

Operating Instructions

Water retention capacity



Table of contents

1. Performing tests	2
1.1 Nature of the procedure	2
1.2. Test specification.....	2
1.3. Description of the equipment.....	2
1.4 Execution	3
2. Reception	4
3. Warranty	4
4. Customer service	5
4.1 Operating instructions at date of issue	5
4.2 Copyright.....	5
4.3 Supply of replacement parts – address	5

1. Performing tests

1.1 Nature of the procedure

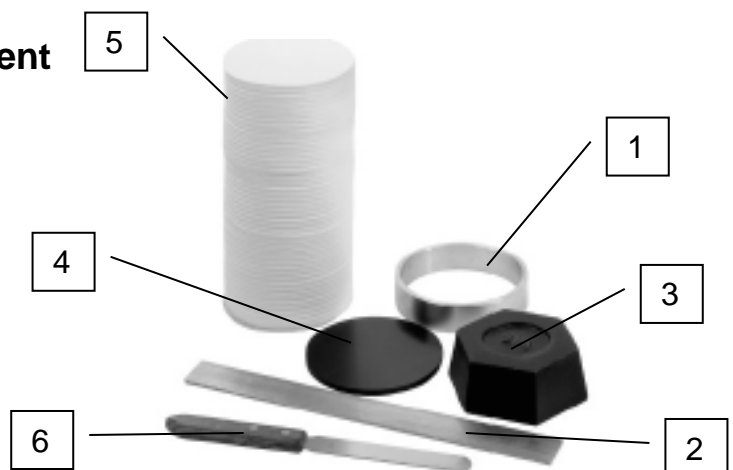
In the testing device, the fresh mortar undergoes extraction treatment under defined conditions using filter paper as a base. The mass of water retained in the mortar after the extraction treatment is regarded as the water retention capacity. The proportion is expressed as a percentage.

1.2. Test specification

EN 413-2 Water retention capacity Section 5

1.3. Description of the equipment

1	Rigid container Ø100 mm ± 1 x 25 mm ± 1
2	Levelling ruler
3	2 kg weight
4	Rigid, dense plate
5	Filter paper
6	Plate knife



1.4 Execution

- Weigh empty dry container to the nearest 1 g [u]
- Weigh 8 unused filter paper discs to the nearest 0.01 g [v]
- Fill the container with about 10 individual samples.
- Use sawing motion to scrape off protruding material with the levelling ruler at approx. 45°.
- Then smooth off the surface in the opposite direction at a slightly flatter angle.
- Weigh container with contents to the nearest 1 g [w]
- Cover the surface with 2 cotton gauzes and place the 8 filter paper discs on top.
- Place a dense plate on the filter papers.
- Turn the container over so that the open base surface is now facing upwards
- Place the 2 kg weight on the open surface

- After 5 minutes ± 5 seconds remove the 2 kg weight and turn the container over again.
- Remove rigid, dense plate, filter papers and cotton gauze.
- Weigh filter papers to the nearest 0.1 g [x]

Mass of available water:

$$z = [y(w-u) / (1800+y)]$$

u = mass of empty container in g

w = mass of container filled with mortar in g

y = mass of water required to produce mortar with a penetration of 35 mm ± 3, in g

Water retention capacity:

$$R = [z-(x-v)] * 100 / z$$

v = mass of the 8 filter papers before absorption of water in g

x = mass of the 8 filter papers after absorption of water in g

z = mass of water in mortar before absorption of water in g

The water retention capacity should be specified as the mean of the two tests to the nearest 1%. If the two individual values deviate by more than 2% from their mean value, another two samples of a fresh mortar mixture should be tested.

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 with 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

The copyright remains with the company

TESTING Bluhm & Feuerherdt GmbH

These operating instructions are intended only for the operator and his/her personnel. They include specifications and instructions that may not be

- duplicated
- distributed or
- communicated by other means.

Infringements are punishable under criminal law.

4.3 Supply of replacement parts – address

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

TESTING Bluhm & Feuerherdt GmbH

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12277 Berlin, Germany

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