Lab Companion

Temperature And Humidity Test Chamber C-288-40

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	600	800	600
Overall	920	1840	1500

Homogeneity and Regulation:

Temperature range
from -40°C to +150°C
Humidity range:
20~98%RH
Temperature fluctuation:
≤±0.5℃
Temperature deviation:
≤±2.0℃
Temperature uniformity:
≤2℃
Relative humidity deviation:
+2~3%RH
Relative humidity uniformity:
±3%RH
Temperature rise time:
3℃/min (+25℃→ +150℃) The whole process of nonlinear heating, no-load)
Temperature drop time:
1℃/min (+25℃→-40℃) The whole process of nonlinear cooling, no-load)
Power supply specifications:
AC 380 V, 50/60 HZ, 3 ∮ 5 wire
Rated current:
AC 16 A, power 3.6 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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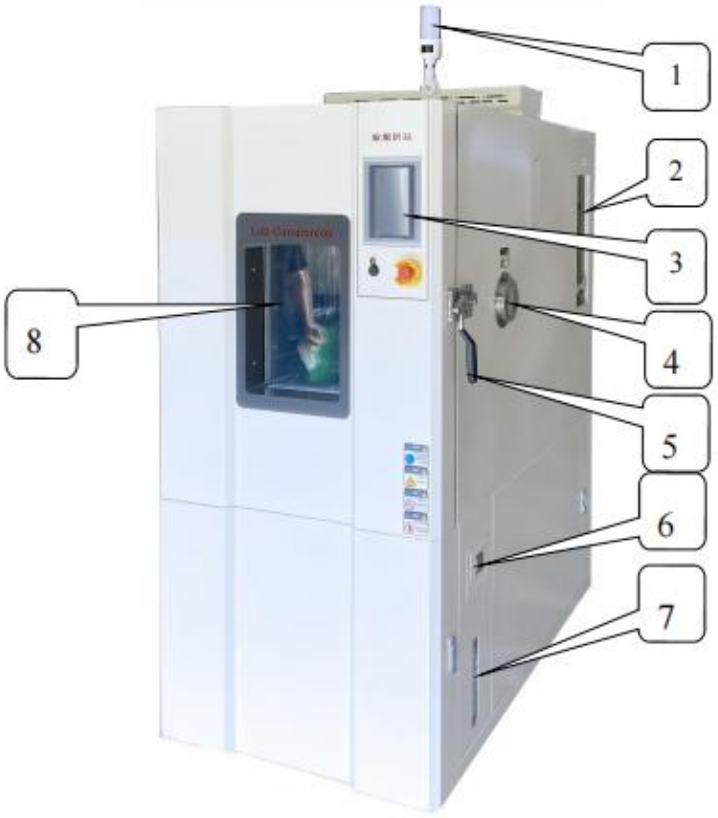
Appearance Introduction and Description:

1. Front and side of the machine

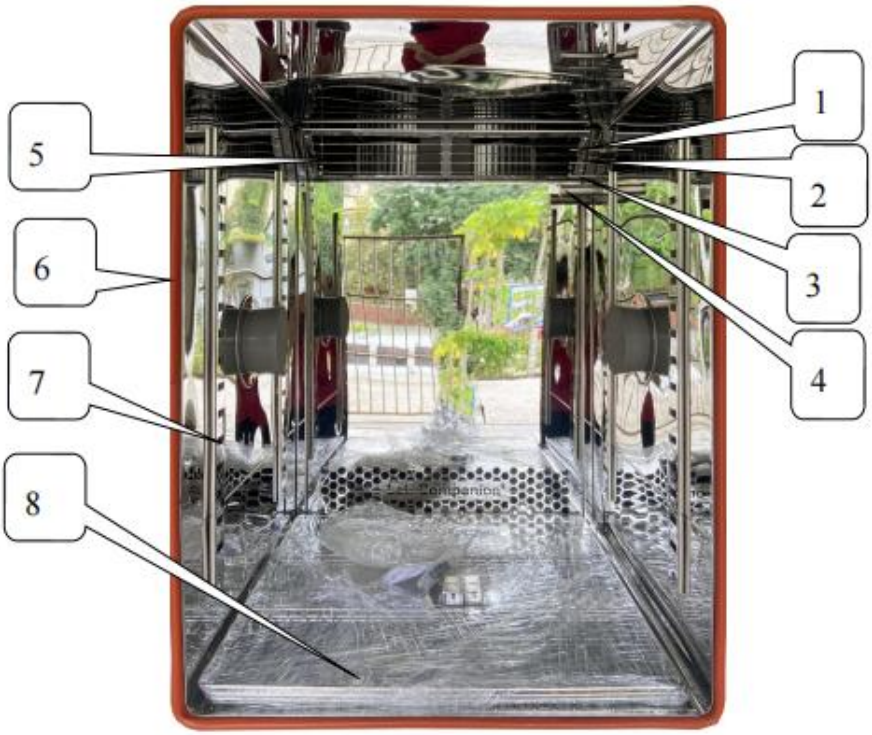


Number	Name	Illustration
1	Three color lights	Green running, yellow standby, red fault
2	The control panel	Leakage protector and safety control
3	The control panel	Operation panel for machine operation
4	The test hole	An external power supply can be plugged in from the test hole for live product testing
5	The door lock	Pull the vertical door to open it
6	Water injection tank	Add water when doing humidity test
7	Water level gauge	How much water can be observed when adding water
8	Glass window	To observe the inner workings of the laboratory

2. Control panel

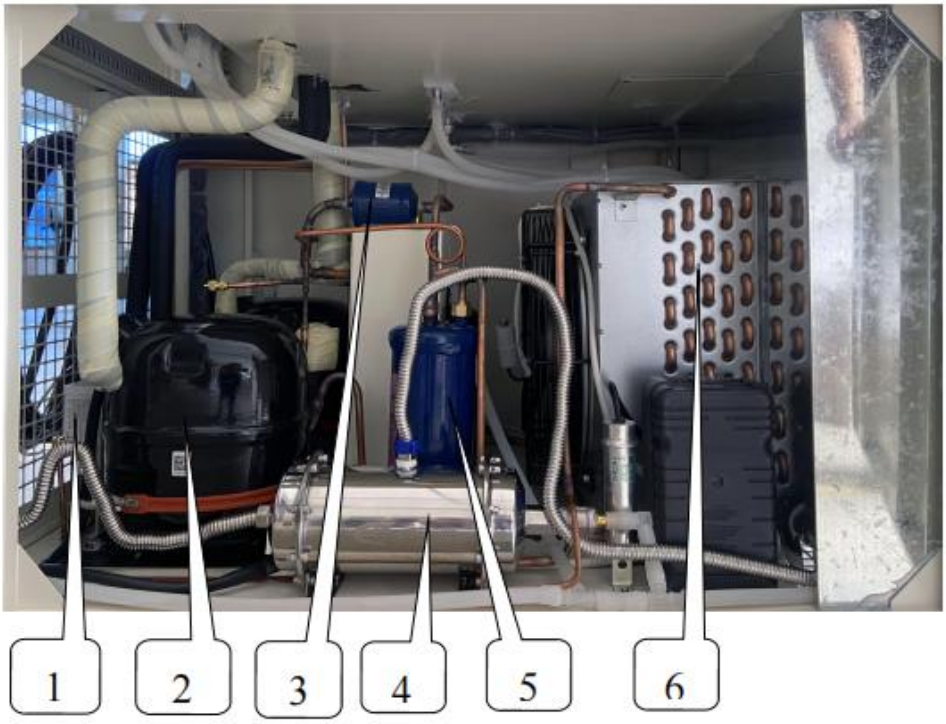
Number	Name	Illustration
1	Controller	Touch screen programmable controller (Refer to controller manual)
2	USB interface	Used to copy curves or document-related data
3	Scram switch	Used to connect the device and cut off the power supply

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

4. The cooling machine room



Number	Name	Illustration
1	Pressure protection controller	The machine will alarm when the pressure is too high
2	Compressor	Compression refrigeration
3	Filter dryer	Filter out debris from the cooling system
4	Water purifier	The device filters impurities in the water when doing humidity test
5	Oil separator	Separate refrigerant and refrigerant oil
6	Condenser	Cooling refrigerant

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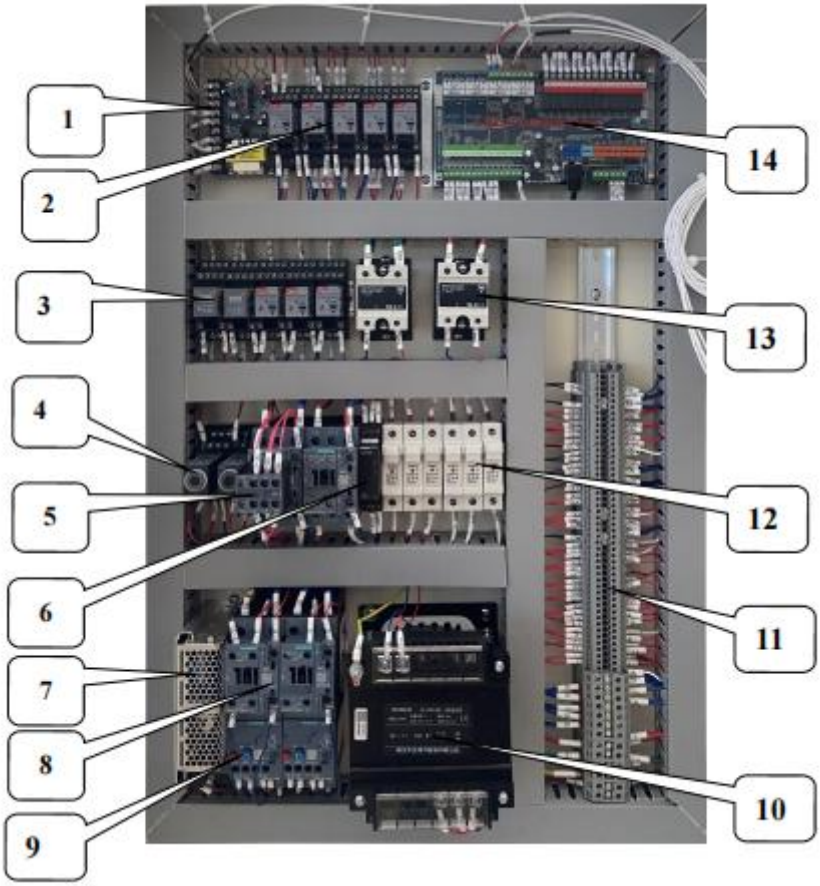
5. Power distribution room



Number	Name	Number	Name
1	Overheated plate	8	Ac contactor
2	Intermediate relay	9	Thermal overload relay
3	Intermediate relay	10	Transformer
4	Time relay	11	Connector terminal
5	Auxiliary contact	12	Fuse
6	Underinverting phase protector	13	Solid state relay
7	Dc power supply	14	Temperature controller

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Test Report:

Temperature Sensor ℃	-40℃	0℃	20℃	40℃	85℃	125 ℃	25℃ 25%	50℃ 50%	60℃C9 5%
1	-39.9	0.2	20.1	40.2	84.9	125.0	24.8	50.3	59.4
2	-40.0	0.5	19.7	40.5	85.0	124.7	25.0	50.5	59.2
3	-40.2	0.7	20.3	40.7	85.3	125.0	25.2	50.7	59.6
4	-40.5	0.9	20.6	40.6	85.4	125.2	25.3	50.5	59.8
5	-40.6	1.0	20.5	40.8	85.7	125.6	25.5	50.8	60.0
6	-40.2	1.2	20.2	41.0	85.9	125.9	25.7	51.0	60.2
7	-40.5	1.5	20.5	41.2	86.0	125.7	25.9	51.3	60.0
8	-40.7	1.0	20.9	40.9	86.1	125.9	26.0	51.0	59.8
9	-40.9	0.9	21.0	40.7	86.3	125.6	26.0	50.8	59.6
Temperature deviation	0.9	1.5	1.0	1.2	1.3	0.9	1.0	1.3	0.8
Humidity display							24.5%	49.6%	94.2%
Temperature uniformity	1.0	1.3	1.3	1.0	1.4	1.2	1.2	1.0	1.0