



增达环境试验设备

Zundar Environmental Test Equipment



www.zundar.com 

<http://www.zundar.com>

上海增达环境试验设备有限公司

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• 中国上海 •



增达简介 >>>

CORPORATE BRIEF

上海增达环境试验设备有限公司是由原上海海鹰制冷设备厂改制而成立的股份制企业，是一家有着三十多年制冷设备研发、生产经验的高科技企业。公司在继承原海鹰制冷设备厂强大制冷技术力量基础上，根据市场需求，研制开发了系列高性能、高标准的环境试验设备，其中包括：各类温(湿)度试验箱、红外线及阳光模拟试验箱、深冷试验箱、步入式温(湿)度试验室、快速温变(湿热)试验箱、高温试验箱/干燥箱、温度冲击试验箱、盐雾腐蚀试验箱、沙尘淋雨试验箱等环境试验设备。

上海增达以高科技为立业、以“环境模拟”为自己的经营课题，遵循“技术领先、价格合理、质量第一、服务优良、用户满意”的方针，依靠现代化管理模式，秉承“团结协体，求实守信，积极进取，追求卓越”的精神，为客户提供各种环境试验设备和优良服务。增达产品在中外用户中得到了信赖，公司产品已广泛应用于在汽车制造、航空航天、军工制造、通讯、电子、仪器、医药化工、科研院校、计量检测、热处理、蓄电池等众多领域；同时也致力于光电、光伏等新能源行业。

公司以技术开发为基础，产品在深冷技术、综合控制技术和箱体构造技术上处于国内领先水平。自主研发的深冷试验箱采用机械制冷方式，温度最低可达到 -120°C 以下；开发设计的增达专用触摸式彩色液晶控制仪表，在设计中融入了计算机过程控制技术，采用了触摸屏人机接口，保证了试验箱更加良好的性能和友好方便的操作界面，并且满足了工业用户大规模集成控制的要求；公司掌握的箱体构造技术，在保证箱内性能指标的前提下，可满足各种结构要求。

愿我们的努力为客户成功贡献力量！

COMPANY BRIEF

Shanghai Zundar Environmental Test Equipment Co., Ltd is a leading manufactory in the design, build and servicing of all types of environmental testing industry of China, always creates outstanding value to the customer with excellent technology, Zundar has reorganized from Haiying Refrigeration Facilities Factory which is high-tech enterprise with more than thirty years experience in research and development of environmental simulation, Zundar has developed various series of high performance and high standard environmental test equipments which are uniquely designed to suit any climatic test conditions, including Temperature(humidity) test chamber, Extremely low temperature test chamber, Walk-in temperature(humidity) test chamber, Fast alternation temperature(humidity) test chamber, High temperature test chamber/oven, Thermal shock chamber, Salt corrosion chamber, Dust test chamber, Rain test chamber, IR and solar simulation test chambers, Custom built chambers, etc.

Based on high technology, Shanghai Zundar has 'environment simulation' as its business task and follows the business policies of "excellent technology, high quality, considerate service and satisfaction of customers". Rely on the modern management pattern, Zundar's products have gained trust from both local and abroad Customers, and are widely used in the field of automotive, aviation, military, telecommunications, electron, medicinescientific research institutions, measurement testing, heat treatment and batteries etc. And we also devote to optoelectronics, photovoltaic and other new energy industry.

By virtue of technical development, our products have superiority in extremely low refrigeration, integrated control and structure configuration technology. We can produce extremely low temperature chambers which can reach -120°C with mechanical compressing refrigeration system. We developed ZD series controller which introduced computer process control technology in design and developed HMI interface, which guarantees the excellent control performance as well as the friendly interface of test chambers and satisfied the demand of large scale integrated control of the industrial customers.

Hoping that our endeavor will lead you to success!

公司部分客户/合作伙伴 >>>

CUSTOMER REFERENCE

一汽-大众 上海大众 GM PATAC
 FOTON 福田汽车 SAIC MOTOR 上海汽车 Ford DFAC JAC
 NISSAN CHERY BYD
 faurecia UAES DELPHI IAC International Automotive Components CAERI
 BOSCH TRW Visteon 延锋百利得 YANFENG KSS
 TAKATA 东方久乐 EAST JOY LONG 潍柴动力 WEICHAI POWER Autoliv 富奥·江森自控
 JOHNSON CONTROLS MAGNA MAGNA CLOSURES ZF Shanghai Steering 富维-江森 FAIVV-JOHNSON CONTROLS
 Valeo 法雷奥 Continental LEAR CORPORATION Cummins 国利 GOLLEE CORP

KAUTEX A Textron Company YAP 亚普 江阴万奇内饰系统有限公司 SGS
 Calsonic Kansei Intertek RA BUREAU VERITAS
 NACTC MISON Denkei
 winchance 文创 创想太阳能 AKCOME EG NG ECSOLAR
 CASC 中国航天 中国商飞 AVIC I FAST CSIC PSG
 NCC CETC
 SHARP DELIXI 中国·德力西 ERICSSON SONY
 SIEMENS Narada SEARI 上电科 tyco Electronics

企业荣誉 >>>

ENTERPRISE HONOUR

经过近几年的发展，公司已建立一套完善的、符合ISO9001:2000的质量管理体系，为各界用户提供高性能、高质量、高效率的产品和服务。公司服务承诺：为用户提供的产品满足GB/T2423、GJB150、JJF1101的试验标准要求，亦可满足IEC和MIL相关标准的要求，此外可根据用户的特殊需求设计制造相关的试验标准，公司可以根据用户要求，提供产品出厂计量标定、技术培训等服务，产品出厂后出现质量问题，公司保证24小时内响应。

另外，作为一家对社会、环境和安全负责的企业，我们还持续有效地运行了ISO140001环境管理体系和OHSAS18000职业与健康安全体系。

愿我们与您精诚合作，共同携手创造更辉煌的明天。

As a result of recent years' continual development, we have built up a set of increasingly comprehensive quality management system according to ISO9001:2000 to provide products and service with high performance, high quality and high efficiency for customers. Our company promises to provide products according with standards such as GB/T2423,GJB150,JJF1101,IEC,MIL,ISO etc. Besides, we can custom the test chamber as the customer requirements. we also provide top quality after-sale services to meet consumer satisfaction such as calibration and technical training etc. A response within 24 hours malfunction after shipment is Zundar's full commitment for customers.

Moreover, as an responsible enterprise for society、environment and staff safety, we continue operating effectively environmental management system ISO140001 and professional & health safety system OHSAS18000.

We hope to cooperate with you faithfully to create resplendent tomorrow hand in hand.



关于增达 >>>

ABOUT ZUNDAR



【我们的使命】 Our Mission

提供超越客户期望的技术、产品和服务，实现企业和个人价值

Providing technology, products and services beyond customer expectation, realizing company and employees value

【我们的核心价值观】

顾客至上 以人为本 价值创造 应对挑战 专业规范 团队合作

Customer first, People foremost, Value Creation, Challenge, Professional and standardization, Teamwork

【我们的愿景】 Our Vision

成为世界领先的测试设备供应商
As a leader of worldwide supplier in the environmental testing industry

Zundar ---excellence brings a brilliant future

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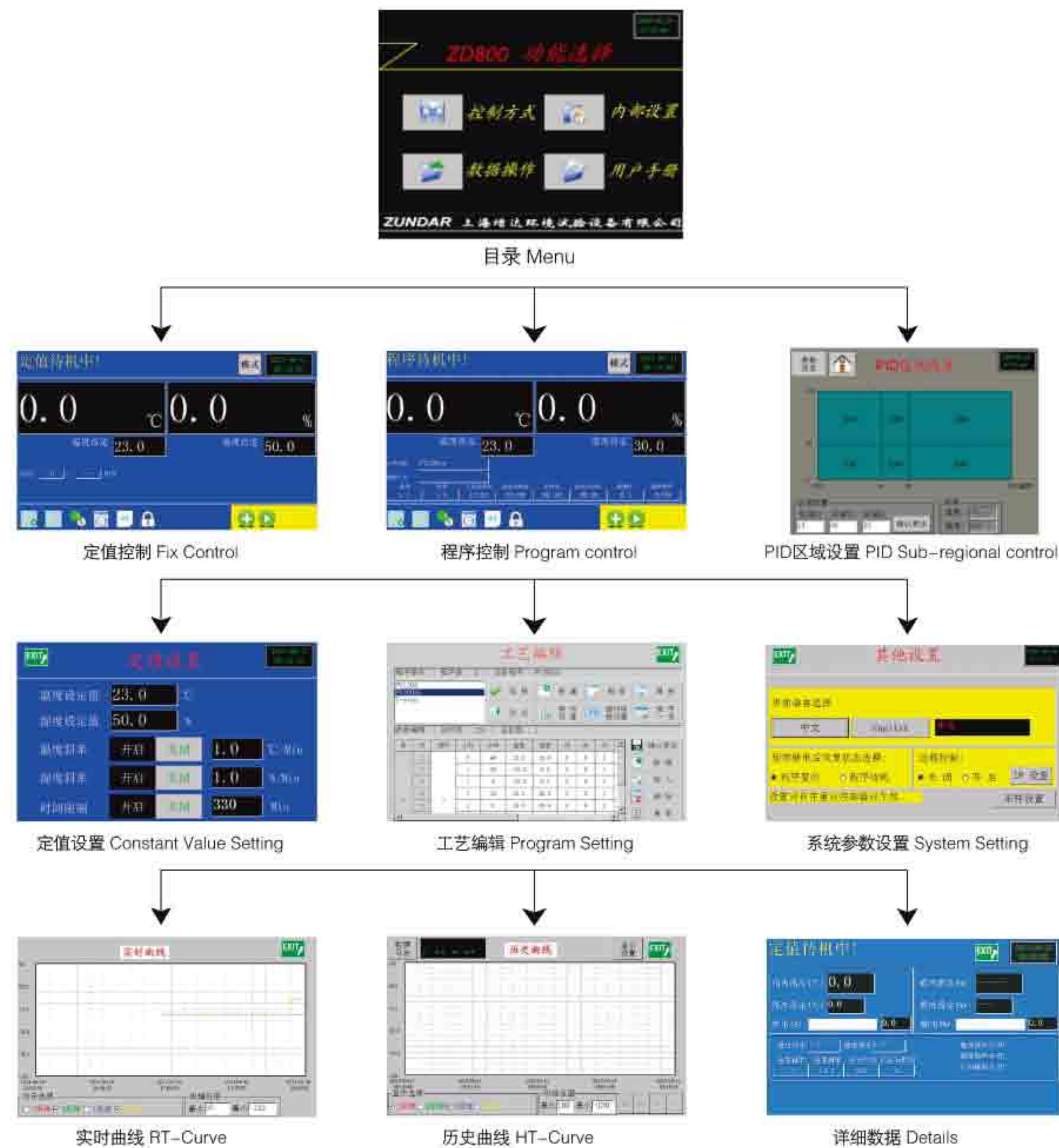


控制系统 >>>

TEMP & HUMI Control System

本公司自行开发的温湿度控制系统，采用基于ARM9内核的嵌入式主板，可实现高效可靠的实时控制。可进行丰富的程序设置，并具备数据存储与回放，实时曲线显示，报警显示与存储，数据导出，PID设置等功能，界面操作采用对话方式，简单易学。此外，本公司能独立开发基于步入式实验室和复杂试验标准的大型集成控制软件。

We developed an advanced TEMP & HUMI control system, which is based on embedded hardware and has a ARM9 inner core. The controller can fulfil the requirements of high efficient and reliable control. This controller has the functions of data record, real-time alarm detection, record and analysis, PID subarea and auto adjustment etc. It is programmable, and have friendly HMI interface to operator. Additionally, we can develop large-scale integrated control software based on the walk-in climatic chamber and complex test stanard independently.



本系统具有强大的通讯和组态编程功能，通过局域网(LAN)或RS232/RS485连接可组成实验室测控网络，也可通过互联网实现远程监控，极大地方便了用户的系统集成与自动化监测。

Our controller has the powerful ability of communication; it can realize the remote control and centralized control through LAN or RS232/RS485 interface to provide convenience for integration control in client site.



公司免费提供上位机监控软件，以远程监控试验箱做运行及进行数据处理
We provide pc software for remote control and data processing for free.

ZT系列高低温交变试验箱 >>>

ZT Series Temperature Test Chamber



执行标准:

- GB11158 GB/T2423.1
- GB10589 GB/T2423.2
- GB10592 GJB150.3
- GB10586 GJB150.4

性能特点

- 具有极宽的温度控制范围和极高的控制精度，可满足国家标准GB/T2423《电工电子产品基本环境试验规程》1、2项的试验要求。
- 采用独特的平衡调温方式，可调节理想温度环境，可进行高精度、高稳定的温度控制。
- 温度控制选用嵌入式计算机系统(ZD-800)；大屏幕(7"或10.2")TFT液晶显示器，配备触摸屏，可选配LAN通讯接口，便于用户远距离控制和中央集中控制。具备大容量存储，可存储三年的温度数据。数据可通过U盘导出并在PC软件上回看曲线和打印报表。
- 制冷控制：PLC根据箱内温度的设定值和实际值自动控制压缩机和制冷阀，满足不同的试验要求，减少设备运行功率，确保压缩机的安全运行。

Performance & Characteristics:

- Extremely wide temperature range and high precision control meet requirements of standard GB/T 2423.1~4《Basic environmental testing procedures for electric and electronic products》.
- Unique balanced control method can achieve perfect temperature control.
- The controller adopted embedded computer system (ZD-800) with large TFT touch screen(7" or 10.2") to realize the remote control and centralized control by LAN communication interface. The data record has a large storage that can record 3 years' temperature datas. The datas can be download from the controller using a USB and reviewed on the PC.
- Refrigeration control:The refrigeration system, including compressor and refrigeration valve, are controlled based on actual temperature inside chamber and temperature setting by PLC, so as to meet different test requirement, reduce power consumption and ensure compressor's safety.

高低温交变试验箱-20℃
Temperature Test Chamber -20℃

型号 Model		ZT005R	ZT010R	ZT020R	ZT030R	ZT040R	ZT050R	ZT100R
电源 Power supply		AC220V 1φ 3W 50Hz				AC380V 3φ 5W 50Hz		
最大电流 Max. current (A)		15	15	17	14	11	13	14.5
最大功率 Max. power consumption(KW)		2.5	2.5	3.2	3.8	4.5	5.5	7.8
性能参数 performance *1	温度范围 Temperature range	-20 ~ +130℃*3						
	温度波动度 Temperature fluctuation	≤ ± 0.5℃						
	温度均匀性 Temperature uniformity	≤ 2.0℃						
	温度偏差 Temperature deviation	≤ ± 2.0℃						
	升温时间 Heating rate	-20 ~ +130℃ 50分钟以内 No more than 50 mins						
	降温时间 Cooling rate	+20 ~ -20℃ 45分钟以内 No more than 45 mins						
制冷系统 refrigerant system	制冷系统 Refrigeration system	机械压缩机单级制冷系统 (空冷或水冷) Mechanical single-stage refrigerating system. (Air-cooling condenser or water-cooling condenser)						
	压缩机 Compressor	全封闭压缩机/半封闭压缩机 Hermetically sealed compressor or Semi-hermetic compressor						
温度传感器 Temperature sensor		铂电阻 PT100						
控制器 Controller		ZD800温度控制器 7"真彩触摸屏/中文或英文输入/ ZD800 temperature controller (7" TFT Touch Screen/Chinese or English language)						
内容积 Interior capacity(L)		50	100	200	300	400	500	1000
内尺寸 Interior dimensions(mm)	W	380	450	500	600	650	700	1000
	D	340	450	600	700	750	750	1000
	H	460	550	700	750	850	950	1000
外尺寸 Exterior dimensions(mm)*2	W	880	910	960	1060	1110	1160	1460
	D	760	900	1080	1175	1225	1225	1475
	H	1385	1545	1795	1845	1970	2070	2165
重量 Weight (kg)		260	290	320	325	330	460	520

*1、上诉指标在室温为+23℃时，温湿度性能测试按照国家标准《JJF1101-2003》相关条款检定
(Performance measured at ambient temperature of +23℃, according to <JJF1101-2003>: Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)

*2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)

*3、高温180℃可选。(Highest temperature: 180℃ Optional)

*4、使用环境温度: +5℃ ~ +32℃ (Ambient temperature: +5℃~+32℃)

高低温交变试验箱-40℃

Low Temperature Test Chamber-40℃

型号 Model		ZT005L	ZT010L	ZT020L	ZT030L	ZT040L	ZT050L	ZT100L
电源 Power supply		AC220V 1φ 3W 50Hz			AC380V 3φ 5W 50Hz			
最大电流 Max. current (A)		16	16	12.5	12	11	14	19
最大功率 Max. power consumption(KW)		2.7	2.8	3.7	4	4.5	6	11
性能参数 Performance *1	温度范围 Temperature range	-40 ~ +130℃*3						
	温度波动度 Temperature fluctuation	≤ ±0.5℃						
	温度均匀性 Temperature uniformity	≤2.0℃						
	温度偏差 Temperature deviation	≤ ±2.0℃						
	升温时间 Heating rate	-40 ~ +130℃ 小于60分钟以内 No more than 60 mins						
	降温时间 Cooling rate	+20~-40℃ 65分钟以内 No more than 65 mins			50分钟以内 No more than 50 mins			
制冷系统 Refrigerant system	制冷系统 Refrigeration system	机械压缩机单极结合复叠制冷系统 (空冷或水冷) Mechanical single-stage and cascade refrigerating system. (Air-cooling condenser or water-cooling condenser)						
	压缩机 Compressor	全封闭压缩机 Hermetically sealed compressor						
温度传感器 Temperature sensor		铂电阻 PT100						
控制器 Controller		ZD800温度控制器 (7"真彩触摸屏/中文或英文输入/历史曲线记录/PID自整定) ZD800 temperature controller (7" TFT Touch Screen/Chinese or English language /data record function/PID AT)						
内容积 Interior capacity(L)		50	100	200	300	400	500	1000
内尺寸 Interior dimensions(mm)	W	380	450	500	600	650	700	1000
	D	340	450	600	700	750	750	1000
	H	460	550	700	750	850	950	1000
外尺寸 Exterior dimensions(mm)*2	W	880	910	960	1060	1110	1160	1460
	D	760	900	1080	1175	1225	1225	1475
	H	1385	1545	1795	1845	1970	2070	2165
重量 Weight (kg)		290	320	350	360	370	500	600

- *1、上诉指标在室温为+23℃时，温湿性能测试按照国家标准《JJF1101-2003》相关条款检定
(Performance measured at ambient temperature of +23℃, according to <JJF1101-2003>:Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)
- *2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)
- *3、高温180℃可选。(Highest temperature: 180℃ Optional)
- *4、使用环境温度: +5℃ ~ +32℃ (Ambient temperature: +5℃~+32℃)

高低温交变试验箱-70℃

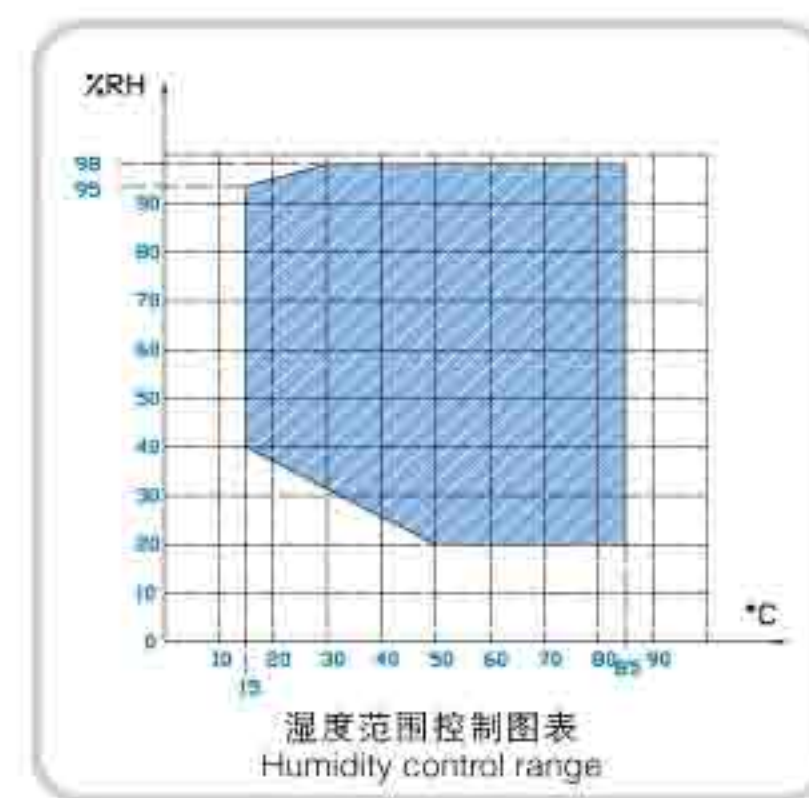
Ultra Low Temperature Test Chamber -70℃

型号 Model		ZT005U	ZT010U	ZT020U	ZT030U	ZT040U	ZT050U	ZT100U
电源 Power supply		AC220V 1φ 3W 50Hz			AC380V 3φ 5W 50Hz			
最大电流 Max. current (A)		18	20	15	17	16.5	19	22
最大功率 Max. power consumption(KW)		3.2	4	5	5.5	7.4	9	13
性能参数 Performance *1	温度范围 Temperature range	-70 ~ +130℃*3						
	温度波动度 Temperature fluctuation	≤ ±0.5℃						
	温度均匀性 Temperature uniformity	≤2.0℃						
	温度偏差 Temperature deviation	≤ ±2.0℃						
	升温时间 Heating rate	-70 ~ +130℃ 75分钟以内 No more than 75 mins						
	降温时间 Cooling rate	+20 ~ -70℃ 85分钟以内 No more than 85 mins						
制冷系统 Refrigerant system	制冷系统 Refrigeration system	机械压缩机单极结合复叠制冷系统 (空冷或水冷) Mechanical single-stage and cascade refrigerating system. (Air-cooling condenser or water-cooling condenser)						
	压缩机 Compressor	全封闭压缩机 Hermetically sealed compressor						
温度传感器 Temperature sensor		铂电阻 PT100						
控制器 Controller		ZD800温度控制器 (7"真彩触摸屏/中文或英文输入/历史曲线记录/PID自整定) ZD800 temperature controller (7" TFT Touch Screen/Chinese or English language /data record function/PID AT)						
内容积 Interior capacity(L)		50	100	200	300	400	500	1000
内尺寸 Interior dimensions(mm)	W	380	450	500	600	650	700	1000
	D	340	450	600	700	750	750	1000
	H	460	550	700	750	850	950	1000
外尺寸 Exterior dimensions(mm)*2	W	880	910	960	1060	1110	1160	1460
	D	760	900	1080	1175	1225	1225	1475
	H	1385	1545	1795	1845	1970	2070	2165
重量 Weight (kg)		300	330	360	370	380	510	590

- *1、上诉指标在室温为+23℃时，温湿性能测试按照国家标准《JJF1101-2003》相关条款检定
(Performance measured at ambient temperature of +23℃, according to <JJF1101-2003>:Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)
- *2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)
- *3、高温180℃可选。(Highest temperature: 180℃ Optional)
- *4、使用环境温度: +5℃ ~ +32℃ (Ambient temperature: +5℃~+32℃)

ZTH系列高低温交变湿热试验箱 >>>

ZTH Series Temperature and Humidity Test Chamber



执行标准:

- GB11158
- GB10589 GB/T10586
- GB10592 GB/T2423.1
- GJB150.3 GB/T2423.2
- GJB150.4 GB/T2423.3
- GJB150.9 GB/T2423.4

性能特点

- 具有极宽的温(湿)度控制范围和极高的控制精度, 可满足国家标准GB/T2423《电工电子产品基本环境试验规程》1、2、3、4项的试验要求。
- 采用独特的平衡调温(调湿)方式, 可调节理想温(湿)度环境, 可进行高精度、高稳定的温(湿)度控制。
- 温(湿)度控制选用嵌入式计算机系统(ZD-800); 大屏幕(7"或10.2")TFT液晶显示器, 配备触摸屏, 可选配LAN通讯接口, 便于用户远距离控制和中央集中控制。具备大容量存储, 可存储三年的温(湿)度数据。数据可通过U盘导出并在PC软件上回看曲线和打印报表。
- 制冷(除湿控制): PLC根据箱内温(湿)度的设定值和实际值自动控制压缩机和制冷阀, 满足不同的试验要求, 减少设备运行功率, 确保压缩机的安全运行。

Performance & Characteristics:

- Extremely wide temperature (humidity) range and high precision control meet requirements of standard GB/T 2423.1~4《Basic environmental testing procedures for electric and electronic products》.
- Unique balanced control method can achieve perfect temperature (humidity) control.
- The controller adopted embedded computer system (ZD-800) with large TFT touch screen(7" or 10.2") to realize the remote control and centralized control by LAN communication interface. The data record has a large storage that can record 3 years' temperature (humidity) datas. The datas can be download from the controller using a USB and reviewed on the PC.
- Refrigeration (dehumidification control): The refrigeration system, including compressor and refrigeration valve, are controlled based on actual temperature(humidity) inside chamber and temperature(humidity) setting by PLC, so as to meet different test requirement, reduce power consumption and ensure compressor's safety.

高低温交变湿热试验箱-20℃

Temperature and Humidity Test Chamber-20℃

型号 Model	ZTH020R	ZTH030R	ZTH040R	ZTH050R	ZTH100R	
电源 Power supply	AC220V 1φ 3W 50Hz		AC380V 3φ 5W 50Hz			
最大电流 Max. current (A)	24	25	14	14.5	23	
最大功率 Max. power consumption(KW)	4.7	5	6.5	7.5	12	
性能参数 performance *1	温湿度范围 Temperature and humidity range	-20 ~ +130℃*3 20% ~ 98%RH				
	温度波动度 Temperature fluctuation	≤ ± 0.5℃				
	温度均匀性 Temperature uniformity	≤ 2.0℃				
	温度偏差 Temperature deviation	≤ ± 2.0℃				
	温湿度偏差 Temperature and humidity deviation	≤ ± 2.0℃/+2, -3%RH				
	升温时间 Heating rate	-20 ~ +130℃ 50分钟以内 No more than 50 mins				
降温时间 Cooling rate	+20 ~ -20℃ 45分钟以内 No more than 45 mins					
制冷系统 refrigerant system	制冷系统 Refrigeration system	机械压缩式单级制冷系统(空冷) Mechanical single-stage refrigerator system (air-cooled condenser)				
	压缩机 Compressor	全封闭压缩机 Hermetically sealed compressor				
温度传感器 Temperature sensor	铂电阻 PT100					
湿度传感器 Humidity sensor	干湿球湿度传感器或电容式湿度传感器 Psychrometer humidity sensor or Capacitive humidity sensor					
控制器 Controller	ZD800温湿度控制器 (7"真彩触摸屏/中文或英文输入/历史曲线记录/PID自整定) ZD800 temperature and humidity controller (7" TFT Touch Screen/Chinese or English language /data record function/PID AT)					
内容积 Interior capacity(L)	200	300	400	500	1000	
内尺寸 Interior dimensions(mm)	W	500	600	650	700	1000
	D	600	700	750	750	1000
	H	700	750	850	950	1000
外尺寸 Exterior dimensions(mm)*2	W	960	1060	1110	1160	1460
	D	1080	1175	1225	1225	1475
	H	1795	1845	1970	2070	2165
重量 Weight (kg)	370	375	390	510	590	

*1、上诉指标在室温为+23℃时, 温湿度性能测试按照国家标准《JJF1101-2003》相关条款检定 (Performance measured at ambient temperature of +23℃, according to <JJF1101-2003>: Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)

*2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)

*3、高温180℃可选。(Highest temperature: 180℃ Optional)

*4、使用环境温度: +5℃ ~ +32℃ (Ambient temperature: +5℃~+32℃)

高低温交变湿热试验箱-40℃

Low Temperature and Humidity Test Chamber-40℃

型号 Model		ZTH020L	ZTH030L	ZTH040L	ZTH050L	ZTH100L
电源 Power supply		AC380V 3φ 5W 50Hz				
最大电流 Max. current (A)		14	13	18	19	22
最大功率 Max. power consumption(KW)		5.2	5.5	6.5	8	12
性能参数 Performance *1	温湿度范围 Temperature and humidity range	-40 ~ +130℃*3 20% ~ 98%RH				
	温度波动度 Temperature fluctuation	≤ ±0.5℃				
	温度均匀性 Temperature uniformity	≤2.0℃				
	温度偏差 Temperature deviation	≤ ±2.0℃				
	温湿度偏差 Temperature and humidity deviation	≤ ±2.0℃/+2,-3%RH				
	升温时间 Heating rate	-40 ~ +130℃ 60分钟以内 No more than 60 mins				
	降温时间 Cooling rate	+20 ~ -40℃ 65分钟以内 No more than 65 mins		50分钟以内 No more than 50 mins		
制冷系统 Refrigerant system	制冷系统 Refrigeration system	机械压缩机单极结合复叠制冷系统 (空冷或水冷) Mechanical single-stage and cascade refrigerating system (Air-cooling condenser or water-cooling condenser)				
	压缩机 Compressor	全封闭压缩机 Hermetically sealed compressor				
温度传感器 Temperature sensor		铂电阻 PT100				
湿度传感器 Humidity sensor		干湿球湿度传感器或电容式湿度传感器 Psychrometer humidity sensor or Capacitive humidity sensor				
控制器 Controller		ZD800温湿度控制器 (7"真彩触摸屏/中文或英文输入/历史曲线记录/PID自整定) ZD800 temperature and humidity controller (7" TFT Touch Screen/Chinese or English language /data record function/PID AT)				
内容积 Interior capacity(L)		200	300	400	500	1000
内尺寸 Interior dimensions(mm)	W	500	600	650	700	1000
	D	600	700	750	750	1000
	H	700	750	850	950	1000
外尺寸 Exterior dimensions(mm)*2	W	960	1060	1110	1160	1460
	D	1080	1175	1225	1225	1475
	H	1795	1845	1970	2070	2165
重量 Weight (kg)		380	390	400	520	630

- *1、上诉指标在室温为+23℃时，温湿度性能测试按照国家标准《JJF1101-2003》相关条款检定
(Performance measured at ambient temperature of +23℃, according to <JJF1101-2003>:Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)
- *2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)
- *3、高温180℃可选。(Highest temperature: 180℃ Optional)
- *4、使用环境温度：+5℃ ~ +32℃ (Ambient temperature: +5℃~+32℃)

高低温交变湿热试验箱-70℃

Ultra Low Temperature and Humidity Test Chamber -70℃

型号 Model		ZTH020U	ZTH030U	ZTH040U	ZTH050U	ZTH100U
电源 Power supply		AC380V 3φ 5W 50Hz				
最大电流 Max. current (A)		14.5	15	20	22	24
最大功率 Max. power consumption(KW)		5.8	6	7.5	8	13
性能参数 Performance *1	温湿度范围 Temperature and humidity range	-70 ~ +130℃*3 20% ~ 98%RH				
	温度波动度 Temperature fluctuation	≤ ±0.5℃				
	温度均匀性 Temperature uniformity	≤2.0℃				
	温度偏差 Temperature deviation	≤ ±2.0℃				
	温湿度偏差 Temperature and humidity deviation	≤ ±2.0℃/+2,-3%RH				
	升温时间 Heating rate	-70 ~ +130℃ 75分钟以内 No more than 75 mins				
	降温时间 Cooling rate	+20 ~ -70℃ 85分钟以内 No more than 85 mins				
制冷系统 Refrigerant system	制冷系统 Refrigeration system	机械压缩机单极结合复叠制冷系统 (空冷或水冷) Mechanical single-stage and cascade refrigerating system (Air-cooling condenser or water-cooling condenser)				
	压缩机 Compressor	全封闭压缩机 Hermetically sealed compressor				
温度传感器 Temperature sensor		铂电阻 PT100				
湿度传感器 Humidity sensor		干湿球湿度传感器或电容式湿度传感器 Psychrometer humidity sensor or Capacitive humidity sensor				
控制器 Controller		ZD800温湿度控制器 (7"真彩触摸屏/中文或英文输入/历史曲线记录/PID自整定) ZD800 temperature and humidity controller (7" TFT Touch Screen/Chinese or English language /data record function/PID AT)				
内容积 Interior capacity(L)		200	300	400	500	1000
内尺寸 Interior dimensions(mm)	W	500	600	650	700	1000
	D	600	700	750	750	1000
	H	700	750	850	950	1000
外尺寸 Exterior dimensions(mm)*2	W	960	1060	1110	1160	1460
	D	1080	1175	1225	1225	1475
	H	1795	1845	1970	2070	2165
重量 Weight (kg)		450	460	480	600	700

- *1、上诉指标在室温为+23℃时，温湿度性能测试按照国家标准《JJF1101-2003》相关条款检定
(Performance measured at ambient temperature of +23℃, according to <JJF1101-2003>:Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)
- *2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)
- *3、高温180℃可选。(Highest temperature: 180℃ Optional)
- *4、使用环境温度：+5℃ ~ +32℃ (Ambient temperature: +5℃~+32℃)

ZTD系列深冷试验箱 >>>

ZTD Series Extremely Low Temperature Test Chamber

增达特有的机械式压缩机制冷方式的深冷技术，摒弃了采用液氮作为深冷的传统制冷方式，突破了机械制冷方式只能做到-75℃低温的瓶颈，开创了环境试验设备领域低温水平的新篇章。

公司生产的深冷试验箱已被广泛应用到了航空航天、兵器、军工、电子元器件等高精尖领域和基础材料应用研究领域，得到了用户的肯定。

实践证明，该系列深冷试验箱具有到达温度低，制冷效果好，控制精度高，性能稳定可靠的特点，是用户超低温试验和进行冷处理的首选产品。

目前，深冷试验箱有-80℃、-90℃、-100℃、-110℃、-120℃可供用户选择。

Zundar's unique mechanical compressing refrigeration technique for ultra low temperature abandons traditional refrigeration method of using liquid nitrogen, breaks through the limited temperature of -75℃ with the mechanical refrigeration method and creates a new field of low temperature in environmental test industry.

Our extremely low test chambers have been widely used in the high-tech areas and new material research fields of aviation, space, military, weaponry, electron, etc.



Customer practice proves that the series of our extremely low test chambers can reach extremely low temperature, have good efficiency of refrigeration, high control precision, stable and reliable performance. So this series of chambers become to be the best choice for the customers to do ultra low temperature test.

At present chamber with lowest temperature -80℃、-90℃、-100℃、-110℃、-120℃ is available.

深冷试验箱-80℃、-90℃、-100℃、-110℃、-120℃*5 Extremely low temperature test chamber -80℃、-90℃、-100℃-110℃-120℃

型号 Model		ZT010D*4	ZT020D	ZT030D	ZT040D	ZT050D	ZT100D
电源 Power supply		AC380V 3φ 5W 50Hz					
最大电流 Max. current (A)		16	18.8	20	21	22	26
最大功率 Max. power consumption(KW)		8	9	11	12	13.5	15
性能参数 Performance *1	温度范围 Temperature range	-80~+130*3(-90℃~-120℃可以被选/are optional)					
	温度波动度 Temperature fluctuation	≤±0.5℃					
	温度均匀性 Temperature uniformity	≤2.0℃					
	温度偏差 Temperature deviation	≤±2.0℃					
	升温时间 Heating rate	-80~+130℃ 80分钟以内 No more than 80 mins					
降温时间 Cooling rate	+20~-80℃ 80分钟以内 No more than 80 mins						
制冷系统 Refrigerant system	制冷系统 Refrigeration system	机械压缩式复叠制冷系统(风冷/水冷) Mechanical double-stage refrigerator system (air-cooled condenser/water-cooled)					
	压缩机 Compressor	全封闭压缩机 Hermetically sealed compressor					
温度传感器 Temperature sensor		铂电阻 PT100					
控制器 Controller		ZD800温度控制器 (7" 真彩触摸屏/中文或英文输入/历史曲线记录/PID自整定) ZD800 temperature controller (7" TFT Touch Screen/Chinese or English language /data record function/PID AT)					
内容积 Interior capacity(L)		100	200	300	400	500	1000
内尺寸 Interior dimensions(mm)	W	450	500	600	650	700	1000
	D	450	600	700	750	750	1000
	H	550	700	750	850	950	1000
外尺寸 Exterior dimensions(mm)*2	W	910	960	1060	1110	1160	1460
	D	900	1080	1175	1225	1225	1475
	H	1545	1795	1845	1970	2070	2165
重量 Weight (kg)		350	390	450	540	560	650

*1、上诉指标在室温为+23℃时，温湿度性能测试按照国家标准《JJF1101-2003》相关条款检定
(Performance measured at ambient temperature of +23℃, according to <JJF1101-2003>:Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)

*2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)

*3、低温-90℃~-120℃可选；高温150℃可选。(Lowest temperature: -90℃~-120℃ is optional, highest temperature: 180℃ optional)

*4、D1: -80℃, D2: -90℃, D3: -100℃, D4: -110℃, D5: -120℃.

*5、-120℃ 非标定制，参数待定。

大容量ZT(H)系列 高低温(湿热)交变试验箱 >>>

ZT(H) Series Temperature Test Chamber



执行标准:

Standards implemented and met:

- IEC60068-2-1 GB/T 2423.1
- IEC60068-2-2 GB/T 2423.2
- IEC60068-2-78 GB/T 2423.3
- IEC60068-2-30 GB/T 2423.4
- GB11158 GJB 150.3
- GB10589 GJB 150.4
- GB10592

可选行业标准:

Option: Standards implemented and met for certain industry

- IEC61215 CNS15115-10.11
- IEC61646 PV1200
- UL1703 PV2005
- IEC62108 AK-LV01
- IEEE1513 PR308.2
- IEC61730 PR303.5
- GB18911-10.11

性能特点

- 采用整体式结构, 无需现场的安装, 并且方便搬运;
- 箱体内胆外壳整体焊接;
- 相对于小型温湿度试验箱具有更大的内容积, 可以满足例如太阳能板, 仪表板, 发电机, 座椅等的试验

Performance & Characteristics:

- The overall structure and integral design bring convenience to site installation and commissioning.
- The inner and exterior chamber body is continuous argon arc welded for hermetic sealing to prevent moisture migration into the insulation space.
- Big inner volume up to 8m3 which can fit for the big test specimen such as solar energy panel, instrument board, generator, seat, etc.;

型号 Model	内尺寸 mm Inner size			外尺寸 mm Exterior size			温度 范围 T Range	湿度 范围 H Range	降温 速度 Cooling Speed	升温 速度 Heating speed	配电 Maximum power/ Current	冷却水 Required Cooling water	加湿 水流量 Required Humidifying water
	W	D	H	W	D	H							
ZTH150L	1000	1250	1200	2100	1760	1820	-40°C ~ +130°C	25%~98%RH	+25°C~-40°C 35 minutes	+25°C~+130°C 20 minutes	14KW/28A	3t/h	10l/h
ZTH150U	1000	1250	1200	2100	1760	1820	-60°C ~ +130°C	25%~98%RH	+25°C~-60°C 35 minutes	+25°C~+130°C 20 minutes	14KW/28A	3t/h	10l/h
ZT150L	1000	1250	1200	2100	1760	1820	-40°C ~ +130°C	/	+25°C~-40°C 35 minutes	+25°C~+130°C 20 minutes	14KW/28A	3t/h	/
ZT150U	1000	1250	1200	2100	1760	1820	-60°C ~ +130°C	/	+25°C~-60°C 35 minutes	+25°C~+130°C 20 minutes	14KW/28A	3t/h	/
ZTH200L	1100	1500	1200	2200	2010	1820	-40°C ~ +130°C	25%~98%RH	+25°C~-40°C 40 minutes	+25°C~+130°C 20 minutes	14KW/28A	3t/h	10l/h
ZTH200U	1100	1500	1200	2200	2010	1820	-60°C ~ +130°C	25%~98%RH	+25°C~-60°C 45 minutes	+25°C~+130°C 20 minutes	14KW/28A	3t/h	10l/h
ZT200L	1100	1500	1200	2200	2010	1820	-40°C ~ +130°C	/	+25°C~-40°C 40 minutes	+25°C~+130°C 20 minutes	14KW/28A	3t/h	/
ZT200U	1100	1500	1200	2200	2010	1820	-60°C ~ +130°C	/	+25°C~-60°C 45 minutes	+25°C~+130°C 20 minutes	14KW/28A	3t/h	/
ZTH300L	1300	1700	1400	2400	2210	2020	-40°C ~ +130°C	25%~98%RH	+25°C~-40°C 30 minutes	+25°C~+130°C 30 minutes	15KW/31A	3t/h	10l/h
ZTH300U	1300	1700	1400	2400	2210	2020	-60°C ~ +130°C	25%~98%RH	+25°C~-60°C 70 minutes	+25°C~+130°C 30 minutes	15KW/31A	6t/h	10l/h
ZT300L	1300	1700	1400	2400	2210	2020	-40°C ~ +130°C	/	+25°C~-40°C 30 minutes	+25°C~+130°C 30 minutes	15KW/31A	3t/h	/
ZT300U	1300	1700	1400	2400	2210	2020	-60°C ~ +130°C	/	+25°C~-60°C 70 minutes	+25°C~+130°C 30 minutes	15KW/31A	3t/h	/
ZTH400L	1500	1800	1500	2600	2310	2120	-40°C ~ +130°C	25%~98%RH	+25°C~-40°C 45 minutes	+25°C~+130°C 40 minutes	15KW/31A	3t/h	10l/h
ZTH400U	1500	1800	1500	2600	2310	2120	-60°C ~ +130°C	25%~98%RH	+25°C~-60°C 85 minutes	+25°C~+130°C 40 minutes	15KW/31A	3t/h	10l/h
ZT400L	1500	1800	1500	2600	2310	2120	-40°C ~ +130°C	/	+25°C~-40°C 45 minutes	+25°C~+130°C 40 minutes	15KW/31A	3t/h	/
ZT400U	1500	1800	1500	2600	2310	2120	-60°C ~ +130°C	/	+25°C~-60°C 85 minutes	+25°C~+130°C 40 minutes	15KW/31A	3t/h	/
ZTH500L	1550	2000	1600	2650	2510	2220	-40°C ~ +130°C	25%~98%RH	+25°C~-40°C 50 minutes	+25°C~+130°C 50 minutes	15KW/31A	3t/h	10l/h

型号 Model	内尺寸 mm Inner size			外尺寸 mm Exterior size			温度 范围 T Range	湿度 范围 H Range	降温 速度 Cooling Speed	升温 速度 Heating speed	配电 Maximum power/ Current	冷却水 Required Cooling water	加湿 水流量 Required Humidifying water
	W	D	H	W	D	H							
ZTH500U -1	1550	2000	1600	2650	2510	2220	-60℃~ +130℃	25%~ 98%RH	+25℃~ -60℃ 90 minutes	+25℃~ +130℃ 50 minutes	15KW/31A	3t/h	10/h
ZTH500U -2	1550	2000	1600	2650	2510	2220	-60℃~ +130℃	25%~ 98%RH	+25℃~ -60℃ 60 minutes	+25℃~ +130℃ 50 minutes	16KW/34A	4t/h	10/h
ZTH500U -3	1550	2000	1600	2650	2510	2220	-60℃~ +130℃	25%~ 98%RH	+25℃~ -60℃ 35 minutes	+25℃~ +130℃ 50 minutes	17KW/32A	6t/h	10/h
ZT500L	1550	2000	1600	2650	2510	2220	-40℃~ +130℃	/	+25℃~ -40℃ 50 minutes	+25℃~ +130℃ 50 minutes	15KW/31A	3t/h	/
ZT500U -1	1550	2000	1600	2650	2510	2220	-60℃~ +130℃	/	+25℃~ -60℃ 90 minutes	+25℃~ +130℃ 50 minutes	15KW/31A	3t/h	/
ZT500U -2	1550	2000	1600	2650	2510	2220	-60℃~ +130℃	/	+25℃~ -60℃ 60 minutes	+25℃~ +130℃ 50 minutes	16KW/34A	4t/h	/
ZT500U -3	1550	2000	1600	2650	2510	2220	-60℃~ +130℃	/	+25℃~ -60℃ 30 minutes	+25℃~ +130℃ 50 minutes	17KW/32A	6t/h	/
ZTH600L	1700	2000	1800	1950	3500	2420	-40℃~ +130℃	25%~ 98%RH	+25℃~ -40℃ 60 minutes	+25℃~ +130℃ 60 minutes	15KW/31A	3t/h	10/h
ZTH600U -1	1700	2000	1800	1950	3500	2420	-60℃~ +130℃	25%~ 98%RH	+25℃~ -60℃ 70 minutes	+25℃~ +130℃ 70 minutes	16KW/34A	4t/h	20/h
ZTH600U -2	1700	2000	1800	1950	3500	2420	-60℃~ +130℃	25%~ 98%RH	+25℃~ -60℃ 30 minutes	+25℃~ +130℃ 30 minutes	26KW/45A	6.7t/h	20/h
ZT600L	1700	2000	1800	1950	3500	2420	-40℃~ +130℃	/	+25℃~ -40℃ 60 minutes	+25℃~ +130℃ 60 minutes	15KW/31A	3t/h	/
ZT600U -1	1700	2000	1800	1950	3500	2420	-60℃~ +130℃	/	+25℃~ -60℃ 70 minutes	+25℃~ +130℃ 70 minutes	16KW/34A	4t/h	/
ZT600U -2	1700	2000	1800	1950	3500	2420	-60℃~ +130℃	/	+25℃~ -60℃ 30 minutes	+25℃~ +130℃ 30 minutes	26KW/45A	6.7t/h	/
ZTH800L	2000	2000	2000	2250	2500	2620	-40℃~ +130℃	25%~ 98%RH	+25℃~ -40℃ 65 minutes	+25℃~ +130℃ 35 minutes	15KW/31A	3t/h	20/h
ZTH800U	2000	2000	2000	2250	2500	2620	-60℃~ +130℃	25%~ 98%RH	+25℃~ -60℃ 40 minutes	+25℃~ +130℃ 35 minutes	26KW/45A	6.7t/h	20/h
ZT800L	2000	2000	2000	2250	2500	2620	-40℃~ +130℃	/	+25℃~ -40℃ 65 minutes	+25℃~ +130℃ 35 minutes	15KW/31A	3t/h	/
ZT800U	2000	2000	2000	2250	2500	2620	-60℃~ +130℃	/	+25℃~ -60℃ 40 minutes	+25℃~ +130℃ 35 minutes	26KW/45A	6.7t/h	/

《《 ZT(H)K系列快速温变(湿热)试验箱

ZT(H)K Series Fast Alternation Temperature (Humidity) Test Chamber



具有温度变化速度快，线性好的特点，应用于电子产品、元器件和航空航天材料的快速温度变化试验以及应力筛选试验。

The series products have characteristics of fast temperature changing rate and good linear control; it can be used as temperature fast changing test and HASS test tool in the field of electronic products, components and material of aviation and spaceflight.

性能特点

Performance & Characteristics

- 控制系统采用彩色触摸屏程序控制器控制，操作简单，界面友好；
- 升降温速度：5℃/min~15℃/min可选；
- 可根据实际负载、热量、温度变化速率为客户进行专门优化设计。
- ZD800 controller with 7" or 10.2" TFT touch screen; friendly HMI and easy to operate;
- Temperature changing rate: 5℃/min~15℃/min Optional;
- Optimized design based on customer requirement.

ZT(H)K系列 快速温变(湿热)试验箱

ZT(H)K Series Fast Alternation Temperature(Humidity)Test Chamber

型号 Model	ZTH100UKS-5	ZTH100UKS-10	ZTH100UKS-15	
电源 Power supply	AC380V 3φ 5W 50Hz			
最大电流 Max. current (A)	40	46	87	
最大功率 Max. power consumption(KW)	21	26	50	
性能参数 Performance *1	温湿度范围 Temperature and humidity range	-70 ~ +130°C*3/+15 ~ +85°C 20% ~ 98%RH		
	温度波动度 Temperature fluctuation	≤ ± 0.5°C		
	温度均匀性 Temperature uniformity	≤ 2.0°C		
	温度偏差 Temperature deviation	≤ ± 2.0°C		
	温湿度偏差 Temperature and humidity deviation	≤ ± 2.0°C/+2, -3%RH		
	升温时间 Heating rate	-70 ~ +130°C 50分钟以内 30分钟以内 20分钟以内 No more than 50 mins No more than 30 mins No more than 20 mins -40 ~ +80°C 24分钟以内 12分钟以内 8分钟以内 No more than 24 mins No more than 12 mins No more than 8 mins		
降温时间 Cooling rate	+20 ~ -70°C 30分钟以内(No more than 30 mins) +80 ~ -40°C 24分钟以内(No more than 24 mins)	+20 ~ -70°C 20分钟以内(No more than 20 mins) +80 ~ -40°C 12分钟以内(No more than 12 mins)	+20 ~ -70°C 10分钟以内(No more than 10 mins) +80 ~ -40°C 8分钟以内(No more than 8 mins)	
制冷系统 Refrigerant system	压缩机 Compressor	全封闭压缩机 Hermetically sealed compressor	半封闭式压缩机 semi-hermetic compressor	半封闭压缩机 semi-hermetic compressor
温度传感器 Temperature sensor	铂电阻 PT100			
湿度传感器 Humidity sensor	电容式湿度传感器 Capacitive humidity sensor			
控制器 Controller	ZD800温湿度控制器 (7"真彩触摸屏/中文或英文输入/历史曲线记录/PID自整定) ZD800 temperature and humidity controller (7" TFT Touch Screen/Chinese or English language /data record function/PID AT)			
内容积 Interior capacity(L)	1000*4			
内尺寸 Interior dimensions(mm)	W	1000		
	D	1000		
	H	1000		
外尺寸 Exterior dimensions(mm)*2	W	1500		
	D	1515		
	H	2065		
重量 Weight (kg)	1150			

*1、上诉指标在室温为+23°C时，温湿度性能测试按照国家标准《JJF1101-2003》相关条款检定

(Performance measured at ambient temperature of +23°C, according to <JJF1101-2003>:Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)

*2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)

*3、低温-90°C~-120°C可选；高温150°C可选。(Lowest temperature: -90°C~-120°C is optional, highest temperature: 180°C optional)

*4、内容积另有200L和500L两种标准可选。(Inner dimension 200L and 500L are optional.)

ZTS系列 温度冲击试验箱 >>>

ZTS Series Thermal Shock Test Chamber

本系列冲击试验箱采用立式箱体、冷热两箱结构、采用提篮转换试品所在试验区域的办法，达到冷热冲击试验的目的；这种结构最大限度的减小了冷热冲击时的热负荷，缩短了温度恢复时间。

ZTS series thermal shock chamber has one high temperature zone and one low temperature zone. Test samples is moved between two zone within 10s by a cylinder. This design reduce the heating and refrigeration load during the transferring period, which ensure the temperature recovery time.



性能特点

Performance & Characteristics

- 采用大型彩色触摸屏程序控制器控制，界面友好，具有参数记录功能(3年)；
- 提篮转换时间小于10秒，温度恢复时间小于5分钟；
- 高温区和低温区可分别独立控制，一箱三用。
- Control system: 10.2" TFT touch screen, easy to operate, friendly interface, data record function;
- Lifter basket switch time: less than 10s; Temperature recovery time: less than 5mins;
- The controller can control high temperature zone and cold temperature zone separately.

温度冲击试验箱
Thermal shock test chamber

型号 Model		ZTS010L/U*1	ZTS020L/U*1	ZTS030L/U*1	ZTS050L/U*1
电源 Power supply		AC380V 3φ 5W 50Hz			
最大电流 Max. current (A)		22	24	26	30
最大功率 Max. power consumption(KW)		11	12	13	15
温度控制系统 Temperature control system		平衡调温系统BTC系统 Balanced Temperature Control system(BTC system)			
性能参数 Performance *2	高温室 High temperature zone	预热温度范围 Pre-heated	RT+10 ~ +190°C		
		升温速度 Heating rate	+25°C ~ +190°C 35分钟以内(Within 35 mins)		
	低温室 Low temperature zone	预冷温度范围 Pre-cooled	-10 ~ -65°C		
		降温速度 Cooling rate	+25°C ~ -65°C 60分钟以内(Within 60 mins)		
	试验空间 Working space	温度范围 Temperature range	-40 ~ +150°C / U: ~ -60+ ~ 150°C		
		温度均匀度 Temperature uniformity	≤2°C		
		恢复时间 Temp recovery time	5分钟(5mins)		
恢复条件 Recovery condition		+150°C曝露30分钟 ~ -40°C曝露30分钟(30 min) +150°C for 30 minutes ~ -40°C for 30 minutes(30 min)			
最大负载 Max load		5Kg	7Kg	8Kg	10Kg
制冷系统 Refrigerant system	制冷系统 Refrigeration system	机械压缩式复叠制冷系统 Mechanical double-cascade refrigerating system (air-cooled condenser)			
	压缩机 Compressor	全封闭或半封闭压缩机 Hermetically sealed compress or semi-hermetic compressor			
温度传感器 Temperature sensor		铂电阻 PT100			
控制器 Controller		ZD800温度控制器 (10.2"真彩触摸屏/中文或英文输入/历史曲线记录/PID自整定) ZD800 temperature controller(10.2" TFT Touch Screen/Chinese or English language/data record function/PID AT)			
内容积 Interior capacity(L)		200	300	500	1200
内尺寸 Interior dimensions(mm)	W	600	680	800	1000
	D	600	680	900	1100
	H	600	680	700	1100
吊篮尺寸 lift basket dimensions(mm)	W	400	480	600	800
	D	400	480	600	800
	H	524	616	600	800
外尺寸 Exterior dimensions(mm)	W	1580	1660	1800	3605
	D	1235	1285	1485	1725
	H	1620(2300)*3	1780(2560)*3	1820(2710)*3	1689
重量 Weight (kg)		300	350	400	1000

*1、型号带S为水冷机组。(Modle with "S" is water-cooling.)

*2、外尺寸包括送风机罩壳以及脚轮高度。(The height includes height of blower and casters.)

*3、上诉指标在室温为+23°C时，温湿度性能测试按照国家标准《JJF1101-2003》相关条款检定 (Performance measured at ambient temperature of +23°C, accroding to <JJF1101-2003>.Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)

*4、包括吊篮气缸尺寸高度。(The cylinder's height dimension is included.)

小型阳光模拟试验箱 >>>

Small Solar Simulation Chamber



性能特点

Performance & Characteristics

- 温度范围：-30°C ~ 100°C, 湿度范围：10% ~ 90%RH, 辐射照度范围：1200 W/m² ~ 600 W/m²;
- 灯管采用金属卤素灯，光谱符合：CIE 85,表4; DIN 75220 and IEC68-2-5 表1;
- 符合试验标准：MIL-STD-810, EPA, IEC86-2-5, DIN75220 etc.;
- 辐射照度可根据光照强度计或者黑标温度计进行自动闭环控制;
- 特殊设计的机械结构：做光照试验时，灯罩自动移入试验箱；进行普通试验时，灯罩移出试验箱。再获得更加良好光照效果的同时，延长了灯管的使用寿命;
- 灯光采用风冷，避免水冷系统造成的不便;
- 灯光控制系统所有部件德国进口，光照强度计采用荷兰Kipp&Zonen

- Temperature range: -30°C ~ 100°C, Humidity range: 10% ~ 90%RH, Irradiance: 1200W/m² ~ 600 W/m² in the irradiation area;
- Real sun spectral according. CIE 85, Table 4; DIN 75220 and IEC68-2-5 Table 1;
- Applying standard: MIL-STD-810, EPA, IEC86-2-5, DIN75220 etc.;
- Irradiance power can be controlled manually or automatically according to pyranometer or black standard temperature sensor;
- The lamp can be moved into chamber ceiling automatically in the test step with irradiance, and moved out chamber ceiling in test steps without irradiance to avoid the condensation inside the lamp;
- Equipped with air cooling lamp, Not necessary to provide additional air dryers or refrigerated water to dry or cool the lamp;

ZSC 系列砂尘试验箱 >>>

ZSC Series Dust Test Chamber

ZSC系列砂尘试验箱根据国际国内一系列的标准设计制造，模拟沙尘环境，可进行外壳防尘或破坏性试验。

ZSC series dust test chamber is designed and constructed according to a series of domestic and international standard. It can be used to conduct enclosure protection class and destructive test.



砂尘试验箱

Dust Test Chamber

型号 Model		ZSC100B1	ZSC100B2
电源 Power supply		3 φ 380V	3 φ 380V
最大功率 Max. power consumption(KW)		4KW	5KW
性能参数 Performance	温度范围 Temperature range	RT+5 ~ 50°C(可调) Adjustable	RT+5 ~ 50°C(可调) Adjustable
	湿度范围 Humidity Range	自然湿度无控制 No control	自然湿度无控制 No control
	粉尘浓度 Dust amount	2KG/M ³	2KG/M ³
	粉尘规格 Dust specification	能通过筛孔为75um,金属直径为50um的方孔干燥滑石粉 talcum powder sieved through square opening sieve whose aperture is 75um and tinsel diameter is 50um	能通过筛孔为75um,金属直径为50um的方孔干燥滑石粉 talcum powder sieved through square opening sieve whose aperture is 75um and tinsel diameter is 50um
	试验风速 Air flow velocity	≤2m/s	≤2m/s
	扬尘控制 Dust control	间隙, 循环 Interval and cycle control	
	压力差 Pressure difference	无 None	≤ -1.98Kpa
	试验平台 Test platform	格栅式 Grid	格栅式 Grid
	试验品通电 Speciment electriying	无 None	有 Yes
	试验台载重 Platform load	≤20KG	
防护等级 Protection rank	IP5X	IP5X、IP6X	
应用标准 Standard	DIN40050 GB2423.38 GB2424.23 JIS0203 GB4208.2008 GB/T4942 GB/T10485 IEC60529 ISO20653 CNS7139-D3069	DIN40050 GB2423.38 GB2424.23 JIS0203 GB4208.2008 GB/T4942 GB/T10485 IEC60529 ISO20653 CNS7139-D3069	
示意图 Diagram	扬尘规范图形 Standard diagram		
	控制器 Controller	触摸彩屏 Touch screen controller ZD800	触摸彩屏 Touch screen controller ZD800
	流量传感器 Flow sensor		玻璃转子流量计 Glass rotar
	压差传感器 Pressure sensor		美国阿尔法ALPHA pressure sensor
内容积 Interior capacity (L)		1000	1000
内尺寸 Interior dimensions(mm)	W	1000	1000
	D	1000	1000
	H	1000	1000
外尺寸 Exterior dimensions(mm)*	W	1460	1460
	D	1600	1600
	H	1880	1880
重量 Weight (kg)		300	300

ZLY 系列淋雨试验箱 >>>

ZLY Series Rain Simulation Test Chamber

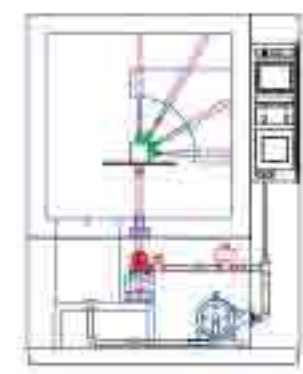

本系列淋雨试验箱对各种防水、防渗漏有特别要求的产品和设备进行试验,满足GB4208标准IP代码第2位表征数3、4的防护试验,也可根据试验要求制造符合其它标准试验的试验箱,如满足GB/T4942、GB2423.38、DIN40050、JIS D0203、GBJ150.8、MIL506.4、MIL-STD-810F的试验设备。


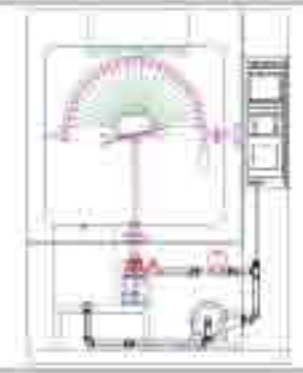

This kind of rain simulation test chamber is used to examine products, such as low voltage electric apparatus, electric motor, instrument, lights and household electric apparatus, whether there is leakage, erosion, chap or bad isolation because of rain and change of temperature or wind velocity. It can be content to standard GB4208 IP code the second token NO3,4 protect test, and we can also design this kind of chambers according to other standards such as GB/T4942、GB2423.38、DIN40050、JIS D0203、GBJ150.8、MIL506.4、MIL-STD-810F etc.



技术参数 (淋雨试验箱) Technical Data (Rain Simulation Test Chamber)

型号 Model	ZLY100B1	ZLY100B2	ZLY100B3	
电源 Power	3 ϕ 380V			
	2KW	2KW	10KW	
使用环境温度 Ambient temperature	5 $^{\circ}$ C ~ 35 $^{\circ}$ C	5 $^{\circ}$ C ~ 35 $^{\circ}$ C	5 $^{\circ}$ C ~ 35 $^{\circ}$ C	
性能参数 performance	喷水压力 Spraying pressure		80Kpa ~ 400Kpa (可调 Adjustable)	30Kpa ~ 1000Kpa (可调 Adjustable)
	喷水流量 Spraying flux	1mm/min ~ 3mm/min	0.1L/min ~ 0.6L/min	12.5 L/min ~ 100L/min
	浸水高度 Sinking height			
	摆杆半径 Swing pipe radius		ϕ 400mm	
	喷嘴直径 Nozzle diameter	ϕ 0.4mm	ϕ 0.4mm ~ ϕ 0.8mm	Φ 6.3mm, Φ 12.5mm
	喷嘴间距、距离 Nozzle interval	20mm	50mm	2500mm ~ 3000mm
	滴水范围 Dripping range	600mm*600mm		
	摆杆摆幅 Swing oscillation		\pm 60 $^{\circ}$ ~ \pm 170 $^{\circ}$ (可调 Adjustable)	
	摆动速度 Swing Speed		约 60 $^{\circ}$ /s	
	摆杆内径 Swing pipe diameter		ϕ 15mm	ϕ 15mm
	试验台直径 Platform size	ϕ 400mm	ϕ 400mm	1000*1000
	试验台转速 Platform rotation speed	1rpm	4 ~ 17rpm	
	试验台载重 Platform load	\leq 15KG	\leq 15KG	\leq 100KG
	试验台倾斜 Platform inclination	0 ~ 15 $^{\circ}$		
	试验台升降 Platform movement	可选其一 Can choose one		
试验品通电 Experiment electricity	可选 Option			
试验水温差 Water temperature difference	可选 Option			
防护等级 Protection rank	IPX1 IPX2	IPX3 IPX4 IPX4K	IPX5 IPX6	
应用标准 Standard	DIN40050、GB2423.38、GB2424.23、GB4208、IEC60529、DNS7138、ISO20653、GB/T10485、GB/T4942			
结构 Construction	喷淋规范图形 Schematic			
	内箱材料 Inner material	不锈钢 Stainless Steel SUS304		
	箱体材料 Exterior material	钢板粉体烤漆 Plastic-sprayed steel-tin		
	观察窗 Window	680mm*680mm		
	控制器 Controller	触摸彩屏 Touch panel controller		
	流量传感器 Flowmeter	涡轮流量传感器 Turbine flow sensor		
压力传感器 Pressure sensor	美国 USA GEMS			
内容积 Interior capacity (L)	1000			
内尺寸 Interior dimensions (mm)	W	1000	1000	1000
	D	1000	1000	1000
	H	1000	1000	1000
外尺寸 Exterior dimensions(mm)	W	1500	1500	4000
	D	1450	1450	3000
	H	2150	2050	3800
重量 Weight (kg)	350	350	350	

型号 Model		ZLY100B4	ZLY100B5	ZLY100B6
电源 Power		3 φ 380V		
使用环境温度 Ambient temperature		5°C ~ 35°C	5°C ~ 35°C	5°C ~ 35°C
性能参数 performance	喷水压力 Spraying pressure		8000Kpa ~ 10000Kpa	10Kpa ~ 300Kpa (可调Adjustable)
	喷水流量 Spraying flux		14 L/min ~ 16 L/min	1.9 L/min ~ 39.2 L/min
	浸水高度 Sinking height	150mm ~ 1000mm		
	摆杆半径 Swing pipe radius			
	喷嘴直径 Nozzle diameter		9K喷嘴 Nozzles	Φ1.2mm, Φ0.5*8mm
	喷嘴间距, 距离 Nozzle interval		0° 30° 60° 90°	400mm
	滴水范围 Dripping range			
	摆杆摆幅 Swing oscillation			360°
	摆动速度 Swing Speed		30s/个	23rpm
	摆杆内径 Swing pipe diameter		φ 15mm	φ 15mm
	试验台直径 Platform size		φ 400mm	φ 400mm
	试验台转速 Platform rotation speed		4 ~ 17rpm	4 ~ 17rpm
	试验台载重 Platform load	≤ 100KG	≤ 15KG	≤ 15KG
	试验台倾斜 Platform inclination			
	试验台升降 Platform movement		可选其一 Can choose one	可选其一 Can choose one
	试验品通电 Experiment electricity	无 None	可选其一 Can choose one	可选其一 Can choose one
	试验水温差 Water temprature difference	可选 Option	80°C ± 5°C	可选 Option
	防护等级 Protection rank	IPX7X X8	IPX9K	R1 R2 S1 S2
应用标准 Standard		DIN40050 ISO20653	JIS0203 KSR0015 CNS7138	
结构 Construction	喷淋规范图形 Schematic			
	内箱材料 Inner material	不锈钢 Stainless Steel SUS304		
	箱体材料 Exterior material	钢板粉体烤漆 Plastic-sprayed steel-tin		
	观察窗 Window		680mm*680mm	680mm*680mm
	控制器 Controller		触摸彩屏 Touch panel controller	
	流量传感器 Flowmeter		涡轮流量传感器 Turbine flow sensor	
	压力传感器 Pressure sensor		美国 USA GEMS	
内容积 Interior capacity (L)	1000	1000	1000	
内尺寸 Interior dimensions (mm)	W	1000	1000	1000
	D	1000	1000	1000
	H	1200	1000	1000
外尺寸 Exterior dimensions(mm)	W	1500	1500	1500
	D	1450	1450	1450
	H	1800	2050	2050
重量 Weight (kg)	350	350	350	

型号 Model		ZLY100B7	ZLY100B8	ZLY100B9
电源 Power		3 φ 380V		
使用环境温度 Ambient temperature		5°C ~ 35°C	5°C ~ 35°C	5°C ~ 35°C
性能参数 performance	喷水压力 Spraying pressure	10Kpa ~ 400Kpa (可调Adjustable)		
	喷水流量 Spraying flux	0.1L/min ~ 0.6L/min 1.9 l/min ~ 39.2l/min	1mm/min ~ 3mm/min 0.1L/min ~ 0.6L/min	1mm/min ~ 3mm/min 0.1L/min ~ 0.6L/min 1.9 l/min ~ 39.2l/min
	浸水高度 Sinking height			
	摆杆半径 Swing pipe radius	φ 400mm		
	喷嘴直径 Nozzle diameter	φ 0.4mm ~ φ 0.8mm Φ 1.2mm, Φ 0.5*8mm		
	喷嘴间距, 距离 Nozzle interval	20mm ~ 400mm		
	滴水范围 Dripping range		600mm*600mm	600mm*600mm
	摆杆摆幅 Swing oscillation	± 60° ~ ± 170° (可调 Adjustable)		
	摆动速度 Swing Speed	约60° /s 23rpm	约60° /s	约60° /s 23rpm
	摆杆内径 Swing pipe diameter	φ 15mm	φ 15mm	φ 15mm
	试验台直径 Platform size	φ 400mm	φ 400mm	φ 400mm
	试验台转速 Platform rotation speed	4 ~ 17rpm	4 ~ 17rpm	4 ~ 17rpm
	试验台载重 Platform load	≤ 15KG	≤ 15KG	≤ 15KG
	试验台倾斜 Platform inclination		0 ~ 15°	0 ~ 15°
	试验台升降 Platform movement	可选其一 Can choose one	可选其一 Can choose one	可选其一 Can choose one
	试验品通电 Experiment electricity	可选其一 Can choose one	可选其一 Can choose one	可选其一 Can choose one
	试验水温差 Water temprature difference	可选 Option	可选 Option	可选 Option
	防护等级 Protection rank	IPX3 IPX4 IPX4K R1 R2 S1 S2	IPX1 IPX2 IPX3 IPX4 IPX4K	IPX1 IPX2 IPX3 IPX4 IPX4K R1 R2 S1 S2
应用标准 Standard	DIN40050. GB2423.38. GB2424.23. GB4208. IEC60529. DNS7138. ISO20653. GB/T10485. GB/T4942 JIS0203 KSR0015 CNS7138	DIN40050. GB2423.38. GB2424.23. GB4208. IEC60529. DNS7138. ISO20653. GB/T10485. GB/T4942	DIN40050. GB2423.38. GB2424.23. GB4208. IEC60529. DNS7138. ISO20653. GB/T10485. GB/T4942 JIS0203 KSR0015 CNS7138	
结构 Construction	喷淋规范图形 Schematic			
	内箱材料 Inner material	不锈钢 Stainless Steel SUS304		
	箱体材料 Exterior material	钢板粉体烤漆 Plastic-sprayed steel-tin		
	观察窗 Window	680mm*680mm		
	控制器 Controller	触摸彩屏 Touch panel controller		
	流量传感器 Flowmeter	涡轮流量传感器 Turbine flow sensor		
	压力传感器 Pressure sensor	美国 USA GEMS		
内容积 Interior capacity (L)	1000	1000	1000	
内尺寸 Interior dimensions (mm)	W	1000	1000	1000
	D	1000	1000	1000
	H	1000	1000	1000
外尺寸 Exterior dimensions(mm)	W	1500	1500	1500
	D	1450	1450	1450
	H	2050	2150	2150
重量 Weight (kg)	350	350	350	

ZT(H)VA 系列真空气候试验箱 >>>

ZT(H)VA Series Temperature (Humidity) and Altitude Test Chamber



真空试验箱用于模拟高空或者太空环境（低气压，高低温），是航空航天及可能涉及低气压的行业必不可少的试验箱。

A vacuum chamber is a rigid enclosure from which air and other gases are removed by a vacuum pump. The resulting low pressure, commonly referred to as a vacuum. A vacuum environment allows researchers to conduct physical experiments or to test mechanical devices which must operate in outer space (for example) or for processes such as vacuum drying or vacuum coating in certain temperature and humidity.

性能特点

Performance & Characteristics

ZT(H)VA100B1 高低温真空箱

- ZT(H)VA100B1 可将温度、高度综合一个试验箱实现多种用途试验，可适用在高度试验对低温真空环境的模拟，最低温度达-70℃；
- 可独立使用，不做高度试验时可作温度试验；
- 控制仪表采用10.2" 触摸屏，人机界面，操作简单明了，仪表具有偏差修正功能，经过调整可获得更为准确条件，区别于传统真空计面板显示，提高显示精度；
- 高性能壳体，耐压设计，工作室采用SU304不锈钢板制成，确保产品经久耐用；
- 箱门闭合采用整体成型的硅橡胶门密封圈，确保箱内高真空度；
- 全电子智能控制真空系统，全系列均有超温保护功能；
- 产品箱体尺寸多样，可提供步入式方案；
- 满足GB/T10590《高低温/低气压试验箱技术条件》标准。

ZT(H)VA100B1(Temperature and humidity vacuum chamber)

- ZT(H)VA100B1 is a full function temperature, altitude, and vacuum test chamber which is specifically modified and reinforced to simulate altitude;
- Temperature test chamber combine vacuum capabilities with achieves lowest temperatures from below ambient to -70° C(Humidity not achieved simultaneously with altitude);
- Uniquely designed fully insulated workspace to suit various tests. Can be only used as normal temperature humidity test chamber without altitude test ;(Humidity not achieved simultaneously with altitude);
- Accurate Control System with 10.2" TFT touch screen, easier to operate, friendlier interface, build-in deviation correction function with high reliability and more accuracy than Panel-type vacuum meter;
- Reinforced with steel vacuum shells that are capable of supporting limiting vacuum. The units are all finished on the inside with 304 stainless steel and the exterior offers a plastic powder coated steel;
- Silicone gasket seals the chamber door;
- Vacuum pumping equipment and electrical control components are enclosed with over temperature alarm device;
- Adjustable shelves;
- Special sizes and configurations up to and including walk-ins.
- Conform to GB/T 10590 <Specifications for high and low temperature/low air pressure testing chambers>

ZT(H)VA100B2 高温真空箱特点

- 高温真空试验环境模拟；
- 全封闭隔热工作室设计，可调式样本架。
ZT(H)VA100B2(High Temperature Vacuum chamber);
- High temperature combine vacuum capabilities;
- Achieves temperatures above ambient to +200° C;
- Fully insulated workspace with adjustable shelves.

ZT(H)VA100B3 真空箱特点

- 模拟真空环境，达到最终真空度小于30分钟；
- 真空度水平由电子压力传感器全电子智能控制真空系统全程控制。
ZT(H)VA100B3(Vacuum chamber)
- Ultimate vacuum capability is achieved within 30 minutes;
- Vacuum level is automatically controlled via a pressure sensitive.

技术参数(真空气候试验箱)

Technical Data (Temperature Humidity and Altitude Test Chamber)

型号 Model	ZT(H)VA100B1	ZT(H)VA100B2	ZT(H)VA100B3
电源 Power supply(A)	3 φ 380V		
最大功率 Max. power consumption(KW)	25KW	12KW	3KW
性能参数 Performance	温度范围 Temperature range	-70°C ~ 100°C	RT+10°C ~ 200°C
	湿度范围 Humidity range	25%~98%RH	
	温度波动度 Temperature fluctuation	≤ ± 0.5°C	≤ ± 1°C
	极限真空度 Limiting vacuum capability	100Pa	
	降温时间 Cooling rate	+20°C ~ -70°C ≤ 90min	
	升温时间 Heating rate	-70°C ~ 100°C ≤ 65min	RT+10°C ~ 200°C ≤ 90min
	降压速度 Depressurization rate	101KPa ~ 100Pa ≤ 20min	
	升压速度 Pressurization rate	100Pa ~ 101KPa ≤ 10min	
可调隔板 Adjustable separator	2片(pieces)		
控制方式 Control method	降温方式 Cooling method	对流+辐射 Convection and radiation	
	加热方式 Heating method	对流+辐射 Convection and radiation	
	降压方式 Depressurization method	真空泵强制降压 Compulsory vacuum-pumping	
	升压控制 Pressurization method	真空阀门 Vacuum valve control	
应用标准 Standard	GB2433.25-92 GB2423.21-91 GB2423.26-92 GB2423.27-81 GB10591-89 GJB150.6-86		
	IEC60068-2 MIL-STD-810F-500.4 MIL-STD-810F-520.2		
箱体配置 Chamber configuration	控制器 Controller	触摸彩屏 Touch screen controller ZD800	
	温度传感器 Temperature sensor	铂电阻 PT100	
	湿度传感器 Humidity sensor	电容式湿度传感器 Electrical capacity humidity sensor	
	压力传感器 Pressure sensor	德国赫尔姆HELM27系列 HELM 27 from Germany	压阻式真空计 Piezoresistive Vacuum Gauge
	制冷系统 Refrigerant system	机械压缩复叠制冷系统 Mechanical cascade refrigerator system	
	加热器 Heater	鳍片式不锈钢加热管 Stainless steel finned tube heater	
	降压系统 Depressurization system	旋片式+罗茨真空泵 Rotary vane vacuum valve plus Roots vacuum valve	
	控制阀 Control valve	真空专用阀 Vacuum valve	
内容积 Interior capacity (L)	1000		
	W	1000	1000
	D	1000	1000
	H	1000	1000

ZYQ系列盐雾腐蚀试验箱 >>>

ZYQ Series Salt Corrosion Chamber



本类盐雾腐蚀试验箱专门针对各种材质经油漆、涂料、电镀、阳极处理、防锈等表面处理，测试其制品之抗腐蚀能力，使用盐水喷雾试验机将氯化钠溶液的试验液，以雾状作用被覆膜上之一种腐蚀试验方法；是材料研究、国防工业、轻工电子、仪表等行业各种产品环境适应性和可靠性的一种重要试验设备。该盐雾腐蚀试验箱可按GB/T2423.17《Ka：盐雾试验方法》做中性盐雾(NSS)，同时也可做乙酸盐雾(ASS CASS)试验。

This kind of salt corrosion Chamber is one of the test equipment for the "three preventions" (hotness & humidity, salt mist and mould) of artificial environment. It is an important equipment used to test adaptability and reliability of products in the field of machinery, industry of national defense, light industry, electronics and instrument etc. This test chamber for salt mist corrosion could be used to do experiment of neutral salt spray(NSS) mist as well as experiment of Acetic-acid salt spray(ASS), Copper-accelerated acetic-acid salt spray(CASS) acetic acid salt mist according to GB/T 2423.17 Basic Environmental Testing Procedures for Electric & Electronic Products Test Ka; Salt Mist Test Method.

技术参数(盐雾腐蚀试验箱)

Technical Data (Salt Corrosion Chamber)

型号 Model	ZYQ015	ZYQ025	ZYQ050	ZYQ100	ZYQ160	ZYQ200
最大电流 Max. current (A)	11	14	20	15	18	22
最大功率 Max. power consumption(KW)	3	4	5	8	10	11
性能参数 Performance	温度范围 Temperature range	RT+10 ~ +50°C		温度偏差 Temperature deviation	≤ ± 2.0°C	
	温度波动度 Temperature fluctuation	≤ ± 0.5°C		盐雾沉降量 Subsidence quantity of salt fog	1.0 ~ 2.0ml/80cm².h	
温度控制器 Controller	日本“富士”PXR7 [ZD800] Japanese "Fuji" PXR7 [ZD800]			温度传感器 Temperature sensor	铂电阻 PT100	
内容积 Interior capacity (L)	150	250	500	1000	1600	2000
内尺寸 Interior dimensions(mm)	W	600	1000	1100	1300	2000
	D	460	640	740	1000	1000
	H	400	500	500	600	800
外尺寸 Exterior dimensions(mm)	W	1140	1580	1700	2000	2700
	D	750	950	1040	1380	1380
	H	1010	1220	1350	1860	1920

*1、上诉指标在室温为+23°C时，温湿度性能测试按照国家标准《JJF1101-2003》相关条款检定 (Performance measured at ambient temperature of +23°C, according to <JJF1101-2003>: Calibration Specification for the Equipment of the Environmental Testing for Temperature and Humidity)

ZGT系列高温试验箱

ZGT Series High Temperature Test Chamber

性能特点 Performance & Characteristics

具有极宽的温度控制范围(RT+20 ~ 250°C), 可满足用户的各种需要。

采用独特的平衡调温方式, 可调节理想的温度环境, 具有稳定平衡的加热能力, 可进行高精度、高稳定的温度控制。

循环方式: 强制热风循环方式。

控温仪表采用日本富士仪表, 数字设定, 仪表具有偏差修正功能, 经过调整可获得更为准确的试验条件。

Extremely wide temperature range (20°C ~ +250°C) can meet different customer requirement.

Unique balanced control method can achieve perfect temperature.

Circular mode: compulsive hot wind circulation.

Equip with FUJI temperature controller with function of deviation correction, PID AT, which is easy to control.



本系列试验箱适用于按GB/T 2423.2《电工电子产品的基本环境试验规程试验B: 高温试验方法》对产品进行高温试验, 该类试验箱采用最先进的控温方式——平衡式温度调节方式, 因而可自动获得高温时设定的可靠、精确的试验温度, 本类产品主要部件采用进口件, 性能优异、外形美观、可靠性好是实验室环境试验设备的理想选择。

(尺寸参考ZT(H)系列高低温交变(湿热)试验箱)

This series of chamber apply to high temperature tests for products according to GB/T2423.2《Basic Environment Test Regulation of Electric & Electronic Products B: High Temperature Test Method》. This kind of test chamber adopts the most advanced temperature control method——balanced thermoregulation, so it can achieve the reliable precise test temperature automatically. All of the main parts of this series are imported pieces. Characterized with good performance, stylish appearance and high reliability, it is an ideal choice for environmental test equipment in laboratory.

ZYLBD 系列压力波动试验装置

ZSCB Series Pressure Fluctuation Test Instrument

性能特点

Performance & Characteristics

● 自动化程度高, 由计算机自动完成从冲液开始到结束的全部过程;

● 采用伺服比例阀控制油缸运动以达到循环介质压力波动波形控制;

● 压力波形输出: 梯形波、三角波、正弦波;

● 设备具有故障报警、停机和提示等功能。

● 试验标准: TL52361 TL82361 GB/T20025.2 /LS08066-2 QCT/664 GB/T5563-2006/ISO 1402:1994; GB7939-87

● High level of automotive control. The complete process from water supply to the end of test is all finished by computer;

● Adopts servo proportioning valve to control movement of the cylinder to control the shape of pressure curve accurately of pressure control;

● The output of pressure shape: trapezoidal wave, triangular wave and sine wave;

● Equipped with alarm analysis, Estop and on-line help functions.

● Testing standard:

TL52361 TL82361 GB/T20025.2 /LS08066-2

QCT/664 GB/T5563-2006/ISO 1402:1994;

GB7939-87



用途

Usage

用于汽车散热器、冷却水管、平衡箱、热交换器等内部循环介质波动压力的疲劳试验和静态压力保持试验。

Used in endurance test and static pressure airproof test for automobile heat-radiator, cooling water pipe, trimming tank, heat-exchanger, etc.

技术参数

Technical Data

型号 Model		ZYLBD	
循环介质 Circulating medium		矿物油、100%乙二醇 Mineral Oil, 100% Glycol	
试验间温度 Temperature inside the chamber		50 ~ 100°C 可调, 温控精度 ± 2.0°C 50 ~ 100°C adjustable, temperature control precision ± 2.0°C	
介质温度 Medium temperature		50 ~ 150°C 可调, 温控精度 ± 2.0°C 50 ~ 150°C adjustable, temperature control precision ± 2.0°C	
压力试验参数 Pressure test parameter	波动试验 Fluctuation test	压力波形输出 Output of pressure profile	梯形波、三角波、正弦波 Trapezoidal wave, Triangular wave, Sine wave
		波动压力 Fluctuation pressure	0 ~ 5 bar 可调; 控制精度: FS ± 5% 0 ~ 5 bar adjustable; control precision: FS ± 5%
		波动频率 Fluctuation frequency	0.1 ~ 2.5Hz 可调; 频率误差: ± 0.1 Hz 0.1 ~ 1.5Hz adjustable; Frequency deviation: ± 0.1Hz
	静态压力保持试验参数 Static pressure airproof test	静态压力 Static pressure	0 ~ 5 bar 可调 (0~5mpa可调) 0 ~ 5 bar adjustable (0~5mpa adjustable)
		控制精度 Control precision	FS ± 5%
试件接口 Sample interface		8组, 任意开关组合, 最大可同时进行8组散热器或其它工件的试验。 8 sets, on-off combined arbitrarily, conduct tests of 4 sets radiator or other samples at most.	

ZRT(H)系列步入式温(湿)度试验室 >>>

ZRT(H) Series Walk-in Temperature (Humidity) Test Chamber



步入式恒温(恒湿)室具有试验空间大, 具有可靠性要求高、温湿度范围广、综合环境参数多、试验条件复杂。操作人员可以进入试验室对试验品进行操作的特点, 为工业生产厂家的批量或者大型零件、半成品、成品提供了温(湿)度环境测试的条件。

The walk-in test chamber are specially designed for testing large test specimens and make the possibility for operators entering into the chamber during test.

During last years, we have designed and developed various walk-in environmental test chambers for some famous companies, such as SVW, FAW-VW, DELPHI, MAGNA, JOHNSON CONTROL, VISTEON, GM, NISSAN, TRW etc., and gained customer trust and praise by our good quality and service. At the same time, we also accumulated much experience of the solution of various walk-in chambers besides temperature and humidity chamber and rain, dust, IR, Solar simulation chambers except for, and can achieve perfect design based on customer requirement.

性能特点

Performance & Characteristics

- 采用易于运输和现场安装的拼装式库板, 可根据用户需要提供各种尺寸规格的产品;
- 科学的空气流通设计, 使室内温(湿)度均匀, 避免任何死角;
- 温湿度控制选用嵌入式计算机系统; 10.2"屏幕真彩触摸屏自动化程度高, 操作简单;
- 每个产品都根据客户的要求订做, 保证了设备的适用性和高效、节能。
- 省耗节能, 增达独有的冷冻回路

- The whole chamber will be assembled at client site, convenient for delivery;
- Scientific air circulation design ensures the temperature & humidity uniformity in the chamber, avoids any blind space;
- With controllers of this series products adopt embedded computer system (ZD800), with 10.2" TFT touch which has user friendly interface and multi automatic functions;
- Each device will accord the demand of customer to ensure the applicability, efficiency and economization;
- energy saving and consumption reducing, with the help of Zundar unique refrigeration system.

整车试验的步入式试验室 >>>

Walk-in chamber for whole car test



- ※ 温度范围: -40°C~+85°C;
- ※ 湿度范围: +20%~98%RH
- ※ 接缝处采用氩弧焊;
- ※ 动力室和试验箱体分离 隔离噪声;
- ※ 远程监控系统;
- ※ 尺寸按客户要求定制。

- ※ Temperature range: -40°C~+85°C;
- ※ Humidity range: +20%~98% RH
- ※ All seams were continuous heliarcwelded;
- ※ Control room separated from power room to keep noise away from control room;
- ※ Big LED displayer as slave displayer for operator check chamber operation condition at a distance.
- ※ dimension can be custom designed according to customer's requirement



安全气囊点爆用试验室 >>>

Airbag static deployment test chamber



试验箱与气囊引爆系统联动设计,能自动完成低温、开门、引爆过程,为用户提高试验精度和节省试验时间提供了极大便利。

Both the test chamber and airbag static deployment system are designed as a whole system which can complete the process of reaching the temperature, open the door, igniting the airbag, ventilation to provide a lot convenience for the customers and increase the test precision and efficiency.

- ※ 温度范围: -50°C ~ +110°C;
- ※ 自动升降滑门和自动升降平台;
- ※ 干燥空气净化系统;
- ※ 整合安全气囊测试系统;
- ※ 试验区域整合,可独立控制;
- ※ 尺寸按客户要求定制。
- ※ Temperature range:-50°C~+110°C;
- ※ With auto up-down sliding door and platform;
- ※ With dry air purge system;
- ※ Integrated with air-bag test system;
- ※ Two zone connected together with separated control;
- ※ dimension can be custom designed according to customer's requirement.

汽车冷启动性能试验及尾气排放试验室 >>>

Vehicle cold start performance and emission test chamber

- ※ 温度范围 -40℃ ~ +50℃;
 - ※ 尾气排放及新风补偿系统;
 - ※ 整合消防设备和实时监控系統;
 - ※ 尺寸按客户要求定制。
 - ※ 配备排放分析仪, 跟踪风机, 转鼓。
- ※ Temperature range: -40℃ ~ +50℃;
 - ※ Exhaust and dry air compensation system;
 - ※ Integrated with fire protection and real-time monitor system;
 - ※ dimension can be custom designed according to customer's requirement.
 - ※ Drive-in climatic chamber for basic calibration and mapping (steady state grid measurement) of vehicles 20-220kW. Emission tests according to (SFTP) EU V, ULEV, SULEV, Japan, USA, India etc.;
 - ※ Equipped with 2 wheel 48" dyno.
 - ※ Equipped with exhaust analysis system: AAR, AAV, CVS, dilution tunnel etc.;
 - ※ Equipped with a speed controlled blower to simulate the air stream;



阳光模拟试验箱 >>>

Walk-in sunlight simulation test chamber



本系列阳光模拟实验舱用于检测成套零部件或整车在阳光照射下的老化性能。用户可通过此测试对零部件或整车在照射后性能的更改进行评估, 包括形状、颜色、光泽度、手感、强度及各种热膨胀结果等。

This kind of sun simulation chamber is used to determine the aging behavior of complex assemblies or whole vehicles. Through this test, customers can evaluate all changes of all properties relevant, such as shape, color, gloss, handle, strength and the consequences of different degrees of thermal expansion.

本系列产品符合标准 MIL-STD-810, EPA, DIN75220 等, 并可根据客户的其他测试需求进行特殊设计。

This kind of chamber is designed according to MIL-STD-810, EPA, DIN75220. We can also design chambers that based on customer requirements.

<温湿度性能 temperature and humidity parameter >

尺寸 Inner size: 1立方到250立方 1m³ up to 250m³;

温度范围 Chamber Temperature: -20~+100℃

湿度范围 Chamber Humidity: 25%~+70%RH

箱体制冷方式: 机械压缩式制冷 Mechanical compressed cooling system

箱体加湿方式: 喷雾式加湿 Mist Spray

湿度控制方式 Humidity control method: Dew point control with independent-cooling system

性能特点

- 多变量控制，用户可选择光强反馈或黑体温度反馈控制方式。
Multi-variables control method. Feedback based on power or blackbody temperature is optional.
- 进口金属卤素灯管，保证在使用寿命期间内光谱无漂移。
Imported metal halide lamp. Its spectrum will not change during its lifetime.
- 高精度电子镇流系统，确保精确的功率输出，并可有效延长灯管使用寿命。
High-accuracy electronic ballast which can create precise power. The lifetime of lamp can be extended.
- 可升降灯架，自动定位马达系统，灯架角度可调节。可应客户需求设计成可移动式灯架。
The height and angle of lamp bracket is adjustable. Auto-positioning system equipped. Movable lamp frame also can be designed.
- 金属灯罩，配备滤光玻璃，易拆卸结构，方便更换灯管。灯罩可采用水冷或风冷方式。
The lampshade is equipped with suitable filtering glass. It can be easily tear open, and its very convenient for the customer to exchange lamp. The lamp-chimney cooling method can be air-cooling or water-cooling.
- 自动或手动标定系统。利用自动行进机器人结构可进行自动标定工作。
Manual or automatic calibration system. The calibration works can be finished using a kind of industrial robot.

阳光模拟控制参数

Solar simulation parameter

型号 Model		ZRTHSO
控制方式Control method		手动输出，光强反馈，黑体温度反馈 MV Out, Irradiance Feedback, Blackbody Temperature feedback
辐照强度 Radiation Intensity		500~1100W(+/-5%) 可调 adjustable
灯管输出功率 Power MV		50%~100% 可调 adjustable
功率微调 Power trimming		±0.5%
区域分组 Zone		1~8组 up to eight group
灯架高度 Lamp bracket height		从维修位置到最大可调 (adjustable from maintenance position to maximum height)
运行温度 Operation Temperature		+20~+85℃
光照配置 SUN configuration	灯管类型Lamp Model	金属卤素灯 metal halide lamp
	灯管功率Lamp Model	2500W or 4000W
	灯管寿命Lamp Lifetime	1000 hour
	灯罩结构Lampshade Structure	铸金属 Molten metal
	灯罩冷却方式Lampshade Cooling	水冷或风冷 water-cooled or air-cooled
	功率调节器 Power regulate system	电子镇流器 功率因数大于0.98 High-accuracy electronic ballast, P.F. > 0.98
	灯架材料 Lamp bracket material	铝型材 aluminum section
	灯架移动机构 Lamp bracket moving mechanism	马达与限位装置 Motor and position limiter
	灯架调节方式 Lamp bracket adjust method	手动或自动定位 Manually or auto-positioning
表面温度传感器 Surface temperature sensor	T型热电偶和黑体温度传感器 T type thermocouple and blackbody temperature sensor	
光照强度计 Pyranometer: Kipp & Zonen CM4		

注：可配备零部件阳光模拟用小箱用于模拟车内状态；
Option: Small transparent chamber for solar simulation test for inside car components.

可与道路模拟系统，红外线系统，VOC检测系统等集成的试验室



Walk-in climatic chamber integration with 4-poster road simulation system, IR simulation system;
Walk-in climatic chamber integration with VOC inspection system and IR simulation system

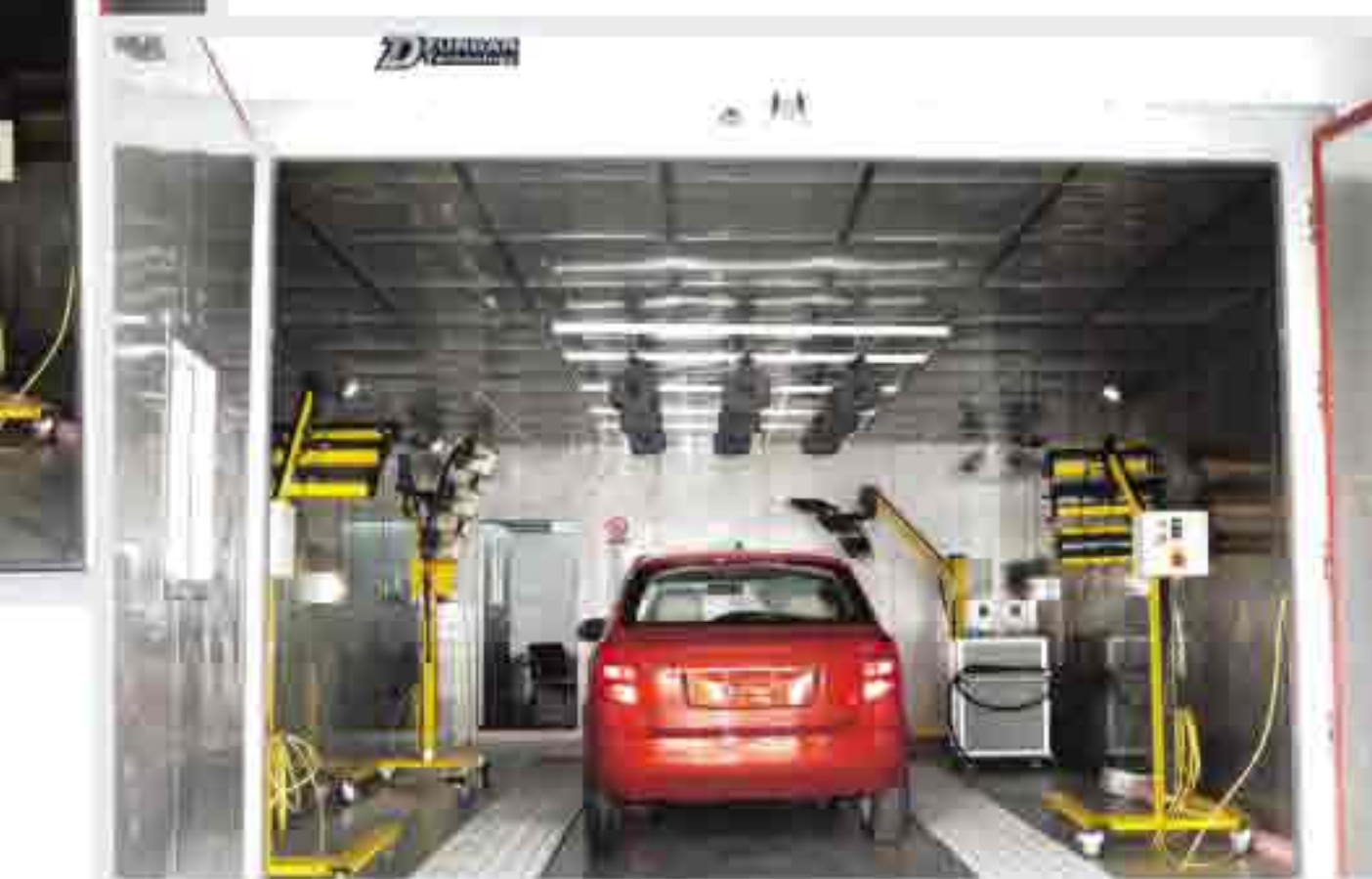
红外线系统与道路模拟系统集成

Integration with road simulation and IR simulation



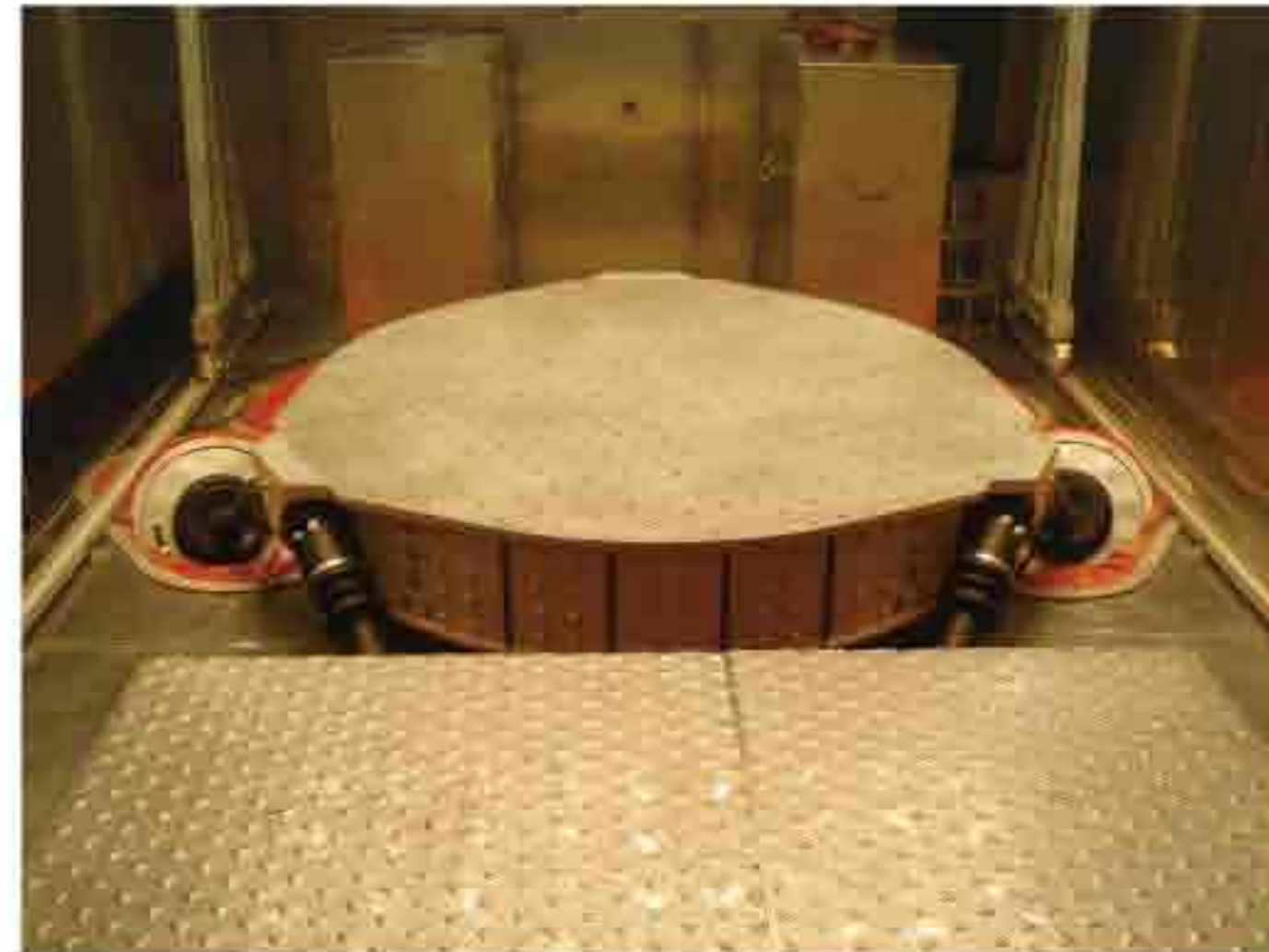
红外线系统与VOC检测系统集成

Integration with IR simulation and VOC inspection



整合MTS MAST™ Systems振动台 以及红外灯光模拟 >>>

Integration with mts mast™ systems and ir simulation system



- ※ 温度控制范围: -40℃~ +100℃
- ※ 湿度控制范围: +15℃~ +85℃, 20%~ 95%RH
- ※ 光照区域控制: 9个独立控制区域
- ※ 照射区域: 大约2000 mm x 2000 mm;
- ※ 辐射强度: 在照射区内每平方米500 W/m² ~ 1200 W/m² 可调
- ※ 表面温度范围: 室温+5℃~ 室温+40℃;
- ※ 辐射均匀度: 在基准面上标准值 ± 5%
基准面 ± 0.3米平行面范围内标准值 ± 7.5%
- ※ 灯架可调高度范围: 1.5米内
- ※ 侧斜面灯架可调角度范围: 0° ~ 50°

- ※ Temperature range: -40℃ ~ +100℃;
- ※ Relative humidity range between +15℃ ~ +85℃, 20% ~ 95%RH;
- ※ Solar Zone Control: 9 independent control sections;
- ※ Irradiation area: approx. 2000 mm x 2000 mm;
- ※ Irradiance: 500 W/m² ~ 1200 W/m² in the irradiation area;
- ※ Surface temperature range: *Ambient temperature +5 ~ Ambient temperature + 40℃;
- ※ IR Uniformity: ± 5% in standard deviation in the reference area;
± 7.5% in the parallel areas ± 0.4m from the reference area;
- ※ Lamps frame height adjustable range: within 1.5m;
- ※ Side lamps frame incline angle adjustable range: 0° ~ 50°

其他特殊规格试验箱 >>>

Special Test Chamber



拉力试验机、减振试验机

Chambers for material test machine

根据试验要求,箱体结构按照试验配套装置而进行设计,实现温度试验与其他性能试验一起的综合试验。

Chambers for configuring with material test machine, shock absorber test machine, rotational test machine etc;
Compressors are separated with chamber body to avoid vibration caused by compressors. Chamber body can move smoothly in horizontal direction.



车载式高低温试验箱

vehicular high-low temperature test chamber



温度/湿度/振动三综合试验箱

Temperature / Humidity / Vibration Synthetical Test Chamber

与电动式振动试验机配套完成温度湿度振动三综合试验。

It can be connected with electric vibration table to complete temperature, humidity and vibration synthetical test.