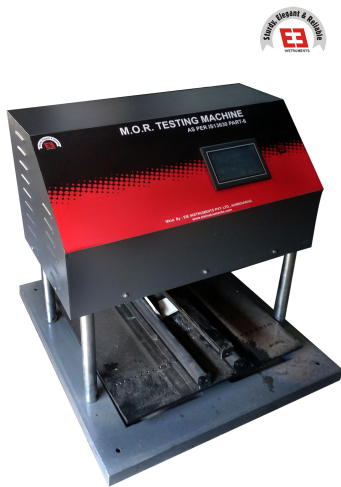




EIE INSTRUMENTS PVT. LTD.
(An ISO 9001:2015 Certified Company)

WET TRANSVERSE STRENGTH TESTING MACHINE IS 13801-ANNEX F 1000KGF- AUTOMAITC PACE RATE CONTROLLED



WET TRANSVERSE STRENGTH TESTING MACHINE (For Cement Concrete Tiles / Flooring Tiles)

TEST PRINCIPLE

The test specimen (tile), conditioned under water immersion, is subjected to a **gradually applied central load** while supported at two ends. The load at fracture is recorded and used to calculate the transverse strength.

PRODUCT DESCRIPTION

The Wet Transverse Strength Testing Machine is designed for determining the **flexural (transverse) strength of cement concrete tiles under wet conditions**, in accordance with:

- IS 13801 (Annex F) – Chequered Cement Concrete Tiles
- IS 1237 (Annex F) – Cement Concrete Flooring Tiles

The machine operates on the **three-point bending principle**, ensuring accurate and repeatable determination of tile strength under simulated service conditions.

SALIENT FEATURES

- Fully compliant with IS standards
- Uniform and controlled loading rate
- Self-aligning fixture for accurate results
- Adjustable span for different tile sizes

- Robust and low-maintenance design
- Suitable for quality control and R&D applications

TECHNICAL SPECIFICATIONS

Load Frame

- Type: Motorized / Servo-controlled (optional)
- Capacity: 5 kN to 50 kN (customizable)
- Construction: Robust welded steel frame
- Loading mode: Uniform and shock-free loading

Load Measurement System

- Sensor: High precision load cell
- Accuracy: $\pm 1\%$ of indicated load (or better)
- Resolution: 0.1% of full scale
- Overload protection: Provided

Loading Control

- Control type: Closed-loop electronic control
- Load rate: Adjustable up to 2000 N/min
- Control modes:
 - Load control (standard requirement)
 - Optional displacement control

Transverse Test Fixture

Support Arrangement:

- Two lower supports (rollers or knife edges)
- One upper loading nose

Features:

- Hardened steel construction
- Self-aligning support (to avoid eccentric loading)
- Replaceable cushioning strips

Span Adjustment:

- Adjustable span: 100 mm to 300 mm (or as required)
- Span scale: Clearly marked for accuracy

Crosshead Movement

- Drive: Motorized precision drive system
- Speed control: Infinitely variable
- Smooth and vibration-free operation

Control & Display Unit

- Digital display for:
 - Load (N / kg)
 - Peak load (auto hold)
 - Touchscreen interface
 - PC-based software (at extra cost)

Software (Optional)

- Automatic calculation of transverse strength
- Data logging and report generation
- Export formats:

- Excel / PDF / CSV
- Multi-standard test selection

ACCESSORIES SUPPLIED

- Transverse test fixture (complete set)
- Calibration certificate (traceable)
- Operating manual

OPTIONAL ACCESSORIES

- Water immersion tank (for specimen conditioning)
- Vernier caliper / digital thickness gauge
- Temperature-controlled water bath
- Advanced software with reporting features
- Cushioning arrangement (Plywood or rubber sheet)

POWER REQUIREMENTS

- 230 V, 50 Hz, Single Phase
- *(Customizable as per requirement)*

OPERATING CONDITIONS

- Ambient temperature: 10°C to 40°C
- Relative humidity: Up to 90% (non-condensing)

NOTES

- Machine configuration can be customized based on tile size and testing requirements
- Compliance with additional international standards can be incorporated upon request
 - ASTM C1167 (Roofing Tiles – Transverse Strength)
 - EN 538 (Clay Roofing Tiles – Flexural Strength)

Technical Specification

- Overall Dimensions : 914 X 914 X 1143(L X W X D) mm
- Weight (Approx) : 220 kg

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