

Environmental Chamber for Universal Testing Machines

-180°C to + 450°C



Manufactured in Germany.
Expandable options for specialised environmental testing.
Extensive temperature testing capabilities.

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INSTRUMENTS

Controlled environmental testing for a huge range of machines, materials and tests

Designed to fit all makes and models of Universal Testing Machines, this environmental chamber enables controlled environmental testing on materials such as metals, plastics, sheet materials, and building products.

Through high heat-up and cool speeds, forced air circulation, and a Sika self-tuning PID temperature controller with 0.1°C resolution, this advanced equipment can simulate a wide range of high and low temperature testing conditions from -80°C to + 280°C (-180°C to + 450°C option available).

Customisable to meet unique environmental testing requirements, manufacturers and researchers use this advanced equipment to gain valuable insights into a product's behaviour, durability, and performance under real-life conditions.



Benefits

- Manufactured in Germany to the highest standards from durable stainless steel while being economically priced.
- Melted, polished and brushed from the outside for a professional finish.
- Range of temperature: -70°C + 280°C (optional -180°C to + 450°C).
- Designed to work with any tension apparatus and can be customised to meet unique application needs.
- Self-supported two-fold body frame made of 2mm thick stainless steel, grade 316.
- Software included for segmented tests at different ramps and dwells.
- Front door contains four glass panes, enabling users to easily see samples inside the chamber.
- Heating coils are fitted between the inner glass plates to prevent the glass frosting.



- Frame to easily move the chamber into and out of the test frame.
- Chamber with adjustable feet is carried by the bearings and can be moved up to 24 inches (611 mm) away from the tensile tester.
- Pullrod hole has a Teflon guide tube (external as standard) to reduce friction and wear on the pullrod as it moves (optional internal Teflon guide tube also available).
- Heat up speed 15°C/Minute (from 20 to 80°C without grip).
- Cooling requires liquid nitrogen, which is controlled by a magnet valve on the rear of chamber.
- Two year warranty (extendable to 3 years).
- Delivery in under a week on stock sizes.

Expand your environmental chamber

Our tensile test chamber is designed to work with any brand machine and can be customised thanks to its industry-leading options to meet your unique application needs.

- Bushings available to reduce through-hole to a smaller diameter for Pull rods.
- Compressor cooling available.
- Optional door light (heating coils alternative).
- Optional interior chamber light.
- Optional long hole in rear of chamber for extensometer.
- Removable insert system to enable chamber to be moved into / out-of position while grips and pull rods are attached.
- Temperature regulator with HS-232 or RS-485.
- Versions of chambers with special dimensions and temperature ranges.

Types of Tests

- Accelerated testing.
- Cyclic tests.
- Dry and wet tensile tests.
- Environmental testing.
- Flexural testing.
- Puncher tests.
- Temperature testing.
- Tensile testing.
- Thermal shock testing.



Expertly designed for precise environment control.

Specifications

In addition to standard dimensions, our chambers can be bespoke manufactured to any size and shape.



Dimensions Internal

220mm (W)
220mm (D)
580mm (H)

External

360mm (W)
480mm (D)
766mm (H)

Weight

50kg

Construction

Fabricated from stainless steel with brushed finish.

Operation Mode

Offline testing/ lab use with Tensile or Universal Tester.

Materials

Sheet materials, plastics, metals, building products.

Power Rating

Heating power: 2.3 kW (220 Volt).

Control Temperature Range

-80+°C + 280°C.



Temperature Control Accuracy

+/-0.2°C accuracy at 4°C setpoint
+/-0.5°C accuracy at 65°C setpoint
+/- 3°C accuracy at -80°C or at +280°C

Temperature Sensor

PT 100 temperature sensor (RTD).

Control Console

19” rack-mountable control console with 4m cable.

Heat-Up Speed

15°C/Minute (from 20 to 80°C without grips fitted).

Energy consumption of the standard TH2700 without grips

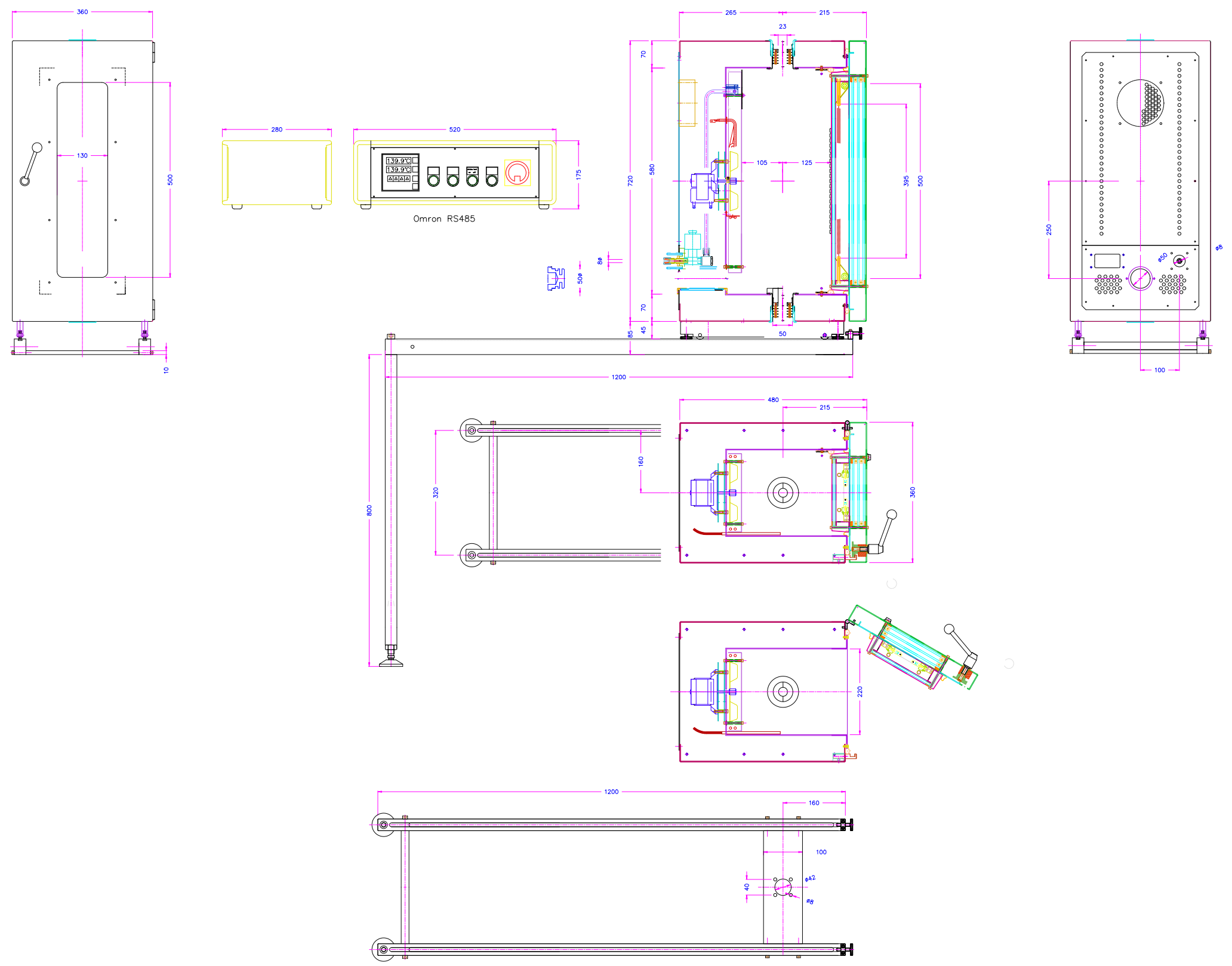
100°C	0.11	kWh/h
200°C	0.24	kWh/h
300°C	0.38	kWh/h

Cooling Method (Standard Option)

Cooling requires liquid nitrogen, controlled by a magnetic valve on the rear of the chamber. To reduce temperature to -80°C, 4 kg of liquid nitrogen is required. To maintain -80°C, 0.5 kg liquid nitrogen per hour is required.

Standard Chamber Drawings

(Custom sizes and shapes available)



TH2700



Our Values

Accountable



Collaborative



Dynamic



Focused



Responsive



AML Instruments

Measuring Success

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