

Lab Companion

Glove Type High and Low Temperature Test Chamber

T-100-70

Custom Solution

Brief Introduction



The product of the high and low temperature test chamber can simulate the temperature change rule in the atmospheric environment. Mainly for electrical, electronic products, as well as its components and other materials in the high and low temperature comprehensive environment transportation, adaptability test. Used for product design, improvement, identification and inspection.

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Particularities:

- * Air regulation mode: forced ventilation internal circulation balance temperature regulation.
- * Air circulation device: built-in air conditioning device, circulating air duct, long axis axial flow fan.
- * Heating method: high-quality nickel-chromium alloy electric heater.
- * Box structure: the box adopts the overall structure.
- * Shell material: high quality cold rolled steel sheet electrostatic spraying.
- * Inner wall materials: stainless steel plate coated with iron fluorine dragon.
- * Insulation material: ultra fine glass fiber.
- * Door seal: use environmentally friendly silicone rubber strip.

Technical Features:

Dimensions (mm)	Width	Height	Depth
Useful	500	500	500
Overall	760	1800	1070

Temperature range

from -70°C to +150°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:

$\geq 3.5^\circ\text{C}/\text{min}$ (25°C → +150°C full nonlinear no-load)

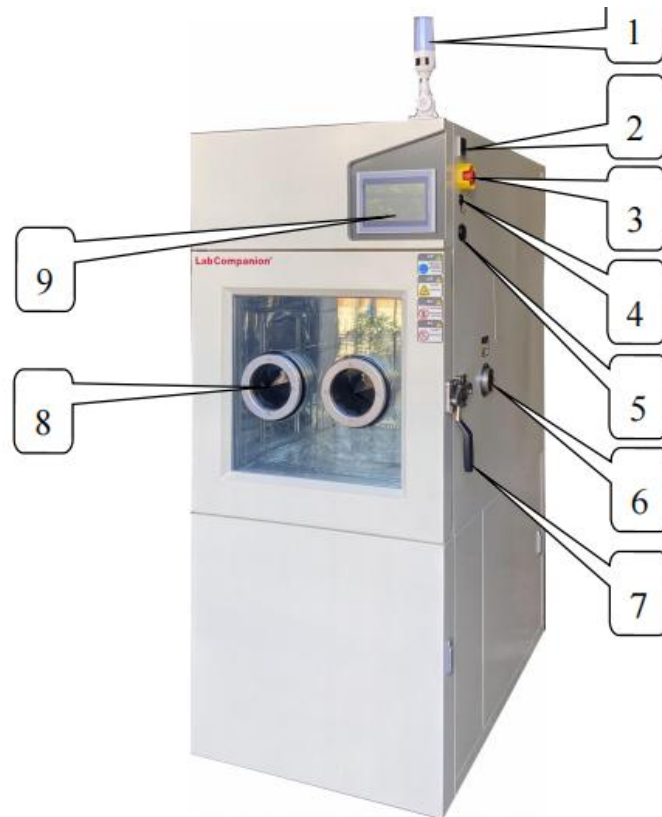
Temperature drop time:

$\geq 3^\circ\text{C}/\text{min}$ (25°C → -40°C full nonlinear no-load)

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Appearance Introduction and Description:

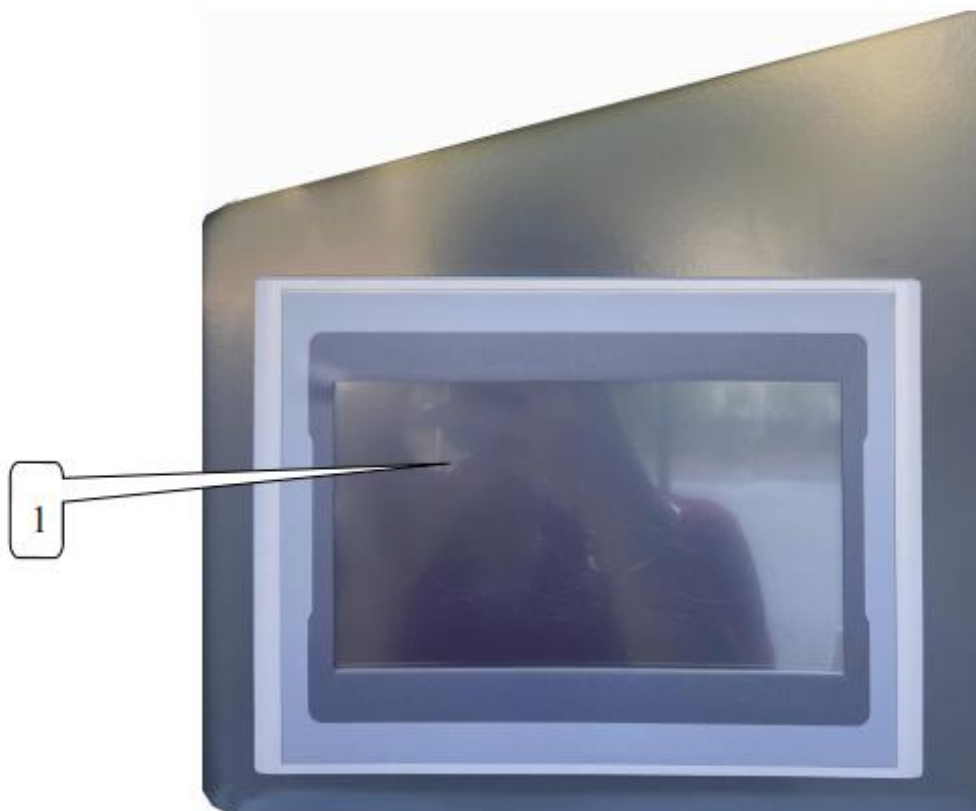
1. Front and side of the machine



Number	Name	Illustration
1	Three color lights	Green running, yellow standby, red fault
2	Overtemperature protection	Set the upper temperature limit in the test area
3	Emergency stop switch	Used to connect the device and cut off the power supply
4	USB interface	Used to copy curves or document-related data
5	Network ports	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	The door can be opened by pulling the vertical bar by hand
8	Window glass + operation hole	It is used to observe the internal operation of the laboratory and facilitate customers to take the products
9	Control Panel	The machine uses an operating panel Operation panel for machine operation

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2. Control panel



Number	Name	Illustration
1	Controller	Touch screen programmable controller

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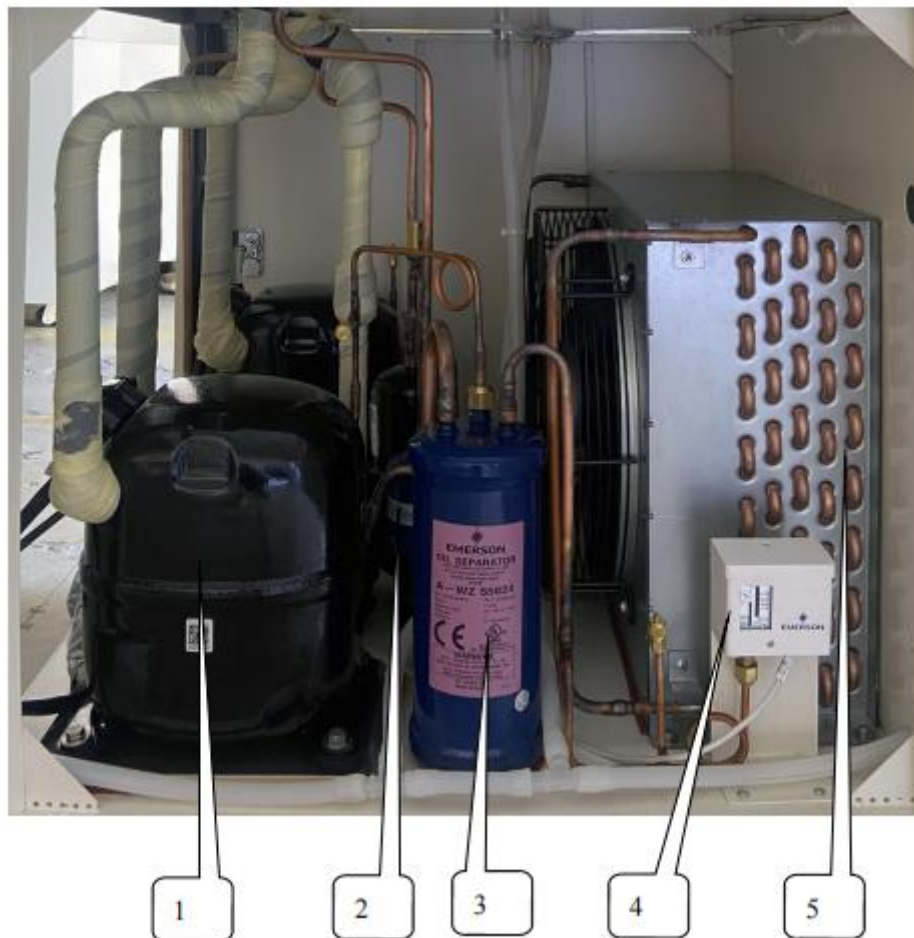
3. Test area



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	The sample rack track	Used to secure the sample rack
6	The sample rack	Used to place the test product

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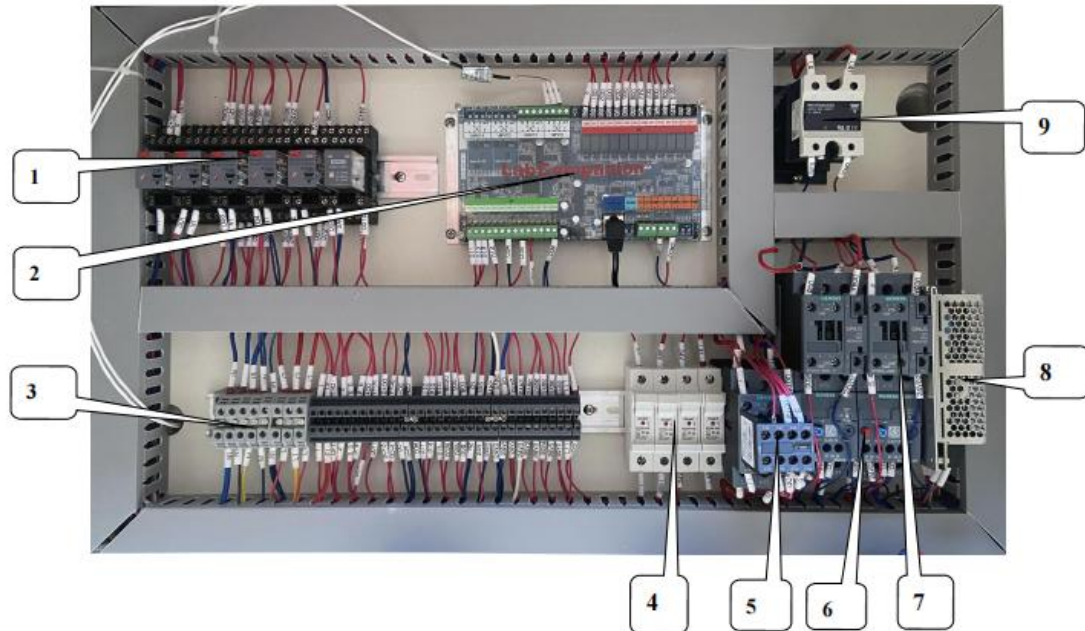
4. The cooling machine room



Number	Name	Illustration
1	Compressor	Compression refrigeration
2	Liquid storage tank	To store refrigerant
3	Oil separator	Separates refrigerant and chilled oil
4	Pressure protection	When the pressure of the controller is too high, the machine will alarm
5	Condenser	Cooling refrigerant

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5. Power distribution room



Number	Name
1	Intermediate relay
2	Temperature controller
3	Connect cable terminals
4	Fuse
5	Auxiliary contact
6	Thermal overload relay
7	AC contactor
8	DC power supply
9	Solid state relay

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Test Report:

Temperature sensor °C	-60°C	-40°C	-20°C	0°C	40°C	85°C	125°C	150°C
1	-59.4	-39.7	-19.9	0.5	40.1	86.2	124.7	149.8
2	-59.2	-40.1	-20.0	0.7	40.5	85.7	124.9	149.5
3	-59.5	-40.3	-20.3	0.9	40.9	85.2	125.0	149.2
4	-59.8	-40.5	-20.2	1.0	41.0	85.6	125.3	149.7
5	-60.0	-40.8	-20.5	0.8	41.3	85.9	125.1	150.0
6	-59.7	-41.0	-20.6	1.2	40.9	86.0	125.4	150.2
7	-59.9	-40.8	-20.8	1.0	40.5	85.8	125.7	150.4
8	-60.1	-40.5	-20.7	0.9	40.3	86.1	125.9	150.7
9	-60.3	-40.7	-20.9	0.5	40.7	85.9	125.5	150.5
Temperature deviation	0.8	1.0	0.9	1.2	1.3	1.2	0.9	0.5
Temperature uniformity	1.1	1.3	1.0	0.7	1.2	1.0	1.2	1.5