

SANWOOD®

High low temperature test chamber



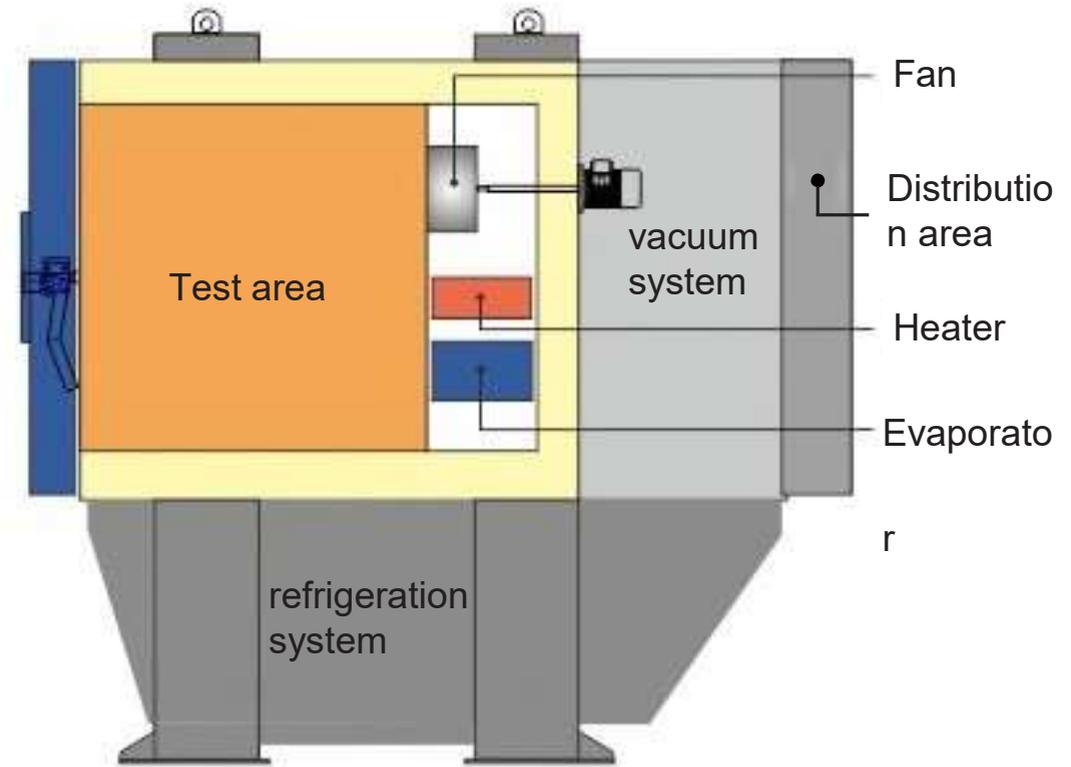
- CLIMATE SKY series has advanced features in terms of quality and reliability

- **Features**

1. High stability of full-color touch screen controller
2. Cable access port in the two-sided wall
3. Adjustable shelf with slide-out rails; Top quality casters with leveling feet; Three level of overheat protection; Super mute
4. Safety relay protects powered specimens
5. Dismountable operator panels for easy access

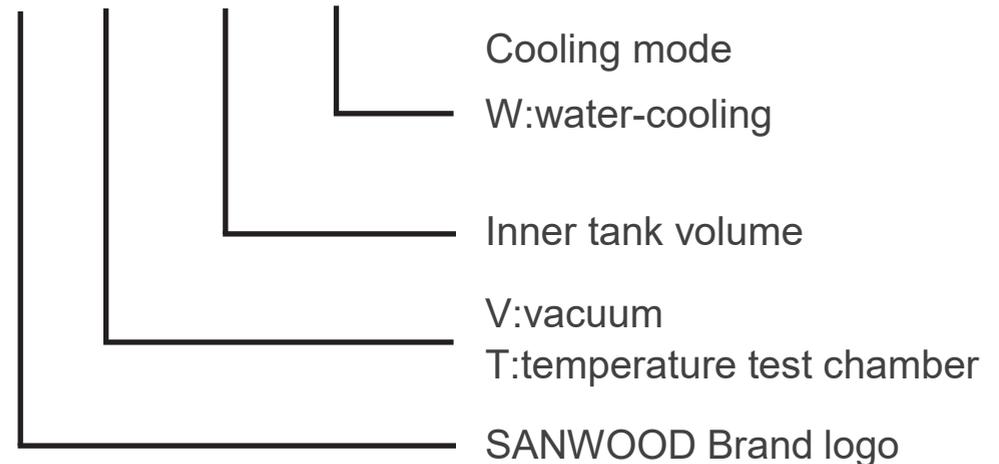
- **Range of application**

1. Vacuum-temperature test chambers enable reproducible tests of highly stressed components in the aviation industry.
2. Our chambers allow the simulation of extreme flight programmes in accordance with the relevant standards. They have been applied in the field of research, development, production and quality control.



Model description

SM-VT-0770-W



Model		VaT360-70W	VaT720-70W	VaT1000-70W	VaT2366-70W
volume (L)		360	720	1000	2366
Test space dimensions (mm)	W	600	800	1000	1300
	D	750	900	1000	1300
	H	800	1000	1000	1400
External dimensions (mm)	W	1000	1200	1400	1700
	D	1850	2000	2100	2350
	H	2360	2560	2560	2960
Pressure deviation		$\leq \pm 2$ kPa(≥ 40 Kpa) $\leq \pm 5$ %(2~40Kpa) $\leq \pm 0.1$ kPa(≤ 2 Kpa)			
Heating time(no load, NP)		+25C(NT)~+160C \leq 60MIN			
Cooling time(no load, NP)		+25C~+60C \leq 45min	" +25C~-60C \leq 60min	" +25C~-60C \leq 60min	" +25C~-60C \leq 90min
Decompression time (NP~1kPa) (min)		20	25	30	45
Specimen weight(kg/layer)		40	40	40	80
Cooling water consumption (t/h)		2			
Rated power(KvA)		15	20	20	28

● Main technical parameters

● Temperature range: -70~ +160 Deg C

Pressure range: NP~0.5kPa

● Pressure rise rate: ≤2kPa

Temperature fluctuation: ≤±0.5 °C

● Temperature uniformity: ≤2.0 °C

Temperature deviation: ≤±2.0 °C

● Temperature pressure means: BPHC equilibrium temperature pressure

Ambient temperature: +5~+35°C

● Power(V): AC 380±10%V 50HZ±0.5HZ

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

Standard configuration: Electrothermal film glass observation 1pcs;

Cable hole (Φ8"") 2 PCS; Sample rack 2 sets; Illuminator 1 pcs;

Sample power control terminal 1pcs; Pressure test interface 1;

manual charging valve DN25 ;

● Implementation standards

● GB/T5170.2-2008 Temperature test equipment

GB/T5170.10-2008 High/low temperature low pressure test equipment

● 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/T2423.21-2008 (IEC60068-2-13:1983) test M, low pressure test method

● GB/T2423.25-2008 (IEC60068-2-40:1976) test Z/BM, high temperature

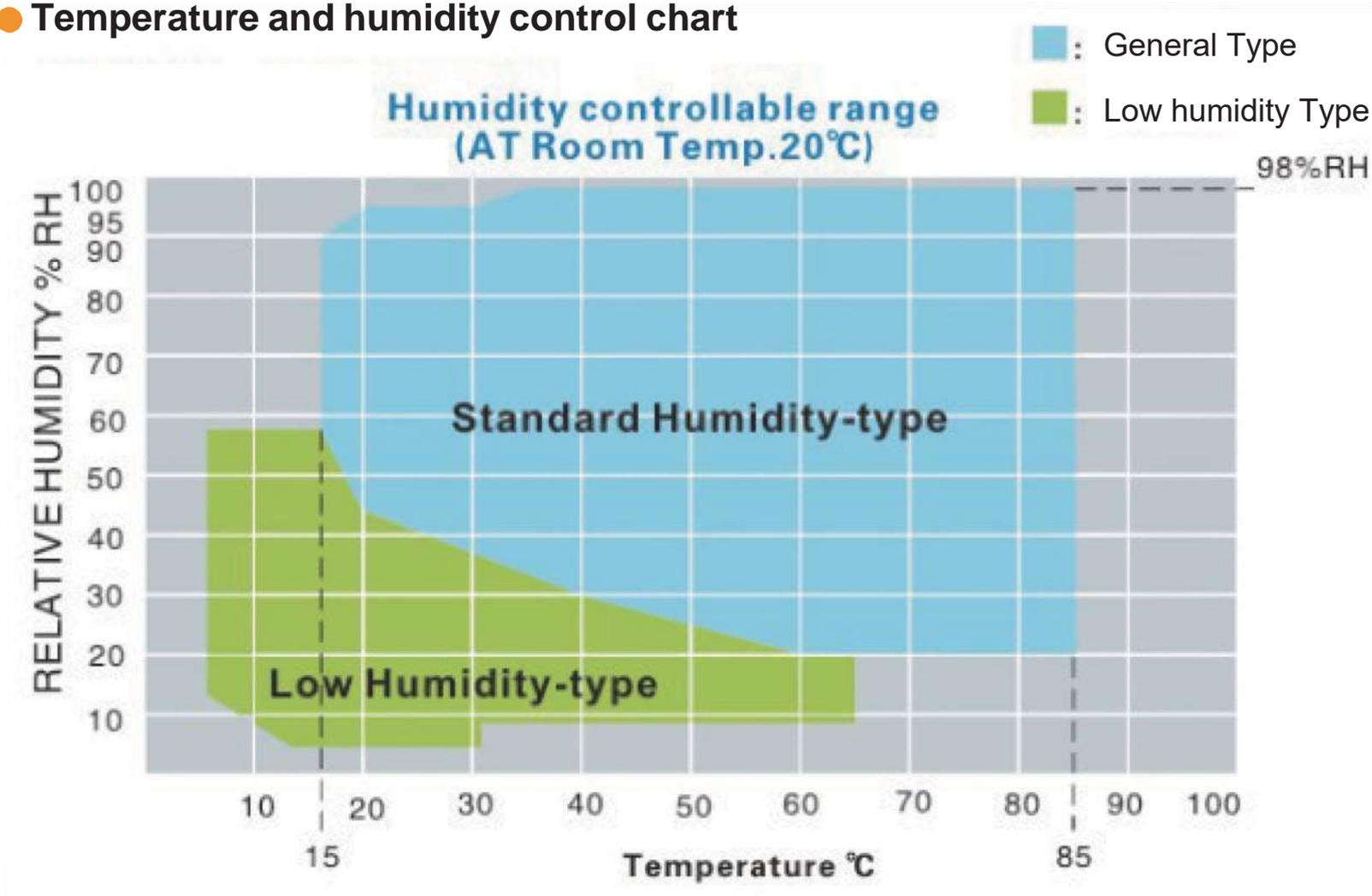
-/low pressure test

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

● GJB150.6-86(MIL-STD-810D) humidity altitude test

GJB360B-2009(MIL-STD-202G) method 105: low pressure test

● Temperature and humidity control chart



● Chamber design

1. External: Pressure: manganese steel, Others: double galvanized steel sheet, the surface spray-paint electrostatic processing
2. Internal: Stainless steel, SUS 304
3. Insulation: Special composite vacuum pressure on thermal insulation material
4. Seal: Toshiba high purity silicon rubber raw materials, effectively prevent aging
5. Heater: Nickel chrome alloy
6. Sample holder: 40kg/ layer * 2 layer
(standard configuration)
80kg/ layer ; 120kg/ layer
Total bearing \leq 240 kg (optional)

Additional cable ports



Φ 8", 2, with a blind flange plate

Viewing window



Window: Φ 12"

Door handle

Door handle: ≥ 90 kg heavy doors
and shut down easily

Vacuum pump

Direct air-cooled single-stage oil seal rotary vane vacuum
pump

Rapid decompression (options)

Executive standard GJB150.2a-
2009

progeamIII

75.2 kPa \sim 18.8 kPa ≤ 15 s



● Refrigeration design

1. Modular production, reliable quality, convenient 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.

Compressor



BITZER

Germany Bizter compressor (standard); low noise piston compressor



TECUMSEH from France

Pressure relay



America EMERSON or Denmark DANFOSS

Evaporator

Custom efficient fin type heat exchanger

Copper coil tube heat exchanger

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

2. Test samples of protection



- 2.1 Adjustable overtemperature protection.
- 2.2 Air conditioning channel over temperature limit.
- 2.3 controller set overtemperature shut down alarm.
- 2.4 sample terminal protection.

3. Electric control

- 3.1 The fan motor overheating.
- 3.2 Total power phase sequence and lack of phase protection.
- 3.3 Leakage protection.
- 3.4 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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