



CLIMATE CHAMBER

TE-4001/1

Used for product stability testing with temperature and humidity control. Enables accelerated and long-term stability studies, including shelf life testing, evaluation of durability, expiration date, and product performance over time, applicable to food, pharmaceuticals, cosmetics, electronics, automotive components, ingredients, and other materials sensitive to environmental conditions.

Technical Characteristics

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- Temperature range: 20°C to 60°C;
- Temperature controller: Via 4.3' HMI;
- Temperature sensor: Vaisala HMP60;
- Control accuracy: $\pm 0.5^{\circ}\text{C}$;
- Uniformity: $\pm 1^{\circ}\text{C}$;
- Humidity range: 50% to 90% RH;
- Humidity controller: Via 4.3' HMI;
- Humidity sensor: Vaisala HMP60;
- Control accuracy: $\pm 2\%$ RH;
- Uniformity: $\pm 5\%$ RH;
- Humidity generation: By means of a boiler-based steam system with PWM control;
- Boiler protection: Via thermostats and digital logic for monitoring and automatic shutdown in the event of a lack of water in the system;
- Compressor: Hermetic 1/2 + HP, with CFC-free R-134A refrigerant;
- Internal circulation: IP68 brushless electric fan;
- Capacity: 6 trays with fixed supports for height adjustment every 130 mm;
- Internal chamber: Polished 304 stainless steel;
- Thermal insulation: Elastomeric blanket;
- Internal door: Tempered glass for process visualization;
- External door: 430 stainless steel with electrostatic coating, featuring an external lock with key;
- Electrical panel door: Carbon steel with electrostatic coating, featuring an external lock with key;
- Data acquisition: Humidity and temperature data stored in internal memory with a sampling rate of once per minute; temperature and humidity variables collected via a USB port located on the front of the unit.;
- Casters: Swivel casters with locking mechanism;
- Housing: Carbon steel with anti-corrosion treatment and electrostatic coating;
- External dimensions: 1020 mm x 2000 mm x 950 mm (W x H x D);
- Internal dimensions: 600 mm x 970 mm x 600 mm (W x H x D);
- Internal volume: 350 L;
- Total power: 6000 W;
- Voltage: 220 VAC $\pm 5\%$ 50/60 Hz;
- Includes: - 6 304 stainless steel shelves - 32A power outlet - 3 m of 8 mm PU tubing ;
- Optional: - Performance qualification - Operational qualification - Installation qualification - RTE-4008 automated reverse osmosis system - APC SRT8KXLI UPS;

Benefits and Advantages

- Easy operation, with software-based control
- Control panel with a 4.3" touchscreen, facilitating operation and programming
- Temperature and humidity stability, ensuring reliable test results
- Internal construction in stainless steel, providing greater resistance, durability, and easy cleaning
- Large internal space for sample accommodation, offering practicality and better space utilization
- Internal glass door for sample visualization without interfering with internal conditions
- External door with key lock, ensuring greater security
- Boiler safety system in case of water shortage, with protection against freezing and overheating
- Continuous data logging with 1-minute sampling and USB data export, facilitating traceability and test analysis
- Two password access levels (administrator and user), enhancing operational security
- Easy mobility due to swivel caster system
- CFC-free refrigeration system
- Strict quality control: inspections and tests ensure proper equipment operation, providing safety and customer satisfaction
- Specialized support, offering assistance for questions and guidance on equipment