



Danble Climate: Our Profile

Danble Climate is a leading experienced professional manufacturer, offer a full range of standard, R&D, custom-designed environmental testing equipments for the automotive, electronics, aerospace, telecommunications, new energy, medical industry and featuring advanced technical solutions to test and simulate all relevant climate testing conditions, both for R&D applications and for the production & quality control of components and complete products.

R&D strength: **16** core technical R& D personnel, who are covering various technical fields such as mechanical, cooling & heating, electronical engineering and testing. They utilize design software such as Solidworks, Auto CAD, and perform 3D modeling and system simulation.

Our products can aid reliability testing by subjecting products to real-world climate and wear extremes like temperature, humidity, altitude, vibration, and more. Danble is approved and in long-term strategic partnership with customers in the fields of new energy vehicles, ESS, electronics, third-party testing, such as: BYD, CHERY, HUAWEI, GCL, INOVANCE etc.,



Facility

7000m²+

Total Staff

80 +

Monthly Capacity

100+

New Energy Vehicle Solutions



E-Motor Test Chamber



EDS Test Chamber



Walk-in Test Chamber



Battery Test Chamber



Aging Chamber



Automotive Airbag Test Chamber

Photovoltaic Energy Storage Solutions



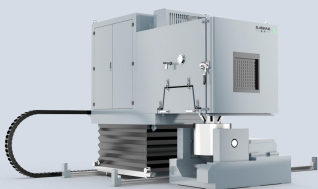
Temperature (Humidity)



Test Chamber Integrated with Charge & discharge



Two-Zone Thermal Shock Chamber



Temp/Humid/Vibration Chamber



Photovoltaic Module Test



1 to 4 Test Chamber

Electronics & Semiconductor Solutions



Temp(Humidity) Test Chamber



Rapid Thermal Change Chamber



Two-zone Thermal Shock Chamber



Three-zone Thermal Shock Chamber



Side by Side Test Chamber



Three-Zone Test Chamber



Constant Temperature (Humidity) Test Chamber

This series of test chamber can simulate various extreme temperature and humidity environments to test products. It has wide temperature and humidity range and high control accuracy and It can meet the GB and IEC related test standards.



Wide Temperture Range



Remote Support



Security Protection



Great Peformance



Constant Temperature (Humidity) Test Chamber

Specification Sheet(Customized is available)

Type	DBH-135	DBH-252	DBH-504	DBH-720	DBH-960	DBH-1000
Internal size (W*D*H mm)	500×450×600	600×600×700	800×700×900	900×800×1000	1200×800×1000	1000×1000×1000
External Size (W*D*H mm)	780×1500×1720	900×1780×1750	1080×1880×1870	1180×1980×1970	1380×1980×1970	1350×2200×1970
Temperature range	-40℃~+150℃ or -70℃~+150℃					
Humidity range	10~98%RH					
Temperature Uniformity	≤2℃					
Temperature Fluctuation	≤±0.5℃					
Heating Rate	1~3℃/min					
Cooling Rate	0.7~1.2 °C/min					
Humidity Deviation	±3.0%RH (> 75%RH) ; ±5.0%RH (≤75%RH)					
View-window Size	W300×H400 (mm)					
Test Hole	φ50/100mm×2					
Refrigerant	R404A、R23					
Cooling Way	Water-cooling or Air-cooling					
Power	AC380V±10% 50Hz±10% Three-phase, five wire system					
Standard Reference	GB/T 2423.1;GB/T 2423.2;GB/T 2423.3;GB/T 2423.4;GB/T 5170.2; GB/T 5170.5; GB/T 11158; GB/T 10589; GB/T 10592; GB/T 10586; IEC60068-3-5					



Multi-layer Constant Temperature (Humidity) Test Chamber

This series have an independent cooling system and control system, which can be tested under different temperature conditions at the same time, and is widely used in the performance evaluation of new energy batteries, aerospace electronics, tripartite testing and other fields.



1

Cost-effective single-chamber test space

2

More efficient site use

3

Independent temperature control system

4

Meet the test requirements of multiple batches and small quantities



Multi-layer Constant Temperature (Humidity) Test Chamber

Specification Sheet(Customized is available)

Type	DBH(2-3)-B253	DBH(2-3)-B390	DBH(2-3)-B455	DBH(2-3)-B560	DBH(2-3)-B1050
Internal size (W*D*H mm)	650×600×650	1000×600×650	1000×650×700	1000×800×700	1500×1000×7000
External Size (W*D*H mm)	Two-layer 850×1958×1950 Three-layer 1200×1850×2800	Two-layer 1200×1958×1950 Three-layer 1200×1958×2800	Two-layer 1200×2008×2050	Two-layer 1200×2158×2050	Two-layer 1700×2250×2100
Temperature range	-40℃~+150℃				
Humidity range	10~98%RH				
Heating Rate	1~3℃/min (average)				
Cooling Rate	1℃/min(average)				
Temperature Uniformity	≤2℃				
Temperature Deviation	≤±2℃				
Temperature Fluctuation	≤±0.5℃				
Humidity Accuracy	0.1%RH				
Humidity Deviation	±3.0%RH (> 75%RH) ; ±5.0%RH (≤75%RH)				
Refrigerant	R404A、R23				
Window Size	W300×H460 (mm)				
Power	AC380V±10% 50Hz±10% Three-phase, five wire system				
Standard Reference	GB/T 2423.1;GB/T 2423.2;GB/T 2423.3;GB/T 2423.4;GB/T 5170.2; GB/T 5170.5; GB/T 11158; GB/T 10589; GB/T 10592; GB/T 10586; IEC60068-3-5				

1 to 2 or 4 Temperature (Humidity) Test Chamber

- Two or Four fully independent test chambers with synchronized control, enabling parallel testing under various environmental conditions.
- Low energy consumption with one total cooling system, reducing power usage by up to **35%**
- Capable of simultaneously testing four independent samples, significantly improving efficiency.



- **Cost Efficiency**
- **Space-Saving**
- **High-throughput testing**

Internal Volume (L)	253
Internal size(mm)	650*600*650
Temp Range	-40°C~+150°C
Heating Rate	1~3°C/min
Cooling Rate	0.7~1°C/min
● Customised is available.	

Temperature Test Chamber Integrated with Charge & Discharge

This Chamber is engineered to evaluate the performance and safety of energy storage devices (e.g., lithium-ion batteries, supercapacitors) under extreme thermal conditions. It integrates temperature cycling (-70°C to $+150^{\circ}\text{C}$) with bidirectional power delivery (charging/discharging), enabling comprehensive validation of electrochemical systems in real-world operational scenarios



High efficiency & energy saving



Strong Versatility



High-load Uniformity



High fire safety level



Temperature and Charge-discharge Integrated Test Chamber

Specification Sheet(Customized is available)

Name		Parameters
Temperature Control Unit	Temperature range	-40°C to +120°C
	Temp Fluctuation	$\leq \pm 0.5^{\circ}\text{C}$
	Temperature Accuracy	0.1°C
	Temperature Uniformity	-30°C to +85°C $\leq 1.5^{\circ}\text{C}$, others $\leq 2^{\circ}\text{C}$
	Temperature Deviation	-30°C to +85°C $\leq 1.5^{\circ}\text{C}$, others $\leq 2^{\circ}\text{C}$
	Humidity Fluctuation	$\leq \pm 1^{\circ}\text{C}$ (-40°C to 100°C)
	Load Capacity	Under the condition of -20°C, the single-layer box can be equipped with 12 3.7V60Ah cell thermal load and maintain stability.
Electronica Control Unit	Charge-discharge Channels	36
	Channel parallel	Support channel parallel, improve the current range($\pm 120\text{A}$)
	Main Channel Power	Single channel continuous operation power 300W
	Power Uniformity	$\pm 0.1\%\text{FS}$
	Auxiliary Temperature Channels	144, Each main channel equipped with 4 temperature monitoring
	Electricity Control Accuracy	0.03%
	Voltage Control Accuracy	0.03%
	Test Accuracy	$\pm 0.5^{\circ}\text{C}$
	Energy Consumption Mode	Regenerative Energy Feedback (DC Bus Efficiency $\geq 75\%$)
Noise	$\leq 69\text{dB}$	
Test Hole	50mm×2,100mm×2,150mm×2	
Power	AC380V $\pm 10\%$ 50Hz $\pm 10\%$ Three-phase, five wire system	
Standard Reference	GB/T 2423.1;GB/T 2423.2;GB/T 2423.3;GB/T 2423.4;GB/T 5170.2; GB/T 5170.5; GB/T 11158; GB/T 10589; GB/T 10592; GB/T 10586; IEC60068-3-5	

Rapid-rate Thermal Test Chamber

This series simulates extreme thermal environments(quick changes 15°C/min ramp rate in specimen temperature and and 30°C/min ramp rate for air temperature(temperature heat up average)) for evaluating the performance and reliability of electronic components, materials, and batteries under rapid temperature shifts test requiring. It covers various applications from GB, IEC standards to screening and features web application allows operator to check the status of the chamber remotely using a web browser.



High Efficiency



Precision and Stability



High Temp Change Range



Compact Structure



Multi-layer Constant Temperature (Humidity) Test Chamber

Specification Sheet(Customized is available)

Type	DBT-252-K(L)	DBT-336-K(L)	DBT-504-K(L)	DBT-720-K(L)	DBT-1000-K(L)
Internal size (W*D*H mm)	600×600×700	700×600×800	800×700×900	1000×800×900	1250×800×1000
External Size (W*D*H mm)	870×1800×1750	970×1900×1800	1080×2000×1870	1280×2100×1870	1600×2100×1970
Temperature Range	-70℃~ +170℃				
Rapid Temp Range	-40℃~+85℃				
Humidity range	10~98%RH (5% can be customized)				
Temp Uniformity	≤2℃(-40℃~100℃) others ≤3℃				
Heating Rate	5℃/min、10℃/min、15℃/min、20℃/min、25℃/min、30℃/min (average)				
Cooling Rate	5℃/min、10℃/min、15℃/min(Linear)				
Temperature Deviation	≤±2℃				
Temp Fluctuation	≤±0.5℃				
Humidity Deviation	±3.0%RH (> 75%RH) ; ±5.0%RH (≤75%RH)				
Refrigerant	R404A、R23				
Cooling Way	Water-cooling				
Power	AC380V±10% 50Hz±10% Three-phase, five wire system				
Standard Reference	GB/T 2423.1;GB/T 2423.2;GB/T 2423.3;GB/T 2423.4;GB/T 5170.2; GB/T 5170.5; GB/T 11158; GB/T 10589; GB/T 10592; GB/T 10586; IEC60068-3-5				



Two-zone Thermal Shock Test Chamber

This series adopts a structure of cold and hot zones and utilizes a bucket rapidly transforming specimens to the test area. It allows endurance tests of over 1,000 cycles to be run without defrosting. This shock mode reduces thermal load during cold and hot impact and shortens temperature recovery time to the greatest extent.



Transfer time < 10s



Web-in Application



Ultra-low defrosting
frequency



Compact Structure



Two-zone Thermal Shock Test Chamber

Specification Sheet(Customized is available)

Type	DBST-48	DBST-80	DBST-150	DBST-245
Internal size (W*D*H mm)	400×400×300	500×400×400	600×500×500	700×700×500
External Size (W*D*H mm) Up-down	1400×2550×1850	1500×2550×2050	1600×2650×2250	1700×2850×2250
External Size (W*D*H mm) Left-right	2300×1500×2100	2500×1500×2200	2700×1700×2300	2900×1900×2300
Temperature Shock Range	High-temperature: 60°C~+150°C; Low-temperature: -10°C~-40°C、-10°C~-55°C			
Pre-heating Zone Heating Rate	≥3°C/min			
Pre-cooling Zone cooling Rate	≥1°C/min			
Pre-heating Zone Temp Range	60°C~+180°C			
Temperature Fluctuation	≤±0.5°C			
Temperature Deviation	≤±2°C			
Temperature Uniformity	≤2°C			
Cooling Way	Water-cooling			
Basket Transfer Time	≤10s			
Recovery Time	≤5 mins			
Dwell Time	≥30 mins			
Standard Reference	JESD22-A106B; GJB-150-A; MIL-STD-810G; MIL-STD-202G			



Three-zone Thermal Shock Test Chamber

This series utilizes a three-chamber structure with pneumatic valve switching to transfer the test zone between cold/heat zones, achieving rapid thermal shock testing while ensuring no mechanical shock to the specimen.



Transfer time < 5s



Web-in Application



Ultra-low defrosting
frequency



Compact Structure



Three-zone Thermal Shock Test Chamber

Specifiction Sheet(Customized is available)

Type	DBST-48	DBST-80	DBST-150	DBST-210
Internal size (W*D*H mm)	400×300×400	400×400×500	600×500×500	700×600×500
External Size (W*D*H mm)	1400×1550×1950	1400×1650×2050	1600×1750×2050	1700×1850×2050
Temperature Shock Range	High-temperature: 60℃~+150℃; Low-temeprature: -10℃~-40℃、-10℃~-55℃			
Pre-heating Zone Heating Rate	≥3℃/min			
Pre-cooling Zone cooling Rate	≥1℃/min			
Pre-heating Zone Temp Range	60℃~+180℃			
Temperature Uniformity	≤2℃			
Temperature Fluctuation	≤±0.5℃			
Temperature Deviation	≤±2℃			
Cooling Way	Water-cooling			
Basket Transfer Time	≤5s			
Recovery Time	≤5 min			
Dwell Time	≥30 min			
Standard Reference	JESD22-A106B; GJB-150-A; MIL-STD-810G; MIL-STD-202G			



Walk-in Temperature Test Chamber

This type is suitable for comprehensive environmental testing of entire machines or large components, including low-temperature, high-temperature, thermal cycling (high/low-temperature transitions), constant humidity, and alternating thermal-humidity cycling tests. It features customizable dimensions and functions to meet specific client requirements, utilizing a modular skid design for aesthetic appearance and scientific layout optimization



Large-Scale and Accessible Design Easy for assemble & disassemble

Multi-Environmental Simulation Capabilities

Advanced Safety Features High efficiency & stability

Excellent Load Performance and Scientific Wind Field Design



Walk-in Test Chamber

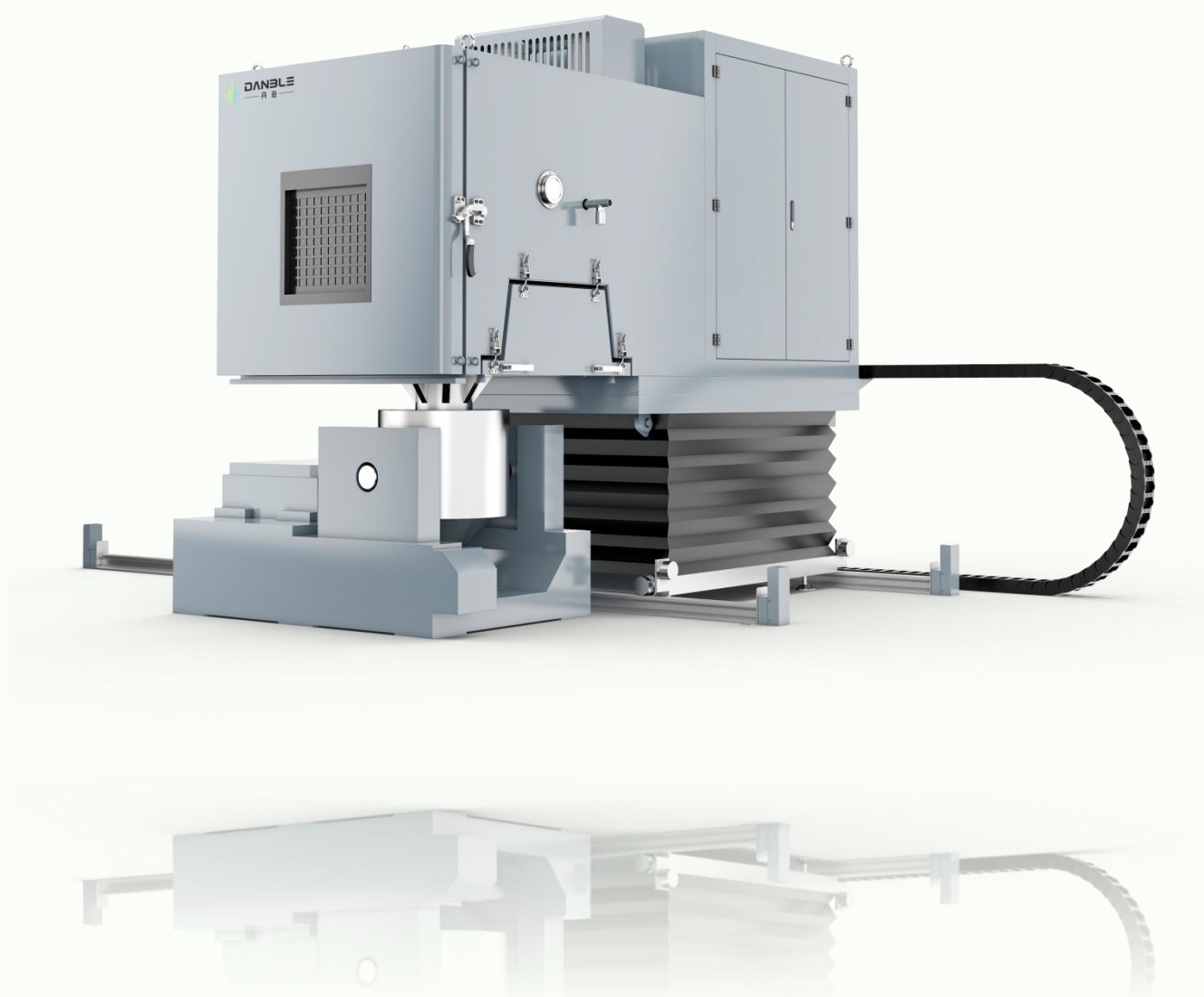
Specification Sheet(Customized is available)

Type	DBWH-8	DBWH-10	DBWH-12	DBWH-18	DBWH-24
Internal Volume	8m ³	10m ³	12m ³	18m ³	24m ³
Internal size (W*D*H mm)	2000×2000×2000	2500×2000×2000	3000×2000×2000	3000×3000×2000	4000×3000×2000
External Size (W*D*H mm)	2200×3500×2300	2700×3500×2300	3200×3500×2300	3200×4500×2300	4200×4500×2300
Temperature Range	-40℃~+150℃				
Humidity Range	20%~95%RH				
Heating Rate	1~5℃/min				
Cooling Rate	1~5℃/min				
Humidity Range	20%RH~98%RH				
Temperature Fluctuation	≤±0.5℃				
Temperature Uniformity	≤2℃(-40℃~+100℃)				
Temperature Deviation	≤±2℃				
Humidity Deviation	±3%RH (> 75%RH); ±5%RH(≤75%RH)				
Temperature Resolution	≤0.1℃				
Cooling Method	Water-cooling				
Standard Reference	GB/T 2423.1;GB/T 2423.2;GB/T 2423.3;GB/T 2423.4;GB/T 5170.2; GB/T 5170.5; GB/T 11158; GB/T 10589; GB/T 10592; GB/T 10586; IEC60068-3-5				



Temp/Humid/Vibration Test Chamber

This test chamber is an advanced environmental simulation device integrating temperature, humidity, and vibration stress factors. It replicates complex real-world environmental conditions to evaluate the reliability, durability, and performance of products, components, or materials across industries



- Large-Scale and Accessible Design Easy for assemble & disassemble
- Multi-Environmental Simulation Capabilities
- Advanced Safety Features High efficiency & stability
- Excellent Load Performance and Scientific Wind Field Design



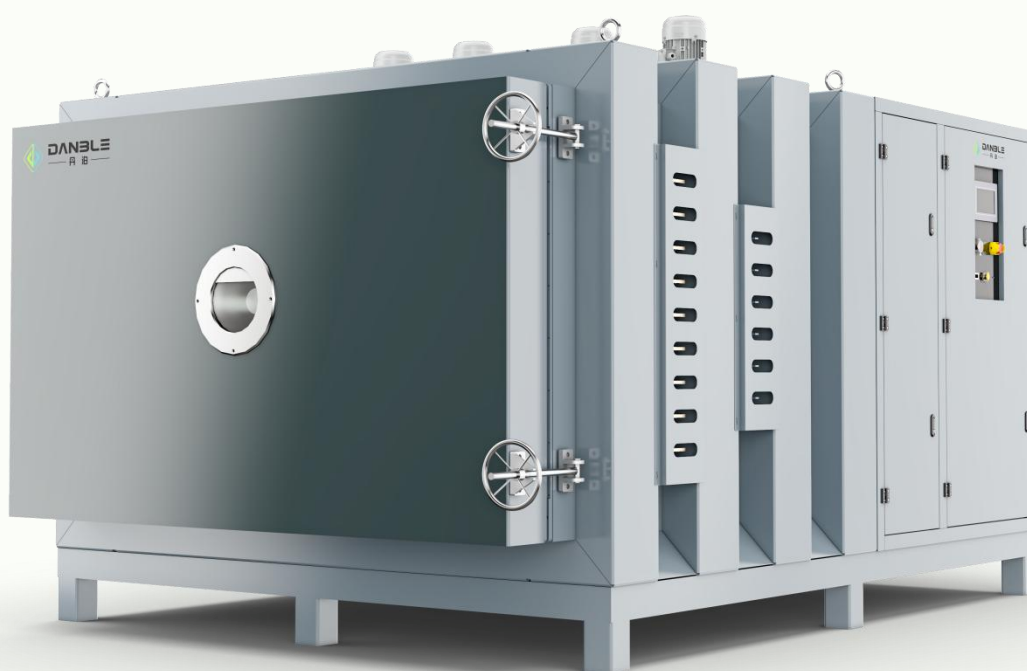
Temp/Humi/Vibration Test Chamber

Specification Sheet(Customized is available)

Type	DBSH-1000	DBSH-1700	DBSH-3375
Internal size (W*D*H mm)	1000×1000×1000	1200×1200×1200	1500×1500×1500
External Size (W*D*H mm)	1270×2700×1200	1470×2900×1400	1770×3400×1700
Temperature Range	-70℃ ~ + 150℃		
Point To Point Heating/Cooling Rate	1℃/min、 3℃/min、 5℃/min		
Acceptance Standard	-40℃~+150℃		
Humidity Range	10%RH~98%RH		
Temperature Fluctuation	≤±0.5℃		
Temperature Uniformity	≤2℃		
Temperature Deviation	≤±2℃		
Humidity Resolution	0.1%RH		
Humidity Deviation	±3%RH (> 75%RH) , ±5%RH (≤75%RH)		
Temperature Deviating	≤2℃		
Cooling Method	Water-cooling		
Chamber Moving Mechanism	Portal Frame or X Type Electric Lifting Platform		
Internal Material	SUS304		
External Material	SPCC+Power Coating		
Insulation Material	Glass Wool+ Phenolic Foam Board/ Rock Wool+ Phenolic Foam Board		
Refrigerant	R404A、 R23		
Standard Reference	GB/T 2423.1;GB/T 2423.2;GB/T 2423.3;GB/T 2423.4;GB/T 5170.2; GB/T 5170.5; GB/T 11158; GB/T 10589; GB/T 10592; GB/T 10586; IEC60068-3-5		

Altitude Test Chamber

This chamber is designed to enable users to conduct temperature and altitude condition tests within a combined testing chamber, creating multiple simultaneous conditions to meet diverse testing requirements. This equipment is crucial for the testing applications of satellites, rockets, airplanes, or helicopters, as modern aircraft experience significant pressure during operation



-  Capable of simultaneously or separately simulating low pressure (simulating high altitudes or outer space) and extreme temperatures (-40°C to 150°C)
-  Uses high-quality sealing materials and vacuum pumps to achieve pressures as low as 4 kPa, mimicking high-altitude or vacuum environments
-  Includes over-temperature, over-pressure, and vacuum protection mechanisms, along with alarm systems to ensure operator and equipment safety
-  Adaptable for various industries (aerospace, electronics, automotive) and can be customized to meet specific testing standards (e.g., GB/T 10590)



Temp/Humi/Vibration Test Chamber

Specification Sheet(Customized is available)

Type	DBTL-150	DBTL-252	DBTL-512	DBTL-1000
Internal size (W*D*H mm)	500×500×600	600×600×700	800×800×800	1000×1000×1000
External Size (W*D*H mm)	870×1700×1750	970×1800×1850	1170×2000×1950	1470×2200×2150
Altro-Low Temperature	A: 0℃ B: -20℃ C:-30℃ D: -40℃ E: -55℃ F: -70℃			
Humidity Range	20%RH~95%RH (standard atmospheric pressure)			
Heating Rate	1~3℃/min (standard atmospheric pressure)			
Cooling Rate	0.7~1℃/min (standard atmospheric pressure)			
Temperature Fluctuation	≤±0.5℃ (standard atmospheric pressure)			
Temperature Uniformity	≤2℃ (standard atmospheric pressure)			
Temperature Resolution	0.1℃			
Pressure Reduction Rate	≤15s (75.2kPa~18.8kPa) ≤30min(std atmospheric perssure~1kPa)			
Pressure-resistance Method	Internal pressure resistance			
Door Sealing	Double-layer O-shaped solid silicone rubber sealing strip			
Insulation Material	Vacuum Insulation Composite Pressure-bearing Panel			
Cooling Method	Water Cooling			
Internal Material	SUS304			
External Material	SPCC+Power Coating			
Insulation Material	Glass Wool+ Phenolic Foam Board/ Rock Wool+ Phenolic Foam Board			
Refrigerant	R404A、R23			
Standard Reference	GB/T 2423.1;GB/T 2423.2;GB/T 2423.3;GB/T 2423.4;GB/T 5170.2; GB/T 5170.5; GB/T 11158; GB/T 10589; GB/T 10592; GB/T 10586; IEC60068-3-5			

E-motor & EDS Test Chamber

This chamber can simulate prolonged operation and various load cycles on drive motors, evaluating the reliability and durability of drive electronics through realistic environmental and usage scenarios. This includes assessing the impact of temperature on motor components and the effects of cyclic loads on motor lifespan, ultimately aiding manufacturers in determining product lifespan, reliability, and optimization



E-Motor Performance Test Standard

IEC 60068-2-78/IEC60068-2-38

GB/T 18488.2-2015/LV 124

EDS Performance Test Standard

IEC 60068-2-78/IEC60068-2-38

GB/T 18488.2-2015/LV 124



Others



Xenon Lamp Test Chamber



Slat Spray Test Chamber



Dust-Proof Test Chamber



Rain Test Chamber
