

DATA SHEET

UNIFRAME-MINI Automatic Testing Machine for Transverse Deformation of Tile Adhesives and Grouts



UNIFRAME-MINI, Automatic testing machine (70-T0108/MINI)

General description

The UNIFRAME-MINI machine is a fully automatic unit specifically designed for transverse deformation testing of tile adhesives and grouts in conformance with the stringent requirements of EN 12004.

Great attention has been given to the machine design, as shown by the high-stiffness frame which allows wide access to the test area, the robust loading anvil and supports, the easily readable touchscreen graphic display mounted at head-height and oriented towards the user at a comfortable angle, the appropriately positioned connection ports on the rear of the machine and the compact and ergonomic overall construction.

During operation, the machine measures the transverse deformation of a tile adhesive or grout strip specimen with prescribed dimensions (3mm thickness), whilst subjecting it to a 3-point bending load which is gradually increased in such a way that the transverse deformation is constant at 2mm/min. The test is completed when failure occurs.

The transverse deformation rate is automatically controlled by an advanced closed-loop controller based on a customized algorithm.

Main features

- **Compact, solid and ergonomic design**
- **Class 1 accuracy** (load and deformation)
- **High productivity**
- **Fully automatic test cycle.** The complete test cycle is automatically performed by simply pressing the start button. Correct test execution conforming to the reference Standard is continuously and automatically controlled.
- **Soft roller-to-specimen contact and smooth load rate control from the very beginning of the ramp**
- **Connects to laboratory network via LAN port/software**
- **Allows remote verification of settings and performances** and easy debugging of unexpected malfunctions

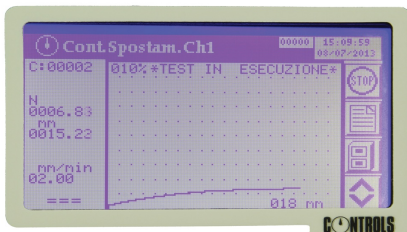
Standards

- EN 12004-2

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Specifications

- 250 N maximum load capacity
- Load cell and device measuring the specimen transverse deformation are included
- Loading anvil and supports are included
- 240 x 128 pixel touchscreen graphic display showing numbers and diagrams
- Effective sampling and control rate up to 50/sec
- 17-bit effective resolution
- 30mm actuator stroke
- Data storage on USB pen drive (included)
- Connection to PC via LAN port (communication software is included)
- Multiple selection of languages and units
- Real-time clock and date
- Closed-loop PID control of transverse deformation rate
- Maximum power absorption: 50W
- Overall dimensions (wxdxh): 470x350x 650mm
- Weight: 30kg (approx.)



Detail of the touchscreen graphic display



Detail of load cell, test supports and loading anvil

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Rectangular frame (70-T0108/M1), specimen mould (70-T0108/M2)
and 10 kg weight with handles for sample preparation to EN 12002

Products

70-T0108/MINI

Automatic testing machine UNIFRAME-MINI for transverse deformation of tile adhesives and grouts conforming to EN12004. 110-230V/50-60HZ/1Ph

Accessories and consumables

70-T0108/M1

Rectangular frame mould for specimen to EN12004, internal dimensions 280 x 45 mm, 5 mm thickness (Template A)

70-T0108/M2

Pressure plate for specimens to EN 12004, dimensions 300mm x 45 mm, 3 mm thickness (TemplateB).

70-T0108/M3

10 kg weight with handle for preparation of specimen to EN12004

70-SW/TDU

PC software for the determination of transverse deformation for cementitious adhesives and grouts to EN 12002