



Creep Testing Apparatus (SMT-SM-12)

This Apparatus uses specimens of lead and different plastics which creep significantly at room temperature and under low loads. Its main part is a simple lever (load beam) with a mechanical advantage of 8:1. The load beam gives a steady and uniform tensile load. A digital indicator measures the extension (creep) of the specimen under load. To ensure correct loading of the specimen, the load beam has a ball-bearing pivot. To apply a load, you can add weights to a weight hanger and measure time and the creep. For effect-of- temperature tests, the student freezes or heats a cool- pack and places it next to the specimen. They then fit the transparent enclosure to preserve the temperature around the specimen during the test. Students may record and plot results by hand, using a timer and the readings from the digital indicator and digital temperature indication.

The unit has Touch LCD display for visualization of process and the measurements. The Unit is also connected to Software for computer connectivity and data analysis. The Touch screen and computer software is included in the package.

TECHNICAL SPECIFICATIONS

Specifications:

- Touch LCD with GUI Interface for better monitoring and accurate measurement of Plant variables.
- Investigation of creep behaviour of different materials in creep rupture test
- flat lead and plastic (PE) specimens
- Demonstrates effect of temperature on creep
- Supplied with weights and test specimens
- Storage system for parts.
- ESOLS DAQ Software for monitoring and control.



Technical Data:

- Specimens
 - LxW: 25x5mm, thickness 2mm
 - 10x lead
 - 10x plastic (PE)
- Weights
 - 1x 1N (hanger)
 - 2x 5N
 - 3x 2N
 - 3x 1N
 - 2x 0.5N
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- Measuring ranges
 - tension: 5 to 25N/mm²
 - travel: 0 to 10mm, graduation: 0.01mm
 - temperature: -50 to 300°C
- Touch LCD with GUI Interface for better monitoring and accurate measurement of Plant variables.
- ESOLS DAQ Software for monitoring and control.
 - Graphical visualization.
 - Security mechanism for login.
 - USB Connected
 - Compatible with Windows 7,8.1,10.
- Digital Instrumentation
- Capability to modify according to end user.
- Can be used in Research Purposes.

Experimental Data:

- Creep in specimens of various materials
- Record a strain–time diagram (creep curve)
- Effect of temperature and load on the creep
- Load and creep recovery in plastics