

Lab Companion®

On-line high and low temperature Test Chamber

Custom solutions

High temperature and high humidity Test Chamber is suitable for the adaptability test of electricians, electronics, instruments and other products, parts and materials for storage, transportation and use in high and low temperature alternating humidity and humidity environment; It is the reliability test equipment for cold resistance, heat resistance, humidity resistance, dry resistance, and high temperature resistance of optical fiber, LCD, crystal, inductance, PCB, battery, computer, mobile phone and other products.



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Technical characteristics

Performance:

Model number: TC-252

Temperature range: -70°C ~ + 150°C (air-cooled type)

Temperature variation range: -40°C ~ + 85°C (air-cooled type)

Cooling rate:

20°C ~ -40°C (no load, full average 3.0°C / min)

20°C ~ -70°C (no load, average 1.0°C / min at all time)

heating rate:

20°C ~ + 150°C (no load, full average 3.0°C / min)

Temperature fluctuation degree: $\pm 0.5^{\circ}\text{C}$

Temperature deviation: $\pm 2.0^{\circ}\text{C}$

Temperature uniformity: 2.0°C

Working volume: 252L

Dimensions (mm)	w	h	d
Use full	600	700	600
Over all	860	1910	1240

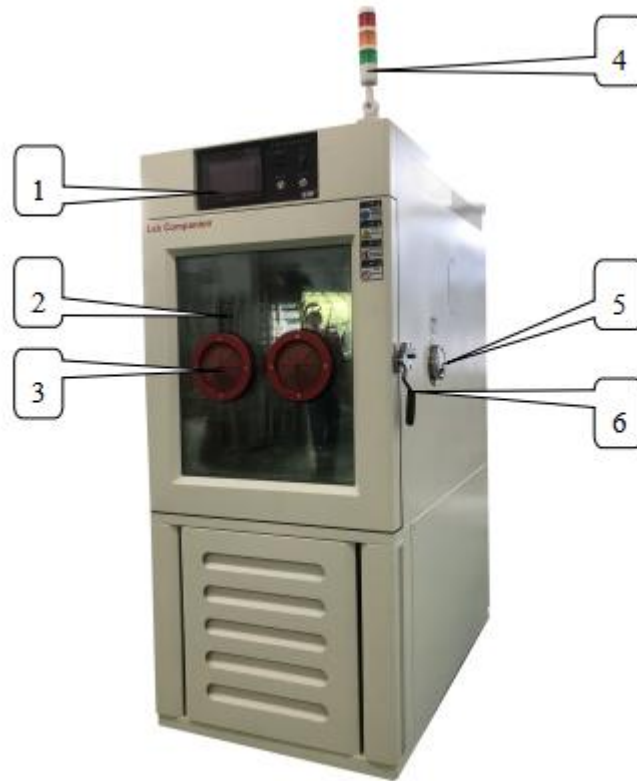
operational principle

air conditioning

1. Air regulation mode: forced ventilation internal circulation balance temperature regulation;
2. Air circulation device: built-in air conditioning device, circulating air duct, long axis axial flow fan;
3. Heating method: high-quality nickel-chromium alloy electric heater.

Room structure

1. Box structure: the box adopts the overall structure;
2. Shell material: high quality cold rolled steel sheet electrostatic spraying;
3. Inner wall materials: stainless steel plate coated with iron fluorine dragon;
4. Insulation material: ultrafine glass fiber;
5. Door seal: use environmentally friendly silicone rubber strip.
6. There are two operating holes, which can put the hand into the test area for operation



Number	Name	Explain
1	Control panel	The machine uses the operation panel
2	Window glass	Used to observe the internal operation of the laboratory
3	Handle hole	You can put your hand into the test area for operation
4	Tricoloured light	Red light failure, green light operation, yellow light standby
5	instrument connection	Product live test can access the external power supply from the test hole
6	gate lock	Pull the door to open

TT&C system

1. Temperature measurement: PT100 Platinum resistance;
2. Control device: use the intelligent digital temperature controller
Temperature control mode: automatic set two-bit PID control
Temperature setting mode: make the digital setting in the controller
Temperature display mode: the set temperature and the measured temperature are displayed in the controller
The product has a self-setting function to ensure that the temperature is constant at each set point
The product has a linear compensation function to avoid the inconvenience of display errors
3. The product is separately equipped with an over temperature protection instrument, which is used to set the upper limit alarm of the working temperature to prevent the damage caused to the test product and Test Chamber due to failure
4. Operation mode: constant operation

safety precautions

1. Over temperature protection setting: triple over temperature protection setting
2. Set temperature of the over temperature dial = set temperature + 15°C. When the temperature in the box is out of control and exceeds the set temperature of the over temperature dial, the buzzer in the box alarms, the box is in standby state, and should be reused after manual reset.
3. Over temperature alarm of the controller: when the product in the box continues to heat up and exceeds the temperature set by the internal parameters of the controller, the buzzer in the box will alarm, which should be manually reset and then reused.
4. The third level of protection is controlled by the anti-dry burning protector. When the heating pipe is uncontrolled and continuously heated, the anti-dry burning protector senses the temperature and then transmits the signal to the controller for alarm.
5. Phase sequence protection: the reverse phase connection or the missing phase connection of the main power supply is detected, and the device stops running
6. Humid air burning protection switch

The humidity generator can generate humidity normally during operation and has the function of avoiding air burning. The humidity air burning protection switch on the machine switchboard is adjusted to between 250-300°C to maintain the normal operation of the humidity generator