

Rapid temperature change (damp heat) vibration comprehensive test chamber



● Main technical parameters

● Temperature range : -70~ +150 Deg C

Up-and-down temperature range: -55~ +70 Deg C

● Temperature fluctuation: $\leq \pm 0.5$ °C

Temperature uniformity: ≤ 2.0 °C

● Temperature deviation: $\leq \pm 2.0$ °C

Humidity deviation: $\leq \pm 3.0\%$ RH (over 75%RH)

$\leq \pm 5.0\%$ RH (lower than 75%RH)

Temperature and humidity control method: BTHC

● Ambient temperature: +5~+35°C

Power(V): AC 380 \pm 10%V 50HZ \pm 0.5HZ

● Equipment noise: ≤ 75 dB(testing from one meter in front of the door)

● Standard configuration: Electrothermal film glass observation 1pcs; Cable hole ($\Phi 100$) 1 PCS; Sample rack 2 sets; Illuminator 1 pcs; Sample power control terminal 1pcs; (C), only C type equipment equipment with this.

● Implementation standards

● GB/T5170.2-2008 Temperature test equipment

GB/T5170.5-2008 Thermal Humidity test equipment (C)

● 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

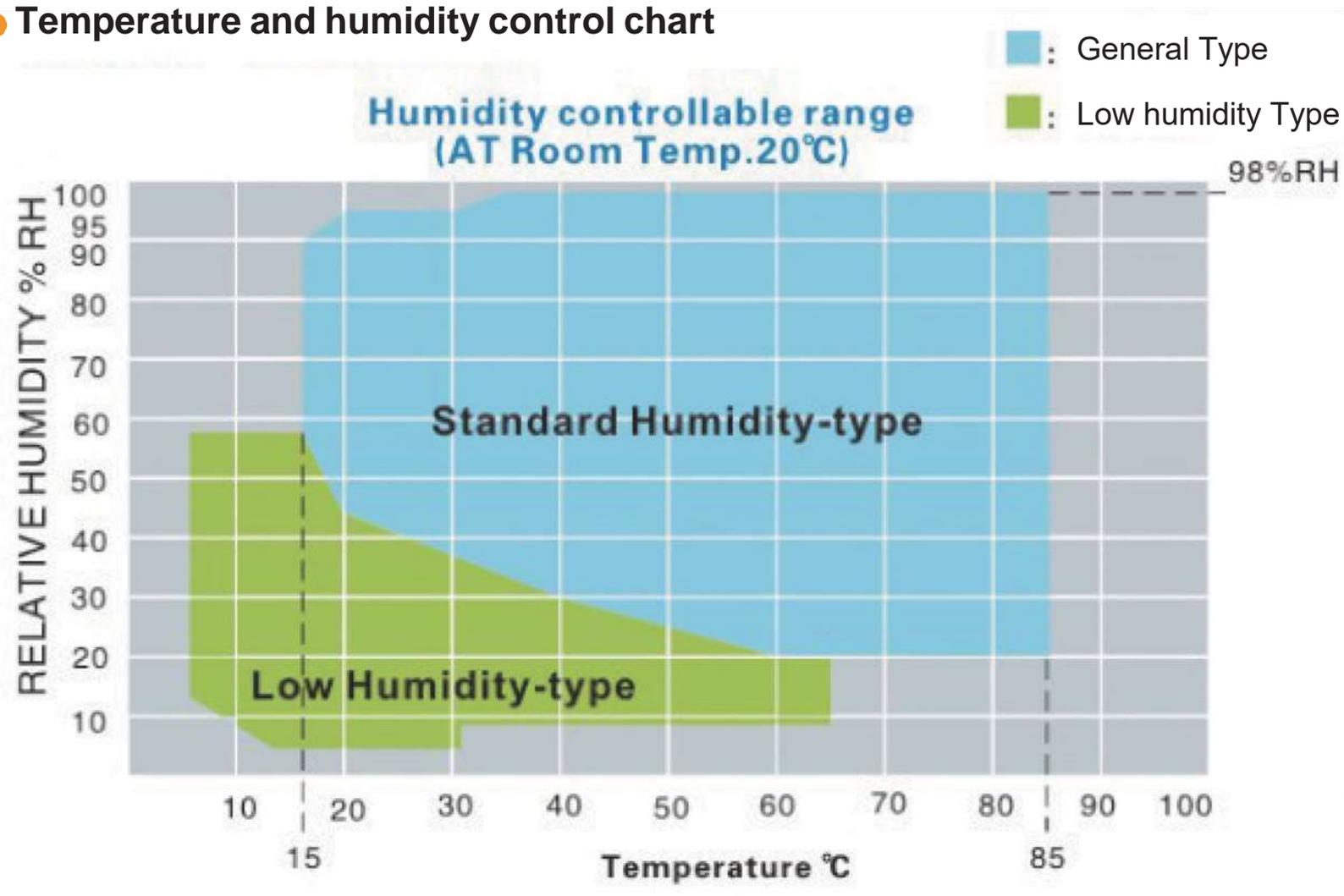
● GB/T2423.3-2006(IEC68-2-3) testing Ca, Constant thermal humidity test (C)

● GB/T2423.4-2008(IEC68-2-30) testing Db, Thermal humidity test (C)

● GJB150.3A-2009(MIL-STD-810F-2000) High Temperature test
GJB150.4A-2009(MIL-STD-810F-2000) Low Temperature test

● GJB150.9A-2009(MIL-STD-810F-2000) thermal humidity test (C)

● Temperature and humidity control chart



Model	Unit	4060-5	7060-5	4120-5	7120-5	4220-5	7220-5
SMA Series temperature)		4060-10	7060-10	4120-10	7120-10	4220-10	7220-10
SMV Series (humidity)		4060-15	7060-15	4120-15	7120-15	4220-15	7220-15
Test volume	(L)	600		1200		2200	
Temperature range	°C	-40/+180	-70/+180	-40/+180	-70/+180	-40/+180	-70/+180
Temperature fluctuation	°C	±0.1~±0.8					
Temperature uniformity	°C	±0.5~±2.0					
Temperature rate	°C/min	5°C/min , 10°C/min , 15°C/min , 20°C/min , 25°C/min , 30°C/min , 35°C/min , 40°C/min					
Climate test specification		SMV series					
Temperature range	°C	+10~+95					
Temperature fluctuation	°C	±0.1~±0.5					
Temperature fluctuation	°C	±0.5~±1.0					
Humidity range	°C/min	10~95 (98%r,h. When used in conjunction with the Blind)					
Humidity fluctuation	°C/min	±1~±3					
Dew-point temperature	°C	+4to+94 (C14 When used in conjunction with the Blind) /+4to+59 (When used with a vertical perforated plate) /+4to+40 (when used With horizontal hole bottom plate)					
The maximum size of the vertical perforated plate	mm	max.Φ710mm		max.Φ1000mm		max.Φ1280mm	
The maximum size of the bottom plate	mm	max.700×700		max.1000×1000		max.1200×1200	
Test Chamber internal dimensions	mm	800×800×950		1100×1100×950		1400×1400×1100	
Test Chamber external dimensions	mm	1225×2890×2150		1525×3590×2150		1825×3950×2300	
Power Supply		400V±10%,50HZ,3/N/PE					
Power	KW	11/16/20	14/20/24	21/24/30	24/26/32	26/35/54	34/44/65
Cooling method		Water-cooled					

- Climate cloud series equipment through the temperature, humidity, vibration integrated security testing, to become a new generation of high reliability products' weapon

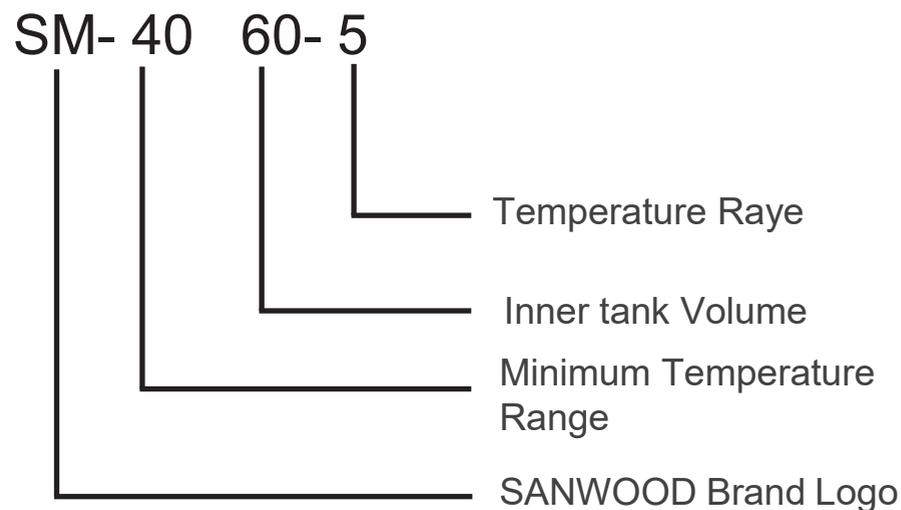
Products advantages

1. It is the best means to accurately assess the reliability of the products. Real reproduction the using environment of the electronic instruments and meters, automotive parts, aerospace and other industrial products.
2. Improve the product reliability to ensure products not only meet the functional requirements, but also can be used for a long time.
3. Reduce the risk of new product and new process, and find out the limit point of the product and product defect, which is in order to give timely correction, then reducing the cost of the customers.

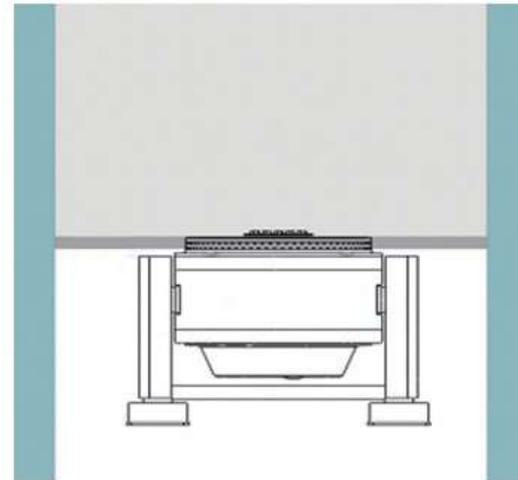
Products Features

1. Large angle and Full heating observation window;
2. High stability full color touch screen;
3. Pin holes on both sides
4. Height adjustable specimen holder;
5. Three independent over temperature protection;
6. Safety sample test terminal

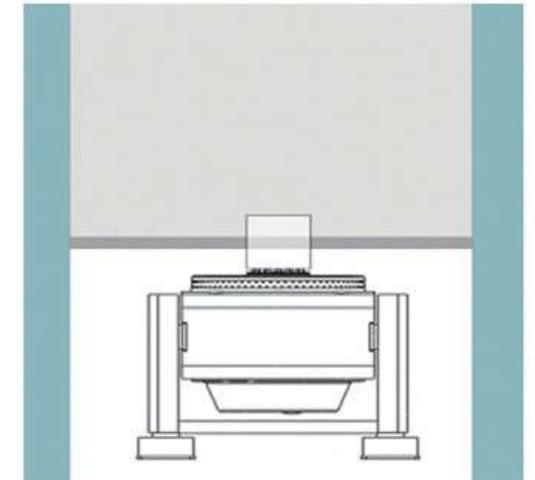
Model description



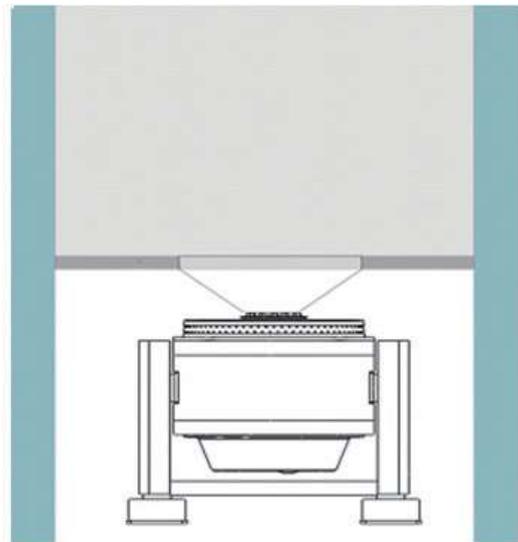
- Vibration Temperature Humidity Enviromental Combined Test Chamber connection mode:



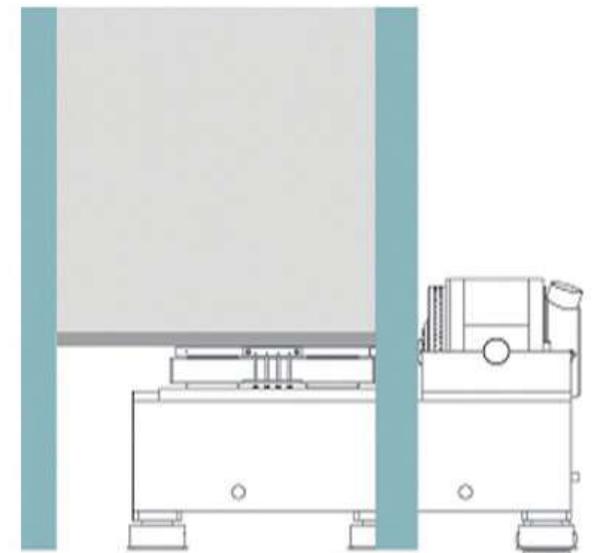
Vibration test systems and test chamber connect directly



Vibration test systems and connect through transition connector



Vibration test systems and test chamber connect through table



Vibration test systems horizontal table and test chamber connect

● 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. Humidifier: Outer tube: SUS316 stainless steel seamless pipe Internal heating wire: Ni Cr alloy wire.
7. Sample holder: 40kg/ layer * 2 layer (standard configuration)
80kg/ layer ; 120kg/ layer
Total bearing ≤ 240 kg (optional).

Lifting and translation component

Automatic horizontal movement and vertical lifting

Pin hole



Φ100mm (standard equipment)
Φ50mm Φ80mm Φ160mm
(optional equipment)

Compressed air drier (optional)



Adsorption drying filter in the experimental process for dehumidification, to prevent condense of the surface of the sample.

Super large observation window



Observation window:
Visual range: W400*H600mm

Pure water purifying device(C)



Water purifier 75L

● Refrigeration design

1. Modular production, reliable quality, easy maintenance.
2. Silver brazing welding vibration pipe with a silver content of 45% , to prevent the welding leak effectively.
3. Adequate space position, easy to operate.
4. Welding through nitrogen, ensure the inner pipe not nitriding.
5. Take a variety of techniques to decouple shock.
6. Take a variety of techniques to anti-corrosive.

Pressure relay



America EMERSON or Denmark DANFOSS

Evaporator

Design high efficiency finned heat exchanger

Mute cover



Germany Bizter compressor (standard)



Germany compressor (option)
Mute cover: reduce noise 10 db (option)



Electromagnetic valve



Italy CASTEL

Refrigerant

R404A

R23(-70)

Ozone depletion index was 0

Denmark DANFOSS brand



1. condenser
2. evaporator condenser(-70)
3. Evaporation pressure regulating valve
4. Thermal expansion valve
5. Dry filter
6. Condensation pressure regulating valve (water-cold)

Controller



1. 5.7" 640*480 lattice. TFT LCD displayer
2. 1200 programs , program can cycle
3. RS - 485 interface, with remote communication function.
4. SD card storage test data, about 7500 days (Sampling period: 5min)
5. operating language: Chinese or English

Recorder



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 Condenser fan overheating (air-cold)
- 1.5 Cooling circulating water pressure shortag (water-cold).

2. Waterway

- 2.1 Heating tube dry.
- 2.2 Abnormal of water supply.
- 2.3 Abnormal drainage.

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



Focusing on the innovation of environmental reliability test

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