TESTING Bluhm & Feuerherdt GmbH
Manufacturing and distribution
of construction material testing devices

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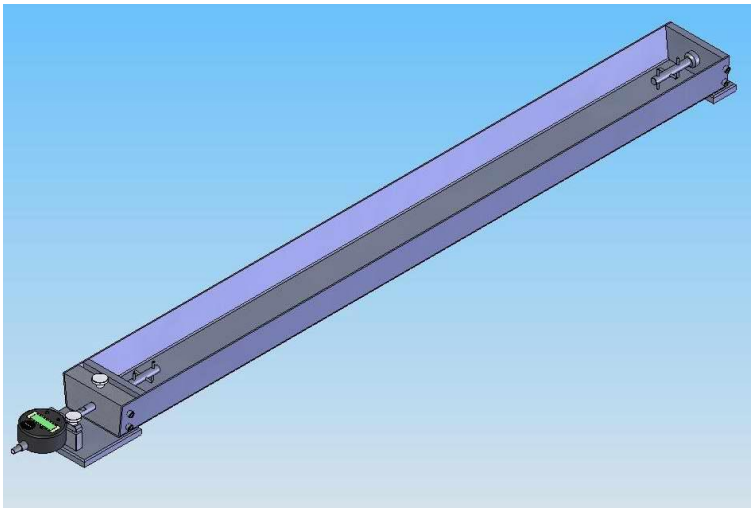
Operating Instructions

Shrinkage channel
for grouting mortar and screed



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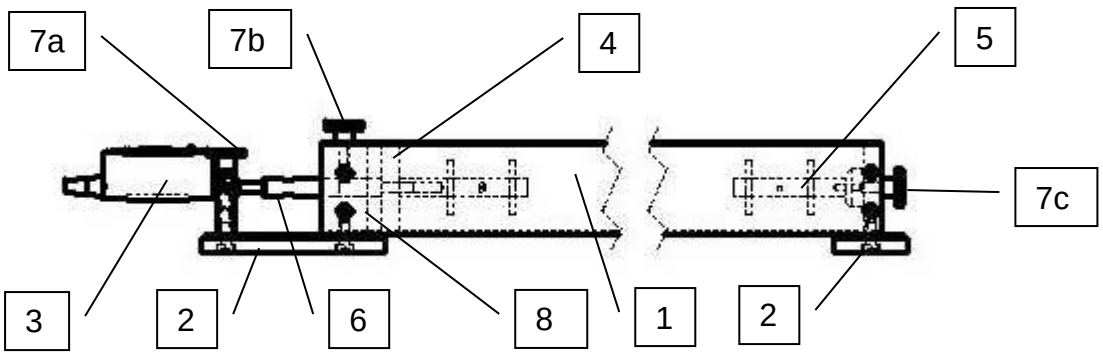
1. Performing tests

1.1 Nature of the procedure

The testing device measures horizontal shrinkage and expansion processes of building material samples during the setting phase.
The shrinkage and swelling processes occurring during the setting phase can be calculated as important mortar-specific parameters and illustrate the technical possibilities and limits of screeds.
The shrinkage value is defined by the difference in length between the maximum swelling value and the actual value on the 28th day.
The shrinkage and swelling value for calcium sulphate (anhydrite) screeds must not exceed the value of 0.2 mm/m according to DIN 4208.
The measurement begins 48 hours after production and is completed on the 28th day.
(Shrinkage channels are not subject to any standard and do not currently provide reproducible comparative values due to the different types of construction.)

1.2. Description of the equipment

1	1000 mm long stainless steel shrinkage channel
2	Baseplates
3	Dial gauge, 0.01 mm
4	Movable punch with measuring rod and barbed hook
5	End bracket with barbed hook
6	Measuring rod extension
7a	Knurled screw for fastening the dial gauge
7b	Knurled screw for fastening the punch
7c	Knurled screw for fastening the barbed hook
8	Range of motion of punch



1.3 Execution

- The guide of the measuring rod extension (6) and the path along which the punch can move (8) must be greased or oiled before filling the channel. Then move the punch back and forth 2-4 times to distribute the grease.
- Place the punch with the measuring rod (4) on the 1000 mm mark and lightly tighten the knurled screw (7b).
- Place a separating liner in the channel to prevent the test sample from sticking to the channel.
- Fill stainless steel channel with about 5 litres of fresh mortar.
- Smoothen out any protruding material to align with the upper edge of the channel. Scrape off any protruding material.
- Insert the dial gauge (3), place the measuring plunger on the measuring rod extension (6), switch on the dial gauge (3) and clamp it to the knurled screw at the half-way point of the duty stroke (7a). Set the dial gauge to zero (reset) and record the measurement starting time.
- Loosen the knurled screw (7b) on the measuring rod to start the testing process.
- Read and record the measured values at self-determined intervals. This recording can be transferred to a printer or PC.

- After completing the measurement, first unscrew all knurled screws (7 a, b, c) from the testing device.
- Then pull out the dial gauge (3).
- Use a wrench to unscrew the still protruding end of the measuring rod extension (6).
- The test sample can now be removed from the channel by tilting and lightly tapping the side walls. Carefully remove any remaining barbed hooks and the punch (4) and (5) from the sample material and remount them along with the measuring rod extension (6).

2. Reception

Check the external visible condition of the delivered shipment. If it is in good condition, the shipment can be accepted by the carrier (parcel service or freight forwarder).

If there is no cause for complaint or transport damage, the completeness of the shipment must be checked against the delivery note.

If transport damage is feared or suspected, or is only noticed after receipt has been completed, a report with an exact account of the extent of the damage must be created immediately. Please send us the report immediately by fax. Please do not make alterations to the shipment under any circumstances.

On the basis of this report, we should be able to assess whether the damage can be fixed
- by delivery of spare parts or
- by sending a specialist technician or only
- by returning the device.

3. Warranty

In principle, our **General Conditions of Sale and Delivery** are applicable.

The manufacturer warrants that these operating instructions were compiled in accordance with the technical and functional parameters of the supplied product.
The manufacturer reserves the right to add supplemental information to these operating instructions.

The manufacturer provides the statutory warranty.
Wear parts are excluded from this warranty.

The manufacturer’s guarantee that the machine will remain in perfect working order is contingent on compliance with the provisions of these operating instructions and use of the equipment as intended.

The manufacturer disclaims liability for damage resulting from improper usage of the product or failure to comply with the guidelines and codes of conduct outlined in these operating instructions.

Warranty claims to the manufacturer are excluded if the product is subject to unauthorised changes in structure or in its functional design without the written agreement of the manufacturer.

4. Customer service

Great care has been taken to ensure the accuracy of these operating instructions. However, no guarantee can be given that they do not contain errors or that the specifications will remain unaffected in the event of technical changes.

4.1 Operating instructions at date of issue

4th edition
Sept 2005

4.2 Copyright

4.3 Supply of replacement parts – address

For technical queries and replacement parts supply, please contact the following address directly:

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