



# **CLIMATIC CHAMBER FOR STABILITY TEST**

## **TE-4005**

Used for tests with temperature and humidity control, such as shelf life (SHELF-LIFE) tests in food, beverage and ingredients for determining the shelf life of products and durability, stability and quality tests applied for pharmaceuticals, cosmetics, electronics, automotive components, etc.

## Technical Characteristics

### TE-4005

- Temperature Range: 20°C to 50°C;
- Control type: digital microprocessed;
- Controller: Coel KM5P;
- Controller reading accuracy:  $\pm 0.1^{\circ}\text{C}$ ;
- Display: LCD;
- Sensor: Vaisala HMP60 ;
- Sensor reading accuracy:  $\pm 0.6^{\circ}\text{C}$ ;
- Control accuracy:  $\pm 0.5^{\circ}\text{C}$ ;
- Uniformity:  $\pm 2^{\circ}\text{C}$ ;
- Heating: finned resistors in stainless steel 304;
- Heating power: 2400W;
- Cooling: airtight Compressor 1 / 2Hp+;
- Gas type: R134A;
- Cooling power: 1739 Kcal/h at 7.2°C;
- Remark: control on resistance by PWM;
- Humidity Range: 40% to 90%;
- Control type: digital microprocessed;
- Controller: KM5P;
- Controller reading accuracy:  $0.1^{\circ}\text{C}$ ;
- Display: LCD;
- Sensor: Vaisala HMP60;
- Sensor reading accuracy:  $\pm 2\%$ ;
- Control accuracy:  $\pm 1.0\%$ ;
- Uniformity:  $\pm 5\%$ ;
- Humidification type: by boiler;
- Remark: humidity control by PWM;
- Circulation type: forced air;
- Fan: Wellington ECF2;
- Quantity: 2;
- Fan power: 20.5 W;
- Protection grade: IP67;
- Operating temperature: -30°C to 50°C;
- Flow rate: 500m<sup>3</sup> / h at 0Pa;
- Insulation Class: A (105°C);
- Type of supply / material: water from purification system (ten 4008) - quoted separately;
- Actuator: solenoid valve;
- Sensors: Key Type Float Hammer;
- Automatic: Yes;
- Level control: via electrical panel of the machine;
- Notes: corresponding description of humidification system;
- Ambient temperature: 12°C to 25°C;
- Minimum and maximum humidity: 30 to 90% UR without condensation;
- Notes: leave a distance of at least 0.5 m from the sides to the wall and equipment;
- Trays: 5 trays in stainless steel 304 #1,5 with spacing of 250mm ;
- Capacity: 32kg / each evenly distributed;
- Notes: approximate dimensions of 990x600x30 (mm) - Wxdxh;
- Total proofs per tray: 40 proofs;
- Door / cover: carbon steel;
- Inner Material: stainless steel 304;
- External Material: carbon steel;

- Insulation: EPS;
- Painting: electrostatic powder;
- Finish: Textured;
- Sealing: molded rubber with magnet;
- External door: 2 doors with magnetic lock;
- Inner door: tempered glass;
- Notes: each door has a glass bottom door for sample viewing without temperature/humidity loss;
- Dimensions of equipment \*;
- External (mm): 1925 x 1730 x 1400 (H x w x d);
- Internal (mm): 1500 x 1000 x 800 (H x w x d);
- Internal Volume: 1200 liters;
- Internal useful Volume: 1000 liters;
- Weight \*;
- Total weight: about 300kg, no load;
- Electrical data \*;
- Total power: 4000W;
- Supply voltage: two-phase 220 VAC;
- Frequency: 60Hz;
- Allowable network fluctuation:  $\pm 5\%$ ;
- Grounding: less than 10 Ohm;

## Benefits and Advantages

- Developed for accelerated and moderate stability testing
- Large internal volume, providing accommodation of large number of samples
- Versatility of sample sizes, due to the flexibility in handling the trays
- Internal glass door for sample viewing without loss of internal temperature and humidity
- Optional: CO2 module
- Presence of side compartment for easy access and verification with external sensors
- Microprocessed controller with PID control system, which provides more precise and stable control, being the final temperature reached more quickly and homogeneously
- Vaisala Intercap Sensor, of excellent quality and adapted to extreme conditions
- Two doors: facilitate use in smaller accommodation spaces
- Vat dyes and trays in 304 stainless steel, for longer service life and easy asepsis
- Easy mobility, due to the system of wheels by swivel casters for ease
- Safety system in the boiler in case of lack of water
- Safety system against freezing and overheating
- NR10 standard panel
- Armored resistance in stainless steel 304 ensuring safety and durability
- Strict quality control, in which checks and tests guarantee the perfect operation of equipment, providing safety and customer satisfaction.