calibrate DAkkS reliably.

From the transducer to the full measuring chain, we are happy to take care of traceable calibration of your test equipment for you. Our accreditation includes the calibration of tensile and pressure force up to 5 kN according to the standards DIN EN ISO 376 and DKD-R 3-3, each with the Newton (N) display unit for a complete measuring chain (situation A) or voltage ratio/transmission coefficient (mV/V, situation B). Below you will find a comparison of which standard meets which criteria:

Comparison of DIN EN ISO 376 and DKD-R 3-3		
	ISO 376	**DKD-R 3-3**
Standardization	ISO standard (internationally standardized)	Standard of the DKD (Germany)
Measuring equipment	Force transducers and complete measuring chains	Force transducers and complete measuring chains
Area of application	Specifically force gauges for the testing of testing equipment	General force gauges
Number of power stages	8	5
Classification/Assessment	Classification in classes 00; 0,5; 1 and 2	None in standard
Test sequences	Fixed procedure	Sequences A, B, C, D possible Standard is sequence A B, C and D are reduced sequences, relevant previous knowledge is necessary
Summary	Higher-quality calibration, as 8 force levels are calibrated	High-quality calibration, reduced sequences with less effort possible

Prices for DAkkS calibration of force gauges and force transducers

Situation A: Force transducer (voltage ratio, in mV/V)*1,2					
ISO 376 (8 stages)			**DKD-R 3-3 (5 stages, sequence A)**		
KERN	**Measuring range**	**Price €** ex works excl. of VAT	**KERN**	**Measuring range**	**Price €** ex works excl. of VAT
Tensile force:					
963-161IV (R)	≤ 500 N	**181,-**	963-161V (R)	≤ 500 N	**168,-**
963-162IV (R)	≤ 2 kN	**214,-**	963-162V (R)	≤ 2 kN	**198,-**
963-163IV (R)	≤ 5 kN	**280,-**	963-163V (R)	≤ 5 kN	**258,-**
Compression force:					
963-261IV (R)	≤ 500 N	**181,-**	963-261V (R)	≤ 500 N	**168,-**
963-262IV (R)	≤ 2 kN	**214,-**	963-262V (R)	≤ 2 kN	**198,-**
963-263IV (R)	≤ 5 kN	**280,-**	963-263V (R)	≤ 5 kN	**258,-**
Tensile and Compression force:					
963-361IV (R)	≤ 500 N	**302,-**	963-361V (R)	≤ 500 N	**278,-**
963-362IV (R)	≤ 2 kN	**363,-**	963-362V (R)	≤ 2 kN	**333,-**
963-363IV (R)	≤ 5 kN	**478,-**	963-363V (R)	≤ 5 kN	**438,-**

Situation B: Complete force gauge (in N)*2					
ISO 376 (8 stages)			**DKD-R 3-3 (5 stages, sequence A)**		
KERN	**Measuring range**	**Price €** ex works excl. of VAT	**KERN**	**Measuring range**	**Price €** ex works excl. of VAT
Tensile force:					
963-161I (R)	≤ 500 N	**149,-**	963-161 (R)	≤ 500 N	**135,-**
963-162I (R)	≤ 2 kN	**182,-**	963-162 (R)	≤ 2 kN	**165,-**
963-163I (R)	≤ 5 kN	**248,-**	963-163 (R)	≤ 5 kN	**225,-**
Compression force:					
963-261I (R)	≤ 500 N	**149,-**	963-261 (R)	≤ 500 N	**135,-**
963-262I (R)	≤ 2 kN	**182,-**	963-262 (R)	≤ 2 kN	**165,-**
963-263I (R)	≤ 5 kN	**248,-**	963-263 (R)	≤ 5 kN	**225,-**
Tensile and Compression force:					
963-361I (R)	≤ 500 N	**270,-**	963-361 (R)	≤ 500 N	**245,-**
963-362I (R)	≤ 2 kN	**330,-**	963-362 (R)	≤ 2 kN	**300,-**
963-363I (R)	≤ 5 kN	**446,-**	963-363 (R)	≤ 5 kN	**405,-**

(R): Recalibration
For each force gauge without interface or from other manufacturers we charge a surcharge of € 10,- for the additional effort.
*1 Compatibility with our amplifiers required
*2 Installation in our measuring equipment required