
Two Zone Thermal Shock Test Chamber

EQUIPMENT DETAILS



APPLICATION

Thermal Shock Test Chamber is used to test the bearing extent of the material structures and composite material in an instant and continuous high temperature and extremely low temperature environment, which is in the shortest time to test its thermal expansion and contraction caused by chemical change or physical harm.

FEATURES

1. Perfect appearance and easy to operate.
2. Imported LCD English microcomputer temperature controller, with high memory capacity, can save 100 programs, max 9999 cycles, each cycle max time 999hrs.
3. Two chamber structures, high temperature chamber and low temperature chamber, control automatically, stay and switch time adjustable.
4. Perfect protection alarm functions: short-circuits, Leakage, over temperature of work chamber; compressor over pressure, over load, short water...

5. Control interface will display alarm reason and provide check methods, machine has emergency stop button.
6. Cold and hot shock temperature recover within 1 minute, which complies with MTL, IEC, JIS, GJB and other international standards.

MAIN PARAMETERS

Item	Specification
Test method	Pneumatic operated doorswitch, two chambers
Basket internal dimension	320Wx230Dx250Hmm (20L)
External chamber dimension	1050Wx1825Dx1440Hmm
High temperature range	Room temperature ~+175°C
Low temperature range	Room temperature ~-50°C
Testing time	Maximum 1000 cycles, 30 minutes for each one
Defrost	Do defrost in every 20 cycles
Temperature deviation	3~5°C
Lifting switch time	≤10 seconds
Test hole for cable routing	Diameter 50mm on the left of chamber attach a silicone plug
External chamber material	High quality electrolytic steel plate spray with powder, antirust
Internal material	SUS#304 stainless steel
Thermal insulation material	High quality superfine glass fiber
Refrigerant	R404A / R23
Cooling method	Water cooling
Power supply	Three phase, 380V, 50Hz

High temperature chamber:

- 1, Including three parts: heater, draught fan and air duct valve
- 2, Draught fan cyclically stirs hot air through heater
- 3, The basket with testing product drive to high temperature range when doing high temperature impact test.

Low temperature chamber:

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- 1, Including four parts: evaporator, energy storage piece, draught fan and air duct valve
 - 2, Draught fan cyclically stirs cold air through evaporator and energy storage piece.
 - 3, The basket with testing product drive to low temperature range when doing low temperature impact test.

Drive device:

Pneumatic cylinder: drive basket with testing product to high and low temperature chamber

Air compressor: Provide the compressed air for driving pneumatic door (supplied by buyer)

Refrigerating device:

Cooling system: complex overlapping efficient cryogenic loop system

Compressor: Bock compressor

Refrigerant: environmental protection refrigerant R23/R404A

Condensation: Stainless steel welded plate heat exchanger

Controller:

Operate interface: 6" color PLC controller, touch screen

Program memory capacity: 100 groups (modify by operator)

Setting range: Time: 1 minute ~ 99 hour 59 minute, cycles: 1~ 9999cycles

Resolution: temperature: 0.01 °C

Input: T thermocouple

Control method: PID auto calculation control

Additional functions:

Timer, over temperature and power failure protection, alarm, record test curve, emergency stop, display test time

Standard configuration: indication lamp of test chamber, time meter, test hole for wire routing, 6pcs castor, 4pcs adjust wheel.

Safety device:

Power overload protection

Leakage protection

Control circuit overload protection

Short-circuit protection

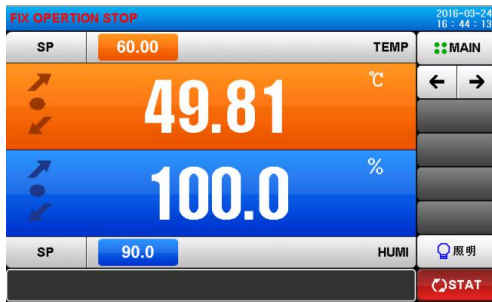
Compressor overload protection

Ground protection

Over temperature protection

Audible and visual alarm

MACHINE PARTS



Temp. Humid. Programmable



Bock Compressor



Water tower