

Force Gauge Sets SAUTER FS SP1 · FS RY1 · FS RQ1 · FS OY1 · FS OY2



**FS SP1**  
For tensile and compressive force measurements



**NEW**



**FS RY1**  
For tensile and compressive force measurements

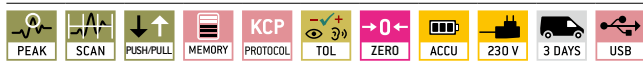
## Practical set of premium force gauge and measuring cell

Thanks to several versions, the pre-configured sets are suitable for tensile and compressive force measurements in a wide range of applications. The set includes the premium force gauge FS 2 and the necessary service FS 401 - FS 408.

It is supplemented optionally by:

- The 4-wire "S" load cell made of nickel-plated steel for force and mass measurement/for tensile and compressive force measurements (CS P1 (for details see set FS SP1))
- The load cell made of alloyed steel CR Y1 for tension and compressive force measurements (for details see set FS RY1)
- The load cell made of stainless steel CR Q1 for compressive force measurements (details see set FS RQ1)
- Miniature button-type load cells made of stainless steel CO Y1 for compressive force measurements (details see set FS OY1) or CO Y2 for tensile and compressive force measurements (details see set FS OY2)

STANDARD



OPTION



\* only for FS SP1, FS RY1, FS OY2  
\*\* up to 5 kN

### FS SP1

Model	Measuring range [Max] N	Readability [d] N	Load cell in the set	Option <b>DAkkS</b> calib. cert. (< 5 kN) / <b>Factory</b> calib. cert. (> 5 kN)		
				Tensile force DAkkS KERN	Compressive force DAkkS KERN	Tensile/Comp. force DAkkS KERN
<b>SAUTER</b>						
<b>FS 2-1KSP1</b> <small>NEW</small>	1000	0,2	CS 100-3P1	963-162	963-262	963-362
<b>FS 2-2KSP1</b> <small>NEW</small>	2500	0,5	CS 250-3P1	963-163	963-263	963-363
<b>FS 2-5KSP1</b> <small>NEW</small>	5000	1	CS 500-3P1	963-163	963-263	963-363
<b>FS 2-10KSP1</b> <small>NEW</small>	10000	2	CS 1000-3P1	961-164	961-264	961-364
<b>FS 2-20KSP1</b> <small>NEW</small>	20000	4	CS 2000-3P1	961-164	961-264	961-364
<b>FS 2-50KSP1</b> <small>NEW</small>	50000	10	CS 5000-3P1	961-165	961-265	961-365
<b>FS 2-100KSP1</b> <small>NEW</small>	100000	20	CS 10000-3P1	961-166	961-266	961-366

### FS RY1

Model	Measuring range [Max] N	Readability [d] N	Load cell in the set	Option <b>DAkkS</b> calib. cert. (< 5 kN) / <b>Factory</b> calib. cert. (> 5 kN)		
				Tensile force DAkkS KERN	Compressive force DAkkS KERN	Tensile/Comp. force DAkkS KERN
<b>SAUTER</b>						
<b>FS 2-5KRY1</b> <small>NEW</small>	5000	1	CR 500-1Y1	963-163	963-263	963-363
<b>FS 2-10KRY1</b> <small>NEW</small>	10000	2	CR 1000-1Y1	961-164	961-264	961-364
<b>FS 2-50KRY1</b> <small>NEW</small>	50000	10	CR 5000-1Y1	961-165	961-265	961-365
<b>FS 2-100KRY1</b> <small>NEW</small>	100000	20	CR 10000-1Y1	961-166	961-266	961-366
<b>FS 2-200KRY1</b> <small>NEW</small>	200000	40	CR 20000-1Y1	961-167	961-267	961-367

Force Gauge Sets SAUTER FS SP1 · FS RY1 · FS RQ1 · FS OY1 · FS OY2



**SAUTER FS RQ1**

For compressive force measurements



**SAUTER FS OY1**

For compressive force measurements



**SAUTER FS OY2**

For tensile and compressive force measurements

### FS RQ1

Model	Measuring range [Max] N	Readability [d] N	Load cell in the set	Option <b>DAkkS calib. cert.</b> (< 5 kN) / <b>Factory calib. cert.</b> (> 5 kN)		
				Tensile force DAkkS KERN	Compressive force DAkkS KERN	Tensile/Comp. force DAkkS KERN
<b>SAUTER</b>						
<b>FS 2-25KRQ1</b> <small>NEW</small>	25000	5	CR 2500-1Q1	-	961-265	-
<b>FS 2-50KRQ1</b> <small>NEW</small>	50000	10	CR 5000-1Q1	-	961-265	-
<b>FS 2-100KRQ1</b> <small>NEW</small>	100000	20	CR 10000-1Q1	-	961-266	-

### FS OY1

Model	Measuring range [Max] N	Readability [d] N	Load cell in the set	Option <b>DAkkS calib. cert.</b> (≤ 5 kN) / <b>Factory calib. cert.</b> (> 5 kN)		
				Tensile force DAkkS KERN	Compressive force DAkkS KERN	Tensile/Comp. force DAkkS KERN
<b>SAUTER</b>						
<b>FS 2-500OY1</b> <small>NEW</small>	500	0,1	CO 50-Y1	-	963-261	-
<b>FS 2-2KOY1</b> <small>NEW</small>	2000	0,4	CO 200-Y1	-	963-262	-
<b>FS 2-5KOY1</b> <small>NEW</small>	5000	1	CO 500-Y1	-	963-263	-
<b>FS 2-20KOY1</b> <small>NEW</small>	20000	4	CO 2000-Y1	-	961-264	-

### FS OY2

Model	Measuring range [Max] N	Readability [d] N	Load cell in the set	Option <b>DAkkS calib. cert.</b> (< 5 kN) / <b>Factory calib. cert.</b> (> 5 kN)		
				Tensile force DAkkS KERN	Compressive force DAkkS KERN	Tensile/Comp. force DAkkS KERN
<b>SAUTER</b>						
<b>FS 2-100OY2</b> <small>NEW</small>	100	0,02	CO 10-Y2	963-161	963-261	963-361
<b>FS 2-500OY2</b> <small>NEW</small>	500	0,1	CO 50-Y2	963-161	963-261	963-361
<b>FS 2-1KOY2</b> <small>NEW</small>	1000	0,2	CO 100-Y2	963-162	963-262	963-362

### Accessories

- A/D converter module for expansion from 2 to 4 external measuring channels, SAUTER FS 34
- Transport case, e.g. for accessories (only suitable for measuring range up to 10.000 N), SAUTER FS TKZ
- Plug-In for data transfer of measuring data from the measuring instrument and transfer to a PC, e.g. in Microsoft Excel®, SAUTER AFI-2.0
- Holders for object fixation and other accessories

NEW New model

 <p><b>Adjusting program (CAL)</b> For quick setting of the instrument's accuracy. External adjusting weight required</p>	 <p><b>Bluetooth* data interface</b> To transfer data from the balance/measuring instrument to a printer, PC or other peripherals</p>	 <p><b>Measuring units</b> Weighing units can be switched to e.g. non-metric. Please refer to website for more details</p>	 <p><b>Conformity assessment</b> Models with type approval for construction of verifiable systems</p>
 <p><b>Calibration block</b> Standard for adjusting or correcting the measuring device</p>	 <p><b>WIFI data interface</b> To transfer data from the balance/measuring instrument to a printer, PC or other peripherals</p>	 <p><b>Measuring with tolerance range (limit-setting function)</b> Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model</p>	 <p><b>DAkkS calibration possible</b> The time required for DAkkS calibration is shown in days in the pictogram</p>
 <p><b>Peak hold function</b> Capturing a peak value within a measuring process</p>	 <p><b>Data interface infrared</b> To transfer data from the measuring instrument to a printer, PC or other peripheral devices</p>	 <p><b>Protection against dust and water splashes IPxx</b> The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989 +A1:1999+A2:2013</p>	 <p><b>Factory calibration (ISO)</b> The time required for factory calibration is specified in the pictogram</p>
 <p><b>Scan mode</b> Continuous capture and display of measurements</p>	 <p><b>Control outputs (optocoupler, digital I/O)</b> To connect relays, signal lamps, valves, etc.</p>	 <p><b>ZERO</b> Resets the display to "0"</p>	 <p><b>Package shipment</b> The time required for internal shipping preparations is shown in days in the pictogram</p>
 <p><b>Push and Pull</b> The measuring device can capture tension and compression forces</p>	 <p><b>Analogue interface</b> To connect a suitable peripheral device for analogue processing of the measurements</p>	 <p><b>Battery operation</b> Ready for battery operation. The battery type is specified for each device</p>	 <p><b>Pallet shipment</b> The time required for internal shipping preparations is shown in days in the pictogram</p>
 <p><b>Length measurement</b> Captures the geometric dimensions of a test object or the movement during a test process</p>	 <p><b>Analogue output</b> For output of an electrical signal depending on the load (e.g. voltage 0 V - 10 V or current 4 mA - 20 mA)</p>	 <p><b>Rechargeable battery pack</b> Rechargeable set</p>	
 <p><b>Focus function</b> Increases the measuring accuracy of a device within a defined measuring range</p>	 <p><b>Statistics</b> Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.</p>	 <p><b>Plug-in power supply</b> 230V/50Hz in standard version for EU. On request GB, AUS or US version available</p>	
 <p><b>Internal memory</b> To save measurements in the device memory</p>	 <p><b>PC Software</b> To transfer the measurement data from the device to a PC</p>	 <p><b>Integrated power supply unit</b> Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or US on request</p>	
 <p><b>Data interface RS-232</b> Bidirectional, for connection of printer and PC</p>	 <p><b>Printer</b> A printer can be connected to the device to print out the measurement data</p>	 <p><b>Motorised drive</b> The mechanical movement is carried out by an electric motor</p>	
 <p><b>Profibus</b> 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</p>	 <p><b>Network interface</b> For connecting the scale/measuring instrument to an Ethernet network</p>	 <p><b>Motorised drive</b> The mechanical movement is carried out by a synchronous motor (stepper)</p>	
 <p><b>Profinet</b> 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</p>	 <p><b>KERN Communication Protocol (KCP)</b> 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</p>	 <p><b>Fast-Move</b> The total length of travel can be covered by a single lever movement</p>	
 <p><b>Data interface USB</b> To connect the measuring instrument to a printer, PC or other peripheral devices</p>	 <p><b>GLP/ISO record keeping</b> of measurement data with date, time and serial number. Only with SAUTER printers</p>		