Lab Companion

Temperature And Humidity Test Chamber   C-80-70

Custom Solution

Brief Introduction

The humidity test can be conducted at the same time as the temperature test, so that the test effect is closer to the natural climate, simulating a worse natural climate, so that the reliability of the tested sample is higher.

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Particularities:

� High-strength, high-reliability structural design - to ensure the high reliability of the equipment;

✖ The inner chamber material is SUS304 stainless steel - anti-corrosion, strong hot and cold fatigue function, and long service life;

✖ High density polyurethane foam insulation - ensures minimal heat loss;

✖ Plastic-sprayed surface – to ensure the lasting anti-corrosion function and appearance life of the equipment;

✖ High-strength temperature-resistant silicone rubber sealing strip – ensures the high sealing performance of the equipment door;

✖ A variety of optional functions (test hole, recorder, water purification system, etc.) meets the user's needs for various functions and tests;

✖ Large-area electric heating anti-frost observation window, built-in lighting - can provide good observation effect;

✖ Environmentally friendly refrigerants – to ensure that the equipment is more in line with your environmental protection requirements;

✖ Customized constant temperature and humidity test chamber, tell us any function you want and we will make it.

✖ Triple protection mechanism.

✖ USB interface and Ethernet communication function enable the communication and software expansion function of the device to meet various needs of customers.

✖ Adopting internationally popular refrigeration control mode, which can automatically adjust the refrigeration power of the compressor by 0%~100%, reducing energy consumption by 30% compared with the traditional heating balance temperature control mode.

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Technical Features:

Dimensions (mm)	Width	Height	Depth
Useful	400	500	400
Overall	680	1670	1070

Temperature range：
from -70°C to +150°C
Humidity range：
20~98%RH

Homogeneity and Regulation:

Temperature fluctuation:
≤±0.5°C
Temperature deviation:
≤±2.0°C
Temperature uniformity:
≤2°C
Temperature rise time:
 ≥3.0°C/min (25°C→ +150°C) The whole process of nonlinear heating, no-load)
Temperature drop time:
≥1.2°C/min (25°C→ -70°C) The whole process of nonlinear cooling, no-load)
Relative humidity deviation:
+2~3%RH (> 75%); ±5%RH (≤75%)
Power supply specifications:
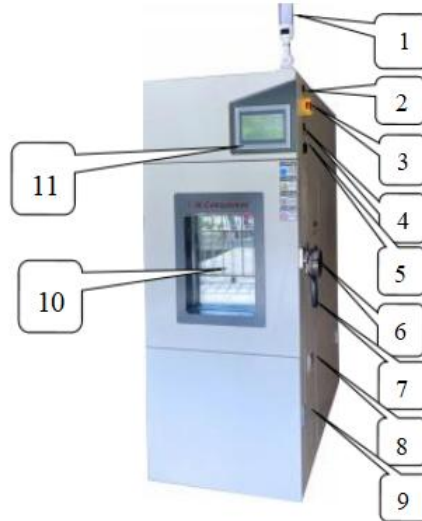AC 380 V, 50/60 HZ, 3 ∮ 5 wire
Rated current:
AC 14 A, power 3 KW
This machine is dedicated to the above marked power supply, please use according to the rated power distribution.If the use area is changed, please contact our company. Service phone 400-628-2786.

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<u>**Appearance Introduction and Description:**</u>

1. Front and side of the machine

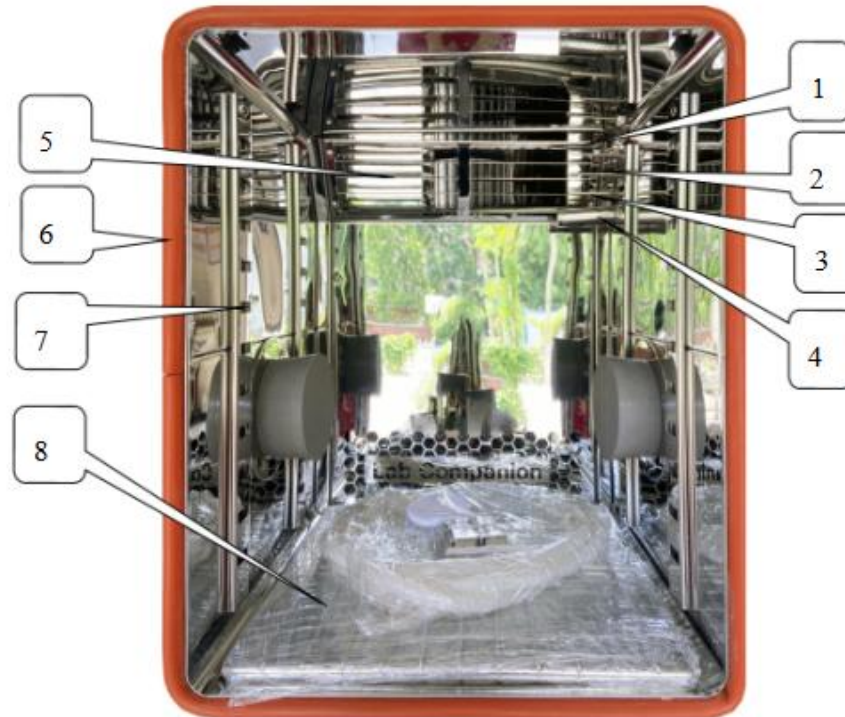| Number	Name	Illustration
1	Three color lights	Green running, yellow standby, red fault
2	Over temperature Setting	To Set the upper temperature limit in the test area
3	Emergency stop switch	Used to connect the device and cut off power supply
4	The USB interface	Used to copy data related to curves or 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	The door lock	Pull the vertical door to open it
8	Water injection tank	Add water when doing humidity test
9	Water level gauge	How much water can be observed when adding water
10	Glass Window	To observe the workings of the inner studio
11	Controller panel	The intelligent operating panel

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2. Control panel
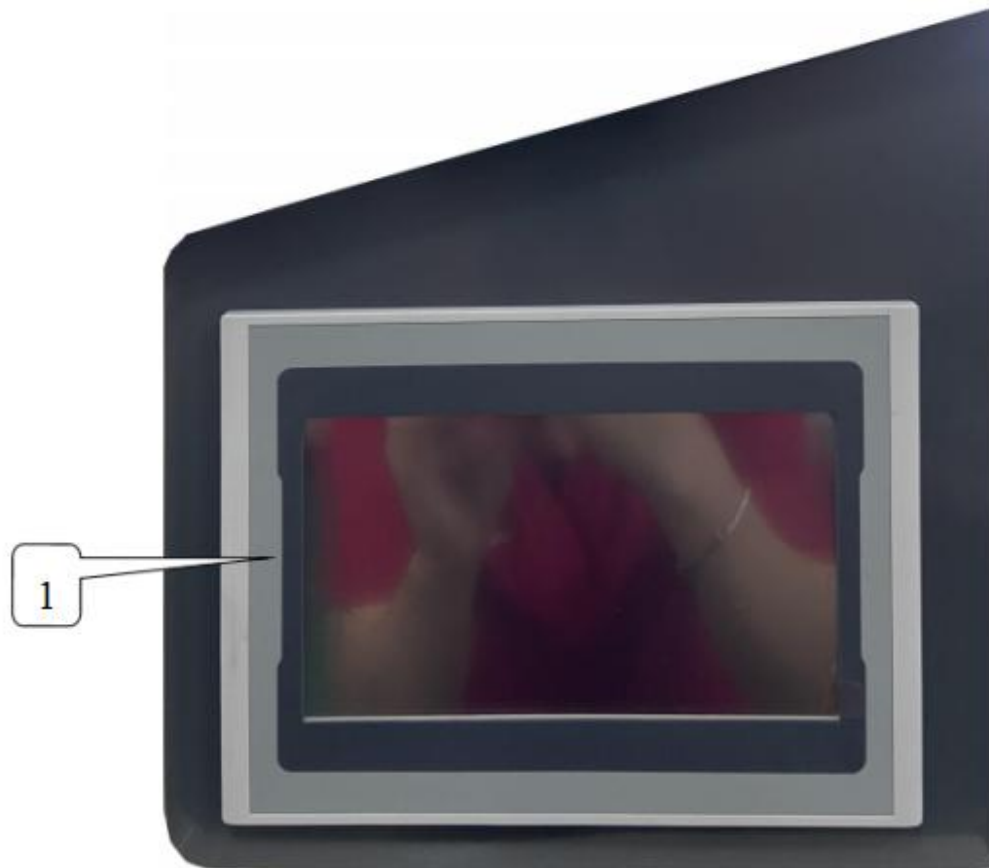
Number	Name	Illustration
1	Controller	Touch screen programmable controller(Refer to controller manual)

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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	Thermal resistance sensor	Used for the controller to sense the temperature of the inner chamber
4	Water tank	When hanging a wet cloth, one end of the wet cloth should penetrate about half of the sensor, and the other One end should be completely submerged in sink water
5	Air outlet	Test area circulates air outlet
6	Sealant	Heat preservation and air leakage prevention
7	Sample rack track	Used to secure the sample holder
8	Sample holder	Used to place test products

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4. The cooling machine room
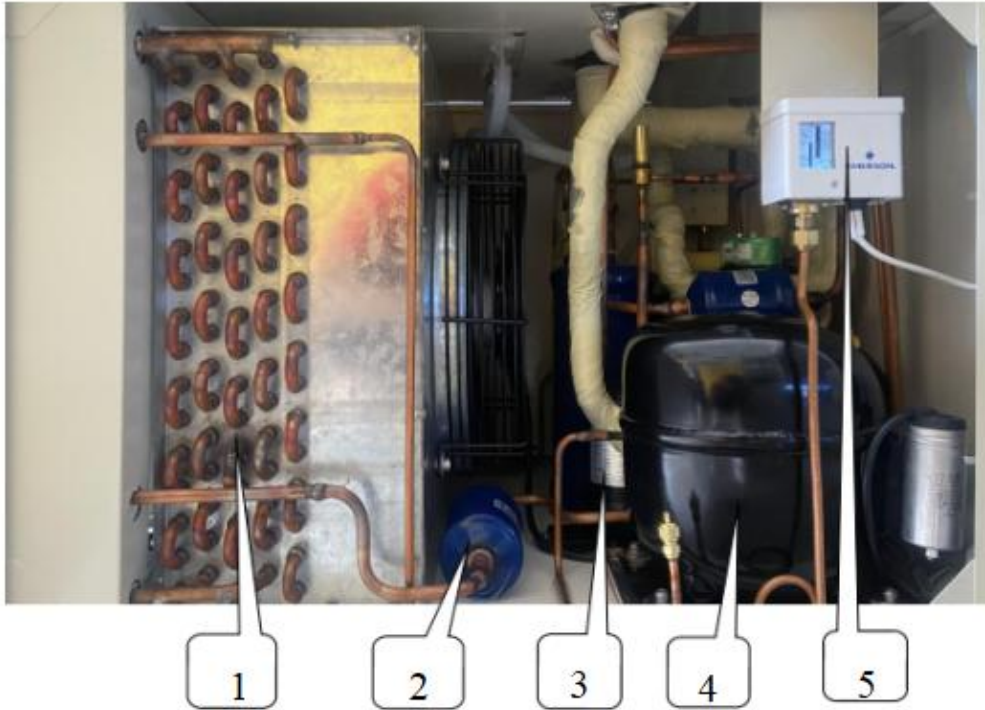
Number	Name	Illustration
1	Condenser	Cooling refrigerant
2	Filter dryer	Filter out debris from the cooling system
3	Liquid storage tank	Storage refrigerant
4	Compressor	Compression refrigeration
5	Pressure protection controller	When the pressure in the pipeline is too high or too low, the controller will alarm

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5. Power distribution room
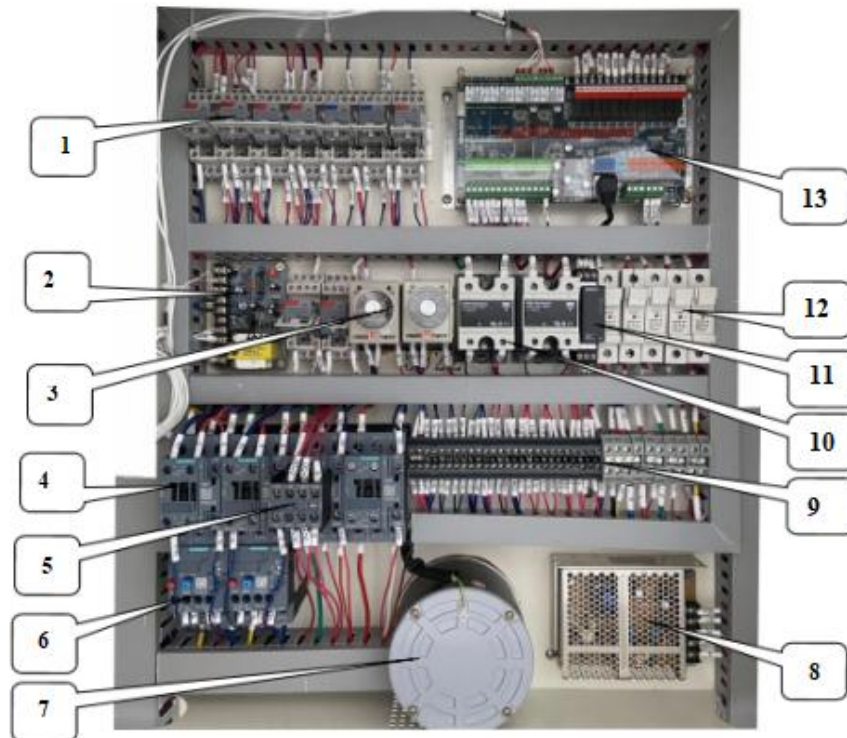
Number	Name	Number	Name
1	Intermediate relay	8	Dc power supply
2	Overheated plate	9	Connector terminal
3	Time relay	10	Solid state relay
4	Ac contactor	11	Underinverting phase protector
5	Auxiliary contact	12	Fuse
6	Thermal overload relay	13	Temperature controller
7	Circulating machine		

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Test Report:

Temperature Sensor °C	-60°C	-40°C	0°C	20°C	40°C	85°C	125°C	25 °C 25%	50°C 50%	60°C 95%
1	-58.9	-39.1	0.2	20.6	40.8	85.3	125.6	25.4	50.1	59.8
2	-59.0	-39.5	0.6	21.0	41.0	85.5	125.8	25.1	49.8	59.6
3	59.2	-39.7	0.7	20.8	41.3	85.7	125.9	25.0	50.1	59.9
4	-59.4	-39.9	0.9	20.3	41.5	85.4	126.0	25.3	50.3	60.0
5	-59.7	-40.0	1.0	20.5	41.0	85.2	126.1	25.5	50.5	60.2
6	-59.9	-40.3	0.8	20.7	40.9	85.0	126.3	25.7	50.7	60.4
7	-60.0	-40.5	0.4	20.9	40.6	84.8	126.0	25.9	50.5	60.6
8	-60.2	-40.2	0.2	21.0	40.2	85.0	125.8	26.0	50.8	60.4
9	-59.7	-40.0	0.5	21.3	40.5	85.4	125.5	25.8	50.2	60.3
Temperature deviation	1.1	0.9	1.0	1.3	1.5	0.7	1.3	1.0	0.8	0.6
Humidity display								24.5%	49.6%	94.2%
Temperature uniformity	1.3	1.4	0.8	1.0	1.3	0.9	0.8	1.0	1.0	1.0