



HOSKIN

SCIENTIFIC

CONCRETE AND CEMENT TESTING EQUIPMENT

TOOLS & INSTRUMENTATION



hoskin.ca

Supplying Testing & Monitoring Instruments Since 1946

ABOUT HOSKIN

For over seventy years, Hoskin Scientific has been a supplier of testing and monitoring instrumentation to the Canadian market. With offices in Vancouver, Edmonton, Oakville and Montréal our customers are able to receive local sales and technical support in our three major departments.

Our Environmental Department provides solutions for monitoring and sampling biological and chemical parameters in the environment. Our team of environmental sales representatives and diverse product range guarantee that you will find the right products for your application. Specific areas include: water quality, water quantity, soil moisture, plant science, weather stations, indoor air quality, aquatic sampling, and oceanography.

Our Materials Testing Department offers testing equipment for soil, asphalt, petroleum, concrete and cement. Our qualified sales associates focus on providing a sophisticated range of testing equipment complying with the various test methods, ensuring that accurate and consistent test results are always obtained.

Our Instrumentation Department focuses on a wide range of products including optical camera systems, transducers and transmitters, data acquisitions and loggers, signal conditioners and indicators, automation sensors and measurement systems. We have technical sales associates that are trained in various areas and willing to help you with your instrumentation requirements.

RENTALS

We offer high quality, proven equipment that will provide the user with valuable data as well as numerous ways of retrieving, filtering and viewing that data. We carry a wide range of instrumentation, including: water quality, portable gas monitors, soil sampling instruments and more.

Rental Equipment:

- Single and multi-parameter instruments that can be setup for spot checks or extended deployment/data logging
- Water sampling instruments
- Water velocity and stream profiling instruments
- Soil sampling instruments
- Soil vapour sampling instruments
- Portable gas monitoring instruments

Customer satisfaction is our goal and we make an effort to ensure that all our customers are satisfied with their rental. All rental instruments are cleaned and calibrated before being sent to the user (please note that we also require equipment to be returned clean). If a rental instrument requires recalibration, please return the instrument to us and we will recalibrate at no charge. Any instrument not functioning properly can be exchanged at no cost.

Hoskin Scientific offers technical support over the phone and can also provide hands on demonstrations.

We are constantly expanding and looking for new equipment to add to the rental inventory and welcome all suggestions.

Check our website www.hoskin.ca for current offerings.

Daily, weekly and monthly rental rates available – please call for a quote.

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Concrete Specimen End Grinder

Features

- No more dangerous capping compound
- High strength concrete specimens are finished to ASTM standards.
- Grinding ensures planeness and parallel finishing as fine as 0.002 inches (0.05 mm).

1. Safe and Economical -

Efficiency can be doubled without the use of abrasive or dangerous materials.

2. Simple Operation -

Automatic cylinder feeding decreases skills needed for operation while further increasing safety.

3. Variable Speciman Sizes -

Unit comes with accessories for grinding four inch (100 mm), five inch (125 mm), and six inch (150 mm) cylinders. Other sizes can be finished with an optional jig.

4. Specifications -

Size: 53 inches (1350 mm) height by 33.5 inches (850 mm) depth by 24 inches (600 mm) width.

Weight: 400 lbs (180 kg).

Electrical: 110Volts, 60 Hz, single phase

Save Time

Test specimens typically require less than 60 seconds to finish.

Save Materials

No capping material is required to finish the specimen end. Grinding disks typically finish 3,000-5,000 pieces before a replacement is necessary.

Portability and Size

Because of its small footprint, space is kept to a minimum. The end grinder is conveniently mounted on lockable castors providing easy mobility.

The Specimen End Grinder conforms to ANSI/ASTM C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.



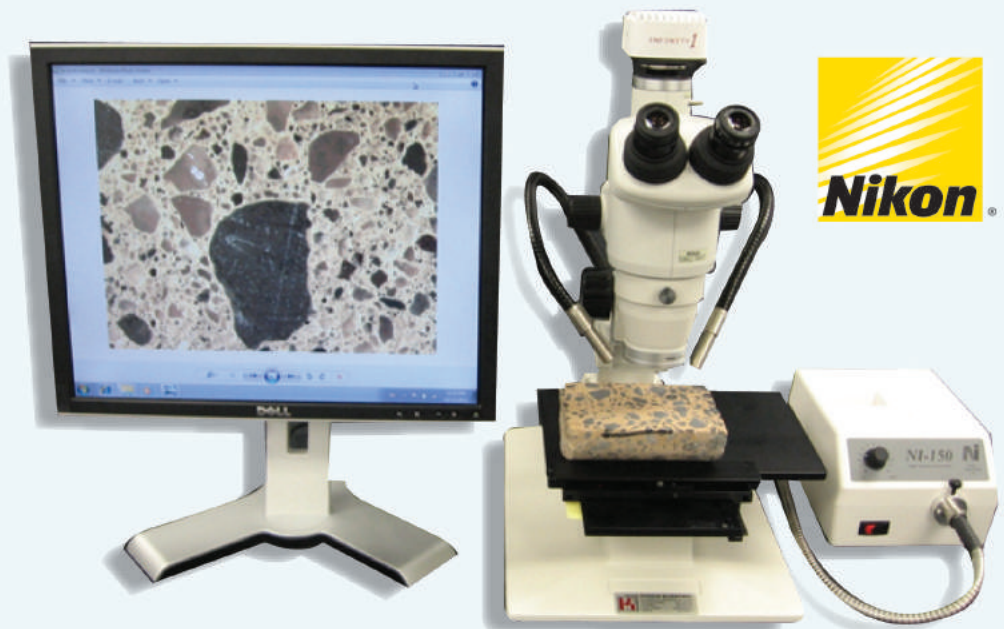
MARUI & CO., LTD.

Air Voids Analysis System (ASTM C457)

Analyzing the air void content and distribution in hardened concrete is a key component when evaluating the susceptibility of concrete during freezing and thawing cycles.

The HS-745T Air Voids Analysis System is used to facilitate the counting of microscopic air void content, frequency, spacing factor and paste-air ratio in concrete.

- *Complies with ASTM C457 specifications and MTO LS-431*
- *Procedure A, The Linear Traverse Method*
- *Procedure B, The Modified Point-Count Method*



Shown with optional PC, video camera and viewing software.

The HS-745T Air Voids Analysis System includes:

- *High quality Nikon trinocular microscope with the option to add a video camera and viewing software to be used with a PC*
- *Nikon fiber optic illuminator produces 150 watts of high-intensity cold light illumination*
- *Lamp life of over 1,000 hours*
- *Proprietary design of the manual stage links both the X and Y axes in a single piece of metal for excellent rigidity and superior accuracy*
- *Patented steel friction drive ensures smooth, backlash-free operation*
- *5 position counter assists in keeping count of parameters being analyzed*

ASTM C457 describes sample preparation equipment for grinding and polishing a plane section of concrete prior to measuring the air void distribution with the use of a microscope. Hoskin Scientific can provide you with a complete turn key system which include all necessary items to perform the air-void determination of concrete. Please contact us for full details.

HOBO UX100 Logger

The HOBO UX100 Series is Onset's next-generation family of data loggers for tracking temperature and relative humidity in indoor environments.

HOBO UX100 Series offer a dramatic price/performance advantage over competitive products by delivering higher accuracy, larger measurement capacity, and more LCD display features to make environmental data collection faster and easier than ever. The loggers provide a variety of features to reduce deployment time, and offer new logging modes for recording and displaying more detailed data without extensive post-processing or memory use.

Supported Measurements:

Temperature, Relative Humidity, Dew Point, Thermocouple

Key Advantages:

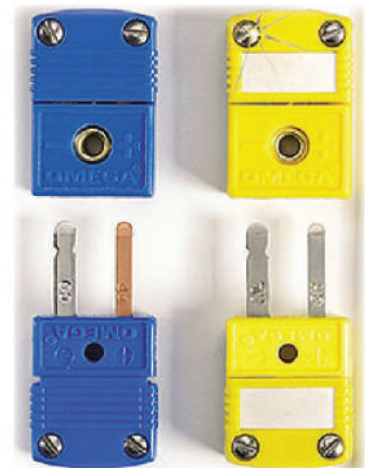
- Easy-to-view LCD display
- Large memory capacity
- Flexible mounting options
- Visual high & low alarm thresholds
- New Burst and Statistics logging modes
- User-replaceable RH sensors
- Temp, temp/RH, and thermocouple models available



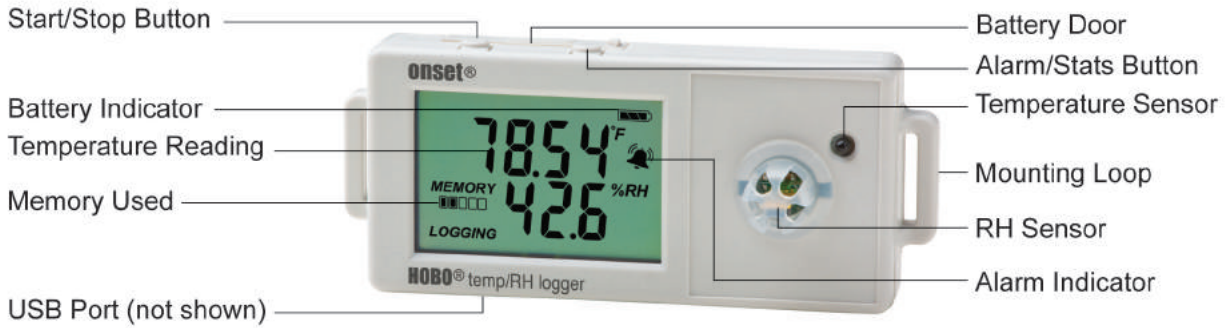
Thermocouple Logging Accessories:

- Thermocouple Wire
- Thermocouple Connectors
- Thermocouple Digital Readout Units

onset[®]
HOBO[®] Data Loggers



Common Features of HOBO UX100 Series Loggers



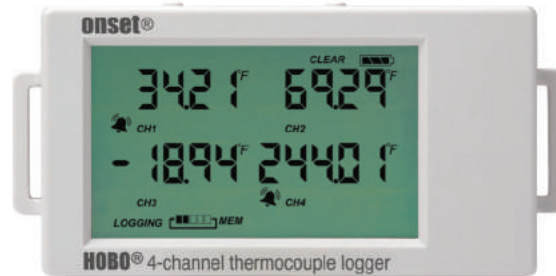
Part number	UX100-001 (Temp)	UX100-003 (Temp/RH)	UX100-011 (Temp/RH)	UX100-023 (Ext Temp/RH)
Memory	84,650 measurements			
Sampling Rate	1 second to 18 hours, user selectable			
Battery Life	1 year typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user-replaceable, CR2032			
Dimensions	3.66 x 5.94 x 1.52 cm (1.44 x 2.34 x 0.6 in.)		3.66 x 8.48 x 1.52 cm (1.44 x 3.34 x 0.6 in.)	
Temperature				
Range	-20° to 70°C (-4° to 158°F)			
Accuracy	±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)			
Resolution	0.024°C at 25°C (0.04°F at 77°F)			
Response Time (airflow of 1 m/s (2.2mph))	8 minutes to 90%	4 minutes to 90%		6 minutes to 90%
Relative Humidity				
Range	n/a	15% to 95%	1% to 95%	
Accuracy	n/a	±3.5% from 25% to 85%	±2.5% from 10% to 90%	
Resolution	n/a	0.07% at 25°C (77°F)	0.05% at 25°C (77°F)	
Response Time (airflow of 1 m/s (2.2mph))	n/a	43 seconds to 90%	11 seconds to 90%	5 minutes to 90%
CE compliant	Yes			

Part number	UX100-014M (Thermocouple)		
Memory	208,076 measurements		
Sampling Rate	1 second to 18 hours, user selectable		
Battery Life	1 year, typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user-replaceable, CR2032		
Dimensions	3.66 x 8.48 x 1.52 cm (1.44 x 3.34 x 0.6 in.)		
Operating Range	Logging: -20° to 70°C (-4° to 158°F); 0 to 95% RH (non-condensing)		
Thermocouple	Range	Accuracy	Resolution
Type J	-210° to 760°C (-346° to 1,400°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.03°C (0.06°F)
Type K	-260° to 1,370°C (-436° to 2,498°F)	±0.7°C (±1.26°F) ± thermocouple probe accuracy	0.04°C (0.07°F)
Type T	-260° to 400°C (-436° to 752°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.02°C (0.03°F)
Type E	-260° to 950°C (-436° to 1,742°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.03°C at (0.05°F)
Type R	-50° to 1,550°C (-58° to 2,822°F)	±2.2°C (±3.96°F) ± thermocouple probe accuracy	0.08°C (0.15°F)
Type S	-50° to 1,720°C (-58° to 3,128°F)	±2.2°C (±3.96°F) ± thermocouple probe accuracy	0.08°C (0.15°F)
Type B	550° to 1,820°C (1,022° to 3,308°F)	±2.5°C (±4.5°F) ± thermocouple probe accuracy	0.1°C (0.18°F)
Type N	-260° to 1,300°C (-436° to 2,372°F)	±1.0°C (±1.8°F) ± thermocouple probe accuracy	0.06°C (0.11°F)

HOBO UX120 4-Channel Thermocouple Logger

Log type J, K, T, E, R, S, B, or N thermocouples

The HOBO 4-Channel Thermocouple data logger records temperature in indoor environments using up to four J, K, T, E, R, S, B, or N type thermocouple sensors (sold separately). The logger also can record the ambient temperature with its internal temperature thermistor. Using HOBOWare, you can easily configure the logger alarm to trip for specific high or low temperatures. Or, you can set up burst logging in which the logger records data at a different interval during certain conditions.



Supported Measurements: Temperature

Key Advantages:

- 4 thermocouple inputs for type J, K, T, E, R, S, B, or N thermocouple probes
- Internal thermistor for ambient temperature & cold junction compensation
- 22 bit resolution
- Logger operating range: -20° to +70°C
- Memory – 1.9 million measurements
- LCD refreshes every 15 seconds
- Visual high & low alarm thresholds
- User upgradable firmware



Part Number	UX120-014M (Thermocouple)
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Internal Temperature	
Range	-20° to 70°C (-4° to 158°F)
Accuracy	±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)
Resolution	0.024°C at 25°C (0.04°F at 77°F)
Drift	<0.1°C (0.18°F) per year

Logger	
Logging Rate	1 second to 18 hours, 12 minutes, 15 seconds
Logging Modes	Normal, Burst, Statistics
Memory Modes	Wrap when full or stop when full
Time Accuracy	±1 minute per month at 25°C (77°F)
Battery Life	1 year typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user replaceable, 2 AAA
Dimensions	10.8 x 5.41 x 2.54 cm (4.25 x 2.13 x 1 in.)
Operating Range	Logging: -20° to 70°C (-4° to 158°F); 0 to 95% RH (non-condensing)
CE Compliant	Yes

Thermocouple (probes sold separately)	Range	Accuracy	Resolution
Type J	-210° to 760°C (-346° to 1,400°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.03°C (0.06°F)
Type K	-260° to 1,370°C (-436° to 2,498°F)	±0.7°C (±1.26°F) ± thermocouple probe accuracy	0.04°C (0.07°F)
Type T	-260° to 400°C (-436° to 752°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.02°C (0.03°F)
Type E	-260° to 950°C (-436° to 1,742°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.03°C at (0.05°F)
Type R	-50° to 1,550°C (-58° to 2,822°F)	±2.2°C (±3.96°F) ± thermocouple probe accuracy	0.08°C (0.15°F)
Type S	-50° to 1,720°C (-58° to 3,128°F)	±2.2°C (±3.96°F) ± thermocouple probe accuracy	0.08°C (0.15°F)
Type B	+60° to 1,820°C (1,022° to 3,308°F)	±2.5°C (±4.5°F) ± thermocouple probe accuracy	0.1°C (0.18°F)
Type N	-260° to 1,300°C (-436° to 2,372°F)	±1.0°C (±1.8°F) ± thermocouple probe accuracy	0.06°C (0.11°F)

Portable Sand & Gravel Moisture Meter



A portable moisture meter for determining the moisture content in bulk goods like sand, gravel and grit. The meter is characterized by a precise measurement and user-friendly handling.

Features of the moisture meter:

- Wide measuring range 0-30 %
- High reliability
- Ergonomically designed measuring device
- Robust plunge probe with ergonomic handle
- Display with e-paper technology: easily readable even in direct sunlight
- Adjustable via USB interface and software
- More than 1000 measuring processes per battery charge

Portable Sand Moisture Meter



Easy handling

Insert the probe into the material to be measured, press the ➤ button and the meter will immediately show the measuring result.

The moisture measuring system consists of a robust probe, an easy to use displaying device and a docking station for loading the storage batteries.

Thanks to its low current consumption, the storage batteries of the device have a long operating time.



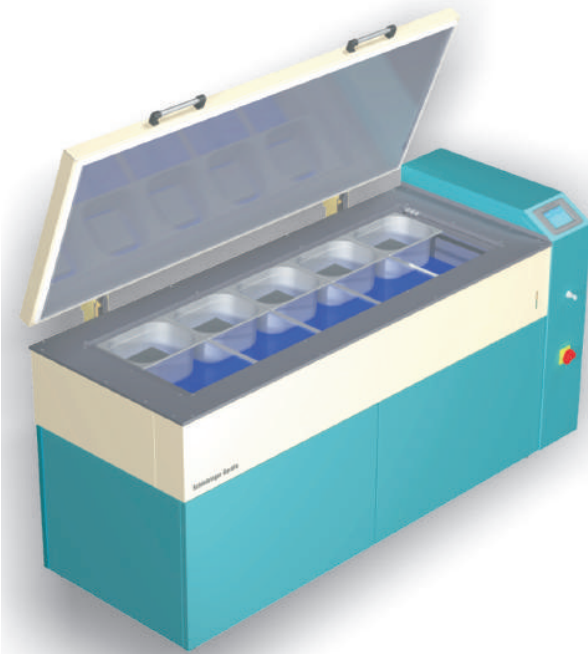
Technical Data

Dimensions device:	220 x 100 x 40 mm
Dimensions probe:	380 x 150 x 35 mm, Insertion length: 260 mm
Dimensions docking station:	155 x 100 x 55 mm
Length of cable:	1200 mm
Protection class:	IP65
Current supply:	wall power supply 9V/1A, 100-240 V, 50/60 Hz
Storage batteries:	4 pieces, 1.2V/2000mAH each, type NiMH, size AA
Resolution:	0,1%
Repeatability:	+/- 0,3%
Standard interface:	USB
Measuring curves:	6 pre-calibrated curves: 0-1, 0-2, 0-4, clayey sand, 4-8, 8-16 10 measuring curves which can be individually calibrated

Portable Sand Moisture Meter

Schleibinger Geräte

CDF Test Equipment



Apparatus 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 chairman of the RILEM committee TC117

Specifications:

- Test cab dim. wxd 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.
- Environment 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, electronic controller, manual.

Specifications:

- 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 x 300 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



viskomat NT	Item No. V0001
Shear Stress Controlled Drive	Item No. V0006
Oscillation-Mode	Item No. V0030



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
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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.

Cement Paste Probe	Item No. V0013
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Beaker for Temperature Control

A double wall beaker, so that the measurement beaker is running in a water bath, which is circulated by an

Beaker for Temperature Control	Item No. V0009
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Vane Probe

6 wings, diameter 40mm, height 60mm, Vessel inner diameter

Vane Probe	Item No. V0004
Vessel for Vane Probe	Item No. V0005



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
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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

Basket Probe	Item No. V0014
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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

Cylindrical Measurement System	Item No. V0070
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Plate-Cone Probe

specially developed for glue like specimen. Fits best for speeds between 0 and 0.5 rpm. Cone diameter

Plate Cone Probe	Item No. V0002
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Rheometer viskomat XL



Cooling and Heating Unit

Unit for cooling and heating water incl. a circulating pump

- Temperature range: 0 - 65 °C
- Deviation: +/- 0,1 K
- Cooling power: 250 W at 20°C
- Heating power: 1 kW
- Circulation pump rate: max. 18 l/min
- Dimensions: w x d x h 280 x 380 x 500 mm
- Weight: 25,3 kg
- RS232 interface

Umlaufkühler Item No. V0019



Beaker for Temperature Control

A double wall beachure, so that the measurement beaker is running in a water bath, which can be circulated by an

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

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

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.

Oscillation mode Item No. VX0030

Rheometer for fresh concrete



eBT2

The eBT2 is a compact rheometer for fresh concrete. Compact rheometer with electrical drive for fresh concrete. Battery driven. Stainless steel 39 l container. Motor driven unit with 2 momentum sensors and 1 speed sensor. Autocalibration, nonvolatile storage for 35 datasets. Battery powered. Bluetooth wireless link to Android Smartphone (included) for programming the speed profile and readout the data. Graphical display of the measurement sets on the Smartphone. Including vessel, meas. unit, Smartphone, Android App, software for the datatransfer to a PC

Specifications:

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

eBT2 Item No. B0010

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 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 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 cm^3
- 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

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

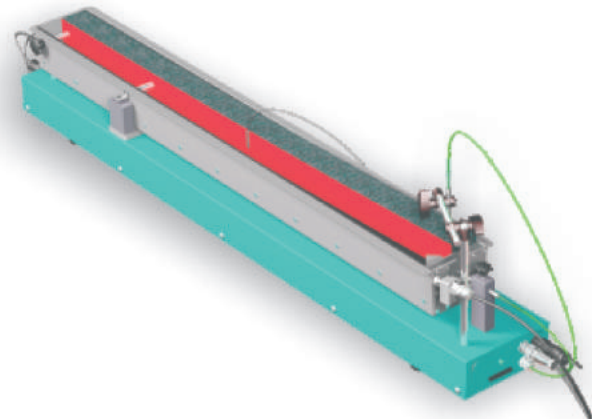
Bending Measuring Unit

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 a 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

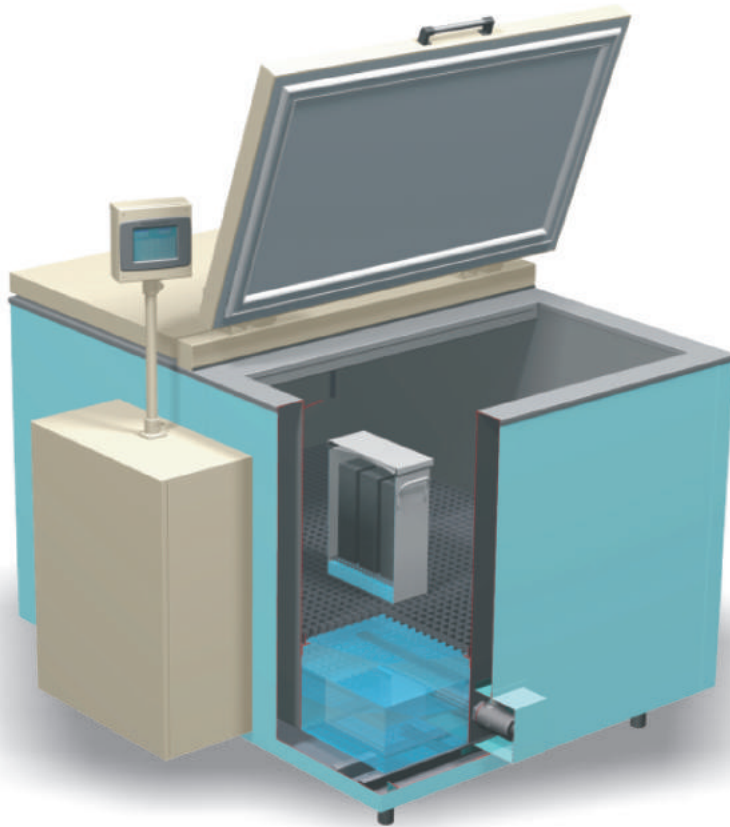
Shrinkage Drain for Mortar, Plaster, etc..	Item No. S0103
Shrinkage Drain for Concrete, 60 x 100 mm	Item No. S0033

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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Alkali-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

Alkali-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

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



Thin Layer Shrinkage System	Item No. S0060
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Hoskin Scientific Limited has been supplying testing and monitoring instruments since 1946. Although our range is broad, we focus on three major markets including:

Geotechnical & Materials Testing
Environmental Monitoring
Test & Measurement Instrumentation

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