Force Measurement Accessories



For Tension Tests ≤ 500 N

or rension res	513 = 300 N		Tot Tellaton Tests = 5500 N			
	Long clamp for tension and rupture tests up to 500 N,	AC 17R		Flat jaw attachment for tension tests up to 5 kN	AC 03R	
	clamping width: 3 mm, thread: M6	1 piece AC 17		(e.g. textile, paper etc.), clamping width: 4 mm, thread: M6	1 piece AC 03	
		2 pieces			2 pieces	
				Parallel jaw grip	AC 12R	
	Angle bracket for tension and rupture tests up to 500 N (e.g. for cable tests),	AC 01R 1 piece		for tension and rupture tests up to 5 kN, clamping width: 5 mm, thread: M10	1 piece	
	clamping width: 22 mm, thread: M6	AC 01			AC 12	
		2 pieces			2 pieces	
				High capacity small clamp for tension and rupture tests up to 5 kN,	AC 16R*	
	Fine point clamp for tension and rupture tests up to 500 N,	AC 14R		clamping width: 5 mm, thread: M10	1 piece	
	width 15 mm, clamping width: 4 mm, thread: M6	1 piece AC 14			AC 16* 2 pieces	
		2 pieces		2 wide jaw grip attachment	AC 18R	
	Fine point clamp for tension and rupture tests up to 500 N,	AC 22R		for tension and extraction tests up to 5 kN, jaw width 60 mm, clamping width: 33 mm, thread: M10 $$	1 piece AC 18	
	width 22 mm, clamping width: 4 mm, thread: M6	1 piece AC 22			2 pieces	
		2 pieces		Rolling-clamp attachment for tension and rupture tests up to 5 kN, thread: M10	AC 11R	
	Screw tension clamp	AD 9001		tillead. Wito	i piece	
	for 100 N for laboratory tensile force measurements, incl. jaws with pyramid grip, clamping width: 4 mm, thread: M6	1 piece		Eccentric roll clamp in particular for cable tests up to 5 kN,	AC 41*	
	Further jaws on request	PREMIUM ★★★		10×30 mm slotted hole, clamping width: 9 mm	1 piece	
	Screw tension clamp	AD 9005		Drum clamp	AC 42*	
2	for 400 N for laboratory tensile force measurements, incl. jaws with pyramid grip with adapter structure for AD-system,	1 piece		typically for cable connector extraction tests up to 5 kN, for test objects with \emptyset from 1,5 mm up to 8 mm, thread: M10	1 piece	
	with M6 thread, clamping width: 8 mm Further jaws on request	PREMIUM ★★★		Wedge tension clamp	AD 9080	
				up to 5 kN, for tensile force tests, due to the wedge shape of the clamp the specimen	1 piece	
				is clamped automatically with increasing load, clamping width up to 10 mm, jaws with pyramid grip	PREMIUM ★★★	
				Rope and thread tension clamp	AD 9120	
				up to 1 kN, Suitable for wires up to a diameter of 2 mm, belts up to 7 mm width,	1 piece	
			45	incl. jaws with rubberised surface	PREMIUM	

For Tension Tests ≤ 5000 N

Force Measurement Accessories



For Tension Tests ≤ 5000 N



Rope and thread tension clamp

up to 5 kN, for clamping belts, ropes, wires, etc.

Suitable for wires up to a diameter of 5 mm, belts up to 8 mm. Jaws with pyramid grip

AD 9121

1 piece





Roller tension clamp

up to 1 kN, can clamp on one side and eccentrically. Suitable for tensile force tests with belts or any other soft, flexible, flat material with a maximum sample thickness of 7 mm, incl. rollers with pyramid grip, the opposite clamping surface is smooth.

Suitable for test objects up to 50 mm width

AD 9205

1 piece



Belt tension clamp

For Tension Tests > 5000 N

up to 10 kN, open at one end, suitable for tensile force tests with belts or any other soft, flexible, flat materials with a maximum sample thickness of 2,5 mm a test object width up to 22 mm

1 piece

AD 9250

Belt tension clamp

up to 20 kN, suitable for tensile force tests with belts or any other soft, flexible, flat materials with a maximum sample thickness of 2,5 mm a test object

AD 9255

1 piece



Roller tension clamp

up to 5 kN, can clamp on one side and eccentrically. Suitable for tensile force tests with belts or any other soft, flexible, flat material with a maximum sample thickness of 7 mm, incl. rollers with pyramid grip, the opposite clamping surface is smooth. Suitable for test objects up to 50 mm width

AD 9207

1 piece



Wedge tension clamp

width up to 80 mm

up to 10kN, for tensile force tests, due to the wedge shape of the clamp the specimen is clamped automatically with increasing load, clamping width up to 10 mm, incl. jaws with pyramid grip

Further jaws on request



AD 9095

1 piece

AD 9090

1 piece



Wedge tension clamp

up to 20kN, for tensile force tests, due to the wedge shape of the clamp the specimen is clamped automatically with increasing load, clamping width up to 13 mm, incl. jaws with pyramid grip





Wedge tension clamp

Further jaws on request

up to 50kN, for tensile force tests, due to the wedge shape of the clamp the specimen is clamped automatically with increasing load, clamping width up to 13 mm, incl. jaws with pyramid grip

Further jaws on request

AD 9096

1 piece



Have you not found the right fastener? We are happy to manufacture individual fastening options according to your specifications, for all details see page 24

Force Measurement Accessories



For Compression Tests > 500 N

-	

Concave force sensor with optimised radius for the measurement particularly of arms and legs up to 1 kN, inner thread: M6



1 piece



For Tension and Compression Tests

Threaded adapters made of steel for SAUTER force measuring devices, clamps and test stands, external thread 1: M6 external thread 2: M12



1 piece



Flat square-shaped sensor for lateral power sensing of back, chest or arm up to 1 kN, inner thread: M6

AC 46 1 piece

Threaded adapters made of steel, for SAUTER force gauges, clamps and test stands, external thread: M10 internal thread: M6





AC 47 Round sensor to measure particular muscle groups, such as, for example, 1 piece the shoulder up to 1 kN, inner thread: M6



Threaded adapters made of steel, for SAUTER force gauges, clamps and test stands, external thread: M12 internal thread: M10



AFM 16



Pressure disc out of aluminium, thickness 10 mm, for compression tests up to 5 kN, diam. 110 mm, outer thread: M12

AFH 06 1 piece

Threaded adapters made of steel for SAUTER force gauges and clamps, external thread: M6 internal thread: M8

AFM 22 1 piece





Pressure disc for compression tests up to 5 kN (e.g. plastics), Ø 49 mm,

inner thread: M10

AC 08R*

1 piece AC 08*

Threaded adapters made of steel, for SAUTER force gauges, clamps and test stands, external thread: M10 internal thread: M6









Ball-shaped head made of nickel-plated steel

for compression and fracture tests up to 5 kN, (e.g. foam, glass), thread: M6/M10

AC 02 1 piece

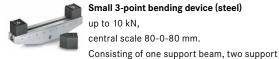
each

2 pieces

Grub screw made of steel for SAUTER clamps and test stands. external thread: M6

AFM 20 1 piece





Small 3-point bending device (steel)

brackets and a curved fin each with

permanently fixed radii, radii on request. Gap between the two support brackets 4-170 mm. Width of the brackets 30 mm

up to 10 kN, central scale 80-0-80 mm.

Ball radius: 5mm/8mm

1 piece

AD 9300



Threaded adapters made of steel, for SAUTER force gauges, clamps and test stands,

external thread: M10 internal thread: M8

1 piece

AFM 23



Numerous more adapters on request.

Force Measurement Accessories



For Tension Tests ≤ 500 N



Standard small clamp

Opening width (inside the jaws): 0-7 mm, for tensile tests up to 500 N, thread M6. Overload protection: 150 % of [Max]. Easy handling without tools, the opening and closing of the jaws can be made with the rotary knob on the upper side. Presetting of the jaw opening via attached screws. Pretension due to built-in springs

AE 01

1 piece



For Tension Tests ≤ 500 N



Cable removal clamp

Opening width (inside the jaws): 1,5-6 mm, for tensile tests up to 500 N, thread M6. Overload protection: 150 % of [Max]. Easy handling without tools, test item can simply be inserted into the appropriate recess and be tested

AE 06







Wide jaw clamp

Opening width (inside the jaws): 0-6 mm, for tensile tests up to 500 N, thread M6. Overload protection: 150 % of [Max]. Easy handling without tools, the opening and closing of the jaws can be made with the rotary knobs on the upper side

AE 02

1 piece



Wedge tension clamp

Opening width (inside the jaws): 0-6 mm, for tensile tests up to 500 N, thread M6. Overload protection: 150 % of [Max]. Easy handling without tools, test item can simply be inserted into the open clamp. It closes automatically during a tensile test

AE 07

1 piece





Belt tension clamps

Opening width (inside the jaws): 0-4 mm, for tensile tests up to 500 N, thread M6. Overload protection: 150 % of [Max]. Easy handling without tools, the opening and closing of the jaws can be made with the lever on the upper side

AE 03

1 piece

For Compression Tests ≤ 5000 N



Stainless steel pressure disc

For compression tests up to 5 kN, ø 47 mm, internal thread M6, foam rubber attachment for sensitive surfaces included in scope of delivery

AE 08

1 piece





Belt tension clamps

Opening width (inside the jaws): 0-6 mm, for tensile tests up to 500 N, thread M6. Overload protection: 150 % of [Max]. Easy handling without tools, the opening

AE 04

1 piece



and closing of the jaws can be made with the lever on the upper side



Rope and thread tension clamps

Opening width (inside the jaws): 0-5 mm, for tensile tests up to 500 N, thread M6. Overload protection: 150 % of [Max]. Easy handling without tools, test item can simply be wrapped around the screw and fastened via the clamping screw

AE 05

1 piece



Force Measurement Accessories



Attachments



Standard attachments kit for all force gauges FA, FH, FL, FC and FS, thread: M6 10-500 N AC 43

6 items



Interface Cables

RS-232/PC connection cable to connect models from the SAUTER FH range to a PC FH-A01
1 piece



Standard attachments kit AC 430 for force gauge FK, thread: M8 6 items 10–1000 N



RS-232/PC connection cable to connect models from the SAUTER FL, DA and DB range to a PC FL-A04
1 piece



Tensiometer attachment FK-A01 optional for all FK models from FK 10 up to FK 250 1 piece



USB/PC connection cable FL-A01
to connect models from the SAUTER
FL, DA and DB range to a PC 1 piece



Tensiometer attachment FK-A02
for high-capacity tensile strength
tests up for FK 500 and FK 1K 1 piece



RS-232/PC connection cable LB-A01 to connect models from the SAUTER LB range to a PC 1 piece



RS-232/USB adapter AFH 12 to connect peripherical devices with USB interface, suitable for all balances and measuring instruments with RS 232 output, scope of supply: adapter, CD with driver



Special Solutions

Stainless steel handle bar
with rubber grip for safe handling,
AFH 04 suitable for FA, FH, FL
AFK 02 suitable for FK, FC and FS

1 piece



RS-232 connection cable FC-A01
to connect models from the SAUTER
FC range to a PC 1 piece



Stainless steel handle bar AFH 05 with rubber grip for FH, FL with external sensor, thread: M12 1 piece



Door tester

Handle (length: 300 mm) and two round force receptor plates (\emptyset 85 mm) as an option to FH 1K up to FH 5K for the safe testing of clamping forces (not approved to DIN 18650 or similar), up to 5 kN

AFH 03
1 piece

SAUTER Pictograms



Conformity assessment

Models with type approval

DAkkS calibration

The time required for

DAkkS calibration is shown

Factory calibration (ISO)

The time required for factory

calibration is specified in

Package shipment

The time required for

internal shipping prepara-

tions is shown in days in

the pictogram

the pictogram

the pictogram

Pallet shipment

The time required for

internal shipping prepara-

tions is shown in days in

in days in the pictogram

systems

possible

for construction of verifiable

M

DAkkS

+3 DAYS

ISO

1 DAY



Adjusting program (CAL) For quick setting of the

instrument's accuracy. External adjusting weight required



Calibration block

Standard for adjusting or correcting the measuring



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 de-centralised 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



WIFI 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



Analogue output

For output of an electrical signal depending on the load (e.g. voltage 0 V - 10 V or current 4 mA - 20 mA)



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 US version available



Integrated power supply unit

Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or US 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



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