

Sigma 700/701 Force Tensiometer

List of accessories

A wide range of accessories are available to expand the use of your Sigma 700 or Sigma 701. Available accessories add measurement types, control temperature or allow improved measurements.

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Accessories

1. ENVIRONMENT AND SAMPLE CONTROL: TEMPERATURE, PH, STIRRER & CABINET

Thermostatic vessel (from -10 to +100°C) | ref. T705

For temperature control of the liquid sample. A heat exchange vessel with water jacket type of construction. Heating/cooling of the water jacket requires external bath/circulator (e.g. T102MC). Fits glass sample vessel 70 mm in diameter (T104). Operable temperature range from -10 to +100°C.

Thermostatic vessel (from -20 to +200°C) | ref. T705A

For temperature control of the liquid sample. A heat exchange vessel with water jacket type of construction. Heating/cooling of the water jacket requires external bath/circulator (e.g. T102MC). Fits glass sample vessel 70 mm in diameter (T104). Operable temperature range from -20 to +200°C.

Gas phase temperature controller | ref. T115

A glass lid mounted on top of thermostatted sample vessels for regulation of the air temperature during measurement. Heating/cooling fluid circulates inside the glass lid. Prevents evaporation and condensation while measuring. Requires external bath/circulator (e.g. T102MC).

Temperature probe | ref. T708

Pt-100 temperature measurement probe with holder (holder not shown here).



Temperature probe
ref. T708



Thermostatic vessel from -10 to 100°C or from -20 to 200°C
ref. T705 and T705A



Gas phase temperature controller
ref. T115

Sample vessel, diameter 70 mm
ref. T104

Bath/circulator Julabo F12
(left) and F25 (right)
ref. T102MC, T102ME, T102ED



Bath/circulator, Julabo F 12-MA | ref. T102MC

A constant temperature bath/circulator, for sample liquid temperature regulation. OneAttention software controlled, fully automatic operation or standalone. Temperature range -20 to +200°C. Stability $\pm 0.02^\circ\text{C}$. Digital readout. Bath opening 130x150mm, bath depth 130mm, volume 4.5L. Dimensions 200 x 360 x 560 (W,L,H).

Note: If software controlled requires temperature probe (T708) to enable computer control in the sample vessel.

Bath/circulator, Julabo F25-ME | ref. T102ME

A constant temperature standalone or OneAttention software controlled bath/circulator for sample liquid temperature regulation. Temperature range -28 to +200°C. Stability $\pm 0.01^\circ\text{C}$. Digital readout. Bath opening 120x140mm, bath depth 140mm, volume 4.5L. Dimensions 230 x 420 x 610 (W,L,H).

Note: If software controlled requires temperature probe (T708) to enable computer control in the sample vessel.

Note: If standalone, can be equipped with external PT100 temperature probe (T102MT) to maintain the desired temperature in the sample vessel. Please note that this is not possible with Julabo F12-MC or F12-ED.

Temperature probe for the Julabo bath circulator F25ME (T102ME) | ref. T102MT

PT-100 temperature probe and probe holder to enable standalone temperature control by the T102ME in the sample vessel.



Temperature probe for
Julabo F25ME
ref. T102MT

Bath/circulator, Julabo F12-ED | ref. T102ED

A constant temperature standalone bath/circulator for sample liquid temperature regulation. Temperature range -20 to +100°C. Stability $\pm 0.03^\circ\text{C}$. Digital readout. Bath opening 130x150mm, bath depth 130mm, volume 4.5L. Dimensions 200 x 360 x 560 (W,L,H).

Cabinet | ref. T140CAB

A transparent cabinet to protect the instrument from environment (e.g. air flow). Dimensions (mm): 772 height x 560 width x 510 depth



Cabinet
ref. T140CAB

Magnetic stirrer | ref. T706

Software and keyboard controlled magnetic stirrer for sample stirring.

pH meter | ref. T118

Digital pH-meter to be immersed in the sample. The measured data is automatically stored by the OneAttention software.



pH meter
ref. T118

2. CRITICAL MICELLE CONCENTRATION

Liquid dispenser, Schott titronic universal 20ml | ref. T101

A computer controlled and software operated dispenser for automatic measurements of CMC. Complete with all accessories for serial or single sample dilution. RS-232-C Interface.

Note: For synchronized dual dispenser operation for dilution CMC measurements of highly concentrated solutions, two dispensers are required.



Dispenser for fully automatic
CMC measurement
ref. T101

Cable to connect two T101 dispensers | ref. T101A

3. POWDER WETTABILITY

Powder wettability measuring device, glass | ref. T112

Powder wettability measuring device for Sigma 701 or Sigma 700, made of glass with glass sinter bottom. Used in measurement of absorption/adsorption behavior of powders, porous solids and fiber bundles. Outer dimensions (mm): 12 diameter x 25.5 height. Inner usable area (mm): 10 diameter x 22 height. Weight: 2.7 g.

Powder wettability measuring device, steel, Sigma 700 only | ref. T112A

Perforated bottom to support filter paper and to allow liquid penetration into bulk powder, porous solids or fiber bundles. Adjustable packing piston for reproducible packing. Used in measurement of absorption/adsorption behavior of powders, porous solids and fibers bundles. Only for Sigma 700 due to its weight. Outer dimensions (mm): 17 diameter x 60 height. Inner usable area (mm): 15.35 diameter x 25 height. Weight: 33 g

Filter paper for T112A, 100 pcs/bag | ref. T112B



Powder wettability measuring
device, glass
ref. T112



Powder wettability measuring
device, steel
ref. T112A



Filter paper for T112A
ref. T112B

4. DENSITY

Density measurement device | ref. T113

Glass probe for measurement of liquid density. For density range up to 2.2 g/ml or 2.2 kg/l.

Density measurement device
ref. T113

Sedimentation measurement device
ref. T119

5. SEDIMENTATION

Sedimentation measurement device | ref. T119
Necessary hardware for sedimentation tests.



6. PROBES AND CALIBRATION

Platinum Du Noüy ring | ref. T106

Pt-Ir-ring made to fulfill the requirements at least of following standards: ISO 301, ISO 4311, ISO 6889, ASTM D1331 and ASTM D 971. Includes also additional weight for push-mode. Packed in a protective wooden box.

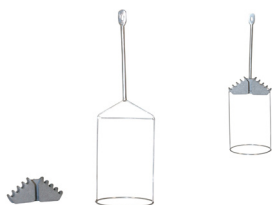
Certificate for Du Noüy ring dimensions | ref. T106A

A document confirming the ring quality, dimensions and specifications. Issued only for new unused rings.

MIKES calibration certificate for Du Noüy ring | ref. T106B

A certificate confirming the ring quality, dimensions and specification to relevant ISO, ASTM and DIN norms. Issued by the Center for Metrology and Accreditation of Finland.

Du Noüy ring & additional weight ref. T106



Wilhelmy plate ref. T107



Platinum rod ref. T110



Wilhelmy Plate, platinum plate with micro roughened surface | ref. T107

Certificate for Wilhelmy plate dimensions | ref. T107A

A document confirming the plate quality, dimensions and specifications. Issued only for new unused plates.

MIKES calibration certificate for Wilhelmy plate | ref. T107C

A certificate confirming the plate quality, dimension and specification to relevant ISO, ASTM and DIN norms. Issued Center for Metrology and Accreditation of Finland.

Platinum rod | ref. T110

Used for very low volume samples.

Certified calibration kit | ref. T117B

Set of certified weights for validation of tensiometers. Including 3 weights with DKD certificate, a brush, a holder and tweezers. (DKD = Deutschen Kalibrierdienst, the German calibration service).

Calibration kit ref. T117B



Calibration weight | ref. T120

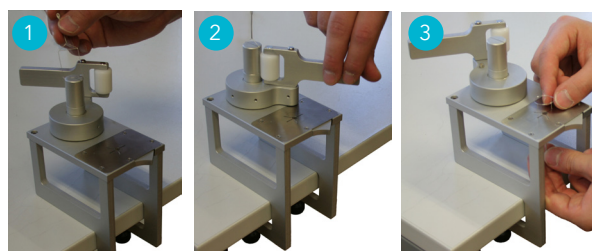
Weight with a hole in the middle for easy placement on the Sigma's balance hook.



Ring re-form tool | ref. T108

For straightening of deformed Du Noüy ring. Du Noüy rings can be accidentally bent, and to get it back in shape a ring re-form tool can be used.

The reform takes place in two steps. First, the ring is fitted onto a cylinder (illustration 1) and a roller is pressed against the cylinder, straightening the ring frame (illustration 2). Second, the ring is slotted through a plate and vertical deformities are fixed (illustration 3).



Ring re-form tool ref. T108

7. SAMPLE HOLDERS

Sample holder for plates | ref. T109RF

For rigid and flexible plate-like samples. Max. sample thickness 3 mm.

Sample holders for fibers | ref. T111

Single use aluminum tube hanged from balance hook. 10 pcs/bag.



Sample holder for plates
ref. T109RF



Sample holders for fibers
ref. T111

8. VESSELS

Sample vessel, diameter 70 mm, 5 pcs/box | ref. T104

Sample vessel, diameter 50 mm, 5 pcs/box | ref. T105



Sample vessel, diameter 50 mm
ref. T105



Sample vessel, diameter 70 mm
ref. T104

9. COMPUTER

Computer with pre-installed OneAttension Software | ref. T130

Sigma compatible computer with OneAttension already installed.

10. MAINTENANCE & SERVICES

Start up and training | ref. STUP-EU, ref. STUP-NEU

Installation, on-site training and first customer sample measurements by an Attension specialist. Includes installation, aligning and calibration of one instrument and a training at the customer premises. All travel expenses are included in the price.

OneAttension upgrade | ref. 1A-UG

One time purchase of the latest available OneAttension software version.

Service contract level 1 | ref. SERV1

Two years instrument and customer specific service contract including all OneAttension upgrades published during the contract period. SERV1 requires that customer already have the latest OneAttension software.

Service contract level 2 | ref. SERV2

One year instrument and customer specific service contract including free software upgrades and an option to a full day maintenance visit during the contract period. Possible spare parts cost is excluded.

Extended warranty | ref. SERV3

One year instrument and customer specific extended warranty.

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