



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

CREEP TESTING MACHINE - 1000KN - DIGITAL - ASTM C512



Conforming to ASTM C512 – Standard Test Method for Creep of Concrete in Compression

The Concrete Creep Testing Machine is designed for determining the creep characteristics of concrete cylindrical specimens subjected to sustained longitudinal compressive loading in accordance with ASTM C512. The system is suitable for testing concrete in which the nominal maximum size of coarse aggregate does not exceed **50 mm**.

Scope of Supply

The complete system consists of the following main units:

- Loading Frame
- Hydraulic Power Pack
- Hydraulic Jack
- Data Acquisition System (DAQ) with Strain Gauges
- Load measuring system - with the help of load cell

Loading Frame

- Will accommodate **three concrete specimens** of **150 mm diameter × 300 mm height** simultaneously.
- Will have a maximum loading capacity of **1000 kN**.
- Will consist of a rigid loading frame incorporating **upper and lower loading platens** between which the test specimens are positioned.

Corporate Office:

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Calibration Laboratory:

Survey No. 1098, Nr. Mahakali Temple,
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Tal-Daskroi, Ahmedabad-382 433.
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GST TIN No. : 24AABCE4018L1ZU
I.T. PAN No. : AABCE 4018L
IEC No. : 0813026598 Dt. 04/03/2014
CIN No. : U29199GJ2004PTC045078
TAN No. : AHME00572F



specimens are positioned.

- Will be equipped with **high-compression springs** designed to maintain a constant sustained compressive load on the specimens throughout the duration of the creep test.
- Will ensure uniform load distribution and long-term load stability during extended testing periods.

Hydraulic Power Pack

- Will be of hand operated and designed for continuous operation.
- The machine will be fitted with polydyron pump
- Will include dedicated hydraulic control levers for:
 - Pressure application.
 - Controlled pressure release.

Hydraulic Jack

- Will comprise a precision-machined hydraulic cylinder and piston assembly.
- Maximum load capacity: **1000 kN**.
- Piston stroke: **100 mm**.
- Will be designed to provide smooth and uniform load transfer to the loading frame.

Strain Measurement System

The system will be supplied complete with:

- **10 Nos. Electrical Resistance Strain Gauges**
 - Type: **BF120**
 - Gauge Length: **60 mm**
 - Resistance: **120 Ω**
 - Lead Wire Length: **25–30 mm**
- Epoxy adhesive for bonding the strain gauges to the concrete specimens.
- Soldering cables and all necessary accessories required for installation and connection of the strain gauges.

The strain measurement system will have:

- Strain resolution: **1 microstrain (1 $\mu\epsilon$)**.
- Strain measurement accuracy: **$\pm 1\%$ or better**.

Technical Specifications

Parameter Specification	
Standard	ASTM C512
Test Type	Creep of Concrete in Compression
Specimen Capacity	3 Nos.

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Specimen Size	150 × 300 mm Cylinders
Maximum Aggregate Size	50 mm
Maximum Load Capacity	1000 kN
Hydraulic Jack Capacity	1000 kN
Jack Stroke	100 mm
Display	Alphanumeric
Load Resolution	0.1 kN
Load Accuracy	±1% or Better
DAQ Channels	6
Strain Gauge Type	BF120
Gauge Length	60 mm
Resistance	120 Ω
Strain Resolution	1 µε
Strain Accuracy	±1% or Better
Data Storage	USB (Pen Drive) Interface
Data Logging	Automatic with User-Programmable Intervals

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