

# Lab Companion

▶ **On-Line High And Low Temperature Test Chamber TC-100**

**Custom Solution**

▶ **Brief Introduction**



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 Features:

Dimensions (mm)	Width	Height	Depth
Useful	500	500	400
Overall	780	1800	1070

## Homogeneity and Regulation:

### **Temperature range**

from -40°C to +150°C(air-cooled)

### **Temperature fluctuation:**

$\leq \pm 0.5^\circ\text{C}$

### **Temperature deviation:**

$\leq \pm 2.0^\circ\text{C}$

### **Temperature uniformity:**

$\leq 2^\circ\text{C}$

### **Temperature rise time:**

3.0°C/min (20°C → +150°C) The whole process of nonlinear heating, no-load)

### **Temperature drop time:**

1.0°C/min (25°C → -40°C) The whole process of nonlinear cooling, no-load)

### **Power supply specifications:**

AC 220 V, 50/60 HZ, 1  $\phi$  3 wire

### **Rated current:**

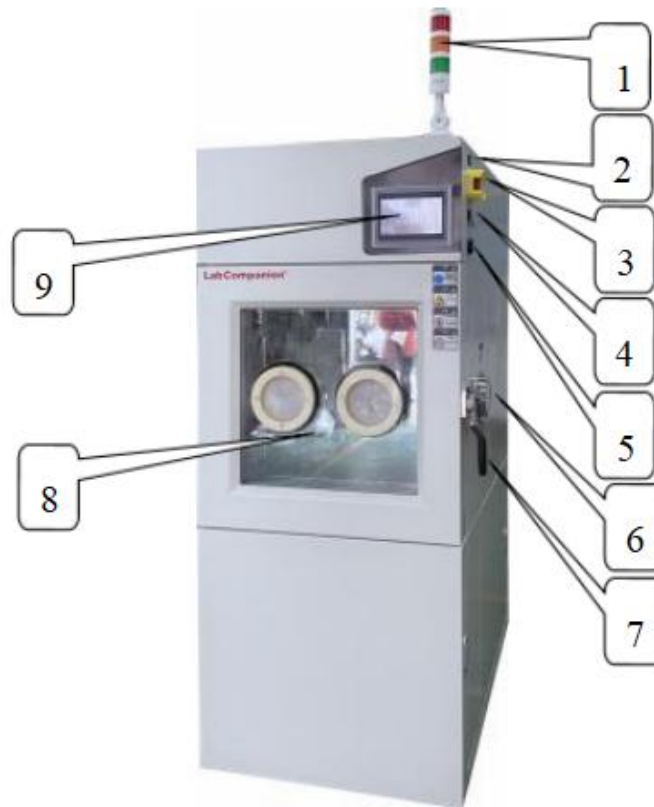
AC 11 A, power 2.5 KW

This machine is dedicated to the above marked power supply, please use according to the rated power distribution. If the use area is changed, please contact our company.

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## Appearance Introduction and Description:

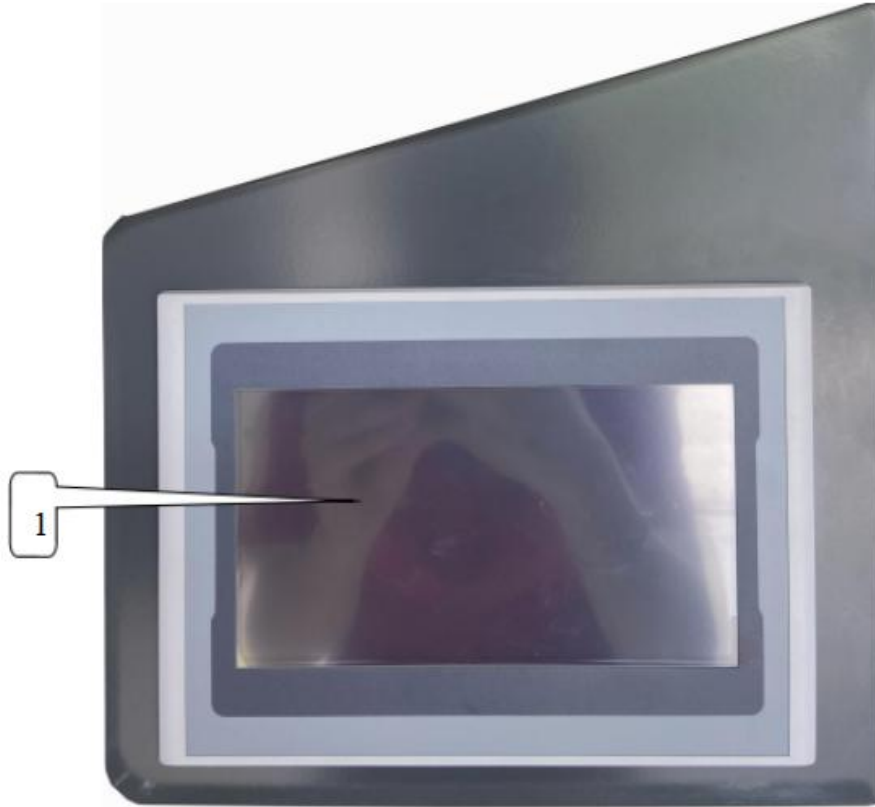
### 1. Front and side of the machine



Number	Name	Illustration
1	Tricolor light	Green light means running, yellow standby, red fault
2	Over temperature setting	To Set the upper temperature limit in the test area
3	Emergency stop switch	Used to connect the device and cut off power supply
4	The USB interface	Used to copy data related to curves or documents.
5	Network interface	The computer can be connected to the controller through the network cable for remote operation
6	Test hole	An external power supply can be plugged in from the test hole for live product testing
7	Door lock	Pull on the handle to open the door
8	Glass window and operating holes	To observe the workings of the inner studio, convenient for customers to frequently pick up products
9	Controller panel	The intelligent operating panel

# Lab Companion

## 2. Control panel



Number	Name	Illustration
1	Controller	Touch screen programmable controller

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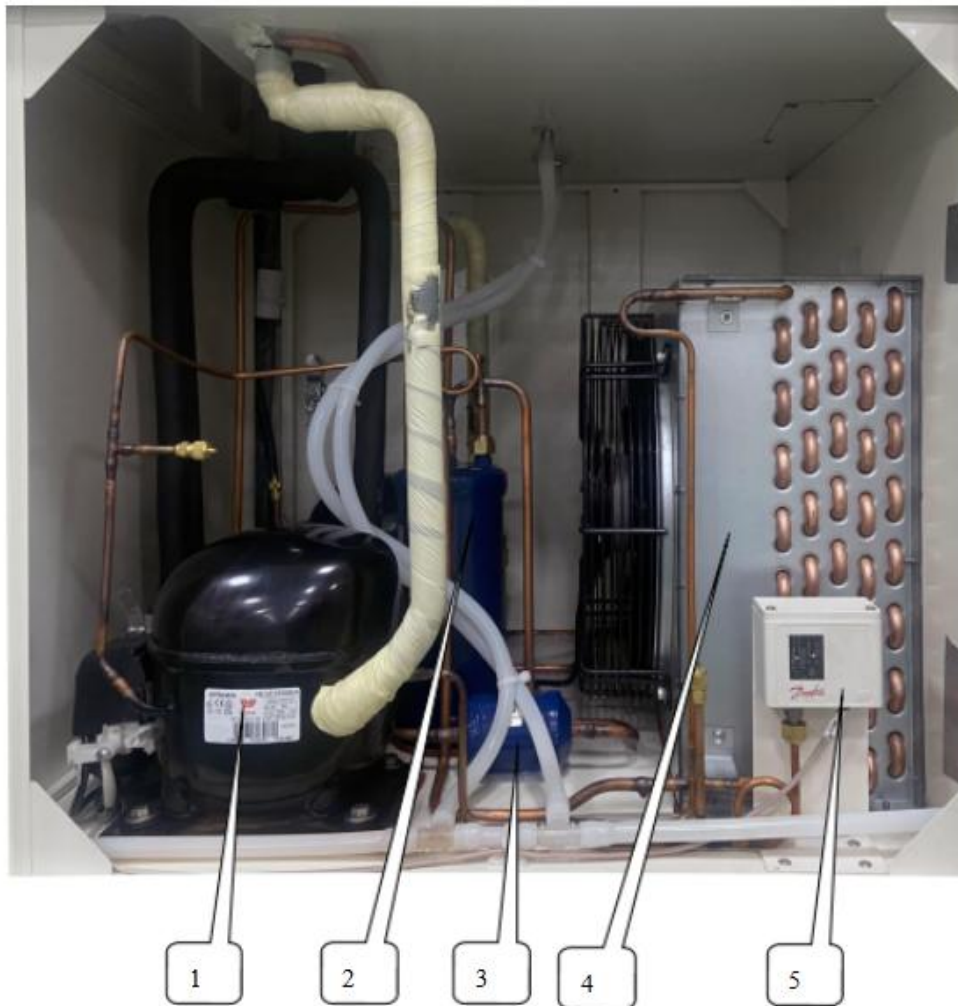
## 3. Test area



Number	Name	Illustration
1	Thermal resistance sensor	Used for panel overtemperature sensing the temperature of the inner chamber
2	Thermal resistance sensor	Used for the controller to sense the temperature of the inner chamber
3	Air outlet	Test area circulates air outlet
4	Sealant	Heat preservation and air leakage prevention
5	Sample rack track	Used to secure the sample holder
6	Sample holder	Used to place test products

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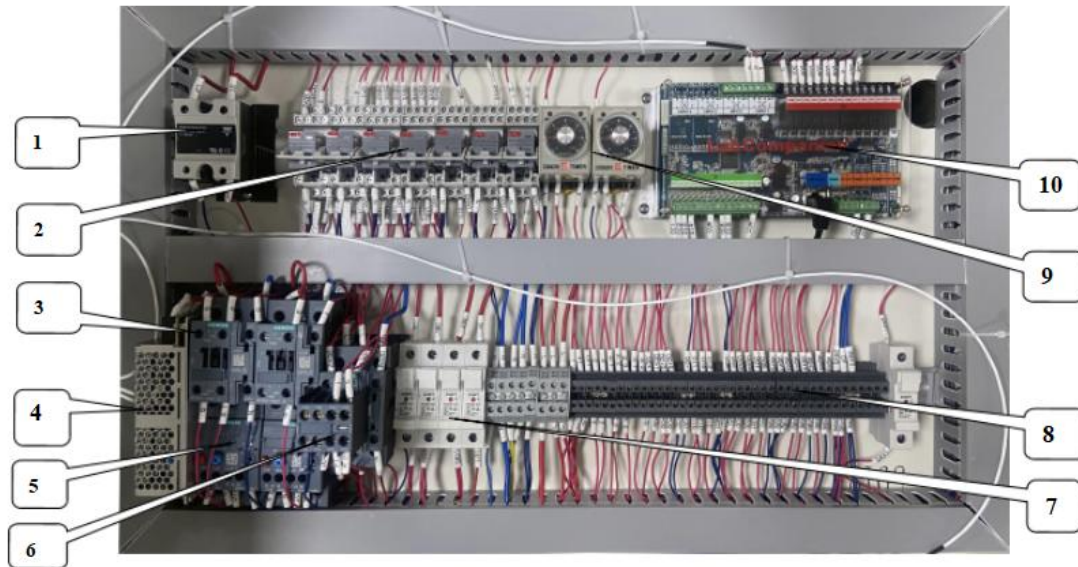
## 4. The cooling machine room



Number	Name	Illustration
1	Compressor	Compression refrigeration
2	Oil separator	Separate refrigerant and refrigerant oil
3	Filter dryer	Remove debris from the cooling system
4	Condenser	Cooling refrigerant
5	Pressure protection controller	When the pressure in the pipeline is too high or too low, the controller will alarm

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## 5. Power distribution room



Number	Name	Number	Name
1	Solid state relay	6	Auxiliary contact
2	Intermediate relay	7	Fuse
3	Ac contactor	8	Connector terminal
4	Dc power supply	9	Time relay
5	Thermal overload relay	10	Temperature controller

# Lab Companion

## Test Report:

Temperature Sensor °C	-40°C	-20°C	0°C	40°C	85°C	125°C	150°C
1	-39.7	-19.9	0.5	40.2	85.1	125.0	149.5
2	-39.9	-20.0	0.7	40.5	84.9	124.8	149.7
3	-40.2	-20.1	0.9	40.7	84.6	125.0	149.5
4	-40.0	-20.3	1.0	40.5	84.9	125.3	149.3
5	-39.8	-20.5	1.2	40.8	85.2	125.6	149.7
6	-39.5	-20.4	1.3	41.0	85.5	125.8	150.0
7	-39.8	-20.7	1.0	41.3	85.8	126.0	150.3
8	-40.2	20.9	0.9	41.5	85.6	126.1	150.5
9	-40.5	21.1	0.8	41.1	85.7	126.0	150.6
Temperature deviation	0.5	1.1	1.3	1.5	0.8	1.1	0.7
Temperature uniformity	1.0	1.2	0.8	1.3	0.9	1.3	1.3