



增达科技已通过ISO 9001:2015质量管理体系认证
ISO 9001:2015 Certified Companies



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公司地址

上海增达科技股份有限公司

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上海增达科技股份有限公司
SHANGHAI ZUNDAR TECHNOLOGY CO., LTD.



公司简介

上海增达科技股份有限公司成立于2000年，是具有领先环境和气候模拟类设备自主研发与生产能力的高新技术企业，竭诚为客户打造可靠、节能、性能优异的环测产品，同时具备环境、气候模拟等相关测试能力。

公司愿景：成为环境和气候模拟类设备领域的领跑者

公司规模：现有员工近200名，其中研发人员占比20%

行业优势：

- **产品丰富** 提供满足各类标准要求的产品与定制产品，广泛应用于汽车、新能源与智能网联、航空航天、军工等各类领域
- **技术领先** 汲取欧洲先进制冷技术，具备自主研发控制系统及软件的能力、丰富的集成经验，高效质量管理流程
- **优质服务** 销售/服务点分布国内外多个主要城市，提供超越客户期望的技术产品和高效服务

Zundar is a high-tech enterprise with more than 20 years of experience in the development and production of environment and climate simulation equipment.

On the basis of strong refrigeration and climate simulation technology, our company integrates advanced climatic control technology and quality management process.

We are dedicated to provide customers with reliable, energy saving, excellent performance of the climatic test products.

The products of the company has integrated with refrigeration technology, air conditioning technology, automatic control technology, software technology and structure technology that in the leading level at domestic and abroad, is one of the few companies with all independent technology and research and development capabilities.

The company's products have been widely used in automobile manufacturing and other related industries, and now it has become an industry benchmark with an annual sales volume of over 200 million yuan.

发展历程

HISTORY





Zundar technology focuses on environment and climate simulation test equipment technology, and has the leading R & D, design and production capacity at home and abroad, as well as 20 years of rich project experience. Through standardized and efficient enterprise management system to ensure product quality and service to meet customer expectations.

The company's products cover a wide range. EXPLORE series provide customers with the best choice of standard/category standardization integration solutions; At the same time, the company can provide customized products according to customer needs and various standards, including: walk-in environment simulation/solar simulation test chamber, road simulation test chamber, battery test chamber, motor test chamber and other advanced test equipment related to new energy and new technology of the automobile industry.



OUR ADVANTAGES | 企业优势

增达股份专注于环境与气候模拟试验设备技术，具有国内外领先的环境类试验设备研发、设计和生产能力以及20年的丰富项目经验，通过规范高效的企业管理体制确保产品质量与服务满足客户期待。

公司产品覆盖范围广泛。EXPLORE系列整体式环境模拟试验箱为客户提供标准/类标准化集成方案的最优选择；同时，公司能够根据客户需求及各类标准提供定制类产品，包括：步入式环境模拟/阳光模拟试验舱、道路模拟类试验台以及电池试验箱、电机试验箱等汽车新能源、新技术相关的先进试验设备。

公司在技术上求实创新，多次获得各类企业荣誉与技术成果：

- 2016/2017年获嘉定区先进制造业发展潜力奖；
- 2017年位列上海市科技小巨人培育企业立项名单；
- 2018年第七届全国电工电子产品环境条件与环境试验标准化技术委员会（SAC/TC8）优秀单位奖；
- 多项发明专利/ 12项计算机软件著作权/ 37项实用新型专利/ 10项专有技术。

公司经过多年流程优化，已建立一套完善的、符合ISO9001的质量管理体系，并提供全面的售后服务。

未来已来，增达股份立足上海、放眼世界，以成为国内细分行业的领导者为目标，坚持技术为先、人才为本的理念，凭借诚实守信的作风、领先创新的技术、稳定可靠的产品和优质高效的服务，竭诚为客户提供满意的试验设备解决方案，为员工提供实现自我发展的平台，积极为社会和环境承担企业责任。



公司荣誉 ENTERPRISE HONOR

经过近几年的发展，公司已建立一套完善的、符合ISO9001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ISO 140001环境管理体系和OHSAS 18000职业与健康安全体系。

As a result of recent years continual development, we have built up a set of increasingly comprehensive quality management system according to ISO9001 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 ISO 140001 and professional & health safety system OHSAS18000.



目录 CONTENTS

EXPLORE系列产品

- 温湿度环境试验箱
- 快速温变试验箱
- 高温试验箱
- 深冷试验箱
- 冷热温度冲击试验箱
- 淋雨试验箱
- 沙尘试验箱
- 低气压试验箱
- 小型阳光模拟试验箱
- 步入式环境试验箱

定制产品

环境模拟类

- 步入式环境试验舱 ■ ■ ■
- 步入式阳光模拟试验舱 ■ ■
- 整车VOC检测试验箱
-

道路模拟类

- 带环境模拟四通道试验台
- 带环境模拟多轴模拟振动MAST试验台 ■
- 大型三综合试验台
-

汽车新技术类应用

- 动力电池
- 电机
- 智能汽车产品



标准配置

STANDARD CONFIGURATION

- 电缆孔带硅胶塞φ100mmx1/Cable port with silicone plug φ100mmx1
- 内部照明/Internal lighting
- 风冷冷凝器/Air-cooled condenser
- 脚轮/Castors
- 急停开关/Emergency button
- 三色报警灯/Tricolor alarm light
- USB接口用于数据下载/USB port for data download
- USB接口及历史数据回放和转换软件/USB interface and History data review and converting software

可选配置

OPTIONAL CONFIGURATION

- 定制箱体内部尺寸/Customized internal size
- 其他温度范围/Other temperature range
- 电缆孔带硅胶塞φ50mm,φ150mm/Cable port with silicone plug φ50mm/φ150mm
- 水冷冷凝器/Water-cooled condenser
- 隔板/Shelf
- 外部插座220V@10A/Exterior socket 220V@10A
- 数字量输入接口/Digital input channel
- 数字量输出接口/Digital output channel
- 模拟量采集通道(可选: PT100, T型热电偶, 4~20mA, 0~10V, -10~10V)
Analog sampling channel(Option: PT100,T thermocouple, 4~20mA, 0~10V, -10~10V)
- 模拟量输出通道(设定温度, 设定湿度, 采样温度, 采样湿度)
Analog output channel(Setting Temperature, Setting Humidity, measured temperature, measured humidity)
- 模拟量输入通道(可选: 4~20mA, 0~10V, -10~10V)/Analog input channel(Option: 4~20mA, 0~10V, -10~10V)
- 干风吹扫系统/Compressed dry air purging system
- 净水器/Water purification system
- 试品温度控制/Specimen temperature control
- LAN接口及远程控制软件/LAN interface and Remote control software

EXPLORE标准温湿度试验箱

EXPLORE SERIES STANDARD CLIMATIC CHAMBER

		型号 ¹ MODEL ¹	EEXT(H)250	EEXT(H)340	EEXT(H)600	EEXT(H)1000	EXT(H)1000
1: EEXT和EXT无湿度功能 EEXT and EXT has no humidity control	有效容积 (升) Useful Capacity(l)		225	337	573	1000	1000
	内部尺寸 Internal Dimensions approx.(mm)	宽度 Width	600	600	850	1000	1000
		深度 Depth	500	750	750	1000	1000
2: L系列采用单级制冷系统, U系统采用复叠制冷系统 L Series use single stage refrigeration system U Series use cascade refrigeration system	外部尺寸 External Dimensions approx.(mm)	宽度 Width	900	900	1150	1300	1300
		深度 Depth	1460	1750	1750	2000	2000
		高度 Height	1925	1925	2075	2175	2175
3: 最高温度和最低温度之间的平均速率 (无负载, 无散热, 参考IEC60068-3-5及IEC60068-3-6) Average speed between highest and lowest temperature (Without load or heat dissipation, according to IEC 60068-3-5 and IEC 60068-3-6)	温度范围 Temperature Range	L Series ²	-40°C~+150°C (最高温度+180°C可选/with option to 180°C)				
	升温速率 ³⁺⁴ Heating up rate ³⁺⁴	L Series(-40~+150)	4.4°C/min	4.2°C/min	4.2°C/min	4.5°C/min	4.5°C/min
		U Series(-40~+150)	4.4°C/min	4.2°C/min	4.2°C/min	4.5°C/min	4.5°C/min
	降温速率 ³⁺⁴ Cooling down rate ³⁺⁴	L Series(+150~40)	2.6°C/min	2.4°C/min	2.6°C/min	2.2°C/min	3.2°C/min
U Series(+150~40)		2.1°C/min	1.9°C/min	2.6°C/min	1.9°C/min	4.5°C/min	
4: 性能指标在室温为+25°C时测定; 传感器位于空气处理单元出风口 Performance data refer to +25°C ambient temperature; The control sensors are installed at the blow-out of air conditioning unit	湿度范围 Humidity Range		+10°C~+90°C 10%~98%RH				
	露点温度范围 Dewpoint temperature range		+4°C~+88°C				
	电源 Power Supply		交流380V 50赫兹 三相+N+PE AC380V 50Hz 3P+N+PE				
	最大功率 Maximum Power (KW)	L Series	6	7	9	14	15
		U Series	8	8	10	17	20

EXPLORE-ESS快速温变试验箱

EXPLORE-ESS SERIES SPEEDY CLIMATIC CHAMBER

		型号 ¹ MODEL ¹	EXT(H)600U	EXT(H)1000U	EXT(H)2000U
1: EXT无湿度功能 EXT has no humidity control	有效容积 (升) Useful Capacity(l)		573	1000	1980
	内部尺寸 Internal Dimensions approx.(mm)	宽度 Width	850	1000	1100
		深度 Depth	750	1000	1200
2: 10-ESS系列升降温速率10°C/min; 15-ESS系列升降温速率15°C/min 10-ESS series has rate of change at 10°C/min; 15-ESS series has rate of change at 15°C/min;	外部尺寸 External Dimensions approx.(mm)	宽度 Width	1150	1300	1400
		深度 Depth	2200	2400	3000
		高度 Height	2075	2175	2175
3: 最高温度和最低温度之间的平均速率 (无负载, 无散热, 参考IEC60068-3-5及IEC60068-3-6) Average speed between highest and lowest temperature (Without load or heat dissipation, according to IEC 60068-3-5 and IEC 60068-3-6)	温度范围 Temperature Range		-70°C ~ +150°C (最高温度+180°C可选/with option to +180°C)		
	升温速率 ³⁺⁴ Heating up rate ³⁺⁴	10-ESS Series ²	10°C/min	10°C/min	10°C/min
		15-ESS Series ²	15°C/min	15°C/min	15°C/min
	降温速率 ³⁺⁴ Cooling down rate ³⁺⁴	10-ESS Series ²	10°C/min	10°C/min	10°C/min
15-ESS Series ²		15°C/min	15°C/min	15°C/min	
4: 性能指标在室温为+25°C时测定; 传感器位于空气处理单元出风口 Performance data refer to +25°C ambient temperature; The control sensors are installed at the blow-out of air conditioning unit	湿度范围 Humidity Range		+10°C~+90°C 10%~98%RH		
	露点温度范围 Dewpoint temperature range		+4°C~+88°C		
	电源 Power Supply		交流380V 50赫兹 三相+N+PE AC380V 50Hz 3P+N+PE		
	最大功率 Maximum Power (KW)	10-ESS Series ²	22	32	40
		15-ESS Series ²	32	40	54

EXPLORE-HEAT高温试验箱

EXPLORE-HEAT SERIES HIGH TEMPERATURE OVEN

		型号 ¹ MODEL ¹	EXHEAT250	EXHEAT340	EXHEAT600	EXHEAT1000
1: 最高温度和最低温度之间的平均速率 (无负载, 无散热, 参考IEC60068-3-5及IEC60068-3-6) Average speed between highest and lowest temperature (Without load or heat dissipation, according to IEC 60068-3-5 and IEC 60068-3-6)	有效容积 (升) Useful Capacity(l)		225	337	573	1000
	内部尺寸 Internal Dimensions approx.(mm)	宽度 Width	600	600	850	1000
		深度 Depth	500	750	750	1000
2: 性能指标在室温为+25°C时测定; 传感器位于空气处理单元出风口 Performance data refer to +25°C ambient temperature; The control sensors are installed at the blow-out of air conditioning unit	外部尺寸 External Dimensions approx.(mm)	宽度 Width	900	900	1150	1300
		深度 Depth	1460	1750	1750	2000
		高度 Height	1925	1925	2075	2175
	温度范围 Temperature Range		RT+10°C~+250°C			
	升温速率 ¹⁺² Heating up rate ¹⁺²		4°C/min	4°C/min	4°C/min	4°C/min
	电源 Power Supply		交流380V 50赫兹 三相+N+PE AC380V 50Hz 3P+N+PE			
	最大功率 Maximum Power (KW)		4	4	7	7

EXPLORE-DEEPPFREEZE深冷试验箱

EXPLORE-DEEPPFREEZE SERIES DEEP COLD TEST CHAMBER

		型号 MODEL	EXT250	EXT600	EXT1000
1: D1系列最低温度-80°C; D2系列最低温度-90°C; D3系列最低温度-100°C D1 Series reach -80°C; D2 Series reach -90°C; D3 Series reach -100°C;	有效容积 (升) Useful Capacity(l)		225	573	1000
	内部尺寸 Internal Dimensions approx.(mm)	宽度 Width	600	850	1000
		深度 Depth	500	750	1000
2: 最高温度和最低温度之间的平均速率 (无负载, 无散热, 参考IEC60068-3-5及IEC60068-3-6) Average speed between highest and lowest temperature (Without load or heat dissipation, according to IEC 60068-3-5 and IEC 60068-3-6)	外部尺寸 External Dimensions approx.(mm)	宽度 Width	900	1150	1300
		深度 Depth	1460	1750	2000
		高度 Height	1925	2075	2175
3: 性能指标在室温为+25°C时测定; 传感器位于空气处理单元出风口 Performance data refer to +25°C ambient temperature; The control sensors are installed at the blow-out of air conditioning unit	温度范围 Temperature Range	D1 Series ¹	-80°C~+100°C		
		D2 Series ¹	-90°C~+100°C		
		D3 Series ¹	-100°C~+100°C		
	降温速率 ²⁺³ Cooling down rate ²⁺³	D1 Series ¹	1.2°C/min	1.2°C/min	1°C/min
D2 Series ¹		1.2°C/min	1°C/min	1°C/min	
D3 Series ¹		1°C/min	1°C/min	1°C/min	
	电源 Power Supply		交流380V 50赫兹 三相+N+PE AC380V 50Hz 3P+N+PE		
	最大功率 Maximum Power (KW)	D1 Series	10	15	17
		D2 Series	11	15	18
		D3 Series	12	15	18



标准配置

STANDARD CONFIGURATION

- 脚轮/Castors (AZTS100-2T,AZTS150-2T,AZTS200-2T,AZTS300-2T)
- 照明/Lighting
- 观察窗/Inspection window
- USB接口及历史数据回放及转换软件/USB interface and history data review and converting software

可选配置

OPTIONAL CONFIGURATION

- 电缆孔带硅胶塞Φ25mm/Cable port with silicon plug Φ25mm
- 隔板/Shelf
- 外部插座 220V 10A/Exterior socket 220V 10A
- LAN接口及远程控制软件/LAN interface and remote control software
- 高低温区单独运转作为常温箱使用/Hot zone or cold zone independent operation as constant temperature chamber
- 数字量输入报警接口x4/Digital alarm input channels x 4
- 数字量输出继电器接口x4 (试验品用)/Auxiliary relay digital output channels x 4 (for specimens)
- 额外温度采集通道x1 用于测量试验品温度 数据可储存回放(T型热电偶)
Additional temperature sampling channels x 1, for sampling temperature of test specimen, data can be reviewed and recorded (T thermocouple)
- 根据试验品温度切换高低温区功能
Switching the test zone according to the test specimen temperature
- 额外模拟量采集通道x4 数据可在控制器上储存回放(PT100, T型热电偶, 4~20mA, 0~10V, -10V~10V可选)
Additional analog sampling channels x 4, sampling data can be reviewed and recorded (Option: PT100/T thermocouple/4~20mA/0~10V/-10V~10V)
- 额外模拟量采集通道x8 数据可在控制器上储存回放(PT100, T型热电偶, 4~20mA, 0~10V, -10V~10V可选)
Additional analog sampling channels x 8, sampling data can be reviewed and recorded (Option: PT100/T thermocouple/4~20mA/0~10V/-10V~10V)
- 模拟量输出通道x3 (设定高温, 设定低温, 采样温度)
Analog output channels x 3 (Setting high temperature/Setting low temperature/Measured temperature)
- 干燥新风补偿/Compressed dry air purging system
- 提篮由电机驱动/Basket driven by electrical motor

两箱式/三箱式冷热温度冲击试验箱

TWO-ZONE/THREE-ZONE THERMAL SHOCK CHAMBER



型号 Model	AZTS130U-3Z	AZTS320U-3Z
电源 Power Supply	交流380V 50赫兹 3相+N+PE AC 380V 50HZ 3 phase+N+PE	
最大功率 Maximum Power (KW)	22	50
使用环境温/湿度 Operation Environment	+15°C ~ +35°C/≤85%RH	
形式 Type	三箱式 Three Zone	
切换形式 Transfer type	风门 Flapper	
切换时间 Transfer time	≤10s	
最大底板负载(kg) Max. Floor load (kg)	30	40
性能*1 Performance*1	温度范围 Temperature Range	低温区:-70°C~-10°C; 高温区:环境温度+20°C~+180°C Cold Zone: -70°C~-10°C, Hot Zone: Amb+20°C~+180°C
	恢复时间为15分钟的温度及负载条件 Test condition with load for 5 minutes recovering time	带5kg电路板-55°C/+125°C -55°C/+125°C with 5kg electronic board
观察窗 Inspection Window	多层导电膜加热观察窗, 尺寸W240mmxH310mm x1 Multilayer glasses with conducting film heating, size W240mmxH310mm x1	
冷凝方式 Condenser	水冷冷凝器 Water-cold condenser	
内容积 (升) Interior Volume (L)	124	319
内尺寸 Interior Size	W(mm)	580
	D(mm)	510
	H(mm)	420
外尺寸 Exterior Size	W(mm)	1500
	D(mm)	1850
	H(mm)*2	2050

*1: 性能指标在室温为+25°C时测定;传感器处于空气处理单元出风口;
All the above specifications are measured at +25°C room temperature and the sensors are installed at blow-out of air conditioning unit;

型号 Model	AZTS100U-2T	AZTS150U-2T	AZTS200U-2T	AZTS300U-2T	AZTS500U-2T	AZTS1000U-2T	
电源 Power Supply	交流380V 50赫兹 3相+N+PE AC 380V 50HZ 3 phase+N+PE						
最大功率 Maximum Power (KW)	20	25	29	35	45	55	
使用环境温/湿度 Operation Environment	+15°C ~ +35°C/≤85%RH						
形式 Type	两箱式 Two Zone						
提篮驱动方式 Basket moving mechanism	气缸驱动, 或者电机驱动 Pneumatic Drive, or Electric Motor Drive						
提篮运动方向 Basket moving direction	垂直方向 Vertical direction			水平方向 Horizontal direction			
最大提篮负载 Maximum Basket Load	16kg	20kg	30kg	35kg	100kg	150kg	
提篮转换时间 Basket Transfer Time	<10S						
性能*1 Performance*1	温度范围 Temperature Range	低温区:-70°C~-10°C; 高温区:环境温度+20°C~+180°C Cold Zone: -70°C~-10°C, Hot Zone: Amb+20°C~+180°C					
	恢复时间为5分钟的温度及负载条件 Test condition with load for 5 minutes recovering time	带0.5kg铁-65°C/+150°C -65°C/+150°C with 0.5kg Steel	带2.5kg铁-65°C/+150°C -65°C/+150°C with 2.5kg Steel	带4kg铁-65°C/+150°C -65°C/+150°C with 4kg Steel	带7kg铁-65°C/+150°C -65°C/+150°C with 7kg Steel	带13kg铁-65°C/+150°C -65°C/+150°C with 13kg Steel	带30kg铁-65°C/+150°C -65°C/+150°C with 30kg Steel
观察窗 Inspection Window	多层导电膜加热观察窗, 尺寸W240mmxH310mmx2 Multilayer glasses with conducting film heating, size W240mmxH310mmx2			多层导电膜加热观察窗, 尺寸W470mmxH320mmx2 Multilayer glasses with conducting film heating, size W470mmxH320mmx2			
冷凝方式 Condenser	水冷冷凝器 Water-cold condenser						
提篮内容积 (升) Interior Capacity (L)	102	148	205	294	506	960	
内尺寸 Interior Size	W(mm)	510	510	620	700	1000	
	D(mm)	400	580	660	700	800	
	H(mm)	500	500	500	600	900	1200
外尺寸 Exterior Size	W(mm)	1000	1000	1100	1200	3600	4700
	D(mm)	2200	2400	2500	2850	1800	2100
	H(mm)*2	2700 (1950)	2700 (1950)	2700 (1950)	3200 (2500)	1950	2400

*1: 性能指标在室温为+25°C时测定;传感器处于空气处理单元出风口;
All the above specifications are measured at +25°C room temperature and the sensors are installed at blow-out of air conditioning unit;
*2: 括号中的数字代表拆除气缸之后的高度;
The value in the brackets is the height excluding the pneumatic cylinder;



产品配置	CONFIGURATION
● 容积: 1000L~10m³/Volume: 1000L~10m³	
● 温度范围: -40°C~+150°C/Temperature: -40°C ~+150°C	
● 湿度范围: 10% ~98%RH/Humidity: 10% ~98%RH	
● 辐照度范围: 600~1200W/m²/Irradiance: 600~1200W/m²	
● 紫外, 可见光, 红外辐射; 光谱分布接近CIE85;Table 4/UV/Visible/Infrared Radiation, close to CIE85;Table 4	
● 多变量控制, 可以控制辐照光强或者黑标表面温度 Multi-variables control logic, feedback control based on irradiation intensity or black standard temperature;	
● 特殊设计的结构, 更好保护精密的辐照系统 Designed mechanical structure to protect the solar simulation lamp.	

	型号 Type	EEXT(H)1000	AZTH3.5L-SO
有效容积 (升) Useful Capacity(l)		1045	3480
内部尺寸 Internal Dimensions approx.(mm)	宽度Width	1000	2000
	深度Depth	950	1160
	高度Height	1100	1500
外部尺寸 External Dimensions approx.(mm)	宽度Width	1250	2250
	深度Depth	2150	2700
	高度Height	2945	2650
温度范围 Temperature Range	无阳光模拟 without solar simulation	-40°C ~ +130°C	
	有阳光模拟 with solar simulation	-20°C ~ +90°C	
湿度范围 Humidity Range	无阳光模拟 without solar simulation	10% to 98% +10°C ~ +90°C	
	有阳光模拟 with solar simulation	10% to 80% +15°C to +80°C	
升温速率 ¹⁺² Heating up rate ¹⁺²	-30°C~+100°C	4°C/min	
降温速率 ¹⁺² Cooling down rate ¹⁺²	+100°C~-30°C	2.5°C/min	
光谱分布 Spectral distribution		根据CIE 85, 表4; DIN 75220, 表1 CIE 85, Table 4; DIN 75220, Table 1	
辐照范围 Irradiation Area		4200cm²	13600cm²
辐照强度 Irradiation Range		600 W/m²~1200 W/m²	
最高黑标温度 MAX. BST		125°C	
电源 Power Supply		交流380V 50赫兹 三相+N+PE AC380V 50Hz 3P+N+PE	
最大功率 Maximum Power (KW)		18	30

1: 最高温度和最低温度之间的平均速率 (无负载, 无散热, 参考IEC60068-3-5及IEC60068-3-6)

Average speed between highest and lowest temperature (Without load or heat dissipation, according to IEC 60068-3-5 and IEC 60068-3-6)

2: 性能指标在室温为+25°C时测定; 传感器位于空气处理单元出风口

Performance data refer to +25°C ambient temperature; The control sensors are installed at the blow-out of air conditioning unit



淋雨试验箱

RAIN TEST CHAMBER

- 本系列一共分为九类不同的产品，测试容积从1立方~2立方米
Total 9 kind Standard Rain Test Chamber by integrating different type of test; Chamber Volume: 1~2m³
- 满足标准: IPX1, IPX2, IPX3, IPX4, IPX4K, IPX5, IPX6, IPX7, IPX8, IPX9K, JIS0203 S1, S2, R1, R2
Test Standard: IPX1, IPX2, IPX3, IPX4, IPX4K, IPX5, IPX6, IPX7, IPX8, IPX9K, JIS0203 S1, S2, R1, R2

型号 Type	AZRA1000 -B1	AZRA1000 -B2	AZRA1000 -B3	AZRA1000 -B4	AZRA1000 -B5	AZRA1000 -B6	AZRA1000 -B7	AZRA1000 -B8	AZRA1000 -B9	
电源 Power Supply	交流380V 50赫兹 3相+N+PE AC 380V 50HZ 3 phase+N+PE									
最大功率 Maximum Power (KW)	5KW	5KW	10KW	5KW	25KW	5KW	5KW	5KW	5KW	
使用环境温/湿度 Operation Environment	+15°C~+35°C/≤85%RH									
性能 ¹ Performance ¹	喷水压力 Spraying Pressure	80KPa~400KPa (可调/Adjustable)		30KPa~1000KPa (可调/Adjustable)		8000KPa~ 10000KPa	10KPa~300KPa (可调/Adjustable)	10KPa~400KPa (可调/Adjustable)	80KPa~400KPa (可调/Adjustable)	10KPa~400KPa (可调/Adjustable)
	喷水流量 Spraying flux	1mm/min~ 3mm/min	0.1L/min~ 0.6L/min	12.5 L/min~75L/min ~100L/min		14L/min~ 16L/min	1.9L/min~ 39.2L/min	0.1L/min~ 0.6L/min	1mm/min~3mm/min 0.1L/min~0.6L/min	1mm/min~3mm/min 0.1L/min~0.6L/min
	浸水高度 Soaking Level					150mm~ 1000mm				
	摆杆半径 Swing Tube Diameter	Φ400mm						Φ400mm	Φ400mm	Φ400mm
	喷嘴直径 Nozzle Diameter	Φ0.4mm	Φ0.4mm~ Φ0.8mm	Φ6.3mm , Φ12.5mm		IPX9K喷嘴 IPX9K Nozzle	Φ1.2mm , Φ0.5*8mm	Φ0.4mm~ Φ0.8mm Φ1.2mm , Φ0.5*8mm	Φ0.4mm~ Φ0.8mm Φ1.2mm , Φ0.5*8mm	Φ0.4mm~ Φ0.8mm Φ1.2mm , Φ0.5*8mm
	喷嘴间距,距离 Nozzle Interval	20mm	50mm	2500mm~ 3000mm		0°30°60°90°	400mm	20mm~ 400mm	20mm~ 400mm	20mm~ 400mm
	滴水范围 Dripping Range	500mm* 500mm							500mm* 500mm	500mm* 500mm
	摆杆摆幅 Swing Range	±60°~±170° (可调/Adjustable)					360°	±60°~±170° (可调/Adjustable)	±60°~±170° (可调/Adjustable)	±60°~±170° (可调/Adjustable)
	摆动速度 Swing speed	约60°/s Around 60°/s					30s/个 30s/pcs	23rpm	约60°/s或23rpm Around 60°/s or 23rpm	约60°/s或23rpm Around 60°/s or 23rpm
	摆杆内径 Swing Tube Inner Diaeter	Φ16mm						Φ16mm	Φ16mm	Φ16mm
	试验台直径 Table Diameter	Φ400mm	Φ400mm	1000*1000		Φ400mm	Φ400mm	Φ400mm	Φ400mm	Φ400mm
	试验台转速 Table Rotating Speed	1~10rpm	1~10rpm				1~10rpm	1~10rpm	1~10rpm	1~10rpm
	试验台载重 Table Bearing	≤15KG	≤15KG	≤100KG		≤100KG	≤15KG	≤15KG	≤15KG	≤15KG
	试验防护等级 Testing Protection Class	IPX1, IPX2	IPX3, IPX4, IPX4K	IPX5, IPX6		IPX7, IPX8	IPX9K	R1, R2, S1, S2	IPX3, IPX4, IPX4K, R1, R2, S1, S2	IPX1, IPX2, IPX3, IPX4, IPX4K, R1, R2, S1, S2
应用标准 Application Standard	DIN40050, GB2423.38, GB2424.23, GB4208, IEC60529, DNS7138, ISO20653, GB/T10485, GB/T4942					GB4208, IEC60529, ISO20653	JIS0203 KSR0015	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, JIS0203, KSR0015, CNS7138	
内容积 (L) Volumme	1000	1000	1000	1000	1000	1000	1000	1000	1000	
内尺寸(mm) Interior Size	W	1000	1000	1000	1000	1000	1000	1000	1000	
	D	1000	1000	1000	1000	1000	1000	1000	1000	
	H	1000	1000	1000	1200	1000	1000	1000	1000	
外尺寸 Exterior Size	W	1500	1500	4000	1500	1500	1500	1500	1500	
	D	1450	1450	3000	1450	1450	1450	1450	1450	
	H	2150	2050	3800	1800	2050	2050	2050	2150	
机器重量(KG) Weight	350	350	350	350	350	350	350	350	350	
可选配件 Options	<ul style="list-style-type: none"> ○ 电缆孔带硅胶塞Φ50mm, Φ100mm /Cable port with silicon plug Φ50mm/Φ100mm ○ 电动升降平台/Electric height movement for carrier table ○ 15度倾斜平台/Incline carrier table up to 15° ○ 手动升降平台带滑环两芯电线(最大25A) /Manually height movement carrier table with two wires for supply power to test specimen maximum 25A ○ 手动升降平台带滑环三芯电线(其中1芯为5A 2芯100A) Manually height movement carrier table with three wires for supply power to test specimen (two with maximum current 25A, one with maximum current 5A) ○ 试验品通电开关控制/Test specimen power control ○ 外部插座 220V 10A/Exterior socket 220V 10A ○ LAN接口及远程控制软件/LAN interface and remote control software ○ 水温RT+10°C ~ 80°C±5°C/Water temperature control from RT+10°C to 80°C±5°C 									



沙尘试验箱

DUST TEST CHAMBER

- 总共四种不同形式的沙尘试验箱，满足不同的试验标准，或者根据客户要求定制；有针对安全带试验的特殊沙尘箱，以及国军标的高风速吹尘吹砂试验；
Four different type of dust test chamber; Special type for safety belt test and military test standard.
- 可以满足的试验标准: GB/T2423.37, GJB150.12A-2009, IP5X, IP6X, GB/T14166-2003
Test Standard: GB/T2423.37, GJB150.12A-2009, IP5X, IP6X, GB/T14166-2003

型号 Type	AZDU1000-B1	AZDU1000-B2	AZDU100-SP	AZDU2500-SP	
电源 Power Supply	交流380V 50赫兹 3相+N+PE AC 380V 50HZ 3 phase+N+PE		交流220V 50赫兹 2相+PE AC 220V 50HZ 2phase+PE	交流380V 50赫兹 3相+N+PE AC 380V 50HZ 3 phase+N+PE	
最大功率 Maximum Power (KW)	5KW	5KW	5KW	5KW	
使用环境温/湿度 Operation Environment	+15°C~+35°C/≤85%RH				
性能 ^{**1} Performance ^{**1}	温度范围 Temperature Range	RT+5°C~50°C	RT+5°C~50°C	无 NA	RT+5°C~50°C
	粉尘浓度 Dust Concentration	2KG/m ³	2KG/m ³	约 1KG Around 1kg	约 3KG Around 3kg
	粉尘规格 Dust Standard	能通过筛孔为75μm, 金属直径为50μm的方孔的干燥滑石粉或ISO 12103 Talcum powder which can be sieved through a square -meshed sieve with nominal wire 50μm diameter and 75μm gap between two wires, or according to ISO 12103	能通过筛孔为75μm, 金属直径为50μm的方孔的干燥滑石粉或ISO 12103 Talcum powder which can be sieved through a square -meshed sieve with nominal wire 50μm diameter and 75μm gap between two wires, or according to ISO 12103	ISO 12103 A1-A4	ISO 12103 A1-A4
	试验风速 Wind Speed	≤2m/s	≤2m/s	Φ1.5mm±0.1mm	Φ1.5mm±0.1mm
	扬尘控制 Blow Control	间隙, 循环 Interval or cycle	间隙, 循环 Interval or cycle	间隙, 循环 Interval or cycle	间隙, 循环 Interval or cycle
	压力差 Vacuum Control for Test Specimen	无 NA	≤-1.98KPa	550KPa±50KPa	550KPa±50KPa
	隔板 Shelf	格栅式 Grid shelf	格栅式 Grid shelf	Φ250	格栅式 Grid shelf
	隔板台载重 Shelf Bearing	≤20KG	≤20KG	≤20KG	≤100KG
	试验防护等级 Testing Protection Class	IP5X	IP5X, IP6X	IP5X	IP5X
	应用标准 Application Standard	DIN40050, GB2423.38, GB2424.23, GB4208, IEC60529, ISO20653, GB/T10485, GB/T4942	DIN40050, GB2423.38, GB2424.23, GB4208, IEC60529, ISO20653, GB/T10485, GB/T4942	GB/T 19949.2-2005, ISO 12097-2, AK-LV01	GB/T 19949.2-2005, ISO 12097-2, AK-LV01
内容积 (L) Volumme	1000	1000	100	2500	
内尺寸(mm) Interior Size	W	1000	1000	Φ500	2500
	D	1000	1000		1000
	H	1000	1000	500	1000
外尺寸(mm) Exterior Size	W	1460	1460	960	3500
	D	1600	1600	800	1700
	H	1880	1880	1550	4000
机器重量(KG) Weight	350	350	150	600	
可选配件 Options	<ul style="list-style-type: none"> ○ 电缆孔带硅胶塞Φ50mm, Φ100mm/Cable port with silicon plug Φ50mm/Φ100mm ○ 试验品通电开关控制/Test specimen power control ○ 外部插座 220V 10A/Exterior socket 220V 10A ○ LAN接口及远程控制软件/LAN interface and remote control software 				

**1: 性能指标在室温为+25°C时测定;传感器处于空气处理单元出风口;
All the above specifications are measured at +25°C room temperature and the sensors are installed at blow-out of air conditioning unit



整体式步入式环境试验箱

MONO-BLOCK WALK-IN CLIMATIC CHAMBER

- 标准容积: 2m³, 4m³, 6m³, 8m³, 12m³; /Standard Volume : 2m³, 4m³, 6m³, 8m³, 12m³;
- 温度范围: -70°C~+150°C/Temperature Range: -70°C~+150°C
- 湿度范围: 10%~98%RH/Humidity Range: 10%~98%RH
- 可以根据客户要求定制不同的升降速率和试验容积; 一体化结构, 整体运输, 免去现场拼装调试的时间; 适用于大中型试件; Customized product by different volume and change of rate; Integrated structure, on-site installation. Suitable for large size DUT.

型号 Model	AZT(H)2L	AZT(H)4L	AZT(H)6L	AZT(H)8L	AZT(H)12L	AZT(H)2U	AZT(H)4U	AZT(H)6U	AZT(H)8U	AZT(H)12U	
电源 Power Supply	交流380V 50赫兹 3相+N+PE AC 380V 50HZ 3 phase+N+PE										
最大电流 Maximum Current (AZT/AZTH)(A)	21/27	29/35	37/43	42/48	57/69	28/34	40/46	50/62	59/71	80/92	
最大功率 Maximum Power (AZT/AZTH)(KW)	12/16	17/21	21.5/25.5	24/28	34/42	16/20	23/27	28.5/36.5	34/42	47/55	
冷却水流量 Cooling water flow (m³/h)	4	5	5	5.5	8	4	5	6	10	12	
使用环境温/湿度 Operation Environment	+15~+35°C≤85%RH										
性能 ³ Performance ³	温度范围 Temperature Range	-35°C~+120°C				-60°C~+120°C					
	湿度范围 Relative Humidity Range	+10°C~+85°C 10%~98%RH									
	露点温度范围 Dew Point Range	+4°C~+84°C									
	温度波动度 Temperature Fluctuation	±0.5°C									
	温度均匀性 Temperature Uniformity	≤2°C									
	温度偏差 Temperature Deviation	±2°C									
	湿度偏差 Humidity Deviation	±3%RH									
	升温速率 ² Heating Up Rate ²	3.5	3.2	3.5	2.8	3.2	3.2	3	3.4	2.8	3.2
	降温速率 ² Cooling down Rate ²	2.5	2.2	2.2	2.8	3.2	2.8	2.5	2.5	3.2	3.6
	观察窗 Inspection Window	多层导电膜加热观察窗, 尺寸W435mmxH495mm, 每扇门一个 One multi-layer glasses with conducting film heating in each door, size W435xH495									
冷凝方式 Condenser	水冷冷凝器 Water-cooled Condenser										
内容积 (立方米) Interior Capacity (m³)	1.98	4.05	5.96	8	12	1.98	4.05	5.96	8	12	
内尺寸(mm) Interior Size	W(mm)	1100	1800	1900	2000	2000	1100	1800	1900	2000	
	D(mm)	1200	1500	1850	2000	3000	1200	1500	1850	2000	
	H(mm)	1500	1500	1750	2000	2000	1500	1500	1750	2000	
外尺寸 Exterior Size	W(mm)	1400	2100	2200	2300	2300	1400	2100	2200	2300	
	D(mm)	2650	2950	3300	3450	4550	2650	2950	3300	3450	
	H(mm)	2170	2170	2420	2670	2670	2170	2170	2420	2670	
门/Door	单开门 Single door W1100mmx H1500mm	双开门 Double wing door W1800mmx H1500mm	双开门 Double wing door W1900mmx H1750mm	双开门 Double wing door W2000mmx H2000mm	双开门 Double wing door W2000mmx H2000mm	单开门 Single door W1100mmx H1500mm	双开门 Double wing door W1800mmx H1500mm	双开门 Double wing door W1900mmx H1750mm	双开门 Double wing door W2000mmx H2000mm	双开门 Double wing door W2000mmx H2000mm	

*1: AZT型的无湿度控制功能/AZT mode has no humidity control function;

*2: 最高温度与最低温度之间的平均速率 (无负载, 无散热, 参考IECC60068-3-5)

Average speed between highest and lowest temperature (without load and heat dissipation according to IEC60068-3-5);

*3: 性能指标在室温为+25°C时测定; 传感器处于空气处理单元出风口;

All the above specifications are measured at +25°C room temperature and the sensors are installed at blow-out of air conditioning unit.



低气压试验箱

VACUUM TEST CHAMBER

- 本系列产品可以用于模拟海拔，温度，湿度等复杂的自然环境；
Vacuum chamber can simulation the altitude, temperature and humidity environment.
- 常规最低压力可以达到1mbar,
The regular controlled pressure up to 1 mbar;
- 或者根据客户要求可以定制压力为10-3mbar级别的试验箱；
Special chamber can reach the pressure of 10-3mbar;
- 在控制压力的同时，温度也能够通过壁面的辐射换热系统进行控制；
Temperature is controlled by heat radiation under low pressure.

型号 ^{*1} Model ^{*1}	AZVAT(H)150U	AZVAT(H)500U	AZVAT(H)1000U	
电源 Power Supply	交流380V 50赫兹 3相+N+PE AC 380V 50HZ 3 phase+N+PE			
最大功率 Maximum Power (AZT/AZTH)(KW)	11	18	21	
使用环境温/湿度 Operation Environment	+5°C~+35°C/≤85%RH			
性能 ^{*3} Performance ^{*3}	温度范围 ^{*4} Temperature Range ^{*4}	-70°C~+120°C		
	湿度范围 Relative Humidity Range	+15°C~+85°C 20%~95%RH		
	露点温度范围 Dew Point Range	+4°C~+84°C		
	升温速率 ^{*2} Model Heating Rate ^{*2}	2.5°C/min	2.5°C/min	2°C/min
	降温速率 ^{*2} Model Cooling Rate ^{*2}	1.8°C/min	1.8°C/min	2°C/min
	压力控制范围 Pressure range	1KPa~1bar		
	压力波动度 Pressure Fluctuation	≤±2 Kpa (1bar~40KPa) / ≤±5% (40KPa~2KPa) / ≤0.1KPa (≤2KPa)		
观察窗 Inspection Window	多层导电膜加热观察窗，尺寸W240mmxH310mm Multiplayer glasses with conducting film heating, size W240mmxH310mm			
冷凝方式 Condenser	水冷冷凝器 Air-cooled condenser			
内容积 (升) Interior Capacity (L)	150	544	1040	
内尺寸(mm) Interior Size	W(mm)	600	800	1010
	D(mm)	500	800	1010
	H(mm)	500	850	1020
外尺寸 Exterior Size	W(mm)	960	1200	1430
	D(mm)	2640	2855	3455
	H(mm)	1900	2490	2290

*1: AZVAT型的无湿度控制功能/AZVAT modle has no humidity control function;

*2: 最高温度与最低温度之间的平均速率 (无负载, 无散热, 参考IECC60068-3-5)
Average speed between highest and lowest temperature(without load and heat dissipation according to IEC60068-3-5);

*3: 性能指标在室温为+25°C时测定;传感器处于空气处理单元出风口;

All the above specifications are measured at +25°C room temperature and the sensors are installed at blow-out of air conditioning unit;

*4: 温度在压力范围40KPa-1bar之间可控/Temperature controllable with pressure from 40KPa to 1bar;



步入式环境模拟仓广泛用于汽车，计量检测，航天航空以及国防工业；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。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；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。

Drive-in climatic test chamber is widely used in automotive industry, testing facility, defense, aerospace and aeronautics areas. This series of product is high reliable under wide range of temperature and humidity conditions.

Operators can enter the chamber to manipulate the large size DUT. Prefabricated panels are used for easy transportation and installation. Customized product to meet the real demand from customer. Ideal air circulation to guarantee the best temperature test humidity uniformity inside chamber. State of art refrigeration technology to save the power consumption and lift-time cost.

步入式整车环境仓 <i>Drive-in Climatic Chamber</i>	性能特点 <i>Main performance</i>
● 温度范围: -70°C~+150°C/Temperature range: -70°C~+150°C,	
● 湿度范围: 10%~98%RH/Humidity range: 10% ~98%RH;	
● 相关标准: PV2005, PV1200, PV2205, PV2206, PR303.5, PR308.2, DBL5471 4.1.2 Test standard: PV2005, PV1200, PV2205, PV2206, PR303.5, PR308.2, DBL5471 4.1.2, etc.	



步入式环境模拟试验仓配合MASTTABLE（多轴液压振动台）MAST系统结合带红外模拟的环境仓可以模拟汽车零部件在极端温湿度以及振动环境下的性能。

Climatic chamber cooperated with MAST (Multiaxial Simulation Tables) Temperature, humidity and Infrared simulation will act on the DUT for the extreme weather and vibration condition.

MAST振动台环境仓 <i>Climatic Chamber with MAST System</i>	性能特点 <i>Main performance</i>
● 温度范围: -40°C~+100°C/Temperature range: -40°C~+100°C,	
● 湿度范围: 10%~98%RH/Humidity range: 10% ~98%RH;	
● 专门的房间减震和隔音设计，少了振动装置对于环境仓的影响/Special noise treatment.	
● 红外模拟系统: 可选/Infrared simulation system: Optional	
● 试验件吊装系统: 可选/Movable crane for lifting DUT: Optional	
● 房间扫气系统: 可选/Air purge system: Optional	
● 电池安全防护系统: 可选/Battery safety system: Optional	



四立柱试验室用于进行结构耐久性、异响及驾驶平顺性测试。
四立柱能通过驱动器自动定位来设置车辆的不同轮距和轴距。
试验室提供适当的消音处理再现极端环境条件下的测试和异响评价。

4-Poster climatic chamber is used for structural durability, NVH and smooth driving test.
The 4-poster hydraulic actuators can move to match different wheelbase and tread.
The chamber will provide specific acoustic treatment to reproduce the NVH condition.

道路模拟环境仓 Climatic Chamber with Four Poster System

性能特点
Main performance

- 温度范围: -40°C~+100°C/Temperature range: -40°C~+100°C,
- 湿度范围: 10%~95%R.H./Humidity range: 10%~95%RH;
- 配合红外模拟系统/With Infrared simulation system;
- 密封底板和4-Poster系统液压缸同步移动, 匹配不同轴距轮距可以选择配置新风供给和尾气抽排系统
The automatic sealing system with hydraulic actuators.Fresh air and exhaust system is optional.



全光谱阳光模拟试验室符合DIN75220,宝马标准PR306.5以及奥迪标准VDA230-219

借助阳光(红外)模拟试验室模拟南佛罗里达和亚利桑那的极端气候, 测量零部件经过暴晒之后的间隙和通过视觉的检查, 从而评估汽车零部件抵抗暴晒的性能; 整车或者汽车零部件历经阳光以及温湿度的综合循环, 来模拟现实中的阳光暴晒的更迭;

Test Standard: DIN75220, PR 306.5, VDA 230-219;

By simulating the extreme weather condition in South Florida and Arizona, the chamber can evaluate resistance to insolation of vehicle components by measuring gaps and flushness and checking condition of visible parts. The part or assembly as fitted to the vehicle is subjected to sunlight, modulated through temperature and humidity regulation for a certain number of cycles, simulating the alternating of non-exposure and exposure;

整车阳光模拟和红外模拟试验仓 Drive-in Solar Simulation and Infrared Simulation Test Chamber

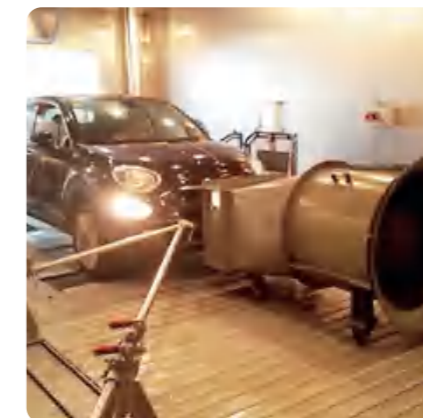
性能特点
Main performance

- 温度范围: -40°C~+80°C/Temperature range : -40°C~+80°C;
- 湿度范围: 10%~95%R.H./Humidity range: 10%~95%R.H.
- 辐照度范围: 400~1200W/m²/Irradiance: 400~1200W/m²
- 紫外, 可见光, 红外辐射; 光谱分布接近CIE85;Table 4/UV/Visible/Infrared Radiation, close to CIE85;Table 4
- 多变量控制, 可以控制辐照光强或者黑标表面温度
Multi-variables control logic, feedback control based on irradiation intensity or black standard temperature;
- 配备自动升降灯架配合不同的车型高度, 达到最佳的辐照均匀度
Equipped with automatic lifting lamp dack to match different vehicles and gain optimum irradiation uniformity;
- 零部件阳光模拟用小试验箱用于模拟车内状态/Small transparent test box for components solar simulation test;



满足中国，欧盟和美国的性能和排放标准，可以进行不同温湿度条件下的浸车测试,冷启动测试,除霜和除雾性能测试;
The chamber is in accordance with China, UN-ECE and US performance/emission regulations. The chamber can be also used for soak tests, cold start tests, defrosters and demisters performance test at different temperature and humidity conditions.

汽车性能测试仓和发动机性能测试仓	Vehicle Performance Test Chamber and Engine Performance Test Chamber	性能特点 Main performance
● 温度范围: -40°C~+60°C/Temperature range : -40°C~+60°C;		
● 湿度范围: 30%~70%R.H./Humidity range: 30%~70%R.H.		
● 配备新风补偿以及尾气抽排系统/Equipped with fresh air supply system and exhaust extraction system;		
● 整合底盘测功机或者自由滚筒/Integrated with chassis dynamometer and fixed-inertia roller;		
● 整合CO2灭火系统和实时监控系統/Integration of CO2 fire extinguishing system and real-time monitoring system;		
● 配合汽车尾气分析系统,风速模拟风机和阳光或红外模拟系统 Integration of exhaust analysis system,air speed simulation blower and solar or IR simulation system		





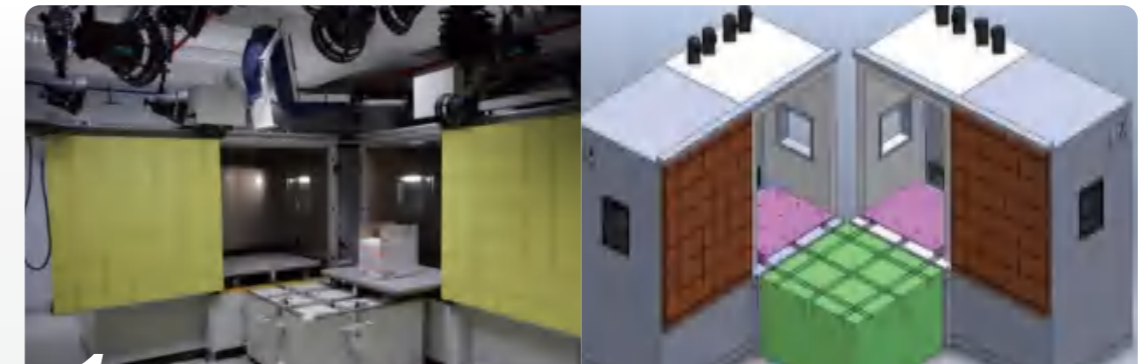
多种试验方法的整合

Integration of different test methods

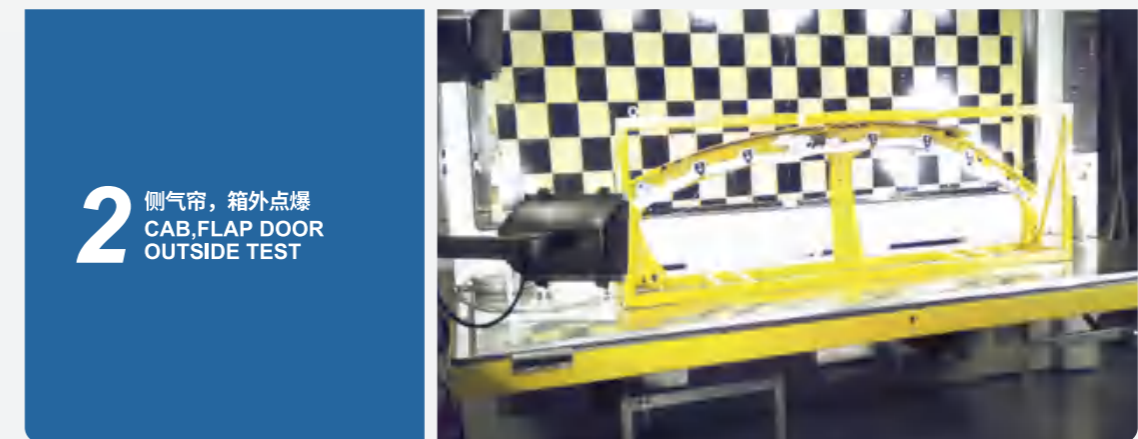
完美综合了环境试验箱，气囊点爆系统以及灯光系统；可以自动完成低温到达，开门，引爆以及通风换气整套过程，提高了试验精度，重复性，节省了试验时间，提高了试验效率；

The integration of test chamber, airbag static deployment system and lighting system can complete the whole process of reaching low temperature, opening the door, igniting the airbag and ventilation automatically; It contributes to improved test efficiency and precision.

气囊静态展开环境仓解决方案 <i>Climatic Chamber Solution for Airbag Static Deployment</i>	性能特点 <i>Main performance</i>
● 温度范围-50°C~+110°C/Temperature range : -50°C~+110°C;	
● 自动滑移门和自动移动平台/Auto-sliding door and automatic movement platform;	
● 超大视窗以及干风吹扫和废气抽排系统/Super size inspection windows, dry air purging and exhaust extraction system;	
● 室内点爆和室外点爆的完美整合/Integration of indoor deployment test and outdoor deployment test;	
● 环境仓，点爆系统以及灯光系统可以联动或者独立手动控制 Integration of test chamber, static deployment system and lighting system;	



1 气囊模块，箱内箱外点爆
IDAB/PAB/SAB/KAB, INSIDE AND OUTSIDE TEST



2 侧气帘，箱外点爆
CAB, FLAP DOOR
OUTSIDE TEST



3 白车身仪表板，箱外点爆
BIW/DASHBOARD, PLATFORM, OUTSIDE TEST



4 整车箱内点爆测试
VEHICLE AND INSIDE
CHAMBER TEST

整车VOC测试仓/三综合环境箱



VEHICLE VOC TEST CHAMBER/CLIMATIC CHAMBER WITH VIBRATION SHAKER

三综合环境箱是用于配合振动台的环境箱，可以根据振动台的台面尺寸定制；具备自动水平移动和自动垂直移动功能，配合不同的振动台工位；特别的软连接系统保证箱体和振动台之间的隔热密封；

Climatic chamber is special designed to cooperate with shaker, Customized by the different size of the shaker extender; The chamber can move horizontal and vertically to match different working position; Flexible material to ensure heat-insulation performance between chamber and shaker.



三综合环境箱 Climatic Chamber with Vibration Shaker

性能特点 Main performance

- 箱体容积: 0.5m³~25m³/Chamber volume: 0.5m³~25m³
- 温度范围: -70°C~+150°C/Temperature range: -70°C~+150°C;
- 升降速率: 1°C~15°C/min/Temperature rate of change: 1°C~15°C/min
- 湿度范围: 10%~98%RH/Humidity range: 10%~98%RH;
- 红外模拟: 可选/Infrared simulation system: Optional
- 试件吊装系统: 可选/DUT Crane system: Optional

整车VOC测试仓 Vehicle VOC Test Chamber

性能特点 Main performance

- 温度范围: +20°C~+40°C/Temperature range: +20°C~+40°C;
- 湿度范围: 40%~60%R.H./Humidity range: 40%~60%R.H.
- 配备带过滤装置的新风系统和尾气抽排系统/Equipped with filtered fresh air supply system and exhaust extraction system
- 配备红外模拟系统,灯架高度连续可调/Equipped with IR simulation system and the automatic lifting lamp bank;
- 更换方便的活性炭过滤系统和优化的仓内气流组织
Well-designed activated carbon system is convenient to replace and optimized air organization inside the chamber;
- 满足行业内部的多个试验标准: 《ISO/FDIS 12219-1:2011(E)》、《PV3938》、《JAMA》、《HT400-2007》;
Applicable to almost all the test standards: 《ISO/FDIS 12219-1:2011(E)》、《PV3938》、《JAMA》、《HT400-2007》;

大型三综合环境箱 WALK-IN CLIMATIC CHAMBER WITH SHAKER



- 振动台面尺寸: >宽2000mm*深2000mm
Size of shaker: >W2000mm*D2000mm
- 箱体容积: >10m³
Chamber Volume: >10m³

小型三综合环境箱 CLIMATIC CHAMBER WITH SHAKER



- 振动台面尺寸>宽400mm*深400mm
Size of shaker: >W400mm*D400mm
- 箱体容积: 0.5m³~3m³
Chamber Volume: 0.5m³~3m³


安全探测 Safety Detection	烟感探测 Smoke Detection 气体探测 Gas Detection 表面温度探测 Battery Temperature Detection 火灾探测 Flame Detection	
被动防护 Passive Protection	增强结构 Enhanced mechanical structure 泄压 Overpressure Flap 泄爆 Burst Disc	
主动防护 Active Prevention	气体吹扫 Pressurized air purge 惰性气体冲注 Permanent inert gas injection 灭火系统 Fire suppression system	

电池试验箱是专门针对不同种类的动力电池测试需要；
 在标准环境箱的基础上，根据不同的严酷等级配备安全防护功能，最大程度保证人员、财产及设备的安全；
 Battery test chamber are special designed for different type of traction battery test.
 On the basis of standard climatic chamber, protection mechanisms are provided to different hazard level, to ensure the safety of company personnel, property and equipment.

电池试验箱 Battery Test Chamber	性能特点 Main performance
● 箱体容积：0.5m³~50m³/Chamber volume：0.5m³~50m³	
● 温度范围：-40°C~+90°C/Temperature range：-40°C~+90°C;	
● 升降速率：5°C/min/Temperature rate of change：5°C/min	
● 湿度范围：10%~98%RH/Humidity range：10%~98%RH;	
● 严酷等级：Level0~Level7/Hazard Level：Level0~Level7;	
● 远程操作，报警及监控：可选/Remote control, alarm and monitoring: Optional	
● 与充放电系统通讯：可选/Communication with power test system: Optional	

物联网云平台介绍

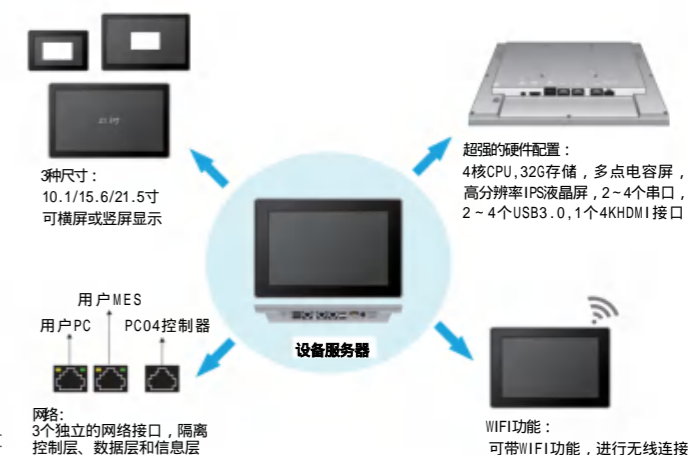
触摸屏只是增加环境试验箱产品线中的一个硬件，它还包含有一整套物联网平台的解决方案，这其中包含了硬件和软件平台，基于此平台我们可以很方便的打造工业设备的通信解决方案，将用户需求的设备通过物联网模块接入互联网，利用先进的云技术实现大量设备入网通信、数据传输、云计算、远程运维等功能，可以大大降低用户的投入，也帮助企业最终用户尽快跨入工业互联网时代。

 <p>远程透传程序 可以实现远程控制器程序的上传、下载、监控，在线解决现场问题。</p>	 <p>数据远程监控 可以通过网页或手机APP实现设备数据监控，第一时间了解设备运行状态、修改参数、运维排障等。</p>	 <p>设备报警推送 可通过微信、短信、邮件等多种方式第一时间推送设备故障报警，及时掌握设备运行状态。</p>
 <p>历史数据查询 可以查询保存设备的历史数据，可以通过曲线或表格形式展示，并且可以导出至本地。</p>	 <p>数据统计分析 可以统计设备的各类数据，对设备进行有效的数据统计，便于研发、售后、销售等多部门进行数据分析。</p>	 <p>提升工作效率 可以通过物联网平台，持续对数据进行采集、监控、分析，在线运维排障等，整体提升工作效率。</p>

基于服务器平台构架触摸屏方案介绍

- 10.2寸电容式触摸屏，基于微软Win10平台，采用嵌入式编程方式；
- 采用西门子S7-1200系列PLC作为控制器；
- 触摸屏和控制器之间通过网线采用通用通讯协议；
- 触摸屏配有HDMI高清输出、USB3.0、千兆以太网口等丰富接口；
- 支持RS485、RS232、CanOpen、Profinet、ModbusTCP、OPC UA等多种通讯协议；

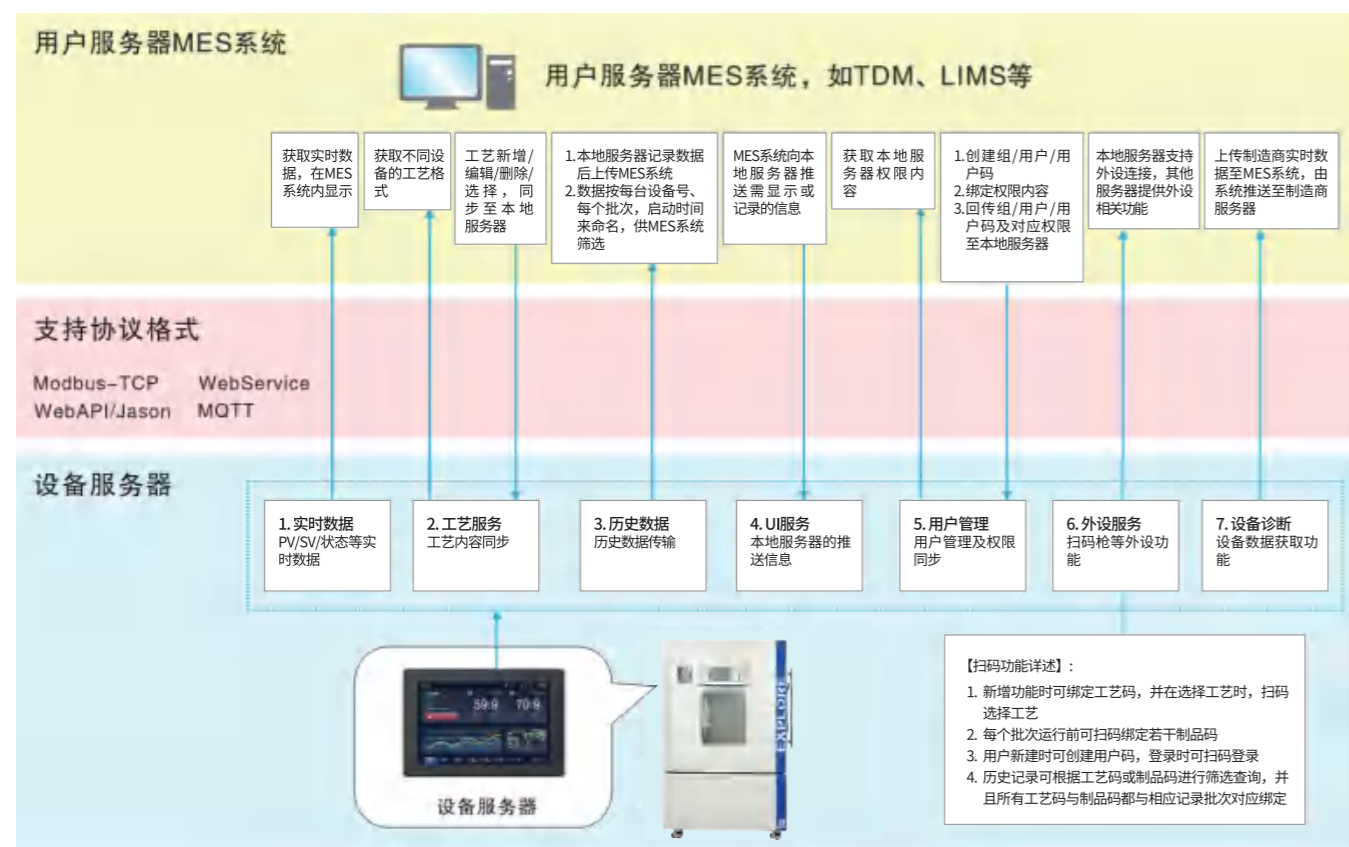
采用Intel四核14纳米1.5GHz处理器，标配4G DDR3内存，64G eMMC存储器，3个独立的以太网，1个WIFI接口，4个USB3.0接口，4个串口（3个RS485，1个RS232/RS485），1个HDMI接口；可扩展SSD硬盘



触摸屏基本界面预览



支持用户服务器MES系统



历史数据可追溯及自动同步

1. 100%的数据可追溯
2. 历史数据以一次运行/停止为一个记录文件，可记录制品编码，模拟量数值，操作、用户登录、报警等所有数据，可与SQL关联查询。
3. 海量记录，每秒10点数据记录可存储2400天（标配32G时）
4. 自动与PC端同步，并远端共享
5. 内置SQL型数据库



制造商设备大数据采集及分析



支持多种外设设备



多用户并发访问



设备远程调试

