

-100°C to 350°C Environmental Chambers

Compatible with

Tinius Olsen ST and SL series of materials testing systems

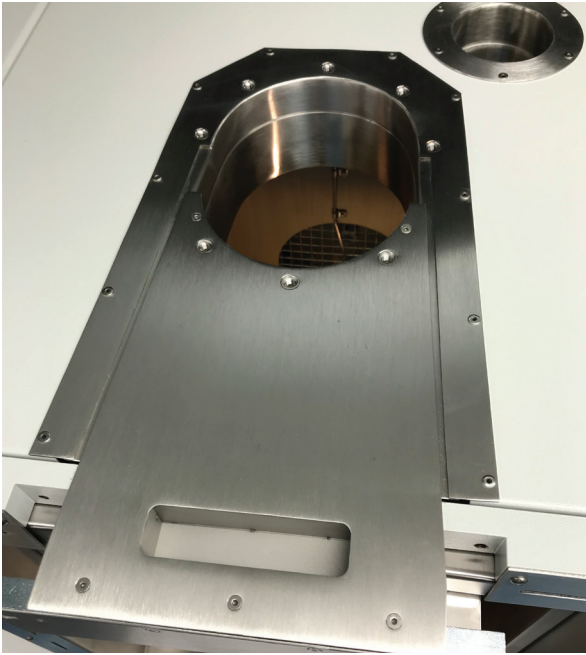
Type

+ Thermocouple type K



- + 4.2kW heating power guarantees full temperature range use.
- + Temperature control & profiling from Horizon.
- + Removable top and bottom chamber wall components to allow movement of chamber in and out of the test area without disturbing specimen grip configurations and tie rods.
- + Optional enhanced chamber temperature control using a twin thermocouple measurement and feedback system.
- + Supports use of contacting and non-contacting extensometers
- + Eurotherm programmable controller managed automatically from Horizon test methods
- + Internal lighting

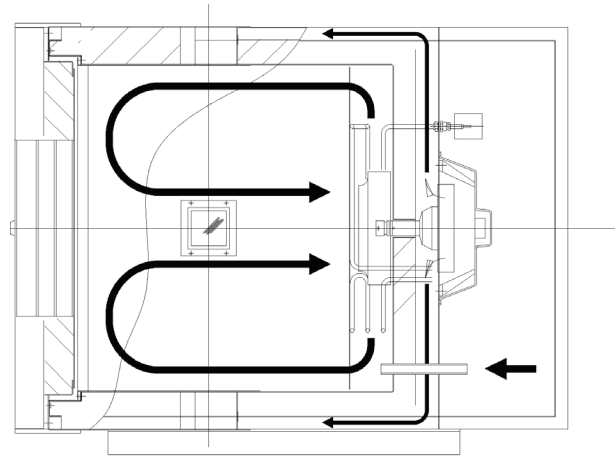
Key features



- + Removable top and bottom chamber wall components in support of efficient use enabling the chamber to be moved in and out of the testing machine/frame test area.
- + Tie rod aperture 125mm



- + Stainless steel interior eliminates risk of high temperature oxidization.
- + Internal lighting, set as on or off as required, illuminates test area for observation by user or web cam.

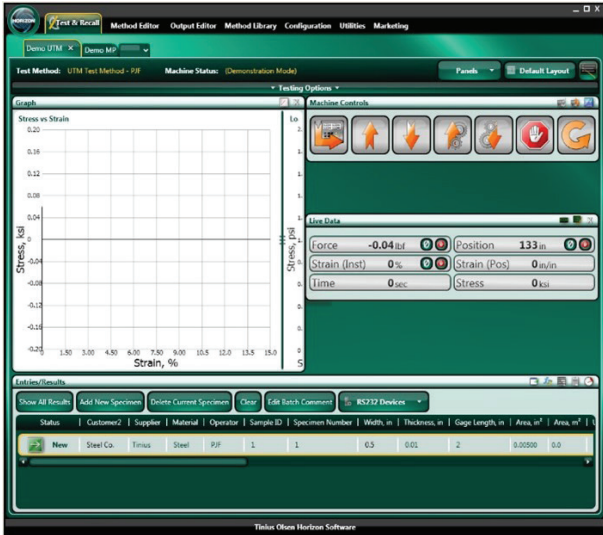


Uniform heating is provided by forced air recirculation

- + Air is forced over the heating elements located in an insulated enclosure protecting the user and forced into the working chamber area top and bottom. It is then drawn back through the centre of the chamber, through a baffle to the heating elements and recirculated.
- + A secondary fan forces air between the inner chamber insulation and the outer skin to minimise the outer chamber surface area temperature when testing at elevated temperatures and frosting when testing at low temperatures.



Controller type Eurotherm model 3508 for dual thermocouple temperature control configuration.



Integration with Tinius Olsen Horizon material testing software allows for test temperature setting and profiling from test methods in support of tensile, shear, peel, flexural and compression testing



Controller type Eurotherm model 3016 for single thermocouple temperature control configuration.

TO order numbers

99-1011491	Environmental Chamber - EC2368 - Int HWD 610x240x230mm - 4kW -100 to 350°C
99-1011335	Chamber Rail Assy EC2007/EC2368 (Ext Length Rails)
99-1010922	Environmental Chamber Thermocouple for on "Test Piece" Control/Monitoring-EC2368
99-1011346	Door Mount Kit for Vector Extensometer on EC2007/EC2368 Chamber

Specifications

Temperature range:	-100°C to 350°C
Heating process	Heating element surrounding rear mounted recirculating fan. Heating/cooling time to maximum temperature from ambient typical <80min depending on masses in chamber.
Temperature measurement	Optional factory configured; 1. Single temperature sensor in a fixed optimised position within the chamber air flow. 2. Dual temperature sensor with two temperature sensors; one fixed optimised position within the chamber air flow and a second mounted to the test specimen by the user. The user may select either cascade mode to use both thermocouples in the control loop or noncascade mode using only the fixed thermocouple and turning cascade mode OFF.
Temperature stability	±2°C

Specifications

Measurement inputs	Accuracy $\pm 0.1\%$ of reading when subjected to an appropriate field calibration. 50ms ramp.
Sample time	Thermocouple 62.5ms (16Hz)
Sensor break	AC sensor break. Break detected within 30 seconds, worst case
Input filtering	OFF to 60 seconds filler time constant
Calibration	2 point input adjust (offset/gradient), transmitter output scaling
Measuring sensor type	Thermocouple type K
Temperature control	Eurotherm controller. Type PID with gain scheduling function. Configured to achieve optimal temperature increase ramp with nominal oscillation. Temperature targets and profiling enabled from Horizon test methods. The control system features an integrated over temperature alarm and push buttons for fan, heat, cool and light.
Construction	Stainless steel 316 interior . External painted mild steel frame and panels.
Door	Left hinged. Safety interlock operated by door hinge cut heating process when door is opened.
Viewing window	Central to door 350mm high by 170mm wide. supports use of non contacting extensometer and deflectometers. The window is heated during chamber cold temperature use to minimise frosting. Whilst the window is heated for sub ambient operation it does not guarantee optical clarity across the whole working range of the chamber as this is test conditions situational.
Instrumentation port	Located top of chamber 65mm diameter supports use of temperature control and monitoring thermocouples and or contacting type extensometers. Fitted with insulated plug when not in use.
Lighting	Two internal lights, left and right inside chamber
Digital integration	With Tinius Olsen Horizon materials testing software and relevant test methods
Mechanical integration	With Tinius Olsen ST, L and SL materials testing systems and frames
Removable components	Chamber wall components in support of chamber location with grips in situ. Tie rod aperture 55mm (Optional up to 125mm on request)
Materials testing modes	Tensile, Shear, Peel, Flexural, Compression
Internal dimensions (HWD)	610mm x 240mm x 230mm / 24" x 9.5" x 9"
External dimensions (HWD)	760mm x 350mm x 650mm / 30" x 13.8" x 25.6"
Integration	The chamber is supplied with a rail mounting system compatible with Tinius Olsen material testing machine/frames which allows the chamber to be easily moved in & out of the test zone as required
Power	4.2kW
Power supply	230V, single phase, 50Hz
Connector type	32Amp (supplied as standard)
Recycling capability	Up to 70% of this product can be recycled: metals & cabling
System environment	10-40°C (50-100°F), for use and storage; 20-80% relative humidity non condensing environments
Typical ROI	10 months when integrated into a Tinius Olsen materials testing system
Component defect warranty	12 months
Weight	65kg / 143.3lbs