

“High Testing Technologies for RHEOLOGY and Concrete-Cement and Aggregate”

Building Materials Testing Systems

Schleibinger Geräte

SCHLEIBINGER Gerate (GERMANY)'s Turkiye **EXCLUSIVE** Distributor ;



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“HIGH TESTING TECHNOLOGIES”

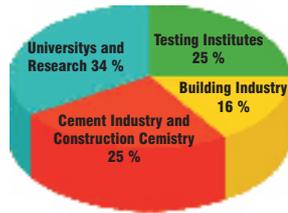
for CONCRETE, SOIL, ASPHALT, CEMENT, AGGREGATE and for ALL CONSTRUCTION MATERIALS
and for Petrochemical, Oil and Gas ---- and ALL KIND OF SCIENTIFIC & LABORATUARY TECHNOLOGIES

Some References

Schleibinger exports 40% to the European market and about 30% worldwide

There are Schleibinger products in these countries:

Australia, Austria, Belgium, China, Croatia, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Iceland, Iran, Italy, Netherlands, New Zealand, Poland, Portugal, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, Taiwan, Turkey, United Arab Emirates, USA.



There are Schleibinger products in these companies:

HeidelbergCement, Dyckerhoff Zement, Buzzi Unicem, Cemex, Schwenk Zement, Holcim, Scancem, Sika, BASF, Sika, Wacker-Chemie, elotex AG, Italcementi, Addimont Italia, Pibrico, Grace, Lafarge, Fescon, Akzo Nobel, RHI Refractories, Süd-Chemie, Bilfinger-Berger, National Gypsum, Hochtief, Dow-Chemical, Rocla Australia, US Gypsum, Viadukt, vantex, Märker Zement, Max Boegl, Iksa Admixtures, Henkel, Fixit Switzerland, Röfix Austria, ICI Shanghai, Sain Gobain.

There are Schleibinger products in these institutes:

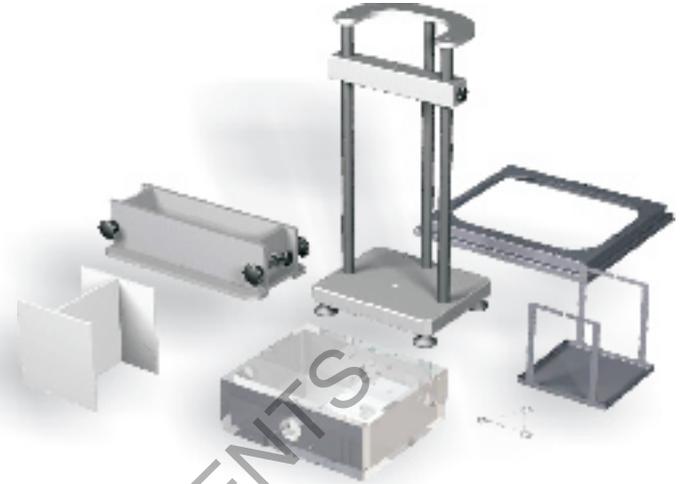
MFPA Thüringen Weimar, BAM Berlin, MPA Berlin-Brandenburg, MPA Hessen Wiesbaden, MPA Bayern, MPA Niedersachsen, VDZ Düsseldorf, CRIC Bruxelles, Belgium Road Research, intron Delft, Ministry of Transportation Hungary, TFB Switzerland, Nanjing Hydraulic Research Institute.

There are Schleibinger products in these universities:

in München, Aachen, Essen, Trier, Hamburg, Erfurt, Cottbus, Hamburg, Nürnberg, Dessau, Erfurt, Freiberg, Hannover, Berlin, Regensburg, Weimar, Karlsruhe, Braunschweig, Bochum, Stuttgart, Gliwice, Zürich, Delft, Hongkong, Southwest Univ. China, Michigan, Cookeville, Minnesota, Ankara, Aveiro, Edinburgh, Helsinki, Hong Kong, Minnesota, Mianjiang, Leuven, Nevada.

System accessories from Schleibinger Complete measuring systems from a single source

Every Schleibinger product meets the high quality demands you have come to expect from Schleibinger. So don't settle for anything less. The range of accessories works perfectly with all the Schleibinger measuring systems. Although you offer catalogue systems we ever deliver customer-specific systems, so individuality as standard.



Technical knowledge



In view of the structural changes in the industry, those who work with the development, research or quality control of building materials must be able to cope with new and more complex technologies.

Schleibinger supports with seminars, congresses and trainings. Schleibinger is organizing for 20 years the „Workshop for Rheological Measurement of Building Materials“ in cooperation with the University of Applied Sciences Regensburg.



www.schleibinger.com



Quick help via the internet. Do you have questions about Schleibinger products or on the subject of building materials? At www.schleibinger.com, you can find comprehensive information round the clock on all Schleibinger products and their specifications, a technical lexicon and much more. There, you'll always find the most up-to-date information, and gain an initial overview before your first discussion with your dealer.

The Company

Schleibinger Geräte Teubert u. Greim GmbH was founded 1995 by Dipl.-Ing. (Univ) Markus Greim, Dipl.-Ing. (FH) Oliver Teubert and the Communication-Technician Anton Schleibinger. Our aim is to develop, build and sell innovative Building Materials Testing Systems.

Most of our products are saved by patents of Schleibinger or by license contracts with industrial partners and Universities. Schleibinger is focused on special products for the constructing material market, developed and built at our own factory.

Schleibinger develops and produces construction materials testing systems for testing the workability, early strength, shrinkage and durability of paste, mortar, concrete and similar materials.

We are a company that ensures its customers' satisfaction through offering high-quality and innovative products. An intensive relationship to our customers and the continuous development of our products are the prerequisites for meeting this demand. As a result of our work, we are providing intelligent measuring instruments offering an optimum of performance. This applies for our service performances and the individual support service.



Oliver Teubert and Markus Greim



Our facilities in Buchbach, Germany

CDF Test Equipment



Apperatus for freeze/thaw test according to CDF / CIF Test RILEM, CEN/TS 12390-9, Cube Test and the following procedures:

- ≈CDF RILEM TC 117 FDC
- ≈CIF RILEM TC 176 IDC
- ≈CF/CDF Test CEN/TS prEN-12390-9 chapter 7
- ≈Cube Test CEN/TS prEN12390-9 chapter 6
- ≈DIN 4226 Lightweight and recycled aggregates
- ≈DIN 52104 Testing of natural stone lightweight aggregates
- ≈USA ASTM C666-2008 Resistance of Concrete to Rapid Freezing and Thawing, Procedure A
- ≈EN 13581 Product and systems for the protection and repair of concrete structures
- ≈CEN/TR 15177 2006-06 Testing freeze-thaw resistance of concrete - Internal structural damage
- ≈Önorm 23303 XF1 freeze-thaw resistance

Our machine is authorised by Prof. Max. J. Setzer inventor of the CDF/CIF test procedure and chairmen of the RILEM comitee Tc117

Specifications:

- Test cab dim. wxl 171 x 55 cm,
- Temperature range -20°..+35°C with air cooling
- Max. temperature deviation better then 0.5 K.
- Dimensions (lxwxh) 225x85x120 cm.
- Place requirement 350 x 145 cm
- Required fuse 3 x 32 A ore 3 x 25 A (B),
- Weight 560 kg net.
- Enviroment conditions (without external water cooling) 10..28°C rel humidity < 65%.,
- max. waste heat 3 kW.

CDF Test Equipment	Item No. C0001
Additional Feature: Air and Watercooling	Item No. C0005
Datalogger and Intranet Access for CDF-Tester	Item No. C0032
Expansion unit for the Cube Test	Item No. C0124

Slab Test Equipment



Freezing chamber with temperature and time controlled refrigerating and heating system. Fans for air circulation in the freezer. Allows freezing and thawing of the concrete specimen according to EN 1340, CEN/TS 12390-9, EN 1339, EN 1338, CEN/TS 15177. Inner and outer surface made of stainless steel.

The temperature profile for the Slabtest is programed and may be started, stopped and reset. Electronic controller with text display, Including: 4 shelves, elektronik controller, manual.

Spezifications:

- minimum temperature -35°C
- maximum temperature 45°C
- Power supply 110 V/ 60 Hz or 230 V / 50 Hz, or 240V / 60 Hz
- Power consumption 0.7 kW
- Size outside, cm (wxdxh) 70x83x215
- Size inside cm (wxdxh) 51x65x146
- maximum weight per shelf 60 kg
- Refrigerant 200g of R290 (Propane)
- Weight 169 /147 kg

Slab Test Equipment	Item No. C0103
Intranet Access and Data Logger for the Slab-Tester	Item No. C1041



Freeze-Thaw Test for Natural Stones / Aggregates / Tile-Glue

Additional feature for the Slabtester for testing stones according to EN 12371, aggregates according to EN 1367-1 tile-glue according to EN 1348:2006 and concrete beams according to CEN/TR 15177 part 7. In the Slabtester a container sized 50 x 60 x 48 cm (width x depth x height) is mounted. So a maximum of 40 specimens 50 x 50 x300 mm tin cans, or other specimen. The temperature sensor is mounted in a hole in one of the specimens or tin cans. Outside the Slabtester a water container, including a pump, electrical heating unit and valves provides the water for the thawing process.

The specimens are frozen at air. After the specified time water is pumped automatically from outside into the test container. Later the water is automatically pumped back into the container outside the Slabtester. The temperature cycle starts again. Temperature profile and flooding times are programmable. This option is only available with the data-logger option.

Freeze-Thaw Test for Natural Stones / Aggregates / Tile-Glue	Item No. C0108
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Rheometer viskomat NT

Viscosical findings are of fundamental importance for the development, manufacture and processing of building materials. The viskomat is a versatile rotational viscometer for determining the workability of fine-grained building materials such as cement paste, mortar, fine concrete, plaster etc. with a maximum particle size of 2 mm. It is recommended for developing admixtures of any mortar or concrete as well as SCC. It is further recommended for determining setting time of paste or mortar. With the ethernet interface you can integrate the viskomat in any TCP/IP based network. The viskomat NT has a built-in web server so any browser can be used as a user-interface for controlling and data evaluation.

Specifications

- Velocity controlled 0.001 - 600 rpm
- Torque 0 - 500 Nmm
- Resolution 0,1 Nmm
- Sampling Rate 0.01 s - 60 s

Included in delivery

- Online Display >17"
- mouse
- printer-interface
- USB-interface
- incl. 1 meas. beaker
- 1 probe for mortar
- 1 probe for cement paste
- 1 scraper
- keyboard



Mortar Probe

Mortar probe made of hardened stainless steel. This probe is used for mortar with a maximum particle size of 2 mm. Using a scraper is recommended for this probe. Temperature sensor integrated.

Mortar Probe

Item No. V0011



Cement Paste Probe

Cement paste probe made of stainless steel. This probe is used for cement paste and mortar with a maximum particle size of 0.5 mm. Temperature sensor integrated.

Cement Paste Probe

Item No. V0013



Modified Cement Paste Probe

formed like the standard cement-paste-probe, but for suspension up to 2 mm of max. grain diameter. Temperature sensor integrated.

Modified Cement Paste Probe

Item No. V0003

viskomat NT

Item No. V0001

Shear Stress Controlled Drive

Item No. V0006

Oscillation-Mode

Item No. V0030



Beaker for Temperature Control

A double wall beaker, so that the measurement beaker is running in a water bath, which is circulated by an external cooling/heating unit

Beaker for Temperature Control

Item No. V0009



Vane Probe

6 wings, diameter 40mm, height 60mm, Vessel inner diameter 100mm, inner height 110mm, smooth vessel wall structure.

Vane Probe

Item No. V0004

Vessel for Vane Probe

Item No. V0005



Basket Probe

invented by Prof. R. Vogel, Weimar. Double gap system with a net formed surface. Specially developed for self compacting mortars. Including special vessel and calibration certificate.

Basket Probe

Item No. V0014



Cylindrical Measurement System

Couette system according to DIN 53019. Diameter 50mm, bottom cone formed, $\Delta = R_{outer}/R_{inner} = 1.0847$, gap size 2.12 mm, specimen volume 127.7 ml, beaker height 150mm. Temperature sensor integrated.

Cylindrical Measurement System

Item No. V0070



Plate-Cone Probe

specially developed for glue like specimen. Fits best for speeds between 0 and 0.5 rpm. Cone diameter 100mm, angle 15°. Inner diameter vessel: 128mm

Plate Cone Probe

Item No. V0002

Rheometer viskomat XL



Safety cabinet, machine will stop instantly when the cabinet is opened.

Safety cabinet included



Beaker for Temperature Control

A double wall beakure, so that the measurement beaker is running in a water bath, which can be circulated by an external cooling/heating

Beaker and Tubes Item No. VX0009



Circular probe fresh concrete probe made of hardened stainless steel. This is used for mortar with a maximum particle size of 8 mm. Using a scraper is recommended for this probe

Circular Probe Item No. VX0013

Based on 20 years experience with rheometers for mortar and fresh concrete, Schleibinger has developed a new instrument called viskomat XL. It is filling the gap between the viskomat NT for mortar and paste with a specimen volume of 360 ml and the concrete rheometer BT2 with a sample volume of 20 l. The operation principle of the viskomat XL is near the same as for the viskomat NT. So a mixer formed probe is measuring the torque, and the specimen vessel is rotating. An additional scraper is cleaning the wall of the vessel. The viskomat XL is controlled via an TCP/IP interface 100 MHz, Ethernet and any PC running a WEB browser. The viskomat XL may be integrated in your Intranet.

Specifications:

- Velocity controlled 0.0001 - 80 rpm
- Steady speed and speed ramp mode
- Motor torque 1,2 Nm
- Two measurement torque range 0 - 3000 Nmm and 0 - 10 Nm
- Resolution 0.1 mNm
- Accuracy 2 mNm
- Sampling Rate 0.005s .. 1min
- Vessel diameter 165mm
- Vessel height 175 mm
- Usable volume 3000 cm³
- Maximum grain size < 8 mm
- Double wall vessel with connection to an external cooling and heating unit for temperature control of the specimen.
- Weight incl. electronic cabinet 90 kg

Included in delivery:

Safety cabinet, online Display with 19" screen, mouse, 4 USB-ports, one measurement beaker, one probe for concrete, one probe for mortar and paste, one scraper, mouse, keyboard.



Viskomat XL Item No. VX0001

Shear Stress Controlled Drive

Shearstress controlled measurement. You can run torque ramps ore torque-steps, angel-ramps or angel-steps. The torque is measured with a resolution of 0.1 Ncm. The angel is measured with an resolution of 0.01°. Internal resolution 0.001°

Shear Stress Controlled Drive Item No. VX0006

Oscillation-Mode

Oscillation mode: max. amplitude 3.6°, max. frequency 5 Hz. Hint: the standard probes are not symmetric. Shear stress controlled drive is required for this option

Oscillation mode Item No. VX0030

Rheometer for fresh concrete



The BT2 is a compact rheometer for fresh concrete. It is a hand driven unit with two momentum sensors and one speed sensor. In opposite to the spread table the concrete is tested at various loads. Therefore you can determine a relative yield-stress and a relative viscosity. The construction avoids structural breakdown and segregation during measuring. The BT2 is small, power independant and easy to use. Particularly suitable for modern concrets as self compacting concrete and high strength concrete. Autocalibration, nonvolatile storage for 35 datasets, battery powered, IRDa infrared link to Palmipilot handheld.

Specifications:

- Specimen volume 19.6 Ltr.
- Weight 17,5 kg
- Diameter 50 cm

Included in delivery:

container, measuring unit, Palmipilot, Palmsoftware, software for the datatransfer to a PC (Excel version 95), Windows 7 / 64-bit is not supported. Battery charging unit

BT2 Item No. B0001

Shrinkage Cone



With the shrinkage cone the shrinkage or expansion of fluid building materials can be measured in the first minutes and hours after start of mixing. The expansion of the building material is registered touchless and very exact by a laser beam. There is no mechanical coupling between the fluid and the sensor.

The shrinkage cone is hollow. With two valves you may connect the specimen container to a circulation or cooling unit.

To ensure that the measured distance correlates with the relative length change of the material we use a special formed specimen container, the form is like a cone. A Cone is a special geometry, where the volume change and the height change is in a direct mathematical correlation.

The length change is registered with a resolution of 1/10 mikron. The measurement values are digitised and stored by the data-logger delivered with the system. Synchronous with the length change, temperature or relative humidity may be stored optional by the data-logger. The data-logger has an ethernet interface and a built in WEB server. So you can integrate the logger in your intranet. You can access your measurement data from every PC in your network with a normal internet browser software like the MS Internet-Explorer or Mozilla browser. No special software is necessary.

Specifications:

- Measurement Range 5 mm
- Basic Distance 25 mm
- Resolution 0,1 µm
- Diameter of Laser spot 0,8 mm
- Volume cone vessel 349 cm³
- Specimen height 100 mm
- Laser Power 1 mW at 675 nm, Class 2.
- Weight 15 kg

Included in delivery:

Including cone formed specimen container, boom stand, laser range finder, electronic unit with power supply, data-logger with software, manual.

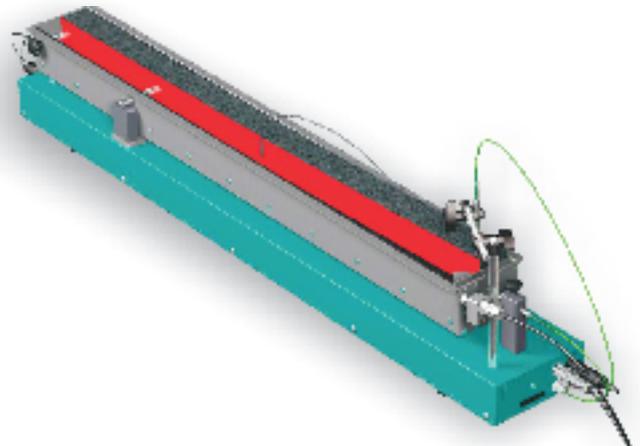
Shrinkage Cone incl. cone for mortar	Item No. S0050
Specimen Container for Concrete	Item No. S0051

Bending Measuring Unit

This unit is made to measure bending and shrinkage of building materials, for example attic. A heating system is built in. To avoid sliding friction the gutter is covered with a removable compressible rubber. Also it enables unstressed deformation of the sample. The sample is mounted on two massive supports. The sample container with the heating system is statically independent of the supports. The bending unit has an ethernet interface and a built-in web-server. You can integrate the logger in your intranet to access the measurement data from every PC in your network using any internet browser. Two temperature probes and one humidity probe are included.

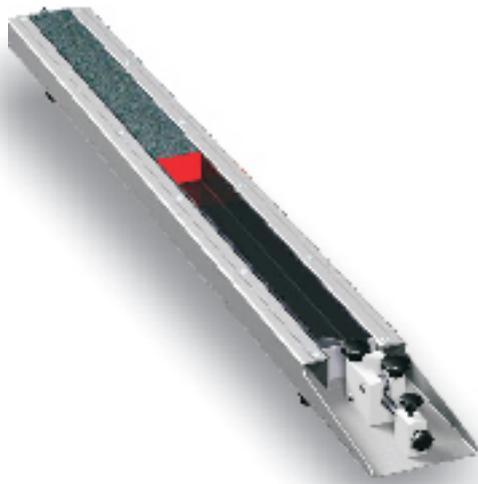
Specifications:

- Specimen size 1000 x 100 x 60 mm
- Overall size 115 x 16 x 17cm
- 2 probes stroke 5mm
- Resolution 0.36 mikron = 0.00036 mm
- Accuracy $\pm 0.64 \mu\text{m} \pm K \times 2.0 \mu\text{m}$
- Power supply 230V/50Hz
- Weight 35 kg



Bending Measuring Unit	Item No. S0018
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Shrinkage Drain



The Shrinkage Drain is made of a one meter long u-shaped stainless steel profile (60 x 40 mm for mortar or 100 x 60 for concrete) which contains the specimen. To avoid wall friction the drain is covered with a removable Neopren® foam sheet. Also it enables unstressed deformation of the sample. On one side a removable anchor is fixed. On the other side this anchor is movable and sliding on two rollers. The motion of this anchor is registered by a high sensitive digital probe.

As displacement sensor we are using a digital probe which is connected to the probe interface electronics which converts the analogue signals from the probe head into a digital format. Up to 12 probes may be connected over a digital bus system.

Shrinkage Drain for Mortar, Plaster, etc..	Item No. S0103
Shrinkage Drain for Concrete, 60 x 100 mm	Item No. S0033

Datalogger SR for the Shrinkage Drain

The length change is registered with a resolution of 1/10 mikron. The measurement values are digitised and stored by the data-logger. Synchronously with the length change, temperature or rel. humidity may be stored by the data-logger.

The data-logger has an Ethernet interface 100Base/T and a built in WEB server. So you can integrate the logger in your Intranet. You can access your measurement data from every PC in your network with a normal Internet browser software. Up to 12 shrinkage drains may be connected to one single data-logger.

Datalogger SR for the Shrinkage Drain	Item No. S0001
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Alcali-Silica-Reactor



For storing concrete specimen at 60°C (free programmable) and nearly 100% rel. humidity.

According to the French standard NF P18-454 (Décembre 2004) Béton - Réactivité d'une formule de béton vis-à-vis de l'alcali-réaction - Essai de performance and the RILEM test method TC 101-ARP AAR-4 -Detection of Potential Alkali-Reactivity- Accelerated method for testing aggregate combinations using concrete prisms.

Heating control by electronical power switches, overtemperature breaks. Temperature measurement in the bath and in the air. Maximum temperature deviation +/- 2.0 K. Control and graphical data plot with an color-touch-screen. Full text state and error messages. Integrated data-logger, Ethernet / TCP/IP interface for remote control from any PC in your intranet via WeB-browser. Temperature profiles programmable.

Specifications:

- Test chamber dimensions (l x w x h) 150 x 110 x 95/67 cm
- Outer dimensions (l x w x h) 168 x 135 x 127 cm
- Insulation rigid foam > 50 mm
- Two lids
- Torque compensated hinge
- Hard-foam insulated
- Removable gratings for 600 kg load
- Two 6 kW heating sets

Alcali-Silica-Reactor	Item No. K001
ASR Specimen Container	Item No. K002

ASR Fog-System

Fog-generating system for the ASR reactor. With a high pressure pump and special stainless steel nozzles. The size of the droplets is smaller than 30 micron. The fog function may be controlled with the ASR control unit by duration and intensity.

ASR Fog-System	Item No. K003
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Thin Layer Shrinkage System

With Schleibingers Thin Film Shrinkage Measurement System the shrinkage or expansion of fluid thin film building materials like self leveling flooring compounds can be measured in the first minutes and hours after start of mixing. The expansion of the building material is registered touchless and very exact by two laser beams. The lasers are directed horizontally onto a pair of light-weight reflectors, which are placed on top of the fresh mortar. The change in distance between the reflectors is then registered with an accuracy of tenth of a micron. By this setup the shrinkage/expansion measurement can be started right after the mortar is applied. There is no mechanical coupling between the fluid and the sensor.

The measurement values are digitised and recorded by the datalogger delivered with the system. Synchronous with the length change, weight loss, temperature or rel. humidity may be stored by the data-logger (option).

The data-logger has a Ethernet interface and a built in WEB server. So you can integrate the logger in your Intranet. You can access your measurement data from every PC in your network with a normal Internet browser.

Specifications:

- Measurement Range 2 x 5 mm
- Resolution 0.1 µm
- Accuracy < +/- 12 µm
- Diameter of Laser spot 0,8 mm
- Laser Power 1 mW at 675 nm, Class 2.
- Size of the platform 700 x 375 mm
- Weight 27 kg



Balance is not included.

Thin Layer Shrinkage System	Item No. S0060
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“High Testing Technologies for RHEOLOGY and Concrete-Cement and Aggregate”

**In this catalogue is only a short survey of our products.
Other instruments from Schleibinger:**

- NEW: Vikasonic: Testing the early setting by ultrasonic waves
- Soil-Freeze-Thaw Chamber according to the Swiss standard SN 670 321a
- Curing Simulation and Measuring
- Wireless Temperature Monitoring
- Custom Specific Instruments

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