

Minimum Requirements for Test Frame, Controllers and Environmental Chamber:

A) Test Stand

- Material Test System - Rated 2000 lbs.
- Extended Length Columns - Dual Column Tabletop Load Frame
 - Minimum of 59 inches vertical test space
 - Minimum of 50 inches crosshead travel
 - 32 inch maximum frame width and 30 inch maximum frame depth to fit in work space
- Drive System Requirements
 - 2000 mm/min. minimum max speed
 - 0.00005 mm position resolution
 - 1000 mm maximum length for maximum position resolution
- Power: 200-230VAC, max 18 amps

B) Hot/Cold Chamber:

- Temperature range: -125 °C to 300 °C
- Internal dimensions: 10 x 10 x 32
- External dimensions compatible with Test Stand
- U-Plug configuration to allow movement without removing grips, fixtures, or ext. rods
- Forced convection heating
- Stainless steel exterior shell
- Stainless steel interior shell
- Door hinged on left side
- Power: max 220V, 18 amps
- Connector for temperature sensor
- Liquid Nitrogen Cooling Assembly
 - LN2 injector assembly installed
 - LN2 solenoid valve for cryogenic service
- Digital heat/cool temperature control system

- Heated window for viewing specimen
- Internal light

C) Controller

- 1000 Hz Data Acquisition Rate
- 1000 Hz Control Loop Rate
- 20 bit resolution
- Handset Controller
- Expandable multi-channel capability
- Protection function for overload, over-current, over-voltage, over-speed and over-travel

D) Computer and Software

- Processor (2.2 GHz min)
- 400 MB free hard disk memory
- 4 GB RAM (min)
- CD ROM disk drive
- 22" Flat Panel LCD Monitor (min)
- Ethernet port
- Keyboard & Mouse
- Ability to plot/display data and export as Excel-readable
- Software - for machine setup, servo-tuning, calibration of each channel
- Test Software includes:
 - Library of standards-compliant test methods for Tensile, Flex, Peel/Tear and Compression
 - Capability to setup, define, modify, run, analyze and report material and mechanical testing properties

E) Project Management Services

- Onsite Installation
- Onsite System Training
- Axial Calibration with Electronics (Load Cell)

- Speed and Displacement Calibration
- All cables and interconnects
- Phone and online support during warranty period

F) Accessories:

Axial Static Force Transducers (Load Cell)

- Low Profile Shear Beam 10,000 N force transducer
- 10kN capacity
- Accuracy: class 0.5 from 1 to 100%
- Designed for load measurement in tension or compression
- Protected to 150% of capacity
- M12 x 1.25 mounting

Extension Rod Kit

- Capacity: 100kN
- Temperature Rating: -125 °C to 300 °C
- Length 1: 250mm
- Length 2: 200mm
- Length 3: 150mm
- Length 4: 125mm
- Length 5: 100mm
- Rated for tension and compression
- Stainless steel
- Maximum weight not to exceed 10 lbs.