WATER RETENTION APPARATUS

Code : C032



- The ALFA Water Retention Apparatus is designed for determining the water retentivity of fresh mortars in accordance with EN 1015-8. It evaluates the ability of masonry, rendering and plastering mortars to retain their mixing water when subjected to suction, ensuring reliable performance on absorbent substrates.
- By simulating the suction exerted by masonry units through filter papers or similar absorptive layers, the apparatus measures the percentage of water retained in the mortar. This parameter is critical for assessing bond quality, resistance to premature drying and the proper hydration of hydraulic binders in site and laboratory mortars.
- The system incorporates an EN-compliant ring mould and base assembly to form a standardized mortar layer, together with high-quality filter papers and gauze. The controlled suction arrangement ensures uniform contact and repeatable conditions, allowing direct comparison between different mortar formulations, admixtures and binder types.
- An integrated vacuum or suction control unit (depending on configuration) with regulator and gauge enables the operator to apply and monitor low negative pressures as required by international standards for water retention testing of cement- and lime-based mortars and plasters. This provides stable test

conditions, minimizes operator variability and supports long-term quality control.

- Vacuum pump must be ordered separately.

STANDARDS

ASTM C1506 • ASTM C110

TECHNICAL SPECIFICATIONS

- Application: Determination of water retentivity of fresh mortar by suction
- Test materials: Masonry, rendering and plastering mortars with mineral binders and normal or lightweight aggregates
- Test principle: Measurement of the water retained in a standardized mortar layer after suction through filter paper or absorbent medium
- Mould type: Circular, rigid, non-absorbent ring mould compliant with EN 1015-8 / EN 413-2
- Base assembly: Smooth, non-absorbent base plate providing tight contact with ring and mortar layer
- Suction method: Vacuum-based or filter-paper suction method (depending on configuration and applicable standard)
- Vacuum control: Integrated vacuum regulator with gauge for fine adjustment and monitoring of applied negative pressure
- Flow control: Three-way stopcock for connection, isolation and release of vacuum line
- Filtration interface: Perforated dish or support for filter papers to ensure uniform suction over the mortar surface
- Mortar compaction: Compatible with standardized tampers and filling procedures prescribed for water retention tests
- Construction: Corrosion-resistant metallic and polymeric components suitable for cementitious and lime-based materials

EQUIPPED WITH

- Vacuum regulator with analogue gauge
- Three-way stopcock for vacuum line control
- Suction flask or intermediate vessel for safe separation of liquids from the vacuum line

ORDERING INFORMATION

Item Name	Item Code
WATER RETENTION APPARATUS	C032H00XH