

**DATASHEET**

## UNIFRAME50 **EmS**

### Automatic Electromechanical 50 kN Universal Tester



**The new UNIFRAME 50 EmS features major improvements to both the user interface and machine performance. They include:**

- **User-friendly display**— wide high resolution 7" color graphic touchscreen display.
- **Flexible data acquisition** — up to four channels for external displacement transducers, two channels for load cells plus one channel for crosshead travel allowing for a wide range of test methods to be performed.
- **Remote control** — by using our newly released PC software (optional), allowing easy and convenient data management and effortless printing/saving of customized test reports in Excel format.
- **Optimum load measurement accuracy** — obtained with 19-bit effective resolution (524,000 divisions).
- **Advanced testing capabilities** — ability to perform complex test procedures including loading / unloading cycles and steady loading phases.
- **Large storing capacity** — 16 GB memory internal memory. Stored data can be exported to your PC by using a USB key or downloaded in real time via the RS 232 serial port.



The UNIFRAME50 EmS is a universal automatic compression and flexural machine for displacement and load-controlled tests on a vast range of construction materials.

Highly flexible, this general purpose testing system benefits from generous dimensions that allows the operator to place an extensive range of accessories meeting all the needs of a material testing lab.

**Ideal solution for the automatic performance and elaboration of both displacement-controlled and load-controlled tests for:**

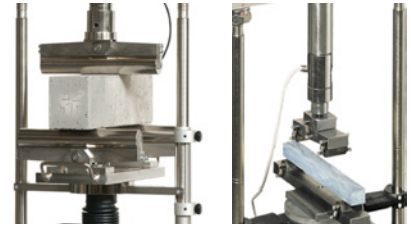
- Cement Testing Labs
- Road and Soil Labs
- Material Labs

#### UNIFRAME 50 at a Glance

- Stand-alone automatic digital load frame
- Closed-loop displacement/load control
- 18 pre-set testing profiles according to Standards
- Automatic failure detection
- 7 channels for onboard data acquisition
- Integrated transducer calibration facility
- Infinitely variable speed from 0.05 to 51 mm/min and from 1 to 10,000 N/s
- 7" touchscreen capacitive color display for viewing real-time graph and test data
- Automatic execution of a wide range of test methods: CBR, Marshall, Indirect Tensile, Elastic Modulus, etc.
- Upper and lower limit switches located on the columns to adjust the effective vertical daylight, depending on the test and accessories in use
- Shorter testing time thanks to the rapid approach and return functions
- Remote control via PC using optional software
- Frontal CE emergency stop button

# Models and Technical Specifications

Models 70-	T1282	T1284
Testing speed	from 0.05 to 51 mm/min	
Load range	1 to 10,000 N/s	
Type of control	Displacement and load	
Channels	1 for crosshead travel, 2 for load cells, 4 displacement transducers	
Data download	RS232 and USB ports	
Memory	16 GB	
Channel resolution	19 bit for load channels 16 bit for displacement channels	
Sampling frequency	Up to 100 Hz	
Max ram travel	100 mm	
Compression capacity	50 kN	
Remote control	With optional software	
Max speed approach	40 mm/min	
Max vertical span	765 mm	
Horizontal span	380 mm	
Overall dimensions (W x D x H)	545 mm x 670 mm x 1,130 mm	
Net Weight (machine only)	110 kg Approx.	
Single-phase line voltage	220-240 V	110 V
Frequency	50/60 Hz	60 Hz
Power	800 W	



Accessories for flexure testing



Detail of the 7" touchscreen display

## Ordering Information

### 70-T1282 UNIFRAME

50 kN automatic electromechanical universal tester  
230 V / 50 – 60 Hz / 1 Ph

### 70-T1284 UNIFRAME

50 kN automatic electromechanical universal tester  
110 V / 60 Hz / 1 Ph

**NOTE:** Load cell(s), displacement transducer(s) and specific accessories are not included.

## Standards

- ✓ **CBR:** EN 13286-47, ASTM D1883
- ✓ **Marshall:** EN 12697-34; ASTM D1559, D5581, D6927
- ✓ **Indirect Tensile:** EN 12697-23; ASTM D4123; AASHTO T283
- ✓ **Unconfined compression:** ASTM D2166; BS 1337
- ✓ **Flexural strength:** ASTM D1635
- ✓ **Quick triaxial:** ASTM D2850; BS 1337
- ✓ **Uniaxial compression:** ASTM D1633
- ✓ **Modulus of rupture of natural building stones:** ASTM C99, C880
- ✓ **Punching test on clay block for flooring:** UNI 9730-3
- ✓ **Flexural strength on concrete beams, concrete and clay tiles:** EN 12390-5, 491, 538; ASTM C78, C293; BS 1881:118; NF P18-407; UNI 6133; UNE 83-305
- ✓ **Flexural strength on mortar prisms:** EN 196; ASTM C348
- ✓ **Compression on low strength mortar mixes:** ASTM C109
- ✓ **Indirect tensile on bituminous mixtures:** EN 12697-12; EN 12697-23; ASTM D4123; CNR 34
- ✓ **Elastic modulus tests on mortar and cement prisms:** EN 13412
- ✓ **Elastic modulus on hydraulically bound mixtures:** EN 13286-43

## CONTROLS

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