

Lab Companion

High And Low Temperature Test Chamber

T-80-40

Custom Solution

Brief Introduction



The equipment is mainly for industrial products reliability test in high and low temperature condition. The adaptability test of electronic, electrical, automobile, aerospace, Marine weapons, scientific research units and other materials in the environment of high temperature and low temperature storage, transportation and use. The test equipment is mainly used for the product in accordance with the national standard requirements or user-defined requirements. At high and low temperature, the physical and other related characteristics of the product experience environmental simulation test. Through testing to determine the performance of the product and whether it can still meet the predetermined requirements for product design, improvement, identification and factory inspection.

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Technical Features:

Dimensions (mm)	Width	Height	Depth
Useful	400	500	400
Overall	670	1650	930

Temperature range
from -40°C to $+150^{\circ}\text{C}$

Homogeneity and Regulation:

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

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

Temperature uniformity:
 $\leq 2^{\circ}\text{C}$

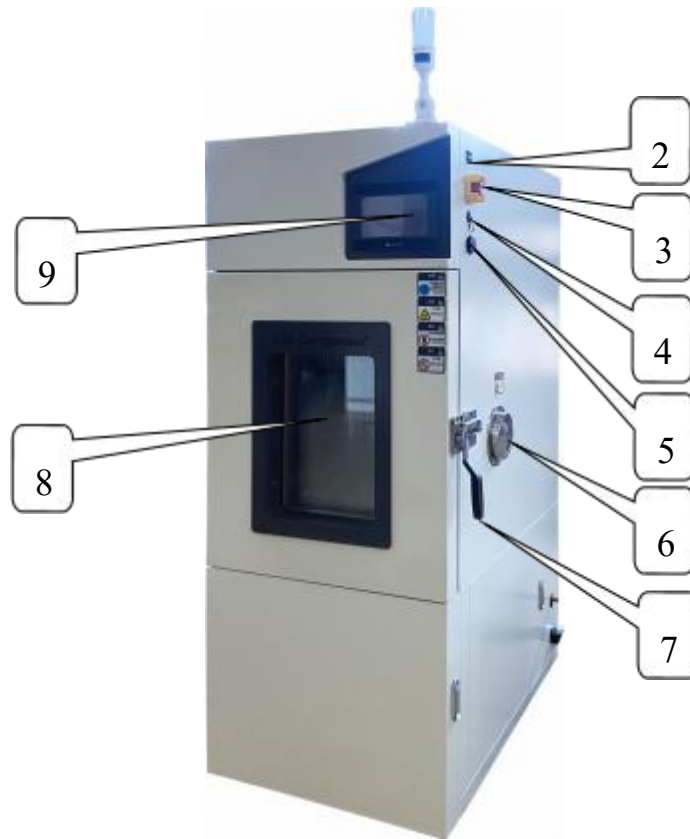
Temperature rise time:
 $3^{\circ}\text{C}/\text{min}$ ($20^{\circ}\text{C} \rightarrow +150^{\circ}\text{C}$) The whole process of linear heating)

Temperature drop time:
 $1.2^{\circ}\text{C}/\text{min}$ ($25^{\circ}\text{C} \rightarrow -40^{\circ}\text{C}$) The whole process of linear cooling)

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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	To observe the workings of the inner studio
9	Controller panel	The intelligent operating panel

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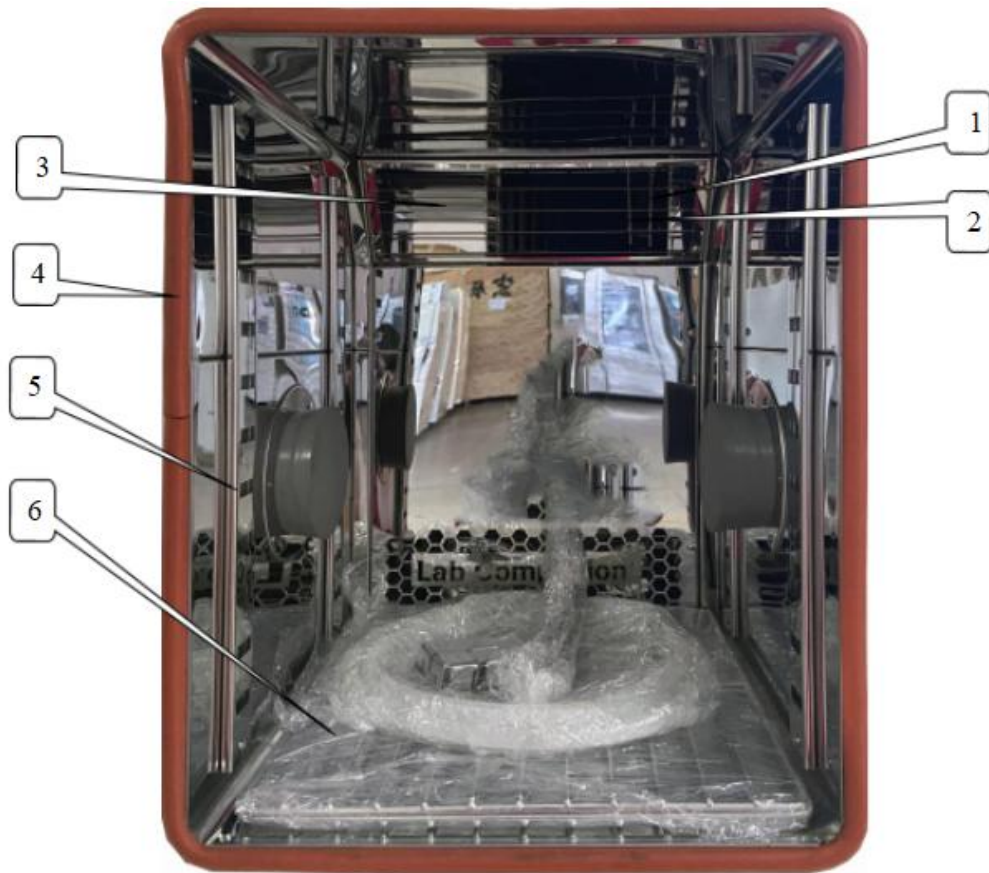
2. Control panel



Number	Name	Illustration
1	Controller	Touch screen programmable controller

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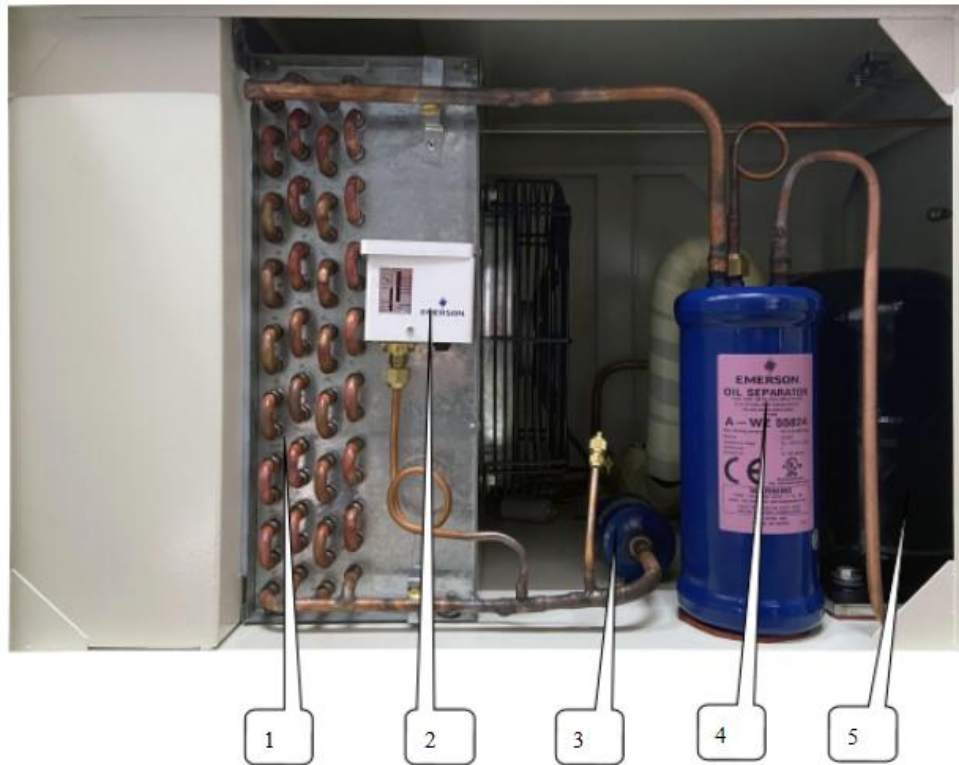
3. Test area



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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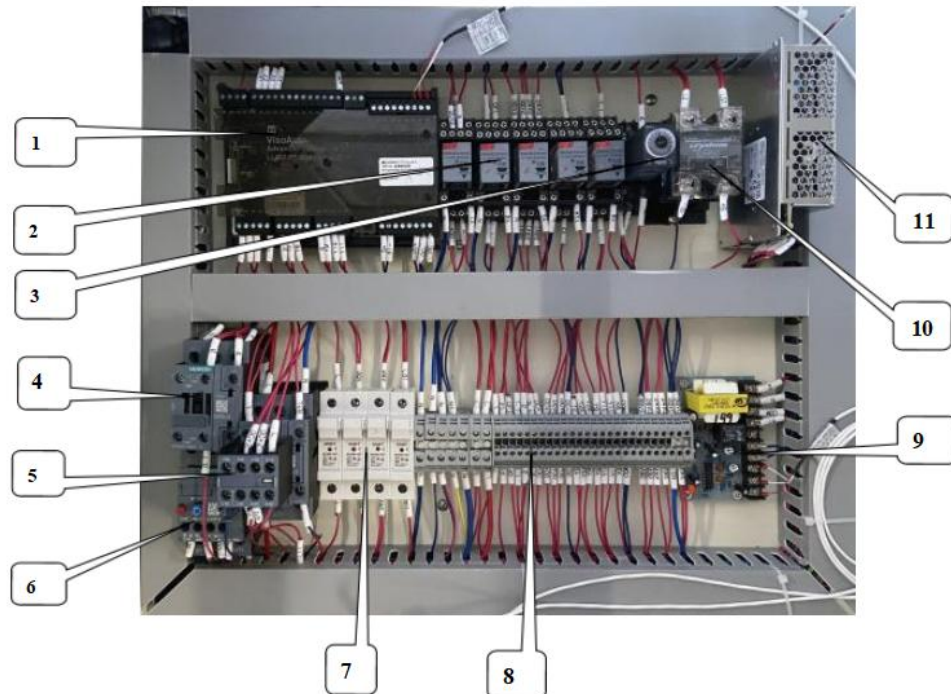
4. The cooling machine room



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

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5. Power distribution room



Number	Name	Number	Name
1	Temperature controller	7	Fuse
2	Intermediate relay	8	Connector terminal
3	Time relay	9	Overheated plate
4	Ac contactor	10	Solid state relay
5	Auxiliary contact	11	Dc power supply
6	Thermal overload relay		

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Test Report:

Temperature Sensor °C	-40°C	-20°C	0°C	40°C	85°C	125°C	150°C
1	-39.6	-20.0	0.8	40.2	84.9	125.0	149.8
2	-39.9	-19.9	1.0	40.0	85.0	125.4	149.6
3	-40.0	-20.1	1.3	39.7	85.2	125.7	149.9
4	-40.1	-20.4	1.5	40.0	85.5	125.9	150.1
5	-40.3	-20.5	1.2	40.3	85.4	126.1	150.3
6	-40.5	-20.8	1.0	40.5	85.8	126.3	150.0
7	-40.7	-21.0	0.8	40.7	86.0	125.8	150.4
8	-40.9	-20.9	0.4	40.7	86.2	125.6	150.6
9	-40.6	-21.0	0.6	40.9	85.9	125.4	150.2
Temperature deviation	0.9	1.0	1.5	0.9	1.2	1.3	0.6
Temperature uniformity	1.3	1.1	1.1	1.2	1.3	1.3	1.0