

# Lab Companion

High And Low Temperature Test Chamber MIC-100-40

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.

# Lab Companion

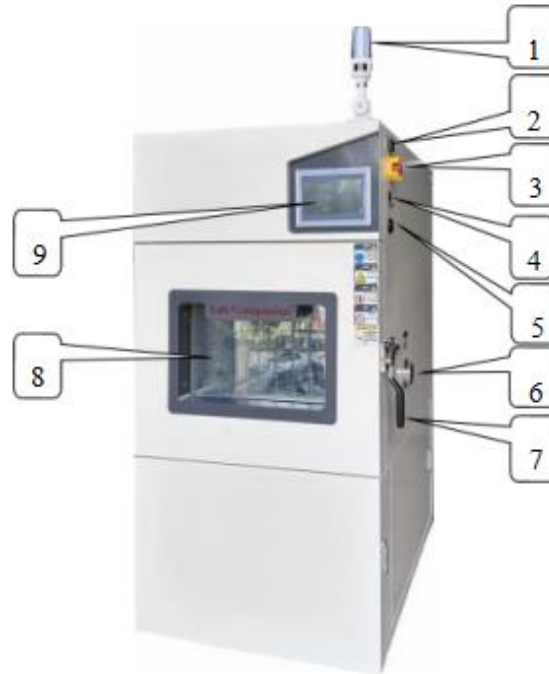
## Specifications and parameters:

Model	MIC-100-40
Power source	AC220V, 50/60HZ, 1 $\phi$ 3 wire
Rated current	AC 9 A
Total power	2 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.	
Temperature Range	-40~+150 °C(Air-cooled, no-load)
Temperature fluctuation	$\leq\pm 0.5^{\circ}\text{C}$
Temperature deviation	$\leq 2.0^{\circ}\text{C}$
Temperature uniformity	$\leq\pm 2.0^{\circ}\text{C}$
Temperature rising rate	20°C→+150°C, Nonlinear no-load approx. 3.0°C/min
Cooling rate	20°C→-40°C, Nonlinear no-load approx. 3.0°C/min
Internal Dimension	W500*H400*D500 (mm)
External Dimension	W780*H1570*D970(mm)
Suitable temperature for using	5~30°C
Controller model	Q8 color touch screen
Compressor model	NEU2183*2
Refrigerant	R-404A/R23
Temperature electric heating	1.8 KW

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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	Over temperature Setting	To Set the upper temperature limit in the test area
3	Scram 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 interface	The computer can be connected to the controller through the network cable for remote operation
6	The test hole	An external power supply can be plugged in from the test hole for live product testing
7	The door lock	Pull on the handle to open the door
8	Glass window	To observe the inner workings of the laboratory
9	Controller panel	The intelligent operating panel

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## 2. Control panel



Number	Name	Illustrate
1	Controller	Touch screen programmable controller

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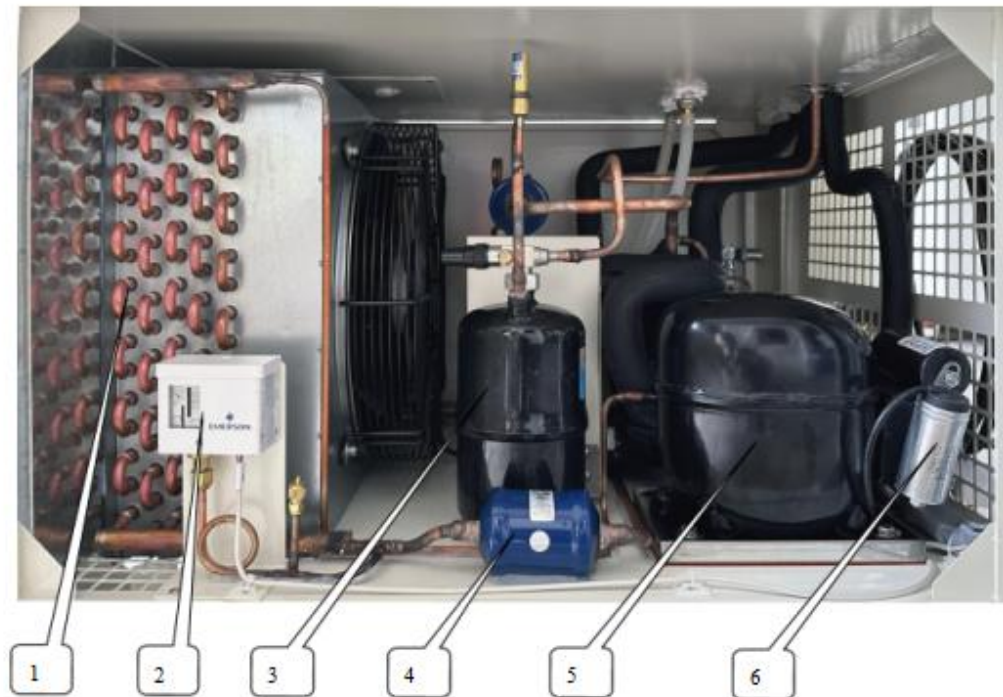
## 3. Test area



Number	Name	Specification
1	Thermal resistance sensor	Used for panel overtemperature sensing the temperature of the inner box
2	Thermal resistance sensor	Used for the controller to sense the temperature of the inner box
3	The 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

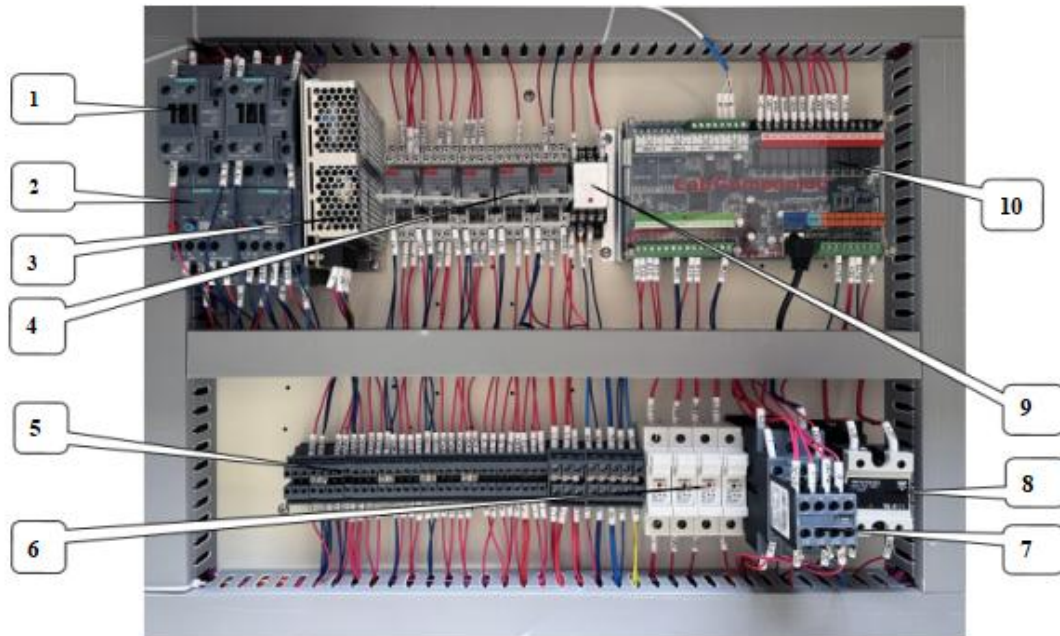


Number	Name	Illustrate
1	Condenser	Cool the refrigerant
2	Pressure protection controller	When the pressure is too high, the machine will alarm
3	Liquid storage tank	Storage refrigerant
4	Filter dryer	Remove debris from the cooling system
5	Compressor	Compression cooling
6	Compressor operating capacitance	Ensure smooth start-up and operation of the compressor



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## 5. Power distribution room



Number	Name	Number	Name
1	Ac contactor	6	Fuse
2	Thermal overload relay	7	Auxiliary contact
3	Dc power supply	8	Solid state relay
4	Intermediate relay	9	Cold and hot valve relay
5	Connector terminal	10	Temperature controller

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## Test Report:

Temperature Sensor °C	-40°C	-20°C	0°C	40°C	85°C	125°C	150°C
1	-39.5	-20.3	0.7	40.3	85.6	125.3	149.5
2	-39.3	-20.4	0.6	40.7	85.2	124.8	149.9
3	-39.1	-20.7	0.3	40.5	85.0	125.0	150.2
4	-39.5	-20.2	0.4	40.8	85.4	125.4	150.4
5	-39.7	-20.6	0.5	41.0	85.7	125.8	150.7
6	-39.9	-20.8	0.7	41.3	85.9	126.0	150.9
7	-40.0	-21.0	0.9	41.0	86.0	126.1	151.0
8	-40.2	-21.2	1.0	41.2	86.2	126.3	150.7
9	-40.5	-21.0	1.3	41.5	86.1	126.1	150.4
Temperature deviation	0.9	1.2	1.3	1.5	1.2	1.3	1.0
Temperature uniformity	1.4	0.9	1.0	1.2	1.2	1.5	1.5