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GWS®

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广州五所环境仪器有限公司
Guangzhou-GWS Environmental Equipment Co.,Ltd

SHARING THE PERFECTION

匠行于智

Contents

History

1955 In 1955, GWS started the earliest reliability research in China.

1958 In 1958, Approved by the state, GWS set up the project to develop the environmental test equipment initially.

1959 In 1959, the first batch of environmental test equipment was successfully developed.

1963 In 1963, the high precision heat chamber was successfully developed and in mass manufacturing.

1995 In 1995, the company was set up as the Sino-Japan joint venture.

2000 In 2000, the 26m³ Highly-comprehensive temperature and humidity chamber was successfully developed.

2002 In 2002, the first set of the biggest combined, multi-functional comprehension environment test system was successfully manufactured (40m³ three comprehensive laboratory)

2003 In 2003, the annual sales volume firstly exceeded 100 million RMB.

2012 In 2012, GWS purchased the 50% shares of Guangzhou ESPEC Environmental Equipment Co., Ltd.

2013

2014 In 2014, the large 600m³ drive-in multi-functional environmental laboratory was successfully developed.

2016 In 2016, GWS developed the first large volume test equipment with rapid depr -essurization, explosive decompression and low pressure function.

2018 In 2018,new series of GWS reliablity test equipment has been launched — Two Axis Turntable Chamber

2022 GWS Test Instrument (Suzhou) Co., LTD was established.

Future In the future, GWS will uphold the rigorous work attitude, play the spirit of artisans, and adhere to the concept of user-centric R&D and service. GWS will constantly improve the product quality and continue to develop the highest level of product in the environmental test industry.

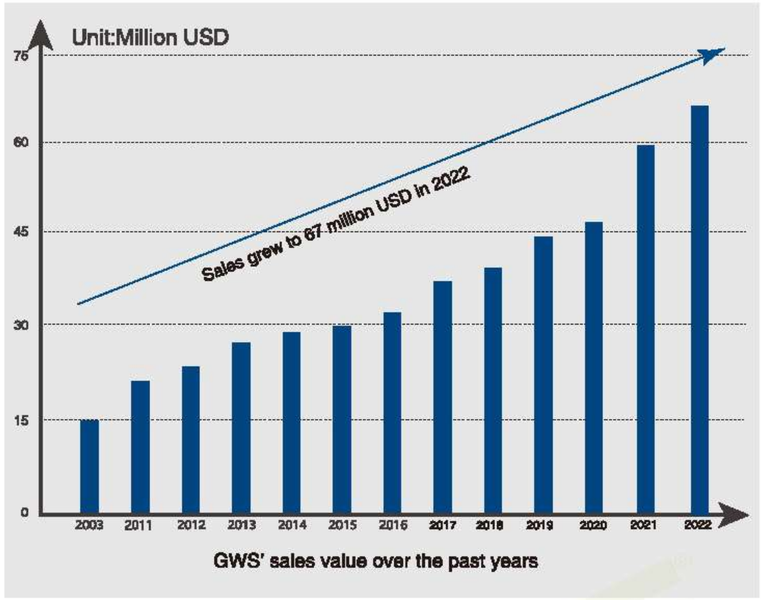
More surprise, more recognition.

GWS is a wholly state-owned high-tech enterprise has been focusing on R&D, manufacturing, sales and service of environmental test equipment in reliability and environmental adaptability.

GWS is the first environmental test equipment manufacturer in China. The original generation of experts developed and manufactured the first batch of Chinese heat chambers, sea fog chambers, industrial gas chambers in 1985. From 1995 to 2012, GWS had cooperated with the foreign enterprise for 17 years. In November 2012, GWS acquired the 50% shares in the joint venture company and use the new "GWS" brand.

Achievement

GWS has been committed to providing world's advanced, domestic first-class, highly reliable and qualified product and service for users since its establishment. The sales value of GWS has exceeded that of domestic peers over the past years. Export value increases yearly. GWS has a reputation among both abroad and domestic users. Products are widely applied in the industries like electronics, machinery, aerospace, shipbuilding, weapon, automobile, light, chemical and pharmaceuticals.



GWS' sales value over the past years

Performance arises from reputation.
Reputation arises from user's recognition.

Honor

GWS has been qualified for ISO9001, ISO4001, QHSAS18001 and continuously improving the internal management such as introducing PDM (Product Data Management System), PLM (Product Life Cycle Management), K/3 ERP (Enterprise Resource Planning Management) and CRM (Customer Relationship Management System). The modern enterprise information management structure matching "two fusion" standard is formed which includes sales, design, manufacture,logistics and service.

GWS actively participates in various industry promotion activities while continuously improving its strength. GWS has been honored with the Outstanding Credit Demonstration Unit, the Manufacturing Association Governing Unit and the Industrial Development and Promotion Unit for many times.

Status


Workshop Scene


Murata CNC Punching Machine

Currently, GWS has two production bases for climate and environmental testing equipment (Huadu production base and Zengcheng production base) and one production base for vibration testing equipment (Suzhou production base). GWS has high-quality service capabilities and rich service experience to meet customer's requirements. GWS also provides targeted and professional customized solutions to customers. While meeting the diverse needs of customers, GWS also enhances projects value for customers. Over these years, numerous customized service and solutions have been highly recognized by our customers.

Huadu Factory covers an area of 24000m ² and the plant area is 10800m ². This factory is equipped with a complete production line of sheet metal, spraying, cold assembling, welding, final assembly, debugging, constant inspection, packaging, etc., to ensure that the quality of each process in the production line is controllable. Huadu Factory base is also equipped with advanced computer-aided manufacturing and production techniques, it has more than ten AMADA sheet metal CNC machines, providing assurance for high-quality customized services.

Zengcheng Factory (Phase I) covers an area of 6000m ² and the building area is 12000m ². This factory has advanced bending machining centers, CNC centers, integrating flexible automated production lines, CNC machine tools, intelligent design. It has efficient and flexible manufacturing capabilities in multiple varieties and small batch flexible production. Zengcheng Factory (Phase I) has been established and successfully used for production since October 2021.

Suzhou Factory possesses intellectual property rights in key and core technologies for vibration testing. It has the ability to develop standard and non-standard customized equipment, air-cooled and water-cooled equipment, vertical and horizontal vibration testing equipment ranging from 1kN (100Kg) to 600kN (60T).

GWS has been implementing the people-oriented talent strategy. Currently, GWS has more than 400 employees, including more than 200 technicians and a large number of experienced production personnel. In the meanwhile, GWS has also expanding and developing the reserve of talents to promote the progress of company and employees.


CNC Bending Machine Center


Robot Welding


Workshop Scene


Workshop Scene


Workshop Scene


Workshop Scene

Future

The second phase of Zengcheng Factory with an estimated area of 40000 meters ² is under planning. Relying on the strategic positioning of advanced manufacturing industry in Zengcheng District and the construction advantages of Dawan District, Zengcheng New Area will be built into a world-class R&D and production base.

In the future, GWS will continue to implement a high-quality operation mode with three parallel producing lines of Huadu Factory, Zengcheng Factory, and Suzhou Factory. GWS will utilize mature networked, intelligent, and digital manufacturing capabilities to achieve dual improvement in both quality and quantity. GWS will also continue to expanding more products, and promoting the high-quality, safe, and reliable environmental testing equipment and mechanical testing equipment to our worldwide users.

OUR PRODUCTS

PH(T) Series-Horizontal Type Oven

The newly upgraded 7-inch big screen.
Stable and reliable performance, low failure rate, long service life.
Can be fixed value / program operation.
Air supply cycle in horizontal type.
Great thermal insulation of chamber body.
Anaerobism, pressure relief and other functions are optional to meet different needs of sample test.
Applicable test type: High temperature test.

Main technical parameters (ambient temperature +25℃, no test sample, no ventilation)

Model		PH*T				PHH*T				IPH*T				IPHH*T				SPH				SPHH				STPH*T		
		101	201	301	401	101	201	301	401	101	201	301	401	101	201	301	401	101	201	301	401	101	201	301	401	101	201	301
Norminal interior volume(L)		91	216	512	1000	91	216	512	1000	91	216	512	1000	91	216	512	1000	91	216	512	1000	91	216	512	1000	91	216	512
Temperature range		(ambient temperature+20)℃~+200℃				(ambient temperature+20)℃~+300℃				(ambient temperature+20)℃~+200℃				(ambient temperature+20)℃~+300℃				(ambient temperature+20)℃~+200℃				(ambient temperature+20)℃~+300℃				(ambient temperature+20)℃~+500℃		
Temperature fluctuation	≤100℃	0.4℃		0.4℃		0.4℃		0.4℃		0.4℃		0.4℃		0.4℃		0.4℃		0.4℃		0.4℃		0.4℃		0.4℃				
	≤200℃			0.8℃				0.8℃				0.8℃				0.8℃				0.8℃				0.8℃				
	≤300℃	—				0.8℃		1.2℃		—				0.8℃		1.2℃		—				0.8℃		1.2℃		1℃		
	≤400℃	—												—														
	≤500℃																											
Temperature deviation	≤100℃	±1.5℃		±2.0℃		±1.5℃		±1.5℃	±2.0℃	±1.5℃			±2.0℃	±1.5℃		±1.5℃	±2.0℃	±1.5℃			±2.0℃	±1.5℃		±1.5℃	±2.0℃	±2.0℃		±1.5℃
	≤200℃	±2.0℃				±2.0℃		±2.0℃		±2.0℃				±2.0℃		±2.0℃		±2.0℃				±2.0℃		±2.0℃				±2.0℃
	≤300℃	—				±3.0℃		±4.0℃		—				±3.0℃		±4.0℃		—				±3.0℃		±4.0℃		±3.0℃		
	≤400℃	—												—												±5.0℃		
	≤500℃																									±6.0℃		
Temperature heat-up rate		≤40min		≤60min		≤60min		≤70min		≤40min		≤60min	≤80min	≤60min		≤70min	≤80min	≤60min		≤75min		≤75min		≤85min		≤90min		≤100min
Inside dimension (mm)	W	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800
	H	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800
	D	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800	1000	450	600	800
Outside dimension (protrusion excluded)(mm)	W	1040	1190	1500	1730	1040	1190	1500	1730	1040	1190	1500	1730	1040	1190	1500	1730	1040	1190	1500	1730	1040	1190	1500	1730	1190	1340	1650
	H	820	970	1210	1480	820	970	1210	1480	820	970	1210	1480	820	970	1210	1480	1260	1370	1715	1800	1260	1370	1715	1800	1110	1260	1500
	D	635	785	1065	1275	635	785	1065	1275	635	785	1065	1275	635	785	1065	1275	635	785	1065	1775	635	785	1065	1775	810	960	1225
Applicable power supply		220V(single phase+ protective grounding wire)		380V(three phases four wires+protective grounding wire)		220V(single phase+ protective grounding wire)		380V(three phases four wires+protective grounding wire)		220V(single phase+ protective grounding wire)		380V(three phases four wires+protective grounding wire)		220V(single phase+ protective grounding wire)		380V(three phases four wires+protective grounding wire)		220V(single phase+ protective grounding wire)		380V(three phases four wires+protective grounding wire)		220V(single phase+ protective grounding wire)		380V(three phases four wires+protective grounding wire)		380V(three phases four wires+protective grounding wire)		
Power capacity（KW）		2	2.7	5	6.5	2.7	3.8	6.5	9.5	2	2.7	5	6.5	2.7	3.8	6.5	9.5	2	2.7	5	6.5	2.7	3.8	6.5	9.5	8.1	11.9	14
Characteristic		—								Anaerobic				Anaerobic				With pressure relief safety door								500℃ ultra high temperature		

Standard configuration

Sample shelf x 2

Cable port(Φ50mm), with white hard rubber plug and port cover for the model PH, only port cover for the model PHH

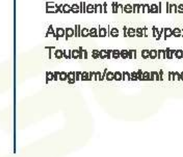
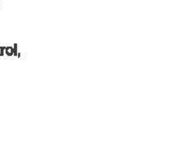
Specimen power supply control terminal
RS-485 Interface
RJ-45 Ethernet Interface

Exhaust hole

PVT Series-Vertical Type Oven

Vertiacl type : save space.
Excellent thermal insulation of chamber body.
Applicable test type: high temperature test.
Touch screen controller, high precision of control, program/constant mode.

Main technical parameters (ambient temperature +25℃, no test sample and ventilation):

Model		PV221T	PV331T
Norminal interior volume(L)		324	768
Performance	Temperature range	(ambient temperature+20)℃~200℃	
	Temperature fluction	≤100℃: 0.4℃ ≤200℃: 0.8℃	
	Temperature Deviation	± 2.0℃	
	Temperature Heat-up Rate	(ambient temperature+20)℃→200℃: ≤40min	(ambient temperature+20)℃→200℃: ≤60min
Inside dimension(mm)		W610×H900×D600	W830×H1200×D800
Outside dimension (protrusion excluded)(mm)		W770×H1500×D925	W1030×H1800×D1145
Power capacity (KW)		4.8	6.8
Applicable power supply		220V (single phase+protective grounding wire)	380V (three phases four wires+protective grounding wire)
Standard configuration		 Sample shelf x 4	 Cable port(Φ50mm), with white hard rubber plug and port cover
		 Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface	 Exhaust hole
		 Caster x 4	

PVJ Series – Clean Oven

Vertical clean oven.
Compact structure and small occupied area.
Imported controller, stable performance, reliable quality.
Applicable test type: high temperature test.

Main technical parameters (ambient temperature +25℃, no test sample and ventilation):

Model			PVJ221
Norminal interior volume(L)			193
Performance	Temperature range		(ambient temperature+60)℃~200℃
	Temperature fluction	≤100℃	0.4℃
		≤200℃	0.8℃
	Temperature deviation	≤100℃	±2.0℃
		≤200℃	±2.5℃
	Temperature heat-up rate		(ambient temperature+20)℃→200℃:≤50min
	Cleanliness		100
Power capacity (KW)			4.2
Maximum power current (A)			11
Inside dimensio(mm)			W610×H530×D600mm
Outside dimension(mm) (with protrusion excluded)			W770×H1260×D1025mm
Standard configurations			 Cable port(Φ50mm), with grey hard rubber plug and port cover
			 Exhaust hole
			 Sample shelf x 2
			 Caster x 4
			 Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface

MC(B) Series-Compact Ultra Low Temperature Chamber

Compact structure and small occupied area.
Wide temperature range and the lowest temperature down to -85°C.
Reasonable design,excellent reliability and high cost performance.
Applicable test type: high temperature test,low temperature test and alternating high-low temperature test.

Main technical parameters （room temperature +25℃, no test sample):

Model		MC-811B-2	MC-811B-3
Norminal interior volume(L)		60	
Performance	Temperature range	-80~+150°C	
	Temperature fluction	0.5°C	
	Temperature deviation	±2.0°C（>100°C时）, ±1.5°C（≤100°C时）	
	Temperature heat-up time	+20→+150°C ≤25min	
	Temperature pull-down time	+20→-70°C ≤55min	
Temperature maximum change rate		Heat up≥6°C/min	
		Pull down≥2°C/min	
Inside dimension(mm)		W400× H375 × D400	
Outside dimension(protrusion excluded)(mm)		W805 × H1284 × D605	
Applicable power supply		220V（single phase +protective grounding wire）	380V (three phases four wires+protective grounding wire)
Power capacity（KW）		3.5	
Condensing method		Air-cooled	
Standard configuration		 Sample shelf x2	 Viewing window
		 Cable port(Φ100mm) with grey soft rubber plug and port cover	 USB interface
		 Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface	 Hour meter
		 Caster x 4	

EW Series-High-Low (humidity) Temperature Chamber

Electronic expansion valve controlling the cooling capacity is engery efficient.
Reducing the environmental effect when euquipment works by upside exhaust structure.
High control precision; fluctuction ≤0.5℃; the temperature deviation ≤ ±1.5℃;
Two standard cable ports, each at the left and right side of the chamber to meet the needs of the electrified sample inspection.
Applicable test type: high temperature test, low temperature test, constant temperature and humidity test, alternating high-low temperature test and alternating high-low temperature (humidity)test.

Main technical parameters （ambient temperature +25℃, relative humidity≤85%RH, no test sample):

Model With humidity function-EW Without humidity function-ET			EW/T2470	EBW/T1670	EBW/T2400
Norminal interior volume(L)			2360	1600	2400
Performance Indication	Temperature range		-70~+150℃		
	Temperature fluction		≤0.5℃		
	Temperature deviation		±1.5℃		
	Temperature uniformity		≤2℃; ≤1℃（Temperature≤70℃, humidity≥80%RH）; ≤1℃（temperature>70℃, humidity≥80%RH）		
	Humidity deviation		±3.0%RH	±3.0%RH(>75%), ±5.0%RH(≤75%)	
	Humidity index (with humidity funtion)		(20~98%)RH / (20~85) ℃ 		
	Temperature heat-up rate		-65→+150℃		
			≤80min		
	Temperature pull-down rate		+20→-65℃		
			≤80min	≤80min	≤90min
Inside dimension(mm)		W	1300	1600	2000
		H	1300	1000	1200
		D	1400	1000	1000
Outside dimension(mm) (with protrusions excluded)		W	1585	1800	2200
		H	2400	2400	2400
		D	3152	2555	2755
power capacity (KW)			380V (three phases and four wires+protective grounding wire)		
Applicable power supply			25		
Condensation method			Air cooled / Water cooled (model in water cooled type, example: EW2470W)		
Standard configurations			 Sample shelf x 2  USB Interface  One electric heating insulating glass Viewwing window  Caster x 4  Hour meter  Cable port x 2 (Φ100mm)  Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface		
Condensing method			 Mould function (option): Application: can be carried out mold culture test; Additional equipment: ventilation device, ozone disinfection device	 Single-axis turntable function (not recommend to choose this option for models with humidity function) Used to get reliability assessment of tester for dynamic and static parameters of Inertial Navigation System at normal and high temperatures. Also used to do calibration of inertial device parameters. With position, speed, swing function. Additional device: Single-axis turntable	

EWJ Series High-Low (humidity) Temperature Chamber

Noise reduction type High-Low (humidity) Chamber with great space utilization
Maximum noise ≤ 57 dB(A),friendly user experience
High performance with wide controllable humidity range, humidity deviation ≤±3.0%RH, temperature deviation ≤1.5℃
Applicable test type: High temperature test, low temperature test, constant temperature & humidity test, alternating high-low temperature (humidity) test

Main technical parameters (The data is measured under the conditions: Ambient Temp. +25℃. No test samples):

Model With humidity function-EW Without humidity function-ET		EW/T0140J	EW/T0240J	EW/T0440J	EW/T1040J	EW/T0180J	EW/T0280J	EW/T0480J	EW/T1080J
Nominal interior volume(L)		100	200	400	1000	100	200	400	1000
Performance	Temperature range	-40~+150℃				-80~+150℃			
	Temperature fluctuation	≤ 0.5℃ (according to GB/T5170.2—2008standard)				≤ 0.5℃(according to GB/T5170.2—2008standard)			
	Temperature deviation	±1.5℃				±1.5℃			
	Temperature uniformity	1.0℃ (humidity test, humidity > 90%RH) 1.5℃ (temperature < 100℃) 2.0℃ (no other conditions and additional glass door)				1.0℃ (humidity test, humidity > 90%RH) 1.5℃ (temperature < 100℃) 2.0℃ (no other conditions and additional glass door)			
	Humidity deviation (with humidity funtion)	±2.0%RH(>75%), ±3.0%RH(≤75%)				±2.0%RH(>75%), ±3.0%RH(≤75%)			
	Controllable humidity range (with humidity funtion)	(20~98%)RH / (10~98) ℃ 				(20~98%)RH / (10~98) ℃ 			
	Temperature heat-up rate	-35→+150℃	-40→+150℃			-70→+150℃			
		≤45min	≤45min	≤45min	≤60min	≤50min			
	Temperature pull-down rate	+20→-35℃	+20→-40℃			+20→-70℃			
		≤45min	≤40min	≤60min	≤60min	≤70min			
Inside dimension (mm)	W	500	500	800	1000	500	500	800	1000
	H	470	730	830	980	470	730	830	980
	D	500	600	800	1000	500	600	800	1000
Outside dimension (mm) (with protrusions excluded)	W	700	700	800	1200	700	700	800	1200
	H	1576	1786	1886	2036	1576	1786	1886	2036
	D	1480	1507	1707	1928	1480	1507	1707	1928
Applicable power supply		380V (three phases and four wires+protective grounding wire)				380V (three phases and four wires+protective grounding wire)			
Power capacity (KW)		1.8	2.2	2.6	4.0	3.3	3.3	3.7	6
Condensing method		Air-cooled and water-cooled methods are optional				Air-cooled and water-cooled methods are optional			
Standard configuration		 Cable port x 2 (Φ100mm), each at the left and right side of the chamberwith grey soft rubber plug and port cover	 Hour meter	 Electric heating insulating glass observation window		 Caster x 4 adjusting wheel x 4	 Sample shelf x 2	 Specimen power supply control terminal RS-485 interface RJ-45 Ethernet interface	 USB interface	
Customized function		 Mould function(option): Application: Mold culture test (EM/EU/EG excluded); Additional device: ventilation device, ozone disinfection device				 Single-axis turntable function (ER/EL/ESL not recommend to choose this option for models with humidity function) Used to get reliability assessment of tester for dynamic and static parameters of Inertial Navigation System at normal and high temperatures. Also used to do calibration of inertial device parameters. With position, speed, swing function. Additional device: Single-axis turntable			

EJ Series High-Low Temperature (humidity) Chamber

Noise reduction type Chamber
Maximum noise ≤ 60 dB(A)
Stable performance, low malfunction rate and high cost performance.
Applicable test type: high temperature test, low temperature test, constant temperature and humidity test, alternating high-low temperature test and alternating high-low temperature (humidity) test.

Main technical parameter (ambient temperature +25℃, relative humidity≤85%RH, no test sample):

Model With humidity function---ER/EL/ESL Without humidity function—EM/EU/EG		ER/M-02J	ER/M-04J	ER/M-10J	EL/U-01J	EL/U-02J	EL/U-04J	EL/U-10J	ESL/G-01J	ESL/G-02J	ESL/G-04J	ESL/G-10J
Norminal interior volume(L)		200	400	1000	100	200	400	1000	100	200	400	1000
Performance indication	Temperature range	-20～+150℃			-40～+150℃	-40～+150℃			-70～+150℃			
	Humidity range(with humidity funtion)	25～98%RH/(20~85) ℃				25～98%RH/(20~85) ℃						
	Temperature fluction	≤0.5℃(in accordance with GB/T5170.2-2017)				≤0.5℃(in accordance with GB/T5170.2-2017)						
	Temperature deviation	±2.0℃				±2.0℃						
	Humidity deviation (with humidity funtion)	±3.0%RH				±3.0%RH						
	Temperature heat-up rate	-20→+150℃			-40→+150℃	-40→+150℃			-70→+150℃			
		≤60min			≤60min	≤60min			≤60min			
	Temperature pull-down rate	+20→-20℃			+20→-40℃	+20→-40℃			+20→-70℃			
		≤30min		≤45min	≤60min	≤45min	≤60min	≤65min	≤65min	≤65min	≤65min	≤70min
Inside dimension(mm)	W	500	600	400	400	500	600	1000	500	500	600	1000
	H	750	850	500	500	750	850	1000	750	750	850	1000
	D	600	800	500	500	600	800	1000	600	600	800	1000
Outside dimension(mm) (with protrusion excluded)	W	910	1010	810	810	910	1010	1410	910	910	1010	1410
	H	1786	1886	1536	1536	1786	1886	2036	1786	1786	1886	2036
	D	1173	1373	1173	1173	1173	1373	1588	1173	1173	1373	1588
Applicable power supply		380V (three phases and four wires+protective grounding wire)				380V (three phases and four wires+protective grounding wire)						
Power capacity (KW)		6	6	11	7	7	7	12	8	10	10	18
Condensation method		Air cooled / Water cooled				Air cooled / Water cooled						

Standard configuration

Cable port(Φ100mm) with grey soft rubber plug and port cover

Hour meter

Sample shelf x 2

USB interface

Electric heating insulating glass viewing window

Specimen power supply control terminal
RS-485 Interface
RJ-45 Ethernet Interface

Caster x 4
Ajusting wheel x 4

Customized function

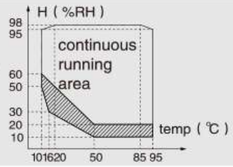
Mould function(option):
Application: can be carried out mold culture test;
Additional equipment: ventilation device, ozone disinfection device

Single-axis turntable function (not recommend to choose this option for models with humidity function)
Used to get reliability assessment of tester for dynamic and static parameters of Inertial Navigation System at normal and high temperatures. Also used to do calibration of inertial device parameters. With position, speed, swing function.
Additional device: Single-axis turntable

HJ Series Temperature (humidity) Chamber

High performance: Great improvement of heat–up rate and cool–down rate
Wide controllable range of temperature and humidity;
Applicable test type：high temp.test,low temp.test,temp.&humi.test,high–low temp.test、high–low temp.&humi.test.

Main technical parameter （ ambient temperature +25℃, relative humidity≤85%RH, no test sample)：

Model With humidity function–––HSL Without humidity function–––HG			HSL/G–02JA/JW	HSL/G–04JA/JW	HSL/G–10JA/JW
Norminal interior volume(L)			200	400	1000
Performance indication	Temperature range		–70 ~ +180℃		
	Temperature fluctuation		0.5°C(according to GB/T5170.2-2017)		
	Temperature deviation		± 2.0°C		
	Humidity performance (only for humidty function)		Humidity range: 10 ~ 98%RH/(10~95)℃ Humidity deviation: ± 3.0%RH 		
	Temperature heat–up rate		–55℃→+70℃ ≥ 4 ℃/min (standard load)		
	Temperature pull–down rate		70℃→–55℃ ≥ 3 ℃/min (standard load) 120℃→–40℃ ≥ 3 ℃/min (standard load)		
	Standard load		10 Kg Al	10 Kg Al	15 Kg Al
Inside dimension(mm)		W	500	600	1000
		H	750	850	1000
		D	600	800	1000
Outside dimension (protrusion excluded)(mm)		W	910	1010	1410
		H	1836	1936	2086
		D	1273	1473	1588
Applicable power supply			380V (three phases and four wires+protective grounding wire)		
Power capacity (KW)			10	12	18
Condensation method			Air-cooled/water-cooled		

Standard configuration	Cable port (Φ100mm) with grey soft rubber plug and cover	Hour meter	Viewing window (transparent electric heating insulating glass)	Caster x 4 Adjusting wheel x 4	Sample shelf x 2	Specimen power supply control terminal RS–485 Interface RJ–45 Ethernet Interface	USB interface
							

HB Series High–Low Temperature (humidity) Chamber

Energy–saving type chamber
Bidirectional PID algorithm, Save 40% energy consumption
Superior performance with better controllable temperature range
Applicable test type：high temp.test, low temp.test, temp.&humi.test, high–low temp.test, high–low temp.&humi.test.

Main techinical parameters (ambient temperature +25℃, relative humidity≤85%RH, no test sample)：

Model With humidity function–––HBL/HBSL Without humidity function–––HBU/HBG			HBU/L–02JA	HBU/L–04JA	HBU/L–10JA	HBG/SL–02JA	HBG/SL–04JA	HBG/SL–10JA
Norminal interior volume (L)			200	400	1000	200	400	1000
Performance	temperature range		–40 ~ +150℃			–80 ~ +150℃		
	Temperature fluctuation		≤0.5℃					
	Temperature deviation		±1.5℃					
	Temperature uniformity		1.0℃ (dampheat test, humidity > 90%RH) 1.5℃ (Temperature < 100℃) 2.0℃ (Other condition, no additional glass door)					
	Humidity performance (only for humidty function)		Humidity range: 20 ~ 98%RH/(10~98)℃ Humidity deviation: ±2.0%RH(>75%RH), ±3.0%RH(≤75%RH) 					
	Temperature heat-up rate		–40→+150℃			–70→+150℃		
			≤45min	≤60min		≤50min		
	Temperature pull-down rate		+20→–40℃			+20→–70℃		
			≤45min	≤60min		≤70min		
Inside dimension(mm)		W	500	600	1000	500	600	1000
		H	750	850	1000	750	850	1000
		D	600	800	1000	600	800	1000
Outside dimension (protrusion excluded)(mm)		W	910	1010	1410	910	1010	1410
		H	1786	1886	2036	1786	1886	2036
		D	1173	1373	1588	1173	1373	1588
Applicable power supply			380V (three phases and four wires+protective grounding wire)					
Power supply(KW)			6		10	8		15
Condensing method			Air-cooled					

Standard configuration	Cable port (Φ100mm) with grey soft rubber plug and cover	Hour meter	Viewing window (transparent electric heating insulating glass)	Caster x 4 Adjusting wheel x 4	Sample shelf x 2	Specimen power supply control terminal RS–485 Interface RJ–45 Ethernet Interface	USB interface
							

MINI Series High-Low (humidity) Temperature Chamber

Desktop style chamber, compact structure and small size.
Applicable test type: high temperature test, low temperature test, constant temperature and humidity test, alternating high-low temperature test and alternating high-low temperature (humidity) test.

Main technical parameter (ambient temperature +25℃, relative humidity≤85%RH, no test sample):

Model		MW3030	MT3065
Norminal interior volume(L)		30	
Performance indication	Temperature range	- 30°C～+150°C	- 65°C～+150°C
	Humidity range	(25～98)%RH/(20～85) °C	——
	Temperature fluctuation	1°C	
	Temperature deviation	± 2.0°C (temperature ≤ 100°C) ; ± 3.0°C (temperature >100°C)	
	Humidity deviation	± 3.0 % RH(>75%RH); ± 5.0% RH(≤ 75% RH)	——
	Temperature heat-up rate	- 30°C→+150°C	- 65°C→+150°C
		≤ 35min	≤ 40min
	Temperature pull-down rate	+ 20°C→- 25°C	+ 20°C→- 60°C
		≤ 30min	≤50min
Inside dimension(mm)		W300×H400×D250	
Outside dimension (protrusion excluded)(mm)		W500×H850×D875	
Applicable power supply		220V (Single phase+protective grounding wire)	
Power capacity (KW)		2.3	
Condensation method		Air-cooled	

Standard configuration					
					
Sample shelf x 2	Cable ports x 2 (Φ50mm) each at the left and right side of the chamber with gray ruber plug and port cover.	Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface	Hour meter	USB interface	

TS Series Thermal Shock Chamber (Basket-type)

Two-zone structure, Samples can be switched in different temperature area through fast up-and-down movement of the basket.
Applicable test type: high temp.test, low temp.test, temperature change test, thermal shock test

Main techinical parameters (ambient temperature +25℃, relative humidity≤85%RH, no test sample):

Model			TS-120SA	TS-120SW	TS-300SW
Norminal interior volume (L)			About 120		About 300
Test system			2 zones basket moving up-and-down driven by a motor and a screw.		
Performance	High temp. zone	Temperature range	+60℃～+220℃		
		Temperature heat-up rate	≥ 10℃/min		
	Low temp. zone	Temperature range	-80℃～+70℃		
		Temperature heat-up rate	≥ 2°C/min		≥1.5℃/min
		Temperature pull-down rate	≥ 4°C/min	≥ 5°C/min	
	Test area (Hanging Basket)	High temp.exposure range	+60℃～+200℃		
		Low temp.exposure range	-70℃～+70℃		
		Temperature fluctuation	1°C		
		Temperature deviation	± 2°C (≤ 150°C) , ± 3°C (> 150°C)		
	Temp. recovery performance	Temp.recovery time	≤ 5min		
		Basket transfer time	≤ 10 sec		
		Recovery conditions	High temp.exposure: +150℃ 30min Low temp.exposure: -55℃ 30min Sample weight: 3 kg plastic packed IC (distributed) in two sample baskets.		High temp.exposure : +150℃ 30min Low temp.exposure : - 55℃ 30min Sample weight : 10 kg plastic packed IC (distributed) in two sample baskets.
			Sensor position: at geometric center point inside of the chamber; Cooling water temperature (only humidity type) : +25℃ Power supply voltage : rated voltage		
Inside dimension (mm)			W470 x H410 x D650	W470× H410× D650	W770 x H610 x D650
Outside dimension (protrusion excluded)(mm)			W1250 x H2587 x D2900	W1000×H2587× D2510	W1510 x H3072 x D2885
Power capacity(KW)			16.5	15	35
Condensation method			Air-cooled	water-cooled	

Standard configuration					
	Hour meter		Sample basket x 2		USB interface
	Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface		Electric heating insulating glass observation window		Caster x 6 Adjusting wheels x 4

TSG Series Thermal Shock Chamber

Three-zone structure by means of damper switching;two-zone or three-zone test system;
Thermal shock without moving test samples,which will reduce the interference to samples effectively,thus the test data will be more accurate;
The door is opened and closed by pneumatic mode, which is convenient and safe;
Applicable test type: high temp.test, low temp.test, temperature change test, thermal shock test.

Main technical parameters(ambient temperature +25℃, relative humidity≤85%RH, circulating water temperature +25℃, no test sample):

Model			55 type				55S type		H type	S type			L type	
			TSG2055W	TSG3055W	TSG5055W	TSG10055W	TSG3055WS	TSG5055WS	TSG-71H-W	TSG-71S-A/W	TSG-101S-W	TSG-201S-W	TSG-71L-A	TSG-101L-A
Nominal interior volume(L)			200	300	500	970	300	500	70	70	100	200	70	100
Test system			2-zone or 3-zone system by means of damper switching						2-zone or 3-zone system by means of damper switching					
Performance	High temp zone	Pre-heat highest temp.	+200°C						+200°C					
		Temperature heat-up rate	+ 60°C→ + 200°C ≤ 20min						ambient temp.→ + 200°C ≤ 15min					
	Low temp zone	Pre-cool lowest temp.	- 78°C						- 77°C	- 75°C			- 75°C	
		Temperature pull-down rate	+ 20°C→ - 70°C ≤ 80min		+ 20°C→ - 75°C ≤ 75min				ambient temp. →+75°C≤65min	ambient temp. →+75°C≤45min	ambient temp.→+75°C≤55min	ambient temp.→+75°C≤50min	ambient temp.→+75°C ≤ 50min	ambient temp.→+75°C ≤ 75min
	Test area	Temperature deviation	± 2°C						± 2°C（≤+150°C）, ± 3°C（>+150°C）					
		Temperature range	High temp:（+60~+150）℃ / Low temp:（-55~-10）℃						High temp:（+60~+200）℃ / Low temp:（-70~0）℃				High temp:（+60~+200）℃ / Low temp:（-65~0）℃	
		Temp.recovery time	within 5min（3 temp. zones）				within 5min(2 temp. zones)		within 5min (2 temp. zones)	within 5min (3 temp. zones)		within 10min (3 temp. zones)	within 5min (3 temp. zones)	
Sample weight			10kg	7.5kg	12.5kg	12.5kg	7.5kg	10kg	3.5kg	5kg	5kg	20kg	2.5kg	2.5kg
Inside dimension (mm)		W	650	970	970	970	970	970	410	410	650	650	410	650
		H	460	460	780	1000	460	780	460	460	460	460	460	460
		D	670	670	670	1000	670	670	370	370	370	670	370	370
Outside dimension (protrusion excluded) (mm)		W	1710	2030	2030	2030	2030	2030	1310	1310	1550	1550	1310	1550
		H	1800	1800	2120	2475	1800	2120	1950	1950	1950	1950	1950	1950
		D	1700	1700	1700	2090	1700	1700	1670	1370	1370	1670	1370	1370
Power capacity(KW)			39	39	50	55	50	55	43	35	35	49	26	26

Standard configuration		Cable port (25*100mm)oblong hole*one,with grey soft rubber plug and cover		Hour meter		Sample basket x 2
	Caster x 6 Adjusting wheel x 4		USB interface		Specimen power supply control terminal RS-485 interface RJ-45 Ethernet Interface	

Rapid-Rate Thermal Cycle （Humidity） Chamber

Rapid temperature change rate with maximum mechanical refrigeration rate goes to 15℃/min.Assisted with a liquid nitrogen refrigeration system,the pull-down rate goes to 30℃/min.
The electronic expansion valve controls the cooling capacity with high efficiency and energy saving.The temperature rate can be adjusted flexibly.
High control precision， fluctuation≤0.5℃, temperature deviation ≤±1.5 ℃;
Applicable test type： high temp.test, low temp.test, temp.&humi.test, high-low temp.test, high-low temp.&humi.test, environment stress screening test.

Main technical parameters (ambient temperature +25°C, relative humidity≤85%RH, circulating water temperature +28°C, no test sample):

Model With humidity function—QW Without humidity function---QT		QW/T0270W5/A5 QW/T0270W10/A10 QW/T0270W15/A15	QW/T0570W5/A5 QW/T0570W10 QW/T0570W15	QW/T1070W2 QW/T1070W5 QW/T1070W10 QW/T1070W15	QW/T2470W2 QW/T2470W5 QW/T2470W10 QW/T2470W15	QW/T3470W2 QW/T3470W5 QW/T3470W10 QW/T3470W15	QW/T4970W2 QW/T4970W5 QW/T4970W10
Norminal interior volume(m³)		0.21	0.5	1.0	2.36	3.37	4.89
Performance	Temperature range	-70°C～+150°C			-70°C～+150°C		
	Humidity range (only humidity type)	(20～98) %RH/ (20～85) °C			(20～98) %RH/ (20～85) °C		
	Temperature fluctuation	≤ 0.5°C			≤ 0.5°C		
	Temperature deviation	±1.5°C			±1.5°C		
	Humidity deviation (with humidity funtion)	± 3.0%RH(humidity > 75%RH) ± 5.0%RH（humidity ≤ 75%RH)			± 3.0%RH(humidity > 75%RH) ± 5.0%RH（humidity ≤ 75%RH)		
	Temperature change rate (mechanical refrigeration)	2/5/10/15°C/min（Standard load，-55°C～+70°C, average rate, measured at the air supply）			2/5/10/15°C/min（Standard load，-55°C～+70°C, average rate, measured at the air supply）		
	Standard load	12.5kg Al，250W heatload	15kg Al，350W heatload	50kg Al，700W heatload	100kg Al，1000W heatload	150kg Al，1500W heatload	200kg Al，2000W heatload
Inside dimension (mm)	W	600	800	1000	1300	1500	1800
	H	700	900	1000	1300	1500	1700
	D	500	700	1000	1400	1500	1800
Viewing window		W280 x H490		W390 x H570	W390 x H570	W390 x H570 (2)	
Chamber door		Single hinged door			Single hinged door	Double hinged door	
Power capacity(KW)		W5:20 W10:22 W15:25 A5: 20 A10:25 A15:28	W5:20 W10:36 W15:47 A5: 25	W2:27 W5:43 W10:56 W15:77	W2:37 W5:56 W10:85 W15:115	W2:40 W5:70 W10:110 W15:135	W2:50 W5:80 W10:120
Power supply		380V（three phases four wires+protective grounding wire）			380V（three phases four wires+protective grounding wire）		
Condensation method		Water cooled /Air cooled (only available to model with letter "A")			Water cooled /Air cooled (only available to model with letter "A")		
Refrigeration method		Mechanical Compression Binary Cascade Refrigeration			Mechanical Compression Binary Cascade Refrigeration		
Refrigerant		R404a/R23 (ozone free) or R404a/R508B (only available to QW/T0270W/A5)			R404a/R23 (ozone free) or R404a/R508B (only available to QW/T0270W/A5)		

Standard configuration

Cable port (Φ100mm) x 2 each at left and right side, with grey soft rubber plug and cover

USB interface

Viewing window (transparent electric heating insulating glass)

Hour meter

Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet interface

Sample shelf x 2

Walk-in Type Temperature（Humidity）Chamber- (Panel type)

Customized products，including:interior dimensions，temperature range,temperature rate, etc.Maximum interior volume can be 1000m³.
The electronic expansion valve controls the cooling capacity with high efficiency and energy saving.
Applicable test type：high temp.test, low temp.test, temp.&humi.test, high-low temp.test, high-low temp.&humi.test, environment stress screening test.

Main technical parameters(ambient temperature +25℃, circulating water temperature≤ +28℃, no test samples)：

Volume No.		40	60	80	120	160	180	230	290	310	390	470
Norminal interior volume(m³)		3.9/3.4	6.3/5.5	7.8/6.8	11.7/10.2	15.6/13.6	17.5/15.3	23.3/20.4	29.2/25.5	31.1/27.2	38.9/34.0	46.7/40.8
Performance	Temperature range	Max. test temperature：+85℃ Min. test temperature：-65℃, -40℃, -25℃, -20℃, -15℃										
	Humidity range (with humidity funtion)	(25~98) %RH/ (20~75) ℃										
	Temperature fluctuation	0.6℃										
	Temperature deviation	± 2.0℃										
	Humidity deviation (with humidity funtion)	+ 3.0 % RH(> 75 % RH) + 5.0% RH(≤ 75% RH)										
	Temperature heat-up rate	25℃→+ 85℃										
		≤ 25min	≤ 28min	≤ 28min	≤ 30min	≤ 31min	≤ 32min	≤ 34min	≤ 36min	≤ 38min	≤ 41min	≤45min
	Temperature pull-down rate	+ 25℃→rated extreme low temperature										
		30min-180min（depends on different models and configuration）										
Inside dimension (mm)	W	1800			2700	3600	2700			3600		
	H	2100										
	D	900	1450	1800	1800	1800	2700	3600	4500	3600	4500	5400

Standard configuration	 Cable port（Φ100 mm）x 2，with grey softrubber plug and cover	 Hour meter	 Viewing window (transparent electric heating insulating glass)	 Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface	 USB Interface
Customized function	 Mold function（option）： Function：mold cultivation test can be conducted； Additional devices：ventilative device, ozonic-sterilization device	 Infrared radiation function (option): Purpose: to test the ability of the sample to withstand Infrared radiation; Additional devices: infrared light group, blackboard temperature sensor.			

※ Customized Product, for further information, please consult the foreign trade sales

Walk-in Type Temperature （Humidity）Chamber -(Solid type)

Customized products，including:interior dimensions，temperature range,temperature rate,etc.
The electronic expansion valve controls the cooling capacity with high efficiency and energy saving.
Applicable test type：high temp.test, low temp.test, temp.&humi.test, high-low temp.test, high-low temp.&humi.test, environment stress screening test.

Main technical parameters(ambient temperature +25℃, circulating water temperature ≤+28℃, no test samples)：

Volume No.		60	80	100	120
Norminal interior volume(m³)		6.3	8.4	10.5	12.6
Performance	Temperature range	Max. test temperature：+120℃, +150℃ Min. test temperature：-65℃, -40℃, -25℃, -20℃, -15℃			
	Humidity range (with humidity funtion)	(25~98) %RH/ (20~85) ℃			
	Temperature fluctuation	0.6℃			
	Temperature deviation	± 2.0℃			
	Humidity deviation (with humidity funtion)	+ 3.0 % RH(> 75 % RH) + 5.0% RH(≤ 75% RH)			
	Temperature heat-up rate and pull-down rate	Customized according to user's requirements			
Inside dimension (mm)	W	2000			
	H	2100			
	D	1500	2000	2500	3000

Standard configuration	Cable port（Φ100 mm）x 2，with grey soft rubber plug and cover	Hour meter	 Viewing window (transparent electric heating insulating glass)	 Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface	 USB Interface	 Emergency stop switch
Customized function	 Mold function（option）： Function：mold cultivation test can be conducted； Additional devices：ventilative device, ozonic-sterilization device	 Infrared radiation function (option): Purpose: to test the ability of the sample to withstand Infrared radiation; Additional devices: infrared light group, blackboard temperature sensor.				

※ Customized Product, for further information, please consult the foreign trade sales

Temperature/Humidity/Vibration Combined Chamber

The chamber can simulate temperature,humidity and vibration simultaneously to conduct a combined experiment,if a vibration table is equipped with.
Rapid temperature change rate with maximum mechanical refrigeration rate goes to 15℃/min.Assisted with a liquid nitrogen refrigeration system,the pull-down rate goes to 30℃/min.
The electronic expansion valve controls the cooling capacity with high efficiency and energy saving.The temperature rate can be adjusted flexibly.
High control precision, fluctuation≤0.5℃ and the temperature deviation is superior to±1.5 ℃;
Applicable test type: high temp.test, low temp.test, temp.&humi.test, high-low temp.test, high-low temp.&humi.test, environment stress screening test, reliability evaluation and acceptance test

Main technical parameters(ambient temperature +5~35℃, relative humidity≤85%RH, circulating water temperature ≤+28℃, no test samples):

Model with humidity---CW without humidity---CT			CW/T0670W5 CW/T0670W10 CW/T0670W15	CW/T1270W5 CW/T1270W10 CW/T1270W15	CW/T2770W5 CW/T2770W10 CW/T2770W15	CW/T8070W5 CW/T8070W10
Norminal interior volume(m³)			0.62	1.2	2.73	8
Performance	Temperature range		-70℃~+150℃			
	Humidity range (with humidity funtion)		(20~98) %RH/ (20~85) ℃			
	Temperature fluctuation		≤0.5℃			
	Temperature deviation		±1.5℃			
	Humidity deviation (with humidity funtion)		±3.0%RH(humidity>75%RH), ±5.0%RH (humidity≤75%RH)			
	Temperature change rate		5/10/15℃/min			5℃/10℃/min
	Standard load		15kg Al, 350W heatload	50kg Al, 700W heatload	100kg Al, 1000W heatload	200kg Al, 1000W heatload
Inside dimension (mm)		W	800	1000	1300	2000
		H	1100	1200	1500	2000
		D	700	1000	1400	2000
Power supply			380V (three phases four wires+protective grounding wire)			
Power capacity (KW)		CW	W5:25 W10:40 W15:50	W5:40 W10:50 W15:80	W5:60 W10:85 W15:115	W5: 95、W10: 135
		CT	W5:22 W10:37 W15:48	W5:35 W10:45 W15:75	W5:55 W10:80 W15:108	W5: 95、W10: 135
Condensing method			Water cooled			
Standard configuration			 Cable port (Φ100 mm) x 2, each at left and right side, with grey soft rubber plug and cover	 Hour meter	 Viewing window (transparent electric heating insulating glass)	 Sample shelf x 2	 USB interface	 Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface

HALT&HASS Chamber

Using the refrigeration method of liquid nitrogen spraying atomization.
The maximum temperature change rate up to 70 ℃ / min under certain conditions,
Three-axis and six degrees of freedom vibration to meet a wider range of product test requirements.
The maximum vibration intensity up to 100Grms (empty platform) can make it quickly find the product design and damage boundaries, greatly reducing the development time.
Brand air hammer; low failure rate; long working life; saving compressed air and greatly reducing R & D costs.

Main technical parameters(ambient temperature +5~35℃, relative humidity≤85%RH, circulating water temperature ≤+28℃, no test samples):

Model			CT05LN70	CT10LN70	CT17LN70
Norminal interior volume(m³)			0.5	1.0	1.7
Performance	Temperature range		-100~+200℃		
	Temperature Fluctuation		≤2.0℃		
	Maximum temperature changing rate		≥70℃/min (Standard load, -80℃~+150℃, average rate, measured at the control point of inlet area) ≥60℃/min (Standard load, -100℃~+200℃, average rate, measured at the control point of inlet area)		
	Axial vibration		Three-axis and six degrees		
	Vibration engery		75Grms (25℃~30℃, empty platform)		
	Vibration stability		±1Grms (≤10Grms); ±2Grms(≤30Grms); ±3Grms(>30Grms)		
	Control precision		±1Grms(after stabilization for 1 min), start to vibrate from the maxinum value 1Grms, with the step of 1Grms		
	Frequency range (Hz)		5-10000		
	Table size (mm)		610x610	910x910	1220x1220
Inside dimension (mm)		W	800	1000	1300
		H	800	1000	1000
		D	900	1000	1300
Applicable power supply			380V (Three phases four wires+protective grounding wire)		
Power capacity (KW)			50	60	96
Refrigeration			liquid nitrogen spraying atomization refrigeration		
Standard configuration			 Cable port x 2 (Φ100mm) with white hard rubber plug and port cover	 Hour meter	 Observation window x 2 (multi-layers of electric heating insulating glass)
			 Specimen power supply control terminal RS-485 Interface RJ-45 Ethernet Interface	 USB interface	 Emergency stop switch

ZT Series Two-axis Turntable Temperature Chamber

The combined system consists of integrated mechanical platform, measurement and control system, and temperature control system.
UT type structure: space saving.
Temperature simulation with stable performance and high precison control.
Exclusive refriegerant transmission system: available to avoid the leakage of refrigerant.
Applied in calibration, motion simulation and acceleration test of inertial components such as magnetic sensors and gyroscopes.

Main technical parameters(ambient temperature +25℃ and circulating water temperature +28℃, no test samples):

Model		ZT0160W3	ZT0260W3	ZT0560W3	ZT1060W3
Nominal interior volume(m³)		0.13	0.27	0.57	0.97
Temperature control system performance	Temperature range	-60℃~+100℃			
	Temperature fluctuation	0.5℃			
	Temperature deviation	±1.5℃			
	Temperature uniformity	2.0℃			
	Temperature change rate	≥3℃/min (empty chamber, -40℃~+80℃, average rate, measured at the control point of inlet area)			
Rotary shaft system parameters	Turntable diameter (mm)	ϕ400	ϕ550	ϕ800	ϕ1000
	Load weight	50	50	100	100
	Table cross-section runout	0.01	0.02	0.04	0.05
	Inclination rotation error	≤±3″			
	Axis verticality error	≤±3″			
	Position accuracy error	≤±3″			
	Range of rate	Main axis: ±0.001°/s~±600°/s Pitch axis:±0.001°/s~±300°/s			
	Speed rate accuracy and stationarity	≤±5 x 10⁻⁴ (360° equally)			
	Maximum acceleration	inner ring: 200°/s² outer ring: 100°/s²			
	Slip ring	80 rings			
Inside dimensions (mm)	W	500	650	800	1100
	H	500	650	700	800
	D	500	650	900	1100
Power rating (KW)		13	15	18	25

Standard configuration

Cable port (Φ50mm) with grey soft rubber plug and cover

Hour meter

Three layer signal light

Viewing window x 2 (transparent electric heating insulating glass)

USB interface

Specimen power supply control terminal
RS-485 interface
RJ-45 Ethernet interface

Temperature (Humidity) & Altitude Chamber

The chamber can simulate temperature,humidity,air pressure and vibration simultaneously to the maximum extent,to conduct a combined experiment.
Fast depressurization(75.5kpa~18.8kpa:within 15S) and explosive decompression can be achived.
Applicable test type: high temp.test, low temp.test, temp. & humi.test, high-low temp.test, high-low temp. & humi.test, temp.& altitude test.

Main technical parameters (ambient temperature +25℃,relative humidity ≤ 85%RH, circulating water temperature ≤+28℃, no test samples.):

Model		VH 0400	VH 0700	VH 1000	VH 2400	VW/T 0470W	VW/T 0770W	VW/T 1070W	VW/T 2470W	VW/T 5170W	VW/T 8070W	VW/T 12070W
Norminal interior volume(m³)		0.36	0.72	1.0	2.37	0.36	0.72	1.0	2.37	5.1	8.0	12.0
Performance	Temperature range	(ambient temperature+20)℃~+160℃				-70℃~+160℃						
	Pressure range	Normal pressure~0.5kpa(when the inner box is dry)										
	Humidity range	——				(20~95)%RH/(20~75℃), air pressure≥54KPa						
	Temperature fluctuation	1℃ (normal pressure, no-load) (according to GB/T5170.2-2008)										
	Temperature deviation	± 2.0℃ (normal pressure, no-load)										
	Temperature uniformity	2℃ (normal pressure, no-load)										
	Humidity deviation (under normal pressure, no load)	——				±3.0%RH (>75%RH),±5%RH (≤75%RH)						
	Pressure deviation	±1kPa (air pressure ≥ 20kPa) , ± 5% (air pressure:2~20kPa) , ± 0.1kPa (air pressure ≤ 2kPa)										
	Temperature heat-up rate (under normal pressure, no load)	25℃ (ambient temperature) →+160℃										
		≤ 60 min (under normal pressure)										
	Temperature pull-down rate (under normal pressure, no load)	——				25→- 65℃						
		——				≤65min		≤70min	≤ 90min	≤80min		≤90min
	Decompression time (no load, the condition of test area is dry)	normal pressure→1kPa										
		≤ 25min		≤ 30min	≤ 45min	≤ 25min		≤ 30min	≤ 45min	≤ 45min		
	Fast depressurization function (option)	The air pressure can decrease from 75.5kPa to 18.8kPa within 15s.										
	Explosive decompression function (option)	The air pressure can decrease from 75.5kPa to 18.8kPa within 0.1s.										
Inside dimension (mm)	W	600	800	1000	1300	600	800	1000	1300	1600	2000	2000
	H	750	900	1000	1300	750	900	1000	1300	2000	2000	2000
	D	800	1000	1000	1400	800	1000	1000	1400	1600	2000	3000
Outside dimension (protrusion excluded) (mm)	W	1000	1290	1490	1790	1000	1290	1490	1790	2050	2450	2450
	H	2200	2350	2450	2750	2200	2350	2450	2750	3005	3005	3005
	D	2310	2510	2510	2910	2310	2510	2510	2910	4850	5250	6250
Power supply		380V (three phases four wires+protective grounding wire)										
Power capacity (KVA)		10	10	10	18	20	20	20	25	40	48	48
condensing method		Air cooled				Water cooled						

Standard configuration

Cable port (Φ200mm) x 2 with blind flange

Hour meter

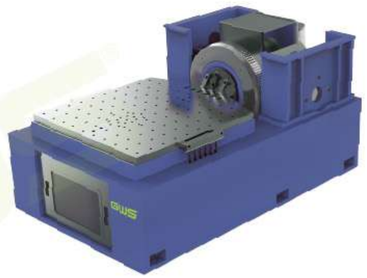
Viewing window (multilayer electric heating insulating glass)

Specimen power supply control terminal
RS-485 interface
RJ-45 Ethernet interface

USB interface

Manual pneumatic brake DN25

Sample shelf x 2



Electro-dynamic Vibration Test System

The low force series shakers are featured by high operation frequency of armature, excellent index, high reliability and easy for operation. Typical fields of applications are electronic components, automotive parts, aerospace and aviation, etc.

The high force series are featured by large force, high cooling efficiency, high bearing capacity and excellent guiding capacity, which are suitable for large specimen test. Typical fields of applications are rail transit, ships, automotive, aerospace and aviation, military and defense, etc.

Low Force Series

System model	TS1-150	TS1.5-150	TS2-150	TS3-150	TS6-230	TS10-240	TS20-320	TS20-445	TS20 LS3-340	TS25 WLS3-340	TS30-370	TS30 LS4-445	TS35 WLS3-340	TS40-370
Sine(peak)/Ran-dom(rms)(kN)	1	1.5	2	3	6	10	20	20	20	25	30	30	35	40
Shock force(kN)	2	3	4	6	12	20	40/60	40/60	40/60	50/75	60/90	60/90	70/105	80/120
Frequency range (Hz)	5-4,500	5-4,500	5-4,500	5-4,000	5-3,500	5-3,000	5-3,000	5-2,800	5-3,000	5-2,800	5-2,800	5-2,600	5-2,800	5-2,800
Max. accele-ration (m/s²)	500	750	1,000	1,000	1,000	1,000	1,000	700	800	1,000	1,000	750	1,000	1,300
Max.velocity (m/s)	2	2	2	2	1.8	1.8	2	2	2	2	2	1.8	2	2
Max.displace-ment (mm)	25	25	25	25	51	51	51	51	76	76	51	100	76	51
Max.load (kg)	70	70	70	120	300	300	300	300	300	300	500	500	300	500
Mass of moving elements (kg)	2	2	2	3	6	10	20	28	25	25	30	40	25	31
Armature dia-meter(mm)	150	150	150	150	230	240	320	445	340	340	370	445	340	370
Boby suspension natural frequency (Hz)	3	3	3	3	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Power amplifier model	PWA1	PWA1.5	PWA2	PWA3	PWA6	PWA10	PWA20	PWA20	PWA20	PWA30W	PWA30	PWA30	PWA40W	PWA40
Power (kVA)	1	1.5	2	3	6	10	20	20	20	36	30	30	48	40
Power require-ment (kVA)	4	4.5	5.5	6.5	16	21	44	44	44	62	54	54	73	73
Condensation method	Air cooled	Air cooled	Air cooled	Air cooled	Air cooled	Air cooled	Air cooled	Air cooled	Air cooled	water cooled	Air cooled	Air cooled	water cooled	Air cooled

System model	TS40 LS4-445	TS50-445	TS50 LS3-445	TS50 LS4-445	TS50 W-445	TS50 WLS3-445	TS50 WLS4-445	TS60-445	TS60 LS3-445	TS60 LS4-445	TS60 W-445	TS60 WLS3-445	TS60 WLS4-445	TS70 LS3-480	TS70 W-445	TS70 WLS3-445	TS70 WLS4-445
Sine(peak)/Ran-dom(rms)(kN)	40	50	50	50	50	50	50	60	60	60	60	60	60	70	70	70	70
Shock force(kN)	80/120	100/150	100/150	100/150	100/150	100/150	100/150	120/180	120/180	120/180	120/180	120/180	120/180	140/210	140/210	140/210	140/210
Frequency range (Hz)	5-2,600	5-2,600	5-2,600	5-2,500	5-2,600	5-2,500	5-2,400	5-2,600	5-2,600	5-2,500	5-2,600	5-2,500	5-2,400	5-2,700	5-2,600	5-2,500	5-2,400
Max. accele-ration (m/s²)	900	1,000	900	850	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Max.velocity (m/s)	1.8	2	2	2	2	2	2	2	2	2	2	2	2	2/2.5*	2	2	2
Max.displace-ment (mm)	100	51	76	100	51	76	100	51	76	100	51	76	100	76	51	76	100
Max.load (kg)	500	800	800	800	800	800	800	800	800	800	800	800	800	1,000	800	800	800
Mass of moving elements (kg)	45	60	55	59	50	50	50	80	55	60	60	60	60	70	60	60	60
Armature dia-meter(mm)	445	445	445	445	445	445	445	445	445	445	445	445	445	480	445	445	445
Boby suspension natural frequency (Hz)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Power amplifier model	PWA40	PWA50	PWA50	PWA50	PWA50W	PWA50W	PWA50W	PWA60	PWA60	PWA60	PWA60W	PWA60W	PWA60W	PWA70	PWA70W	PWA70W	PWA80W
Power (kVA)	40	50	50	50	50	50	50	60	60	60	60	60	60	70	70	70	80
Power require-ment (kVA)	73	82	82	82	90	90	90	95	95	95	100	100	100	108	110	110	140
Condensation method	Air cooled	Air cooled	Air cooled	Air cooled	water cooled	water cooled	water cooled	Air cooled	Air cooled	Air cooled	water cooled	water cooled	water cooled	Air cooled	water cooled	water cooled	water cooled

High Force Series

System model	TS80W-445	TS80WLS3-445	TS80WLS4-445	TS100-550	TS100LS3-550	TS120-550	TS120LS3-550	TS160-650	TS160LS3-650	TS180-650	TS180LS3-650	TS200-650	TS200LS3-650
Sine(peak)/Random (rms)(kN)	80	80	80	100	100	120	120	160	160	180	180	200	200
Shock force(kN)	160/240	160/240	160/240	200/300	200/300	240/360	240/360	320/480	320/480	360/480	360/480	400/600	400/600
Frequency range (Hz)	5-2,500	5-2,500	5-2,400	5-2,500	5-2,500	5-2,500	5-2,500	5-2,100	5-2,100	5-2,100	5-2,100	5-2,100	5-2,100
Max. acceleration (m/s²)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Max.velocity (m/s)	2	2	2	2	2	2	2	2	2	2	2	2	2
Max.displacement (mm)	51	76	100	51	76	51	76	51	76	51	76	51	76
Max.load (kg)	800	800	800	1000	1000	1000	1000	2,500	2,500	2,500	2,500	2,500	2,500
Mass of moving elements (kg)	60	60	60	90	90	90	90	150	150	150	150	150	150
Armature diameter(mm)	445	445	445	550	550	550	550	650	650	650	650	650	650
Boby suspension natural frequency (Hz)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Power amplifier model	PWA80W	PWA80W	PWA80W	PWA100W	PWA100W	PWA120W	PWA120W	PWA160W	PWA160W	PWA180W	PWA180W	PWA200W	PWA200W
Power (kVA)	80	80	80	100	100	120	120	160	160	180	180	200	200
Power requirement (kVA)	140	140	140	160	160	180	180	230	230	250	250	280	280
Condensation method	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled

Slip Table

Slip table works by matching up with all series of vibration shakers to realize horizontal test.
The selection of slip table is based on specimen dimension, required load, required maximum anti-overturning moment and testing conditions.
Except for the listed models, more are avaliable according to customer requirements.

Low Pressure Slip Table

Thickness (mm) / Frequency (Hz) / Effecitve Mass (Al/kg) / Effecitve Mass (Mg/kg) / Model / Dimension (mm)	TS1-150 TS1.5-150 TS2-150 TS3-150		TS6-230 TS10-240		TS20-320		TS20-445		TS20LS3-340 TS25WLS3-340 TS30-370 TS35WLS3-340 TS40-370		TS30LS4-445 TS40LS4-445 TS50-445 TS50W-445 TS60-445 TS60W-445 TS70W-445 TS80W-445		TS50LS3-445 TS50LS4-445 TS50WLS3-445 TS50WLS4-445 TS60LS3-445 TS60LS4-445 TS60WLS3-445 TS60WLS4-445 TS70WLS3-445 TS70WLS4-445 TS80WLS3-445 TS80WLS4-445		TS70LS3-480		TS100-550 TS100LS3-550 TS120-550 TS120LS3-550	
LP0303	300x300	30	2000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		12	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
LP0404	400x400	30	2000	30	2000	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		18	13	20	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—
LP0505	500x500	30	2000	30	2000	40	2000	40	2000	40	2000	45	2000	45	2000	45	2000	—	—
		26	18	28	21	38	28	52	39	42	32	58	43	63	48	62	48	—	—
LP0606	600x600	40	2000	40	2000	40	2000	40	2000	40	2000	45	2000	45	2000	45	2000	—	—
		46	32	49	34	51	36	65	47	56	40	74	54	80	60	78	60	—	—
LP0707	700x700	45	2000	45	2000	45	2000	45	2000	45	2000	45	2000	45	2000	45	2000	—	—
		70	47	72	50	74	52	94	68	80	58	93	69	101	74	98	74	—	—
LP0808	800x800	—	—	45	2000	45	2000	45	2000	45	2000	45	2000	45	2000	45	2000	50	2000
		—	—	91	63	96	66	115	82	100	70	114	82	123	88	120	108	143	108
LP0909	900x900	—	—	45	2000	45	2000	45	2000	45	2000	50	2000	50	2000	50	2000	50	2000
		—	—	112	78	118	81	127	90	122	86	140	98	148	105	145	103	169	124
LP1010	1000x1000	—	—	45	2000	45	2000	45	2000	45	2000	50	2000	50	2000	50	2000	50	2000
		—	—	136	93	142	98	152	106	146	102	166	116	176	124	171	122	198	143
LP1111	1100x1100	—	—	45	2000	45	2000	45	2000	45	2000	50	2000	50	2000	50	2000	50	2000
		—	—	168	113	170	115	178	124	174	120	195	136	205	144	200	141	228	164
LP1212	1200x1200	—	—	45	2000	45	2000	45	2000	45	2000	50	2000	50	2000	50	2000	50	2000
		—	—	196	134	198	135	207	144	202	140	228	158	239	166	233	164	263	186
LP1313	1300x1300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	50	2000
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	298	212
LP1414	1400x1400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	50	2000
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	338	238
LP1515	1500x1500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	50	2000
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	380	265
LP2020	2000x2000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	60	2000
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	780	532

Medium/High Pressure Slip Table

Thickness (mm) / Frequency (Hz) / Effecitve Mass (Al/kg) / Effecitve Mass (Mg/kg) / Model / Dimension (mm)	TS25WLS3-340 TS30-370 TS35WLS3-340 TS40-370		TS30LS4-445 TS40LS4-445 TS50-445 TS50W-445 TS60-445 TS60W-445 TS70W-445 TS80W-445		TS50LS3-445 TS50LS4-445 TS50WLS3-445 TS50WLS4-445 TS60LS3-445 TS60LS4-445 TS60WLS3-445 TS60WLS4-445 TS70WLS3-445 TS70WLS4-445 TS80WLS3-445 TS80WLS4-445		TS70LS3-480		TS100-550 TS100LS3-550 TS120-550 TS120LS3-550		TS160-650 TS160LS3-650 TS180-650 TS180LS3-650 TS200-650 TS200LS3-650	
MP0808/HP0808	50	2000	50	2000	50	2000	50	2000	50	2000	—	—
800x800	108	75	112	80	120	86	118	86	141	105	—	—
MP0909/HP0909	50	2000	50	2000	50	2000	50	2000	50	2000	—	—
900x900	132	92	138	96	146	103	142	101	167	122	—	—
MP1010/HP1010	50	2000	50	2000	50	2000	50	2000	50	2000	—	—
1000x1000	160	110	165	115	173	122	169	120	195	142	—	—
MP1111/HP1111	50	2000	50	2000	50	2000	50	2000	50	2000	—	—
1100x1100	188	129	193	135	203	142	198	140	226	162	—	—
MP1212/HP1212	50	2000	50	2000	50	2000	50	2000	50	2000	50	2000
1200x1200	221	151	226	156	236	165	231	161	260	182	282	206
MP1313/HP1313	50	2000	50	2000	50	2000	50	2000	50	2000	50	2000
1300x1300	256	175	262	180	272	188	266	185	296	210	318	232
MP1414/HP1414	50	1600	50	1600	50	1600	50	1600	50	1600	50	2000
1400x1400	295	199	300	205	310	213	305	210	336	235	358	258
MP1515/HP1515	50	1200	50	1200	50	1200	50	1200	50	1200	50	2000
1500x1500	335	226	340	231	351	241	345	236	378	263	400	285
MP2020	—	—	—	—	—	—	—	—	60	1000	60	2000
2000x2000	—	—	—	—	—	—	—	—	778	530	800	552

Power Amplifier

Power Amplifier

Power amplifier is composed of power exchange unit, electric control unit, signal modulation and protection unit , driving unit, power amplification unit and human-machine interface., Which is featured by high reliability, high efficiency, engergy-saving, flexible and compact structure.

Widely used in vibration test, thermal shock test and fatigue testing etc.

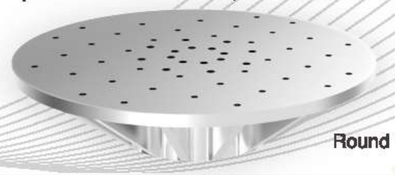
Main features:
Adopt modular design to make internal structure more compact.
Self-diagnostic: Function to realize intelligent monitoring of key parameters including temperature, current and voltage, etc.
Auto-saving: Function to operation and failure code for later track.
Option: Remote control function, the client can realize remote control through wireless network or GPRS.
User-friendly: Human-machine operation interface
Adopt signal and power separation structure design, which conforms to related requirements of EMC/EMI.
Adopt coding and decoding technology to reduce power amplifer output ripple.

Performance:

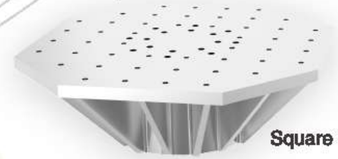
Power range	0.1~600 kVA
Output voltage	150Vrms (rated), 180Vrms (max.)
Input impedance	≥10 kΩ
Signal-to-noise ratio	≥65dB
Harmonic distortion (resistive load)	<1.0% (Typical value)
Output current	≤4000A (200A step increase)
Output current crest factor	≥ 3
DC stability	Output terminal zero drift≤ 50mv/8h
Frequency response DC~5000Hz	±3dB
Medium-frequency gain	≥ 80
DC/AC conversion efficiency	> 95%
Load type	Resistive, capactitve, inductive (option)
Parallel operation current unbalanceness	≤ 1%

Head Expander

Head expanders are required when specimen dimension is larger than the shaker armature surface. The selection of head expander is based on specimen dimension and upper working frequency.
Expect for the listed models, more models are available according to customer requirments.

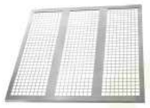
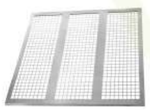
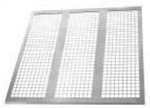


Round Head Expander



Square Head Expander

System model		TS1-150 TS1.5-150 TS2-150 TS3-150		TS6-230 TS10-240		TS20-320		TS20LS3-340 TS25WLS3-340 TS35WLS3-340 TS30-370 TS40-370		TS20-445 TS30LS4-445 TS40LS4-445		TS50/LS3/LS4 /W/WLS3/WL S4-445 TS60/LS3/LS4/ W/WLS3/WLS 4-445		TS70W-445 TS70WLS3-445 TS70WLS4-445 TS80W-445 TS80WLS3-445 TS80WLS4-445 TS70LS3-480		TS100-550 TS100LS3-550 TS120-550 TS120LS3-550		TS160-650 TS160LS3-650 TS180-650 TS180LS3-650 TS200-650 TS200LS3-650	
Model	Material	Mass (kg)	Sine (Hz)	Mass (kg)	Sine (Hz)	Mass (kg)	Sine (Hz)	Mass (kg)	Sine (Hz)	Mass (kg)	Sine (Hz)	Mass (kg)	Sine (Hz)	Mass (kg)	Sine (Hz)	Mass (kg)	Sine (Hz)	Mass (kg)	Sine (Hz)
VT300	Al	7	2000	9	2000	——	——	——	——	——	——	——	——	——	——	——	——	——	——
	Mg	5	2000	6	1800	——	——	——	——	——	——	——	——	——	——	——	——	——	——
VT400	Al	10	2000	14	2000	16	2000	——	——	——	——	——	——	——	——	——	——	——	——
	Mg	7	2000	10	2000	12	2000	——	——	——	——	——	——	——	——	——	——	——	——
VT500	Al	20	2000	23	2000	32	2000	32	2000	——	——	——	——	——	——	——	——	——	——
	Mg	14	2000	17	2000	23	2000	23	2000	——	——	——	——	——	——	——	——	——	——
VT600	Al	——	——	32	1200	34	1800	38	1600	38	2000	38	2000	38	2000	——	——	——	——
	Mg	——	——	22	1200	24	1800	27	1600	27	1900	27	1900	27	1900	——	——	——	——
VT700	Al	——	——	33	800	58	1500	69	2000	70	2000	70	2000	70	2000	——	——	——	——
	Mg	——	——	24	800	41	1500	48	2000	50	2000	50	2000	50	2000	——	——	——	——
VT800	Al	——	——	37	500	65	800	70	1200	72	1500	72	1500	72	1500	85	1800	——	——
	Mg	——	——	26	500	45	800	50	1200	50	1500	50	1500	50	1500	60	1800	——	——
VT900	Al	——	——	——	——	——	——	85	1200	100	1200	100	1200	100	1200	——	——	——	——
	Mg	——	——	——	——	——	——	60	1200	70	1200	70	1200	70	1200	——	——	——	——
VT1000	Al	——	——	——	——	——	——	——	——	140	1000	140	1000	140	1000	150	1100	180	1100
	Mg	——	——	——	——	——	——	——	——	98	1000	98	1000	98	1000	105	1100	125	1100
VT1100	Al	——	——	——	——	——	——	——	——	200	800	200	800	200	800	210	900	260	1000
	Mg	——	——	——	——	——	——	——	——	140	800	140	800	140	800	150	900	185	1000
VT1200	Al	——	——	——	——	——	——	——	——	250	500	250	500	250	500	260	600	290	600
	Mg	——	——	——	——	——	——	——	——	175	500	175	500	175	500	185	600	205	600
VT1500	Al	——	——	——	——	——	——	——	——	330	400	330	400	330	400	350	400	475	400
	Mg	——	——	——	——	——	——	——	——	235	400	235	400	235	400	245	400	335	400
VT0303	Al	7	2000	10	2000	——	——	——	——	——	——	——	——	——	——	——	——	——	——
	Mg	5	2000	7	1800	——	——	——	——	——	——	——	——	——	——	——	——	——	——
VT0404	Al	12	2000	21	2000	——	——	——	——	——	——	——	——	——	——	——	——	——	——
	Mg	9	1800	15	2000	——	——	——	——	——	——	——	——	——	——	——	——	——	——
VT0505	Al	20	2000	32	2000	32	2000	35	2000	——	——	——	——	——	——	——	——	——	——
	Mg	14	2000	23	1800	22	2000	25	2000	——	——	——	——	——	——	——	——	——	——
VT0606	Al	29	1200	42	1350	41	2000	40	2000	58	2000	58	2000	58	2000	——	——	——	——
	Mg	20	1200	28	1350	28	2000	28	1800	40	2000	40	2000	40	2000	——	——	——	——
VT0707	Al	——	——	43	1000	72	1000	75	1800	80	2000	80	2000	80	2000	——	——	——	——
	Mg	——	——	31	900	48	1000	50	1800	56	1800	56	1800	56	1800	——	——	——	——
VT0808	Al	——	——	63	1000	72	1200	82	1300	88	1300	88	1300	88	1300	125	1500	——	——
	Mg	——	——	42	900	69	1100	80	1200	80	1170	80	1170	80	1170	88	1500	——	——
VT0809	Al	——	——	76	500	95	800	100	600	100	1000	100	1000	100	1000	135	1000	——	——
	Mg	——	——	51	500	66	700	68	600	70	1000	70	1000	70	1000	95	1000	——	——
VT1010	Al	——	——	80	500	115	550	120	800	185	1000	185	1000	185	1000	225	900	210	1200
	Mg	——	——	55	450	78	550	85	600	130	900	130	900	130	900	150	900	148	1200
VT1111	Al	——	——	155	400	175	500	185	500	230	500	230	500	230	500	245	700	220	700
	Mg	——	——	102	380	115	450	128	450	165	500	165	500	165	500	175	700	155	700
VT1212	Al	——	——	176	400	180	400	195	400	250	500	250	500	250	500	275	500	286	450
	Mg	——	——	125	360	118	360	140	400	198	500	198	500	198	500	205	500	180	450
VT1515	Al	——	——	283	200	345	350	340	450	380	400	380	400	380	400	415	400	450	500
	Mg	——	——	200	200	230	230	225	450	245	400	245	400	245	400	295	400	315	500
VT2020	Al	——	——	——	——	——	——	——	——	——	——	——	——	——	——	900	300	915	300
	Mg	——	——	——	——	——	——	——	——	——	——	——	——	——	——	630	300	612	300

No.	Option	Photo	EW/J	EJ	PHT	PV	MCB	MINI	H/HB	TSG	TS	Rapid Rate	Combined chamber	Walk-in	Altitude	HALT& HASS
1	02/04 type 80kg Bearing Sample Shelf (SUS type, Punching)		●	●	○	○	○	○	○	○	○	○	○	○	○	○
2	101/201/301/401 type 40kg Bearing Sample Shelf(SUS type,Punching)		○	○	●	●	○	○	○	○	○	○	○	○	○	○
3	MC Punching Type Sample Shelf		○	○	○	○	■	○	○	○	○	○	○	○	○	○
4	Floor plate (load capacity: 100kg\200kg\300kg)		●	●	●	●	○	○	○	○	○	○	○	○	○	○
5	Caster with frame		○	○	●	○	○	○	○	○	○	○	○	○	○	○
6	Cable Port (ϕ100m or ϕ50mm) with Grey Soft Rubber Plug And Cover		●	●	○	○	●	●	●	○	○	●	●	●	○	○
7	Cable Port (ϕ100m or ϕ50mm) with white soft rubber plug and cover (excluding PHH series)		○	○	●	●	○	○	○	○	○	○	○	○	○	○
8	Glass Door With Operating Hole		●	●	○	○	○	○	●	○	○	○	○	○	○	○
9	Temperature Recorder		○	●	●	●	■	○	●	●	○	○	○	○	○	○
10	Additional Device For Low Humidity Function		●	●	○	○	○	○	●	○	○	●	●	●	●	○
11	Reverse Osmosis Water Purification System (Water Supply Device)		●	●	○	○	○	○	●	○	○	●	●	●	●	○

No.	Option	Photo	EW/J	EJ	PHT	PV	MCB	MINI	H/HB	TSG	TS	Rapid Rate	Combined chamber	Walk-in	Altitude	HALT& HASS
12	Water chiller		○	○	○	○	○	○	○	●	●	●	●	●	●	○
13	Double Stacked Fixture Device		○	○	●	○	○	○	○	○	○	○	○	○	○	○
14	Automatic air damper		○	○	■	○	○	○	○	○	○	○	○	○	○	○
15	Vent flange		○	○	●	●	○	○	○	○	○	○	○	○	○	○
16	Buzzer		●	●	●	○	○	○	●	○	○	○	○	○	○	●
17	Emergency Stop		●	●	●	●	●	●	●	●	●	●	●	●	●	●
18	Three color signal light		●	●	●	●	●	●	●	●	●	●	●	●	●	○
19	Air Compressor		○	○	○	○	○	○	○	●	○	○	○	○	○	○
20	Instrument carrier		○	○	○	○	○	●	○	○	○	○	○	○	○	○
21	Control Interface of dry gas		●	●	○	○	○	○	●	○	○	●	●	●	○	○
22	RS-485/RS-232 Convertor		●	●	●	●	●	●	●	●	●	●	●	●	●	●

P7000-series controller of environmental test equipment

- Equipped with low power-consumption SAMSUNG S3C6410 Rapid CPU.
- Large capacity storage and power-off protection function, store the test recording curve for up to one year.
- Input and output modular design, expanding via RS-485 arbitrarily
- With multi-channel anti-integral saturation PID control. Temperature, humidity, pressure, current and voltage are controlled by PID control.
- Working condition data (pressure, temperature, current) recording, analysis and alarm function.
- USB 2.0 HOST interface，available firmware upgrading, storing the recording curve and alarm recording into the USB driver, then can be read and analyzed via the USB driver reader.
- Remotely monitoring via built-in 232/485 and Ethernet.
- Abundant expansion modules in which the GPIB, WIFI, GPRS and SMS alarm can be expanded.
- Integral over-temperature protection setting/display function
- Running and malfunction LED indicator lights.
- With multi-language function including simplified Chinese, traditional Chinese, English, Russian, etc.

Remote centralized monitoring function

Rapidly and effectively monitoring equipment at the testing site via multi-connections

- Local centralized monitoring via RS-485, RS-232, Ethernet, WIFI, etc.
- A maximum of 16 sets can be monitored by GWS centralized monitoring software.
- Providing the second developing and using interface function or STEN communication protocol.

Remote monitoring maintenance equipment

- Establishing the VPN network on the Internet to realize the remote centralized monitoring function.
- Accessing the mobile network via GPRS.
- Up to 16 sets of chamber can be monitored by GWS centralized monitoring software.

SMS alarm

- Equipping the SMS alarm module and insert GSM card.
- Up to 3 cellphone numbers can be set.
- The alarm information will be sent to the pre-set phone via message when equipment alarms.

Centralized monitoring software and interface

Interface

- Providing two communication methods: interface function or STEN communication protocol.
- The interface function is encapsulated as a DLL and OCX control.
- The STEN communication protocol as the order set is provided in PDF.

Reverse osmosis water purification system

Reverse osmosis water purification system:

Application: Converting tap water into pure water by the multi-level filter way together with the automatic water supply function of the chamber. The humidity chamber can continuously carry on the automatic water supply test all day.

Principle: particle filter; activated carbon filter; reverse osmosis semipermeable membrane water purifier multi-layer filter.

Performance: water supply amount ≥8L/h. The maximum water pressure is 2.5kg / cm²

Features: PLC program control; with filter plug tip, low pressure tip, inefficient water tip, filter replacing tip and others. Two sets of water filter device are used to avoid affecting the water manufacture during the maintenance.

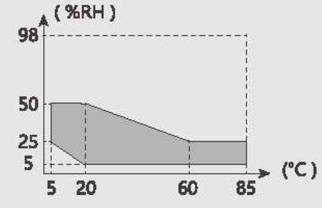
Low humidity additional device function

Low humidity additional device

Application: chamber additional device; providing the low dew dry air for the High-low Temperature Chamber; reducing the dew on the sample surface; providing the low dew dry air for high-low temperature (humidity) chamber; expanding the controllable temperature and humidity range.

Features:

- Two-sided galvanized steel sheet and plastic-sprayed surface make it durable and anti-rusty.
- Using the silent air compressor protection which is energy efficient and manufacturing in low noice
- With multi-safety protection devices: over heat of air compressor, over pressure protection and low pressure of the air source protection.
- Equipped with adjusting wheels and casters that can make the device easy to be moved and fixed.



Our service

GWS commits to providing users with high reliability, high-quality products and services. Customer satisfaction is our consistent pursuit. Globally recognized product quality and honest service are the cornerstone of our standing in the world market. In order to provide better and efficient services, we have built a perfect sales and service network: service institutions all over China, experienced engineers, 24-hour service mechanism and sufficient spare parts reserves. These make us have ability to respond to emergencies quickly.

Profession — Fast — Satisfaction

Exclusive customized service

We have abundant product line and can provide customized service with mainstream products and spare parts at any time. Spare parts can be delivered to customers accurately and quickly by selecting fast and professional logistics transportation.

On-site service

Engineers arrive at the customer's site to provide equipment installation guidance, operation commissioning, repairment, inspection and maintenance, fault removal, technology upgrading, equipment relocation and other services, and regularly visit customers and equipment inspection.

Back to factory service

The customer sends the damaged spare parts to the designated maintenance center for maintenance in a "door-to-door" way. Compared with on-site service, the cost of return maintenance service is more favorable. It is mainly suitable for electrical related product accessories (such as controller, measuring board, I / O board, etc.) or other accessories that need to be returned for maintenance confirmed by technical guidance.

Assistance & Support

Service network

In order to meet customers' all-round, differentiated and personalized needs, we have established a nationwide sales and service network centered on Xi'an, Shanghai, Guangzhou, Shenzhen, Beijing, Tianjin, Chengdu, Wuhan, Hangzhou and Suzhou, so as to support customers to the greatest extent and eliminate customers' worries about service.

Sufficient spare parts storage centers

Sufficient spare parts storage centers have been established in Beijing, Shanghai, Hangzhou, Xi'an, Chengdu,Wuhan, Guangzhou and Shenzhen, which can quickly respond to customers' spare parts needs.

VIP experience centers

There are two VIP customer experi -ence centers in Guangzhou and Xi'an: customers can choose to visit and experience instruments and equipment nearby. We can also undertake sample test to provide more convenient services for our customers.

Professional service support

The professional technical support service team at the headq -uarter provides long-term and full-time service support. The front-line professional technical service engineers with more than 5 years of service will ensure the normal and efficient operation of customers' equipment by virtue of high -quality and professional provision of all-weather technical support and door-to-door service, as well as service institutions all over the country.

Advanced management systems

GWS takes user needs and user experience as the starting point, and comprehensively uses ERP and CRM systems which are interconnected management systems integrating sales, design, production, logistics and after-sales service. For all equipment, the system will sort out the data according to the completed service work orders, and comprehen -sively collect the customer's service experience and equipment maint -enance records, so as to optimize and improve the equipment and services.

The overview of the equipment ability range in environmental reliability experience center		
Climate environmental test	Mechanics environment test	Comprehensive environment test
High temperature test	Sinusoidal test	Vibration + temperature comprehensive environment test
High temperature test in large scale	Stochastic test	Vibration + temperature + humidity comprehensive environment test
Low temperature test	Sinusoidal + Stochastic test	Thermal Shock + temperature comprehensive environment test
Temperature cycle test	Stochastic + Stochastic	Temperature + humidity + vibration+ low pressure comprehension
Rapid-rate thermal cycle test	Typical shock	Sunniness
Humidity test	Resonance search and dwell	
Large walk-in comprehensive chamber		

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