

# Thermal shock test chamber



● Main technical parameters

● Mode: The experimental sample testing through moving up and down in two temperature zones

● Temperature fluctuation:  $\leq \pm 0.5\text{ }^{\circ}\text{C}$

Temperature uniformity:  $\leq 2.0\text{ }^{\circ}\text{C}$

● Temperature deviation:  $\leq \pm 2.0\text{ }^{\circ}\text{C}$

Preheating temperature range:  $+60\text{ }^{\circ}\text{C} \sim +200\text{ }^{\circ}\text{C}$

● Pre-cooling temperature range:  $-80\text{ }^{\circ}\text{C} \sim 0\text{ }^{\circ}\text{C}$

Temperature recovery time: 5min

● Temperature switching time : 5s

Ambient temperature:  $+5\text{ }^{\circ}\text{C} \sim +35\text{ }^{\circ}\text{C}$

● Power(V): AC  $380\pm 10\%V$   $50\text{HZ}\pm 0.5\text{HZ}$

Equipment noise:  $\leq 75\text{ dB}$  (testing from one meter

in front of the door)

Standard configuration: The stainless steel frame 2 pcs;

Shelf rack 2 kits; Cable hole ( $\Phi 80$ ) 1 PCS; Casters

4 pcs; Sample power control terminal 1 pcs.

● Implementation standards

● GB/T2423.1-2008(IEC68-2-1) testing A, Low temperature test method

● GB/T2423.2-2008(IEC68-2-2) testing B, High temperature test method

● GB/T2423.22-2001(IEC68-2-27): Temperature impact test method

● GJB150.3A-2009(MIL-STD-810F-2000) High Temperature test

● GJB150.4A-2009(MIL-STD-810F-2000) Low Temperature test

● GJB150.5A-2009(MIL-STD-810F-503.4) Temperature impact test

Model		SM-70-3P-A		SM-100-3P-A		SM-200-3P-A		SM-300-3P-A		
		-40W/A	-65W	-40W/A	-65W	-40W/A	-55W	-40W/A	-55W	-55WH
Internal volume(L)		70L		100L		200L		300L		
Inner size (mm)	W	410	410	650		650		970		
	H	460	460	460		460		460		
	D	370	370	370		670		670		
External size (mm)	W	1470	1470	1710		1710		2030		
	H	1800	1800	1800		1800		1800		
	D	1570	1870	1570		1870		1870		
Temperature impact range		TS3Z-40: $(+60\sim+125)\text{C}/(-40\sim+10)\text{C}$ ; TS3Z-55: $(+60\sim+150)\text{C}/(-55\sim+10)\text{C}$ ; TS3Z-65: $(+60\sim+150)\text{C}/(-65\sim+10)\text{C}$								
Cooling time		TS3Z-40A: $+20\sim-70\text{C}\leq 95\text{min}$ ; TS3Z-40W/55W: $+20\sim-70\text{C}\leq 80\text{min}$								
		TS3Z-65W: $+20\sim-75\text{C}\leq 70\text{min}$ ; TS3Z-55W: $+20\sim-75\text{C}\leq 70\text{min}$								
Exposure Time (min)	High temperature exposure	30	15	30	30	30	30	30	30	30
	Room temperature exposure				5		5		5	
	Low temperature exposure	30	15	30	30	30	30	30	30	30
Load (kg)		7.5	2.5	7.5	2.5	10	10	10	7.5	7.5
Circulating water flow(t/h)		3	7	3	7	3	4	3	4	8
Main power switch (A)		40	62	45	62	59	62	59	62	95
Power (KVA)		26	38	29	38	37	38	37	38	58
Weight (kg)		~1090	~1430	~1190	~1480	~1440	~1480	~1510	~1550	~1790



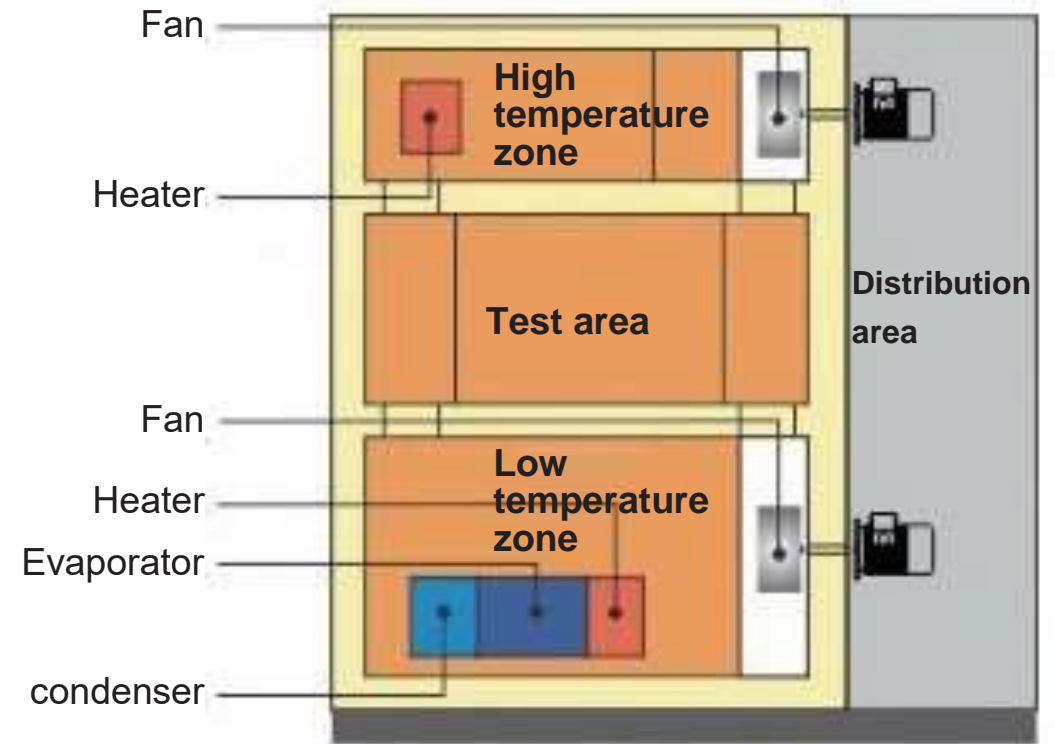
- CLIMATE Lightning series can be applied to all kinds of samples with uniform temperature stress of large capacity three box type temperature shock chamber

- **Product advantage**

1. Three thermal shock test chamber, the test objects do not move
2. LCD color touch screen display, interactive operation
3. Equipped with excellent temperature uniformity
4. The uniform temperature stress can be applied to the sample.
5. Widely used in research, development and testing, production and other fields

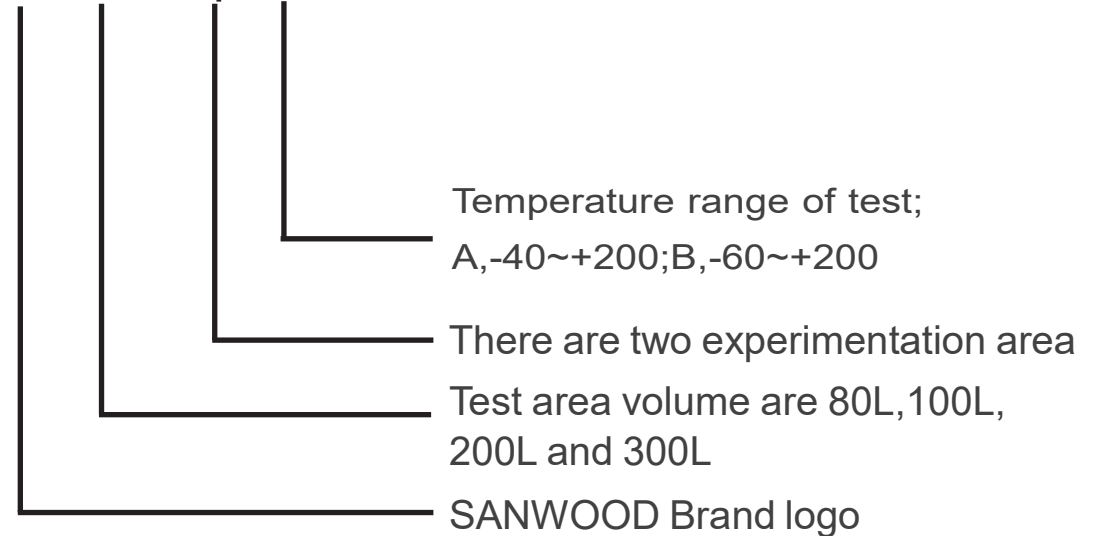
- **Product features**

1. Using the cold and hot air flows switching mode, then it can fast change the temperate of the testing room, making the samples are subject to thermal shock, and does not produce any mechanical shock at the same time
2. Shorten the test time
3. With room temperature recovery function. Then sample can be safely removed after testing
4. Easy to measure sample and equipped with externally applied voltage cable wiring



## Model description

SM-300-2p-A



## ● Structure design

1. Shell: Spray galvanized color steel plate, the surface electrostatic spray processing.
2. Liner: stainless steel SUS 304.
3. Thermal insulation layer: Polyurethane foam board and glass fiber.
4. Seal: Toshiba high purity silicon rubber raw materials, effectively prevent aging.
5. Heater: Ni Cr alloy electric heater.
6. Sample basket: stainless steel SUS 304; 5 net metal basket; 70L/100L : Bearing capacity 5kg/200L/300L : Bearing capacity 10kg

### Observation window (optional)

Samples can be observed from external observation window  
size: W300\*H300mm

### Pin hole (optional)

Φ50mm Φ80mm Φ100mm Φ120mm  
Mounted on the door of the laboratory

### Casters

Installation when the device needs to be moved

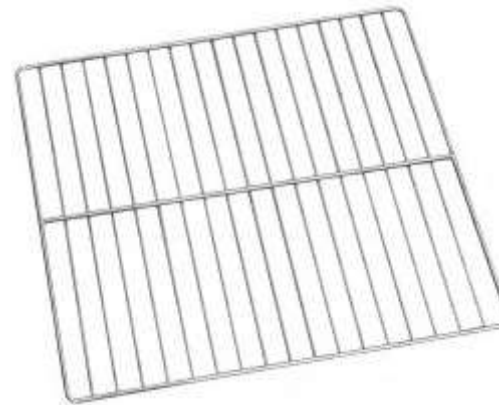
1. Casters 4 pcs.
2. Height adjustment casters 4 pcs.

### The sample temperature measuring thermocouple (optional)

Posted on the sample, for the determination of sample temperature

- T Thermocouple

### The sample basket and The sample frame basket (optional)



The same with incidental goods  
Material: stainless steel (5 net)

### Emergency stop switch



Emergency stop equipment operation

### Heavy-load Shelf (optional)

When placed in the test area of sample basket load exceeds the standard attached load, using the specimen shelf

Carrying capacity 15KG

### Auxiliary cooling spray device (optional)

when the machine in the low temperature exposed, at the same time it began to spray liquid nitrogen, making to shorten the low temperature exposure temperature recovery time.

## Controller



1. 5.7" 320\*240 lattice. 256 colors, LCD displayer
2. 120programs, (two zones thermal shock test chamber: 2 segments / groups; three zones thermal shock test chamber: 3 segments. STEP: 20 segments / groups; LINK: 6 link/ groups )
3. RS - 485 interface, with remote communication function
4. SD card storage device
5. operating language: Chinese or English

## Recorder( option)



1. Large screen LED display
2. High reliability of industrial records requirements

## The sample power control terminal



1. When the equipment safety protection device works, the power supply of the electrified sample is controlled through the connecting terminal.

## Safety protection device



### 1.Compressor

- 1.1 Compressor overpressure
- 1.2 Compressor motor overheating
- 1.3 Compressor motor over-current
- 1.4 Compressor oil shortage
- 1.5 Cooling circulating water pressure shortage

## 3. Test samples of protection



- 3.1 Adjustable overtemperature protection
- 3.2 Air conditioning channel over temperature limit
- 3.3 controller set overtemperature shut down alarm
- 3.4 sample terminal protection

### 4. Electric control

- 4.1 The fan motor overheating
- 4.2 Total power phase sequence and lack of phase protection
- 4.3 Leakage protection
- 4.4 Load short circuit protection

# The Experience you Rely on...

Sanwood Environmental Chambers was established in 1995, which integrated Taiwan and Japan technologies. We have been focus on the most secure and reliable climatic test chamber technology since established. And has become a private science and technology enterprises in Dongguan,Guangdong Province, which passed the ISO9001:2008 quality system certification.

Our products upgrade constantly and our customers come portable batteries, power batteries, battery, lithium batteries, lead-acid, new energy vehicles, electric bicycles, electric tools, electric systems, solar, military, universities research and other technology industries fields.

Having experienced nearly 20 years efforts, we have successfully developed a series of products:

power batteries, battery, lithium batteries, lead-acid, new energy vehicles, electric bicycles, electric tools, electric systems, solar, military, universities research and other technology industries fields.

● High and low temperature test chamber

● explosion-proof type thermal shock chamber

● an explosion-proof type temperature test box

● walk-in temperature and humidity chamber

● weather resistance test chamber

● battery thermal abuse test box

● explosion-proof type hot box

● Temperature&humidity&Vibration integrated test chamber

● dust test box

● vibration table

● rain test chamber

● ozone test box

● xenon lamp test chamber

● high temperature oven

● seawater immersion box

All of products meet GB31241、IE62133、QCT/743、UN38.3、UL2054 Standard. And we have had a good cooperation with ATL, Sony, Sunwoda, Desay, Samsung, BYD, Toyota, Yutong Bus, Nissan, Guangdong Province entry-exit, Tsinghua University, Henan University, Chinese Academy of Sciences, Central South University Successively.

## Enterprise vision:

Sanwood Technology has established a large production base in Dongguan after many years efforts. The plant area reached more than 12000 square meters. The foreign trade branch and foreign service agencies were established in 2010. And branches successively established in Taiwan, Suzhou, Hunan, Hubei, Beijing, Henan. Excellent products and good after-sales service make us won the recognition and trust of customers. Products are exported to more than 30 countries, such as Russia, Singapore, the United States, Turkey, Denmark, Vietnam, India, Malaysia, Kazakhstan, Austria, Canada, etc. In the age with fierce competitions, Sanwood thrived little by little and aims to become the leading brand in the safety and reliability environmental test



# SANWOOD®

Focusing on the innovation of environmental reliability test

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