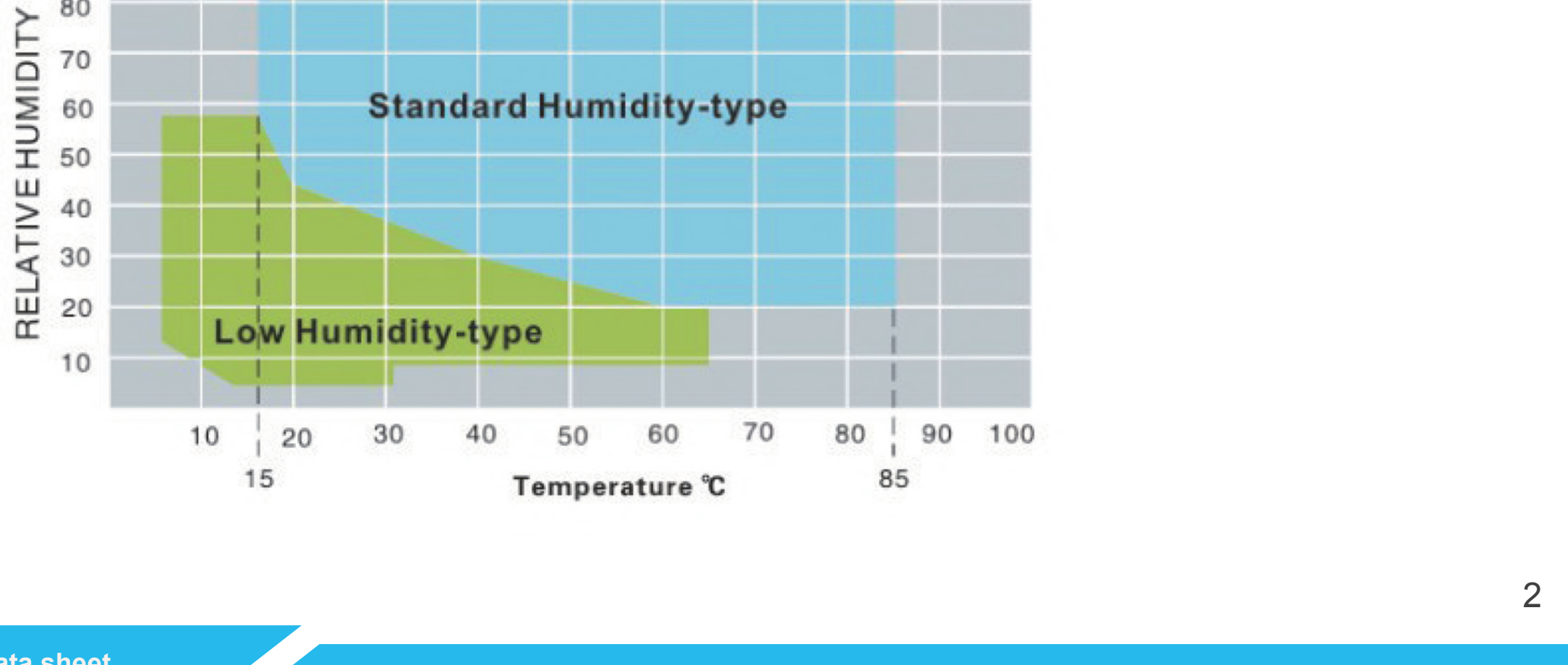


# Rapid temperature change (damp heat) vibration comprehensive test chamber



Technical specifications	
<b>Main technical parameters</b>	<b>Implementation standards</b>
Temperature range : -70~ +150 Deg C	GB/T5170.2-2008 Temperature test equipment
Up-and-down temperature range: -55~ +70 Deg C	GB/T5170.5-2008 Thermal Humidity test equipment (C)
Temperature fluctuation: ±0.5 C	GB/T2423.1-2008(IEC68-2-1) testing A, Low temperature test method
Temperature uniformity: ±2.0 C	GB/T2423.2-2008(IEC68-2-2) testing B, High temperature test method
Temperature deviation: ±±2.0 C	GB/T2423.3-2006(IEC68-2-3) testing Ca, Constant thermal humidity test (C)
Humidity deviation: ±±5.0%RH (over75%RH) ±±5.0%RH (lower than 75%RH)	GB/T2423.4-2008(IEC68-2-30) testing Db, Thermal humidity test (C)
Temperature and humidity control method: BTHC	GJB150.3A-2009(MIL-STD-810F-2000) High Temperature test
Ambient temperature: +5~+35 C	GJB150.4A-2009(MIL-STD-810F-2000) Low Temperature test
Power(V): AC 380±10%V 50HZ±0.5HZ	
Equipment noise: ≤75 dB(testing from one meter in front of the door)	
<b>Standard configuration:</b> Electrothermal film glass observation 1pcs; Cable hole (Φ100) 1 PCS; Sample rack 2 sets; Illuminator 1 pcs; Sample power control terminal 1pcs; (C), only C type equipment equipment with this.	



## Data sheet

Model	Unit	SM-KS-190-40-5	SM-KS-190-70-5	SM-KS-335-40-5	SM-KS-190-70-5	SM-KS-600-40-5	SM-KS-600-70-5	SM-KS-990-40-5	SM-KS-990-70-5	SM-KS-1540-40-5	SM-KS-1540-70-5
Volume	L	190		335		600		990		1540	
<b>Temperature Test Parameters</b>											
Temperature range	C	-40/+180	-70/+180	-40/+180	-70/+180	-40/+180	-70/+180	-40/+180	-70/+180	-40/+180	-70/+180
Temperature fluctuation	C	±0.1 C~±0.5 C									
Temperature uniformity	C	±0.5 C~±2.0 C									
Heating/cooling rate	%r.h	7.0/8.0	7.5/7.5	6.5/6.8	6.8/6.7	6.0/6.5	6.0/6.0	6.1/6.7	6.1/6.0	6.0/6.3	6.0/5.0
<b>Climate test parameters</b>											
Temperature range	C	+10~+95									
Humidity range	%r.h	10~98									
Dew point temperature	C	-3~94									
Humidity fluctuation	%r.h	±1.0~±3.0									
Temperature fluctuation	C	±1~±3									
Temperature uniformity	C	±0.5~±1.0									
Inner dimension	mm	580×450×750		580×765×750		800×800×950		1100×950×950		1100×1475×950	
External dimensions	mm	870×1280×1775		870×1595×1775		1090×1660×1995		1390×1855×1995		1390×2380×1995	
power		400V±10%,50HZ,3/N/PE									
rated power	KW	8	10	8	10	11	17	23	26	23	26
cooling method		Water-cooled									
chamber 10 C/min	Model	SM-KS-270-40-10	SM-KS-270-70-10	SM-KS-480-40-10	SM-KS-480-70-10	SM-KS-800-40-10	SM-KS-800-70-10	SM-KS-1300-40-10	SM-KS-1300-70-10		
chamber 15 C/min	Model	SM-KS-270-40-15	SM-KS-270-70-15	SM-KS-480-40-15	SM-KS-480-70-15	SM-KS-800-40-15	SM-KS-800-70-15	SM-KS-1300-40-15	SM-KS-1300-70-15		
volume	liter	270		480		800		1300			
<b>Temperature Test Parameters</b>											
Temperature range	Model	-40/+180	-70/+180	-40/+180	-70/+180	-40/+180	-70/+180	-40/+180	-70/+180		
Temperature fluctuation	C	±0.3~±0.8									
Temperature uniformity	C/min	±0.5~±2.0									
Heating/cooling rate	C/min	10.0/12.5	10.0/14.5	10.0/12.5	10.0/11.0	12.0/12.0	12.0/12.0	12.0/11.5	11.0/10.5		
Heating/cooling rate	C/min	16.0/16.0	17.0/18.0	16.0/18.0	17.0/15.0	16.0/18.0	16.0/15.5	16.0/17.0	16.0/14.5		
<b>Climate test parameters</b>											
temperature range	C	+10~+95									
Humidity range	%r.h	10~95									
Dew point temperature	C	-3~94									
Humidity fluctuation	%r.h	±1.0~±3.0									
Temperature fluctuation	C	±0.1~±0.5									
Temperature uniformity	C	±0.5~±1.0									
Inner dimension	mm	580×620×750		800×650×950		1100×800×920		1100×1300×920			
Width × depth × height	mm	870×1980×1775		1090×2480×2025		1390×2675×2020		1390×3200×2020			
External dimensions	mm	870×1980×1775		1090×2480×2025		1390×2675×2020		1390×3200×2020			
power Supply		400V±10%,50HZ,3/N/PE									
Power	KW	8/12	14/16	16/20	20/24	28/35	34/44	28/35	34/44		
cooling method		water cooling									

## SUPER STSAR series features

**CLIMATE STSAR series has advanced features in terms of uniformity of temperature variation**

**Customer first**

- Rapid change temperature test chamber realize that using the specimen temperature to control the slope. In order to maintain a fixed sample temperature change ratio, we adopt the sample temperature control technology, rapid temperature change technology and slope control technology and so on.
- Climate for you to open a new generation industry standards test chamber.

**Products Features**

- Large viewing angle and full heating observation window
- High stability full color touch screen
- Pin holes on both sides
- Sample holder capable of conveniently adjusting height
- Triple independent over temperature protection
- Safety sample terminal
- Disassemble operation panel for easy maintenance

SM-KS-190-40-5

- Temperature change rate
- The lowest temperature is -40 test are volume are 270L
- 480L,800L,1000L
- Rapid temperature change test chamber Code
- SANWOOD Brand logo

## Structure characteristics

**Structure design**

- Shell: Spray galvanized color steel plate, the surface electrostatic processing
- Liner: stainless steel SUS 304
- Thermal insulation layer: Polyurethane foam board and glass fiber
- Seal: Toshiba high purity silicon rubber raw materials, effectively prevent aging
- Heater: Ni Cr alloy electric heater
- Humidifier: Outer tube: SUS316 stainless steel seamless pipe Internal heating wire: Ni Cr alloy wire.
- Sample holder: 40kg/ layer \* 2 layer (standard configuration) 80kg/ layer ; 120kg/ layer Total bearing ≤ 240 kg (optional)

- Pin hole**: Φ100mm (standard equipment) Φ50mm Φ80mm Φ160mm (optional equipment)
- Pure water purifying device(C)**: Water purifier 75L
- Inner glass door (optional)**: Operation sample hole on the glass (No display on the picture)
- Super large observation window**: Observation window: Visual range: W400\*H600mm
- Compressed air drier (optional)**: In the experimental process, adsorption drying filter used to dehumidification to prevent the surface of the sample to condense.

**Refrigeration system**

**Refrigeration design**

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

- Mute cover**: Germany Bitzer compressor (standard)
- Solenoid valve**: Italy CASTEL R404A R23(-70) Ozone depletion index was 0 Denmark DANFOSS brand
- Pressure relay**: EMERSON DANFOSS
- Condenser**: Condenser evaporator
- evaporating pressure regulating valve**: thermal expansion valve
- Dry filter**: Dry filtering
- Condensing pressure regulating valve (water-cold)**: Condensing pressure regulating valve (water-cold)

**Control System**

- Controller**: 5.7" 640\*480 lattice. TFT LCD display
- Recorder (option)**: Large screen LED display
- The sample power control terminal**: When the equipment safety protection device works, the power supply of the electrified sample is controlled through the connecting terminal.
- Safety protection device**: 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 short (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 simple 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:

- 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, IEC6133, QCT/743, UN38.3, UL2054 Standard. And we have had a good cooperation with ATL, Sony, Sunwood, Desay, Samsung, BYD, Toyota, Aifon, Bus, Nissan, Guangdong Province entry-exit, Tsinghua University, Henan University, Chinese Academy of Sciences, Central South University Successfully.

## 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 win 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 competition, Sanwood thrived little by little and aims to become the leading brand in the safety and reliability environmental test equipment industry all over the world.

**SANWOOD**

Focusing on the innovation of environmental reliability test

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