



ZETATEK®
Committed to Excellence

**Simulating Environments
Since 1990.**



Thermal Mechanical Chamber

Introduction

Thermal Mechanical Chambers are designed to simulate temperatures while a tensile load is being applied on the specimen. Thermal mechanical testing of specimens enables the assessment of their resistance to a mechanical load during their operation and maintenance. These chambers stand out for their brilliant design, exceptional build quality, performance and reliability.

Combining over three decades of experience in the design and manufacture of environmental test chambers, Zetatek, the market leader in the industry, offers test chambers with a temperature range from -60°C to $+80^{\circ}\text{C}$ and load capacity of 20 Ton to 50 Ton.

Features

- The test space made from stainless steel 304 is welded airtight
- Multilayer composite insulation provides resistance against high and low temperature with just 100mm insulation thickness
- The door can be easily engaged and disengaged with an elegant rotary latch
- Large inspection window with multi-layer vacuum sealed toughened glass and window heaters
- High temperature protection of specimen
- Load is applied on the specimen with a hydraulic tensioning unit along with load cell

Klima Controller

- Connectable to chamber through Ethernet and Wi-Fi
- Multiple touchscreen options: 7", 10" and 15"
- Multiple user levels with passcode access
- Numerical and graphical visualization of test parameters
- Synoptic chart for status monitoring
- Program and manual mode of chamber operation
- Test data logging for easy analysis and graphing

Options

- Load cell with direct read out in tons
- Water cooled system for better performance
- External electrical terminals
- Multiple independent sensors for temperature measurement
- External panels made from stainless steel
- Sudden load release mechanism
- Temperature and load plot on same graph

Specifications

| Models | ZMF | 20S / 20C | 50S / 50C |
|--|-----|-----------|--------------------------------|
| Dimensions | | | |
| Test Space Volume (l) | | | 2400 |
| Basket Dimensions (mm) | w | | 3000 |
| | d | | 1000 |
| | h | | 800 |
| Temperature Performance | | | |
| Temperature Range in Cold Chamber (°C) | | | +80 to -40 or -60 (C Model) |
| Cooling Rate (°C/min) | | | 1.0 |
| Heating Rate (°C/min) | | | 1.0 |
| Temperature Stability (°C) | | | ±0.5 to ±1 |
| Temperature Homogeneity (°C) | | | ±1 |
| Condenser | | | air-cooled / water-cooled |
| Load Performance | | | |
| Hydraulic Load (Ton [kN]) | | 20 [200] | 50 [500] |
| Load Accuracy (kN) | | | ±1 |
| Electrical | | | |
| Supply Voltage | | | 415V ± 10% / 50Hz ± 3% / 3+N+G |



Office: +91 40 2372 1000
Fax: +91 40 2372 0305



www.zetatek.in



sales@zetatekindia.com
info@zetatekindia.com

Plot No. 31, Technocrats Industrial Estate, Balanagar,
Hyderabad, Telangana, India. 500037