Lab Companion

Rapid Temperature Change Test Chamber TC-1560-5-5

Custom Solution

Brief Introduction

Rapid temperature change test chamber is suitable for instruments, chemistry, plastic, electronics, food, clothing, vehicles, metal, chemical, building materials, aerospace and other parts or machine. With rapid temperature change, gradient adaptability test and temperature stress screening test functions, helps to test the performance and change under the proposed conditions, for the purposes of product design, improvement, identification and factory inspection.

Lab Companion

Particularities:

1. The structure design of the Test Chamber is advanced and reasonable, and the supporting products and functional components have the international advanced level, which can meet the long-term, stable, safe and reliable production needs.
2. It can apply temperature stress and realize the change rapidly between the desired temperature values (such as +85~ 40°C temperature range, the lifting temperature rate is 10°C/min).
3. It has a large temperature control range, which can provide: high and low temperature rapid change test, one or more temperature change test (cycle); It can also carry out low temperature(ultra-low temperature) and high temperature test separately.
4. It adopts the perfect modeling design, the appearance has excellent texture and beautiful atmosphere.
5. The control system adopts special control system, with strong expansibility, simple operation, accurate control.

Technical Features:

Dimensions (mm)	Width	Height	Depth
Useful	1300	1000	1200
Overall	1980	2033	3140

Temperature range
-70°C~+150°C(no load); -40°C~+80°C(static load);

Homogeneity and Regulation:

Temperature fluctuation:
≤±0.5°C(no load)
Temperature deviation:
≤±3.0°C(no load)
Temperature uniformity:
≤2°C(no load)
Temperature rise and drop time:
≥5°C/min (-20°C→ +80°C) The whole process of linear heating, load 150KG aluminum ingot +50KG PCBA+20KW heat)

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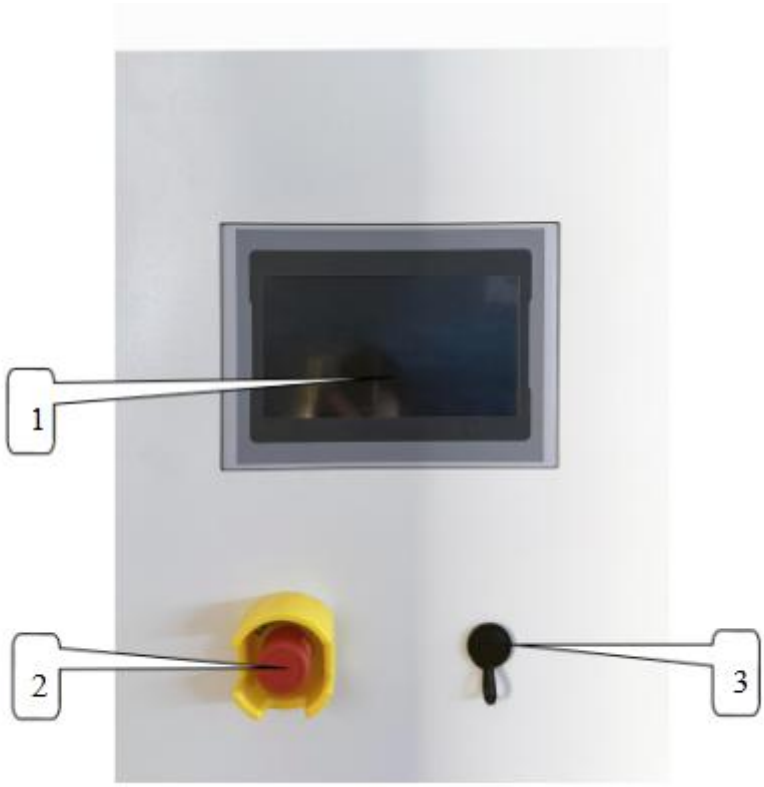
Appearance Introduction and Description:

1. Front and side of the machine

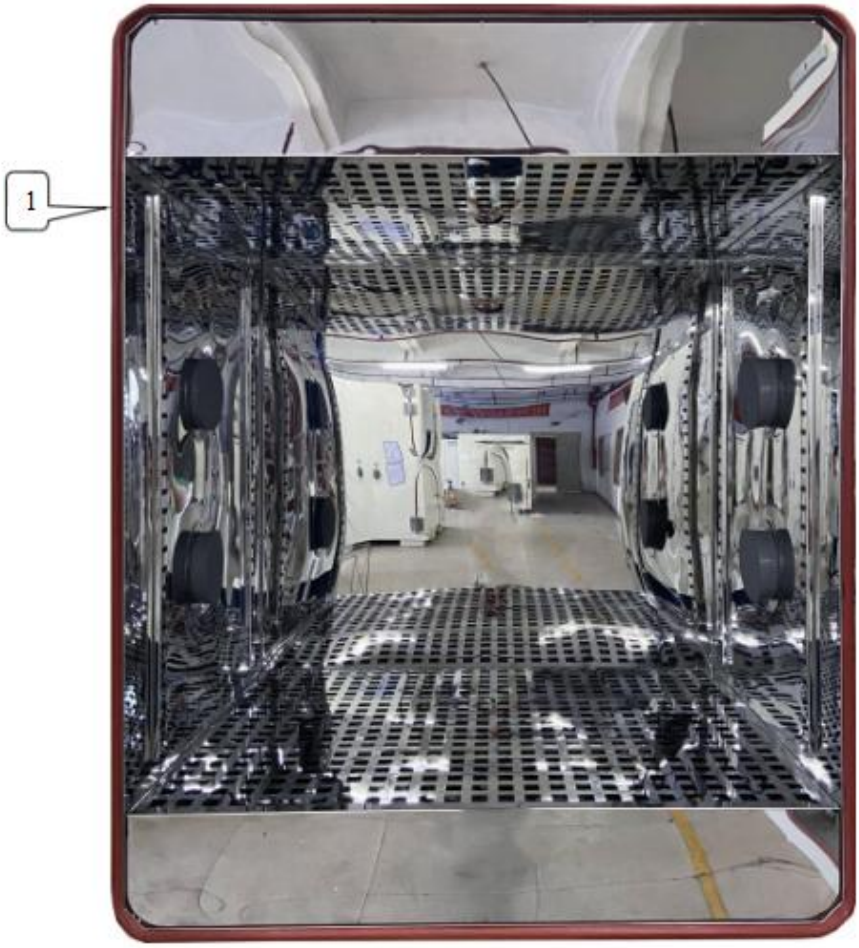
Number	Name	Illustration
1	Three color lights	Green running, yellow standby, red fault
2	The control panel	Operation panel for machine operation
3	The test hole	An external power supply can be plugged in from the test hole for live product testing
4	The control panel	Leakage protector and safety control
5	The door lock	Pull the right vertical bar first and then pull the left vertical bar to open the door
6	Glass window	To observe the inner workings of the laboratory

2. Control panel



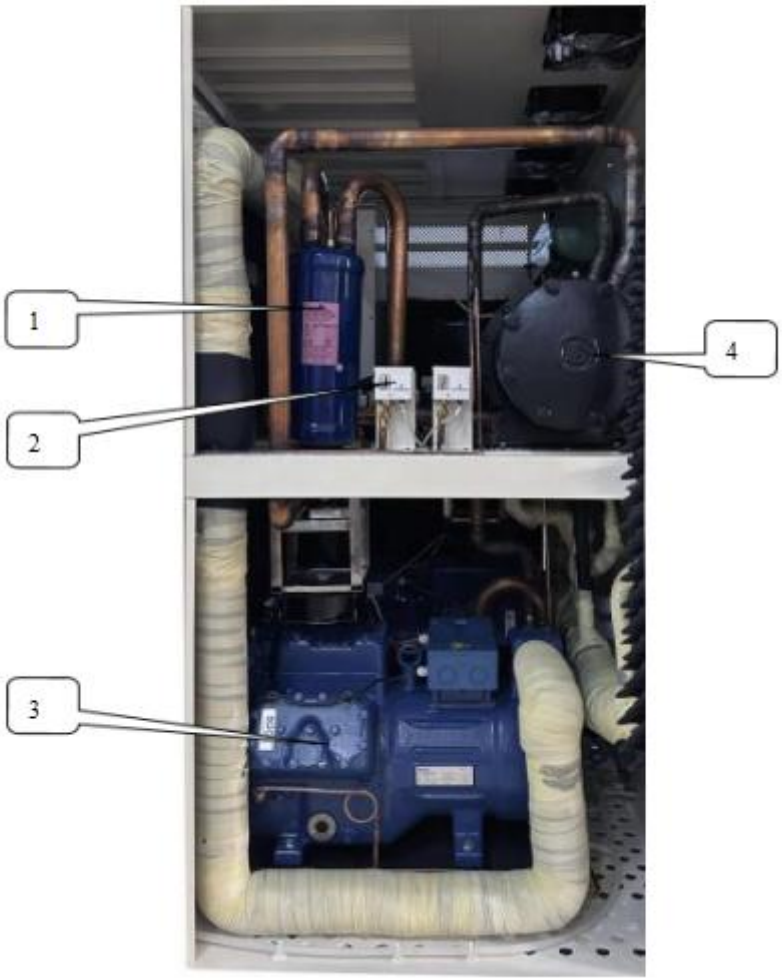
Number	Name	Illustration
1	Controller	Touch screen programmable controller (Refer to controller manual)
2	Scram switch	Used to connect the device and cut off the power supply
3	USB interface	Used to copy curves or document-related data

3. Test area



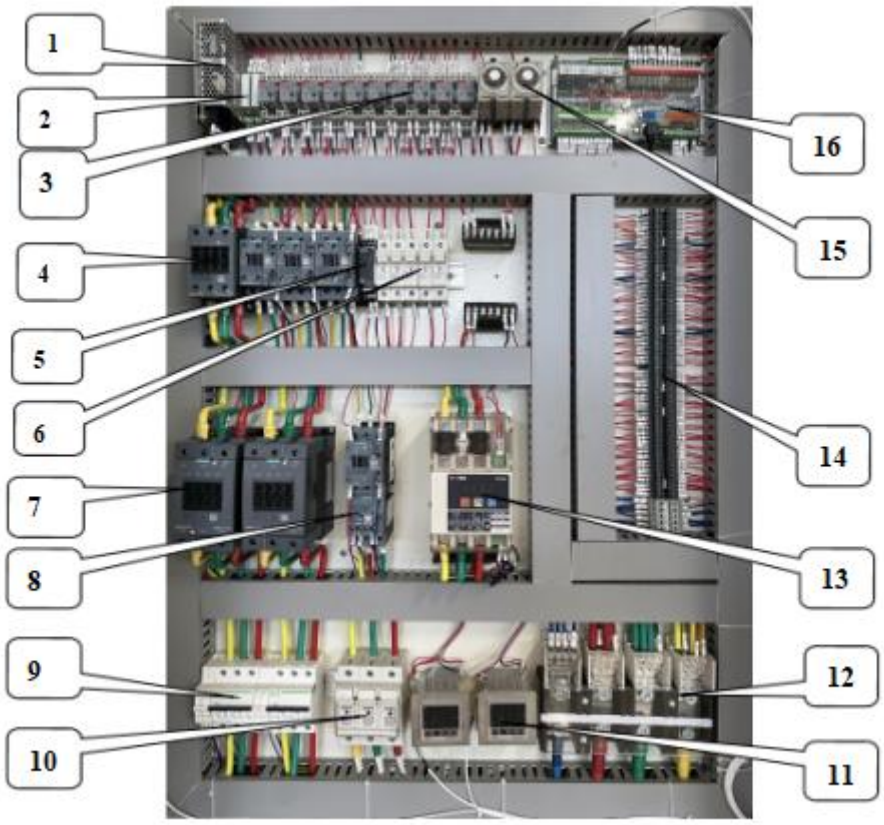
Number	Name	Illustration
1	Sealant	Heat preservation and air leakage prevention

4. The cooling machine room



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

5. Power distribution room



Number	Name	Number	Name
1	Dc power supply	9	Circuit breaker
2	Cold and hot valve solid state relay	10	Fuse
3	Intermediate relay	11	Temperature controller
4	Ac contactor	12	Terminals(One in six out)
5	Underinverting phase protector	13	Power regulator
6	Fuse	14	Connector terminal
7	Ac contactor	15	Time relay
8	Thermal overload relay	16	Temperature controller

Lab Companion

Test Report:

Temperature Sensor ℃	-60℃	-40℃	-20℃	0℃	40℃	85℃	125℃	150℃
1	-58.9	-39.5	-20.4	0.8	40.3	85.0	125.7	150.5
2	-59.2	-39.8	-20.1	0.3	40.5	84.8	125.3	150.3
3	-59.0	-40.0	-20.5	0.4	40.7	85.2	125.0	150.0
4	-59.4	-40.3	-20.2	0.6	40.9	85.4	124.9	149.7
5	-59.6	-40.5	-20.6	0.9	41.0	85.7	125.4	150.1
6	-59.8	-40.1	-20.8	1.0	41.1	85.9	125.9	150.3
7	-60.0	-40.4	-21.0	1.1	40.9	86.0	126.0	150.7
8	-60.3	-40.7	-20.9	1.3	40.6	86.3	125.9	150.5
9	-60.1	-40.5	-20.7	1.5	40.3	86.1	125.5	150.8
Temperature deviation	1.1	0.7	1.0	1.5	1.1	1.3	1.0	0.8
Temperature uniformity	1.4	1.2	0.9	1.2	0.8	1.5	1.1	1.1