Product images are for reference only, configuration, parameters, if there are changes, to prevail in kind, the final interpretation of this brochure to the company all!

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东莞市环仪仪器科技有限公司 全球环境与可靠性试验设备解决方案供应商 GLOBAL ENVIRONMENTAL & RELIABILITY TEST EQUIPMENT SOLUTION PROVIDER

HUANYI 环仪仪器

Global Environmental & Reliability Test Equipment Solution Provider

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ABOUT HUANYI

Dongguan Huanyi Instruments Technology Co.,Ltd. was established on March 20, 2007, covering an area of 6,022 square meters. It is a high-tech enterprise integrating R&D, production, sales and after-sales service. It participated in the drafting of national standards and industry standards for environmental simulation test equipment.

Our philosophy is "customer-centric, quality-guaranteed, honesty-based, and innovation-oriented". Through unremitting efforts, Huanyi has cultivated a high-quality team with rich production, R&D and management experience. Since its establishment, the company has been providing customers with the "most competitive" products, continuously introducing international advanced technologies, learning from others and integrating them.

The main components of all the company's products are made of internationally renowned brand components to ensure the quality and performance of the products. At present, the test equipment developed and produced by Huanyi has reached the domestic leading level, obtained a number of patents, and passed the certifications of high-tech enterprises, ISO9001 quality management system, ISO14001 environmental management system, ISO45001 occupational health and safety management system, etc. We are climbing to the peak of the test equipment industry with new mechanisms, new thinking, new technologies and new images.

OEM ODM R&D Production Sales After-sales

Huanyi is committed to becoming a well-known brand of testing equipment firmly chosen by global enterprise

Enterprise Qualification

Production Workshop

Sheet Metal Workshop

Contents

Environmental Reliability Test Equipment

05 Programmable Constant Temperature and Humidity Test Chamber
06 Rapid-rate Thermal Cycle Change Test Chamber(ESS)
07 Three-zone Thermal Shock Test Chamber
08 Two-zone Thermal Shock Test Chamber
09 Walk-in Constant Temperature and Humidity Test Chamber
10 Aging Test Room
11 Altitude Simulation / Low Pressure Test Chamber
12 Vibration Test System with Temperature & Humidity
13 Unsaturated(HAST)/Saturated (PCT)Steam Life Test Chamber.
13 Ozone Aging Test Chamber
14 Salt Spray Test Machine
15 Precision Oven
15 Vacuum Oven
16 Water Shower Test Chamber
16 Vehicle Water Shower Test Room
17 Dust Test Chamber
17 UV Weathering Test Chamber
18 Xenon Weathering Test Chamber
18 Carbon Arc Lamp Aging Test Chamber
19 Thermal Vacuum Test Chamber /TVAC Test Chamber
20 Battery Explosion-proof Test Chamber (Double/Triple layer)
21 Dynamic and Static Airbag Explosion Test Chamber
22 Vehicle Temperature and Humidity Integrated Testing Chamber
22 Vehicle Comprehensive Performance Environmental Test Chamber (Rotary Hub + Light)
22 Hydrogen Environmental Simulation Test Chamber

Mechanical Reliability Test Equipment

25 Vertical Impact Test Bench
26 Pneumatic Impact Crash Test Bench
27 Centrifugal Constant Acceleration Testing Machine (Rotary Arm Type)
28 Centrifugal Constant Acceleration Testing Machine (Rotary Table Type)
29 Tilt and Swing Test Bench
30 Six-Degree-of-Freedom Swing Test Bench
31 Drop Test Machine
32 Zero Drop Test Machine
33 Aerodynamic Horizontal Impact Response Spectrum Tester
34 Incline Impact Testing Machine
34 Clamping Force Testing Machine
35 Tensile Test Machine
36 Simulated Transport Vibration Tester
37 Electrodynamic Vibration Test Bench

Programmable Constant Temperature and Humidity Test Chamber

■ Application

Suitable for aviation, aerospace, electronics, electrical appliances, communications, instruments, vehicles, electricians, parts and other heat resistance, cold resistance, dry resistance, temperature resistance under various environment performance testing. Widely used in colleges, factories, military scientific research units.

■ Standards

IEC 60068-2-1、IEC 60068-2-2、IEC 60068-2-10、IEC 60068-2-78、IEC 60068-2-30、ISO 2233、ISO 4628、MIL-STD-810、ASTMD4169、GB/T2423.1、GB/T2423.2、GB/T2423.3、GB/T2423.4、GB/T2423.16、GB/T10589、GB/T10592、GJB150.3A、GJB150.4A、GJB150.9A.

■ Technical parameters

Model	HYH																			
	80A	80B	80C	80D	150A	150B	150C	150D	225A	225B	225C	225D	408A	408B	408C	408D	1000A	1000B	1000C	1000D
Internal size (WxHxD)cm	40X50X40(80L)				50X60X50(150L)				60X75X50(225L)				80X85X60(408L)				100X100X100(1000L)			
External size (WxHxD)cm	60X159X137 (80L)				70X167X150 (150L)				80X175X150(225L)				100X185X160(408L)				120X195X195 (1000L)			
Controller	7 inch LED touch screen, Fixed value and program control																			
Temp range	A : 0~150℃					B: -20~150℃					C: -40~150℃					D: -70~150℃				
Humid range	20%~98%RH																			
Fluctuation	Temperature:+0.5℃,Humidity:+2.5%RH																			
Uniformity	≤2℃/≤3%RH																			
Deviation	±2℃、±3. 0%RH (>75%RH) ±5. 0%RH (≤75%RH)																			
Heating and Cooling rate	Heating rate:About 3℃/min(Everage nolinear, No load) Cooling rate:About 1℃/min(Everage nolinear, No load)																			
Materials	Internal:SUS304 Stainless steel																			
	Outer:Advanced steel plate baked paint treatment or SUS304 stainless steel																			
	Insulation:German Bayer refractory grade high-strength PU polyurethane foam insulation material+ultra-fine glass fiber																			
Freezing system	Mechanical compressor binary cascade refrigeration																			
Cooling method	Air cold/Water cold																			
Power	AC 220V/AC 380V+10% 50HZ three-phase five wire																			

Rapid-rate Thermal Cycle Change Test Chamber(ESS)

■ Application

Mainly used in aerospace, electronics, instrumentation, electrical products, material components, complete machines and equipment for alternating humidity and heat tests, constant humidity and heat tests, as well as high and low temperature routine tests, cold resistance tests, low-temperature storage, adaptability tests under rapid or gradual temperature changes. It is particularly suitable for conducting environmental stress screening (ESS) tests on electrical and electronic products or for improving production efficiency.

■ Standards

IEC 60068-2-2、IEC 60068-2-1、IEC 60068-2-78、IEC 60068-2-30、IEC 60068-2-10、ISO 16750-4、ASTM D5488-01、RTCA DO-160G、IEC 60068-2-78、IEC 60721-3-3、GB/T2423.1、GB/T2423.2、GB/T2423.3、GB/T2423.4、GJB150.3A、GJB150.4A、GJB150.9A.

■ Technical parameters

Model	HYQT				
	150	225	408	800	1000
Internal size(WxHxD)cm	50X60X50	60X75X50	80X85X60	100X100X80	100X100X100
External size(WxHxD)cm	70X167X170	80X175X170	140X185X180	160X195X200	160X195X220

Temp change rate:	SL5:5℃/min SL10:10℃/min SL15:15℃/min SL20:20℃/min SL25:25℃/min	Internal material:	SUS304 Stainless steel
Temp change range:	-40℃~ + 85℃ / -55℃~+85℃	Outer material:	Advanced steel plate baked paint treatment or SUS304 stainless steel
Temp range:	-70℃~150℃ (Linear temp range: -40℃~125℃)	Insulation material:	German Bayer refractory grade high-strength PU polyurethane foam insulation material+ultra-fine glass fiber
Temp fluctuation:	±0.5℃	Freezing system:	Mechanical compressor binary cascade refrigeration
Temp uniformity:	≤2.0℃	Refrigerator:	Imported compressor
Temp deviation:	±2.0℃	Freezing medium:	R404A/R23 (Assignable)
Humid. range:	20%~98%RH	Cooling method:	Air cold/Water cold
Humid deviation:	±5%RH (≤75%RH)	Observation window:	Insulating glass coated with heating film

Three-zone Thermal Shock Test Chamber

■ Application

Mainly used in aerospace, aviation, military units, electronics, and other industries for adaptability tests of test products under the conditions of rapid atmospheric temperature and humidity, and safety performance tests of electronic components, parts, and products (complete machines).

■ Standards

IEC 60068-2-1、IEC 60068-2-14、IEC 60068-2-17、ASTMD5488-01、MIL-STD-810G、JISC0040、ISO 16750-4、RTCADO-160、IEC 60068-2-2、GBT24231、GBT2423.22、GBT2423.2、GJB150.3A、GJB150.4A、GB150.5A、G8T10589、GB/T10592、GB/T11158.

■ Technical parameters

Model	HYTS											
	80A	80B	100A	100B	150A	150B	252A	252B	448A	448B	1000A	1000B
Internal size (WxHxD)cm	40X50X40		50X45X40		50X60X50		70X60X60		80X70X80		100X100X100	
External size (WxHxD)cm	135X185X175		145X180X165		145X195X175		182X213X217		192X244X232		195X235X225	

Temp change rate:	-45/-55/-65~150℃	Temp uniformity:	≤2.0℃
High temp zone range:	+60~200℃	Interior material:	SUS304 stainless steel
Low temp zone range:	-70~0℃	External material:	High-grade steel paint treatment or SUS304 stainless steel
Recovery time:	Within 5 minutes	Insulation material:	Germany Bayer refractory grade high strength PU polyurethane foam insulation material + ultra-fine glass fiber
High temp exposure time:	30 minutes	Refrigeration system:	Laminated semi-closed compressor, environmental protection R404A, R23 refrigerant
Low temp exposure time:	30 minutes	Refrigerating method:	Air cold/Water cold
Temp fluctuation:	±0.5℃	Power:	AC 380V+10%, 50HZ, three-phase five-wire
Temp departure:	≤+2.0℃	Note:	Dimensions can be customized

Two-zone Thermal Shock Test Chamber

Left-right structure

Up-down structure

■ Application

Mainly used in aerospace, aviation, military units, electronics, IT industries, etc., to test the adaptability of test products under conditions of rapid changes in ambient atmospheric temperature, and to provide reliability tests and product screening for basic safety tests of electronic components, parts and products (complete machines).

■ Standards

IEC 60068-2-1、IEC 60068-2-2、IEC 60068-2-14、IEC 60068-2-17、MIL-STD-810G、ISO 16750-4、ASTMD5488-01、RTCADO-160G、GB/T2423.1、GB/T2423.2、GB/T2423.22、GJB150.3A、GJB150.4A.

■ Technical parameters

Model	HYTW-V				HYTW-H	
	27	80	150	408	512	1000
Internal size (WxHxD)cm	50X45X50	70X55X60	80X60X70	100X100X80	113X110X100	155X130X131
Basket size (WxHxD)cm	30X30X30	50X40X40	60X50X50	80X85X50	80X80X80	100X100X100
External size (WxHxD)cm	110X210X170	130X220X185	135X225X205	175X255X215	336X229X181	370X249X269

High temp zone:	Preheating temp range:+60℃ ~+180℃ Heating time:+20℃ ~+150℃ ≤30min	Thermal recovery time:	≤5min
Low temp zone:	Temp range: -70℃ ~10℃ Cooling time:+20℃~-70℃≤70min	Interior material:	SUS304 stainless steel
Shock range:	-40/-50/-65℃ ~+150℃	External material:	High-grade steel paint treatment or SUS304 stainless steel
Temp constancy:	±0.5℃	Insulation material:	Germany Bayer refractory grade high strength PU polyurethane foam insulation material + ultra-fine glass fiber
Temp deviation:	≤±2.0℃	Refrigerating mode:	Mechanical compressor binary cascade refrigeration
Temp uniformity:	≤2.0℃	Cooling mode:	Air cold/Water cold
Transfer time:	≤10s	Power:	AC 380V+10%, 50Hz, three-phase five-wire

Walk-in Constant Temperature and Humidity Test Chamber

■ Application

The walk-in constant temperature and humidity test chamber is suitable for aerospace products, information electronic instruments, materials, electrical, electronic products, and various electronic components to test their various performance indicators in high and low temperature or humid and hot environments.

■ Standards

IEC 60068-2-10、IEC 60068-2-1、IEC 60068-2-2、IEC 60068-2-78、IEC 60068-2-30、IEC 60068-2-78、IEC 60068-2-56、ISO 16750-4、ASTMD1776-14、ISO 2230、IEC 60068-2-30、GB/T2423.1、GB/T2423.2、GB/T2423.3、GB/T2423.4、GJB150.3A、GJB150.4A、GJB150.9A.

■ Technical parameters

Model	HYHW					
	4	8	12	15	24	40
Internal size (WxHxD)cm	200X200X100	200X200X200	200X200X300	250X200X300	300X200X400	400X200X500
Temp range	A: 0 ~ 150℃		B: -20 ~ 150℃	C: -40 ~ 150℃		D: -70 ~ 150℃

Humid range:	20% ~98%RH	Exterior material:	High-grade steel paint treatment or SUS304 stainless steel
Temp deviation:	≤±2.0℃	Insulation material:	Germany Bayer refractory grade high strength PU polyurethane foam insulation material + ultra-fine glass fiber
Temp uniformity:	≤2.0℃	Sheet thickness:	100(75/120/150) (mm) optional
Humid fluctuation:	≤±3%RH	Assembly structure:	The panels are designed with a concave-convex structure and are secured using steel eccentric tension locks. The panels are tightly locked together
Humid deviation:	±3.0%RH (>75%RH) ±5%RH (< 75%RH)	Cooling mode:	Air cold/Water cold
Interior material:	SUS304 stainless steel	Power:	AC 380V+10%, 50Hz, three-phase five-wire

Aging Test Room

■ Product Introduction

Aging room (burning room) is a device for simulating high temperature and harsh environment testing for high-performance electronic products (such as: computer, display, terminal, power supply, motherboard, monitor, exchange charger, etc.). It is an important production process for manufacturers to improve product quality and competitiveness. This equipment is widely used in electronics, computers, communications, biopharmaceuticals and other fields.

According to different requirements, the main system, main power system, control system, heating system, temperature control system, air intake and exhaust system, uniform heat system, time control system, test load monitoring system, etc. are configured. Through this test program, defective products can be checked in advance, thereby improving production efficiency and product quality.

■ Technical parameters

Model	HYHT-12	HYHT-24	HYHT-48	HYHT-96
Temp range	40℃~85℃			
Accuracy	≤0.1℃			
Temp reuniformity	≤2℃(No load)			
Temp redeviation	< ±2℃			
Temp constancy	≤±0.5℃			
Heating time	1℃~3℃/Min			
Noise	≤65dB			
Sample trolley	Can be customized according to customer requirements			
Insulation material	50mm fiberglass rockwool board ensures tightness			
Product monitoring (optional)	Computer monitoring system can be installed according to customer requirements			

Altitude Simulation / Low Pressure Test Chamber

■ Application

It is mainly used in aerospace, aviation, shipbuilding, weapons, electrical engineering, electronics, automobiles, communications, scientific research and other industries to determine the storage and transportation reliability test of electrical and electronic products, instruments and meters or other equipment under the action of high, low temperature and low pressure alone or simultaneously, and the electrical performance parameters of the test pieces can be tested at the same time.

■ Standards

IEC 60068-2-13、RTCADO-160G、ISO 12001、IEC 60721-3-4、GB/T2423.1-2008、GB/T2423.2-2008、GB/T2423.3-2006、GB/T2423.4-2008、GB150.2/GJB150.2A、GJB150.3/GJB150.3A、GJB150.4/GJB150.4A、GJB150.6-86、GJB150.9/GJB150.9A、GJB150.19-86、GJB150.24.

■ Technical parameters

Model	HYLA-504A	HYLA-1000A	HYLA-504B	HYLA-1000B	HYLA-2000B
Internal size(WxHxD)cm	70X90X80	100X100X100	70X90X80	100X100X100	120X150X120
Power(KW)	11	15	16	18	27

Temp range:	-40℃/-70℃ ~150℃	Depressurization rate:	ATM ~1Kpa ≤30min (at ATM)
Temp constancy:	±0.5℃	Pressure recovery rate:	10Kpa/Min (Adjustable)
Temp deviation:	≥100℃, +3.0℃ (Normal pressure, no load), <100℃, +2.0℃ (Normal pressure, no load)	Interior material:	SUS304 stainless steel
Temp uniformity:	≤2.0C (ATM, no load)	Exterior material:	High-grade steel paint treatment or SUS304 stainless steel
Humid range:	20%~98%RH	Insulation material:	Ultrafine glass fiber cotton
Humid deviation:	(Under stable conditions) ±3%RH (Humidity>75%RH): ±5%RH (Humidity≤75%RH)	Refrigerating system:	Mechanical compressor binary cascade refrigeration
Heating and cooling rate:	0.7℃~1.0℃/min (Average throughout the process)	Pressure mode:	Internal pressure/external pressure
Pressure range:	ATM ~1Kpa	Vacuuming method:	Mechanical rotary vane vacuum pump
Pressure deviation:	When ≥40Kpa, ±2Kpa, When 4Kpa~40Kpa, ±5Kpa, When ≤4Kpa, ±0.1kpa	Power:	AC 380V+10%, 50Hz, three-phase five-wire.

Vibration Test System with Temperature & Humidity

■ Application

Mainly used in aerospace, electronics, instrumentation, electrical products, material parts, complete machines and equipment industries to determine the reliability test of electrical and electronic products, instruments or other equipment during transportation, storage and use.

■ Product Introduction

The vibration test system with temperature & humidity is mainly a combination of a climate chamber and a vibration tester. During the test, temperature, humidity, and vibration are applied to the sample in the same climate test chamber according to the specified cycle to conduct a comprehensive test of temperature, humidity, and vibration. Compared with the effect of a single factor, comprehensive environmental factors are a powerful tool for discovering defects in new products and accelerating the development of new products.

■ Standards

IEC 60068-2-1、IEC 60068-2-2、IEC 60068-2-78、IEC 60068-2-30、IEC 60068-2-64、IEC 60068-2-30、MIL-STD-810G、RTCA DO-160G、ISO 16750-4、GB/T2423.1、GB/T2423.2、GB/T2423.3、GB/T2423.4、GJB150.3A、GJB150.4A、GJB150.9A、GB/T10589、GB/T10592、GB/T11158、GB/T10586.

■ Technical parameters

Model	HTHV-408	HTHV-1000
Internal size(WxHxD)cm	85X80X60	100X100X100

Temperature control method:	Balanced temperature and humidity control (BTHC)	Heating and cooling rate:	Selectable rate range:1℃/min~15℃/min (Average throughout)
Temp range:	-70℃~+150℃	Interior material:	SUS304 stainless steel
Humid range:	20%~98%RH	Exterior material:	High-grade steel paint treatment or SUS304 stainless steel
Humid deviation:	When humidity>75%RH, ±3.0%RH; When humidity≤75%RH, ±5.0%RH	Insulation material:	Germany Bayer fire-resistant grade high-strength PU polyurethane foam thermal insulation + ultra-fine glass fiber
Humid uniformity:	≤2%RH	Refrigerating system:	Mechanical compressor binary compound refrigeration
Humid fluctuation:	≤±2.5%RH	Cooling method:	Water-cooled / Air-cooled
Temp constancy:	≤0.5℃	Power:	AC380V +10%,Three-phase five-wire

Unsaturated(HAST)/Saturated (PCT) Steam Life Test Chamber

Application

Applicable to the detection of sealing performance of products such as national defense, aerospace, automotive parts, electronic parts, circuit boards, IC, LCD, lighting products, etc., and related products for accelerated life testing, used in the design stage of the product, to quickly expose the defects and weak links of the product. Test the product's resistance to wear and air tightness.

Standards

IEC60068-2-66:1994、GB/T2423.40-2013.

Technical parameters

Model	HY-PCT-300	HY-PCT-400	HY-HAST-300	HY-HAST-400
Internal size(WxHxD)cm	Φ30X40	Φ40X50	Φ30X40	Φ40X50
External size(WxHxD)cm	55X120X50	65X130X60	55X120X50	65X130X60
Exterior material	Stainless steel #304			
Interior material	Plastic spraying			
Temp range	+100℃-132℃(Optional Up to 145℃)			
Operating temperature	121℃/132℃			
Humid range	PCT:100%RH Uncontrollable HAST:65%~100% Controllable			
Temp uniformity	±1.5℃			
Structure	Standard pressure vessel			
Humidification system	Electric heating tube			
Water supply system	Manual water addition (automatic water addition)			
Pressure range	0.2-2kg/cm2 (Optional up to 3kg/cm2)			
Power	220V-240V, 50/60Hz, single phase			
Max operating pressure	3Kg/cm2, can withstand high oxygen pressure above 6ATM			

Ozone Aging Test Chamber

Application

Used for aging and cracking tests on non-metallic materials and rubber products. Mainly used for quality testing of rubber and plastic, automotive production wires and cables, packaging materials, instruments and meters, medical devices, civil nuclear energy, civil aviation and other rubber printed products.

Standards

ISO 1431-1、ASTMD1149、ISO 7326、SAEJ2020、ISO 17493.

Technical parameters

Model	HYQL-150	HYQL-225	HYQL-408	HYQL-1000
Internal size(WxHxD)cm	50X60X50	50X75X60	60X85X80	100X100X100
External size(WxHxD)cm	105X150X110	105X165X120	115X175X140	160X190X160
Ozone concentration range	50pphm ~ 1000pphm			
Ozone concentration deviation	±10%			
Temp. range	0℃ ~ +100℃			
Humid.range	30% ~ 80%RH			
Interior material	High-grade steel plate with paint treatment or SUS/304 stainless steel			
Exterior material	SUS304 stainless steel			
Insulation material	German Bayer fire-resistant high-strength PU polyurethane foam insulation geomaterial + ultra-fine glass fiber			
Circulation device	Aluminum alloy multi-wing air supply			
Heater	SUS304 imported finned heating tube			
Refrigeration system	Air-cooled European and American imported fully enclosed compressor unit			
Control method	Balanced temperature control system (BTHC), PID control + S.S.R			
Other configurations	Dynamic and static fixtures / static fixtures			
Power	AC 3Φ 220V/380V±10%, 50/60HZ			

Salt Spray Test Machine

Conventional salt spray test chamber

Compound salt spray test chamber

Application

Widely used in aerospace, military, electronics, electrical appliances, post and telecommunications, medical and pharmaceutical, colleges and universities, scientific research institutions and other industries to conduct environmental reliability tests on products with regard to temperature and humidity resistance.

Standards

ISO 9227, ASTM B117, JIS Z 2371, IEC 60068-2-11, IEC 60068-2-52, ISO 12944-6, ISO 9227, ISO 4892-1, SAE J2334, MIL-STD-810, DIN 50021, AAMA 2605, GB/T 2423.17, GB/T 2423.17.

Technical parameters(Compound type)

Model	HY-SSP-2m³	HY-SSP-10m³	HY-SSP-12m³
Temp Range	0℃/-40℃/-70℃~+85℃		
Internal size (WxHxD)cm	120x120x140	200x200x250	300x200x200
External size (WxHxD)cm	150x268x292	260x280x420	360x280x380
Cooling method	Air cooling/Water cooling		
Temp change rate	1℃~10℃/min (Average throughout the process)		
Temp change range	A(-35℃~+85℃)/B(-40℃~+85℃)/C(-55℃~+85℃)		
Temp fluctuation	≤1.0℃(Note: If expressed according to GB/T5170.2-2017, the fluctuation is ≤±0.5℃, no-load, constant state)		
Temp uniformity	≤±0.5℃(constant state)		
Temp deviation	≤±2.0℃(constant state)		
Humid range	20%~98%RH		
Humid deviation	+2~-3%RH(>75%RH), ±5%RH(≤75%RH)		

Technical parameters(Conventional type)

Model	HY-SST-60	HY-SST-90	HY-SST-120	HY-SST-160
Internal size(WxHxD)cm	60X45X40	90X60X50	120X80X50	160X100X60
Laboratory temperature	Salt water test method (NSS ACSS) 35℃±1℃/Corrosion test method (CASS) 50℃±1℃			
Pressure tank temperature	Salt water test method (NSS ACSS) 47℃±1℃/Corrosion test method (CASS) 63℃±1℃			
Power	AC220±10V 10A	AC220±10V 15A	AC220±10V 30A	
Test chamber volume(L)	108	270	480	960
Brine tank volume(L)	15	25	40	40

Precision Oven

Features

- It adopts color LCD touch human-machine interface + high-performance programmable controller, with the characteristics of automatic, intelligent and humanized control.
- Control mode: constant operation mode, program operation mode

Application

Applicable to the testing, storage, drying and heat treatment of aviation, aerospace, electrical, electronic products, components, parts and their materials under high temperature conditions.

Technical parameters

Model	HYOV-72	HYOV-150	HYOV-270	HYOV-1000
Temp range	RT+10℃~300℃/400℃/500℃			
Internal size(WxHxD)cm	40X45X40	50X60X50	60X90X50	100X100X100
Temp fluctuation	≤0.5℃			
Temp uniformity	≤2.0℃ within 200℃ (Normal pressure, no load, constant state)			
Temp deviation	≤±2.0℃ (Normal pressure, no load, constant state)			

Vacuum Oven

Application

It is mainly used for aerospace equipment or equipment in the new space field, and is used for adaptation tests when subjected to the combined effects of humidity and altitude at high altitude or high altitude areas. This series of products can meet the comprehensive test of humidity and altitude, and can be equipped with rapid pressure reduction test and explosive decompression test functions.

Standards

ISO 3563、ASTME2787-11、IEC 61010-2-010、ASTM D5528-22、BSEN61010-2-010

Technical parameters

Model	HYUO-27	HYUO-72	HYUO-100	HYUO-290
Temp range	+60℃~200℃/300℃/400℃/500℃			
Internal size(WxHxD)cm	30X30X30	40X45X40	45X50X45	60X95X50
Pressure range	Normal pressure ~ 0.133kpa			
Pressure recovery time	≤10kpa/min			
Note	Other sizes can be customized according to requirements			

Water Shower Test Chamber

Product Introduction

The main function of this equipment is to test the performance of products during storage, transportation and use in a rainy climate environment. It is widely used in electrical and electronic products, lamps, electrical cabinets, electrical components, automobiles, motorcycles and their parts under simulated rainy climate conditions, simulated test products in rain test, dripping rain test, high wind speed rain and other environmental conditions of adaptability test and safety test of electronic components to provide reliability test, etc.

Standards

IEC 60068-2-18、IEC 60529、ISO 20653、DIN40050-9、ISO 16750-4、JISD0203、JISC0920、QC/T476-2007、GB/T12480、GB/T18384.3-2015、GB/T2423.38、GJB150.8A、GJB367A、GB/T2423.38-2006.

Technical parameters

Model	HY-103	HY-103A	HY-103B
Internal size(WxHxD)cm	80X80X80	100X100X100	140X140X140
Water spray ring radius(mm)	200	400	600
Water spray hole size	Φ0.33mm/Φ0.4mm/Φ0.8mm		
Aperture spacing	25.4mm/50mm		
Swing pipe swing amplitude	0°~320°(can be set arbitrarily)		
Test bench speed	2-10r/min(adjustable)		

Vehicle Water Shower Test Room

Purpose

The water sealing performance of the vehicle body mainly tests the vehicle's ability to prevent water from entering the passenger cabin when the doors, windows and hole covers are closed on rainy days or in a car wash environment. It is a basic requirement for the sealing of a car. The whole vehicle rain test room can be used to test the car's waterproof ability in all aspects.

Technical parameters

Internal size	Customized according to user requirements
Rainfall intensity	5~45mm/min, adjustable
Spray direction	The vehicle has six sides. The top spray array considers the full spray test of the front and rear of the vehicle body. Can be manually switched on and off to cover the front and rear of the vehicle.
Blowhole Diamater	Φ2.5 ~ Φ4.5mm
Spray hole density	400x400mm Note: Subject to actual installation
Water supply pressure	1.8MPa±0.2MPa adjustable
Spray device pipe diameter	Main pipe Φ140, branch pipe Φ100, spray pipe array Φ28/Φ38 (SUS304)
Pressure gauge	Electronic pressure gauge, 4~20mA output
Flow meter	Electronic flow meter, 4~20mA output
Rain gauge	Standard Φ100 rain gauge (cup)
Water supply	Vertical centrifugal pump (one spare and one use)
Filter device	Three-stage filtration (stainless steel filter grid and filter bag) 200um, 100um, 20um
Raining time	0~9999min, adjustable at will
Vehicle passing method	Manual driving through-type entry and exit.

Dust Test Chamber

Application

It is mainly used to test the shell sealing performance of products. It simulates the damage caused by sandstorm weather to aerospace, aviation, electrical, electronic, electromechanical products, automotive parts, seals, power meters and other products. Through the test, some protection or dust prevention measures are added to the installation and use of general equipment to improve the resistance and protection ability of the product against sand and dust. It is mainly used for the tests of IP5X and IP6X specified in the shell protection level standard.

Standards

IEC 60068-2-68、GB/T2423.37、GJB150.12A.

Technical parameters

Model	HY-130	HY-131	HY-132
Internal size(WxHxD)cm	80X80X80	100X100X100	120X120X120
Nominal wire diameter of metal mesh	75UM		
Nominal spacing between wires UM	75UM		
Dust concentration	2~4kg/m3; measurable and adjustable		
Dust particle size	≤32μm accounts for 33%; 32μm~250μm accounts for 67%		
Temp range	RT+15℃ ~60℃		
Fine dust	< 75um		
Coarse dust	< 150um		
Air flow velocity	< 2m/s		
Talc dosage	5kg/m³		
Dust concentration	2kg/m3 (Adjustable)		

UV Weathering Test Chamber

Product Introduction

Widely used in coatings, inks, paints, resins, plastics, printing and packaging, adhesives, automobile and motorcycle industries, cosmetics, metals, electronics, electroplating, medicine and other industries. The fluorescent UV in the UV aging test box can reproduce the effects of sunlight, and the condensation and water spray systems can reproduce the effects of rain and dew. It takes a few days or weeks to reproduce the hazards that occur outdoors for months or years. The types of hazards include: fading, discoloration, loss of gloss, pink light, cracking, peeling, turbidity, bubbles, brittleness, reduced strength, decay and oxidation.

Technical parameters

Model	HY-105 (Flat plate type)	HY-110 (Tower type)
Internal size(WxHxD)cm	113X40X50	110X25X45
External size(WxHxD)cm	130X170X70	130X140X52
Temp range	RT+10℃~70℃	
Humid range	85~98%RH	
Distance from sample to the lamp center	55mm	
Distance between the centers of the tubes	100mm	
UV lamp wavelength range	280~315nm (Type A)	315~400nm (Type B)
Standard test piece	75X150mm or 150X300mm	
Exposure method	Steam condensation exposure, radiation exposure	
Water tank requirements	Water depth ≤ 25mm, and automatic water supply	
Standard test piece size	75X150mm or 150X300mm	

Xenon Weathering Test Chamber

Application

The xenon weathering test chamber that can simulate the full sunlight spectrum is used to reproduce the destructive light waves in different environments, which can provide corresponding environmental simulation and accelerated testing for scientific research, product development and quality control. It can well simulate the changes caused by materials exposed to sunlight under different environmental conditions.

Technical parameters

Model	HY-120(Hub type)	HY-125(Flat type)
Internal size(WxHxD)cm	95X95X85	60X60X80
Temp range	RT+10℃ ~90℃	
Humid range	30 ~98%RH (dark)/20%~60%RH (light)	
Temp and Humid deviation	Temperature ±20℃, humidity ±3%RH	
Rainfall time	0~9999 hours 59 minutes adjustable	
Rainfall cycle	0~240 minutes, interval (break) adjustable	
Wavelength range	280nm~800nm	
Xenon lamp power	1.8/3/6KW Lifespan: 1000 hours	
Irradiation intensity	0.30-0.57W/m² (adjustable at 340nm) 0.66-1.22W/m2 (adjustable at 420mm) 35-70W/m (adjustable at 300-400nm)	
Exposure area	2200-6400m²	3760-7500m²
Cooling method	Water cooling	Air cooling
Blackboard temperature	63-100℃、±3℃	
Light intensity	500w/m²-1200w/m²	
Resolution accuracy	Temperature 0.01℃, humidity 0.1%RH	

Carbon Arc Lamp Aging Test Chamber

Features

- This machine mainly uses a sunlight-type carbon arc lamp as the radiation light source, controls temperature, relative temperature, sprays regularly, and is equipped with a rotatable sample rack and other functions to simulate natural climate factors to conduct artificial climate accelerated aging tests.

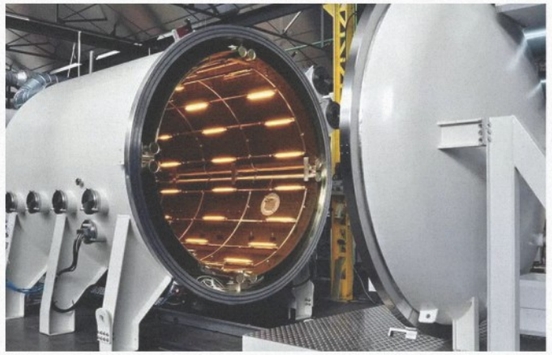
Standards

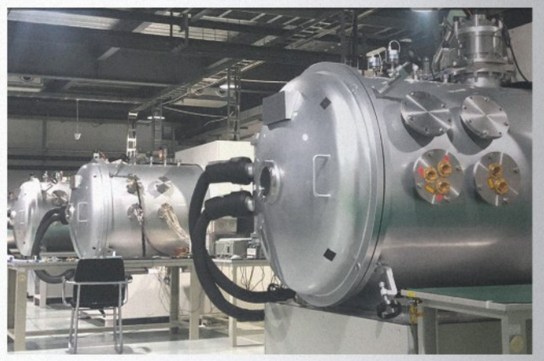
JIS A1415、B7753、D0205、G3312, H86885、K2246、K5400、Z9117、ISO4892-1、ASTM G23、AATCC、NCCA.

Technical parameters

Product Name	HYTD-1000
Internal size (WxHxD)cm	160X200X150
External size (WxHxD)cm	98X98X98
Temp and humid range	Workroom temperature: 38~85℃
	Sample rack temperature: Blackboard temperature (BPT): 40~110℃; Blackboard standard temperature (BST): 40℃~120℃
	Working humidity range: When exposed to light: 10~75%RH
Temp fluctuations	±2℃
Light source type	Sunlight type carbon rod (Continuous lighting for 78 hours)
Irradiance	Light irradiance automatic control system
Material	Inside and outside stainless steel SUS304
Insulation Materials	German Bayer fire-resistant high-strength PU polyurethane foam insulation material + ultra-fine glass fiber
Carbon rod quantity	4 pairs, sunlight type carbon rod
Sample rack	The diameter ofthe sample holderis960mm+3mm
Sample	76 standard sample racks (75X150mm standard samples)
Arc voltage current	Arc voltage, arc current direct display and automatic control

Thermal Vacuum Test Chamber /TVAC Test Chamber





Application

It is mainly used for ground tests to simulate the vacuum, cold black and solar radiation environment of spacecraft in space. Single machines (components), subsystems and spacecraft as a whole are all tested in this way. During the simulation test, the specimens are mostly in working state and their working parameters and environmental parameters are measured.

Standards

GB/T32221、GB/T34522、GJB3758、GJB1033、GJB1027A.

Technical parameters

Model	HY-810	HY-812	HY-1010	HY-1012	HY-1214	HY-1216
Tank body (straight line segment)cm	Φ100X100	Φ100X120	Φ120X100	Φ120X120	Φ140X140	Φ140X160
Heat sink (cm)	Φ80X100	Φ80X120	Φ100X100	Φ100X120	Φ120X140	Φ120X160
Test piece mounting base (length x width)cm	65X60	80X60	65X60	80X60	100X80	120X80
Base plate installation position (mm)	200±2 below center line	200±2 below center line	250±2 below center line	250±2 below center line	300±2 below center line	300±2 below center line
Solar Spectral Absorption Coefficient of Heat Sink Inner Surface αs ≥0.93						
Heat sink inner surface hemispherical emissivity εH≥0.87						
Temperature performance parameters						
Heat sink temp. range	-70~+150°C					
Mounting plate temp range	-70~+150°C					
Heat sink average rate of change	≥2°C/min					
Verage temperature change rate of mounting plate	≥2°C/min					
Heat sink temperature uniformity	±2°C	±2°C	±2°C	±2°C	±3°C	±3°C
Mounting plate temperature uniformity	±2°C	±2°C	±2°C	±2°C	±3°C	±3°C
Pressure performance parameters						
Ultimate pressure	≤$5x10^{-5}$Pa					
Working pressure	≤$1.3x10^{-3}$Pa					
Main pump pumping time (h)	5	5	5	5	5	5
Simulated load (kg)	10	10	15	15	20	20
Simulated load appearance(WxHxD)cm	40X35X40	60X35X40	60X35X40	75X35X40	75X45X50	85X45X50
Main pump	Cryogenic pump					
Oil pump	High and low temperature magnetic pump					
Pre-stage pump	Vane pump + Roots pump					
Cooling method	Mechanical cascade refrigeration					
Heating power(kw)	18	18	18	18	30	30
Power(kw)	50	55	60	60	75	88
Power supply	AC380V 50Hz three-phase five-wire					
Cooling method	Water cooling					
Noise	72dB(A)	72dB(A)	75dB(A)	75dB(A)	78dB(A)	78dB(A)

Battery Explosion-proof Test Chamber (Double/Triple layer)

Application

Double-layer explosion-proof test chamber, used to test the heat resistance, cold resistance, dry resistance and explosion-proof protection of various batteries. Applicable to batteries, electronics, electrical appliances, communications, instruments, vehicles, rubber and plastic products, metal materials, food, medicine, chemistry, building materials, aerospace, ships, weapons, colleges and universities, scientific research institutions.

Standards and test methods

IEC60068-2-1:2007、IEC60068-2-2:2007、GB/T2423.1-2008、GB/T2423.22-2016、GJB150.3A-2009、CJB150.4A-2009、GB/T31485-2015

Technical parameters

Model	HYH-2B-360	HYH-3B-80	HYH-3B-360
Internal size (WxHxD)cm	100X60X60	50X40X40	100X60X60
External size (WxHxD)cm	174X210X190	130X195X115	174X250X210

Structural mode:	The test chamber is designed as an integrated structure with three .	Observation window:	Three-layer vacuum tempered explosion-proof glass
Air supply mode:	Forced internal circulation, upper air outlet and lower air return. Forced internal circulation, horizontal air supply across the entire surface.	Test hole:	Customizable
Temp range:	A : 0℃~ +150℃, B : -20℃~ +150℃, C: -40℃~+150℃, D: -60C~+150℃	Cooling method:	Air cooling/Water cooling (optional)
Temp fluctuation:	±0.3℃	Compressor:	Semi-enclosed compressor/fully enclosed compressor
Heating rate:	Average 1~3℃/minute (non-linear no-load)	Control method:	PLC with programmable touch screen, USB interface, RS485 computer control, control software, remote monitoring and data collection
Cooling rate:	Average 1℃/minute (non-linear no-load)	Internal material:	SUS304 stainless steel
Temp uniformity:	≤2℃ (no-load, constant state)	External material:	High-grade steel plate with baking varnish or SUS/304 stainless steel
Temp deviation:	≤+1℃ (no-load, constant state)	Power supply:	AC 380V±10%, 50HZ/60HZ, three-phase five-wire

Dynamic and Static Airbag Explosion Test Chamber

Features

- Adopting advanced cold end balance control and PID automatic adjustment technology, it can achieve energy saving of more than 30% when maintaining high and low temperature.
- The compressors and accessories of the refrigeration system are all internationally renowned brands, with long-term and reliable operation, excellent craftsmanship, low failure rate, and environmentally friendly refrigerants, which meet the requirements of international environmental conventions.

Main functions

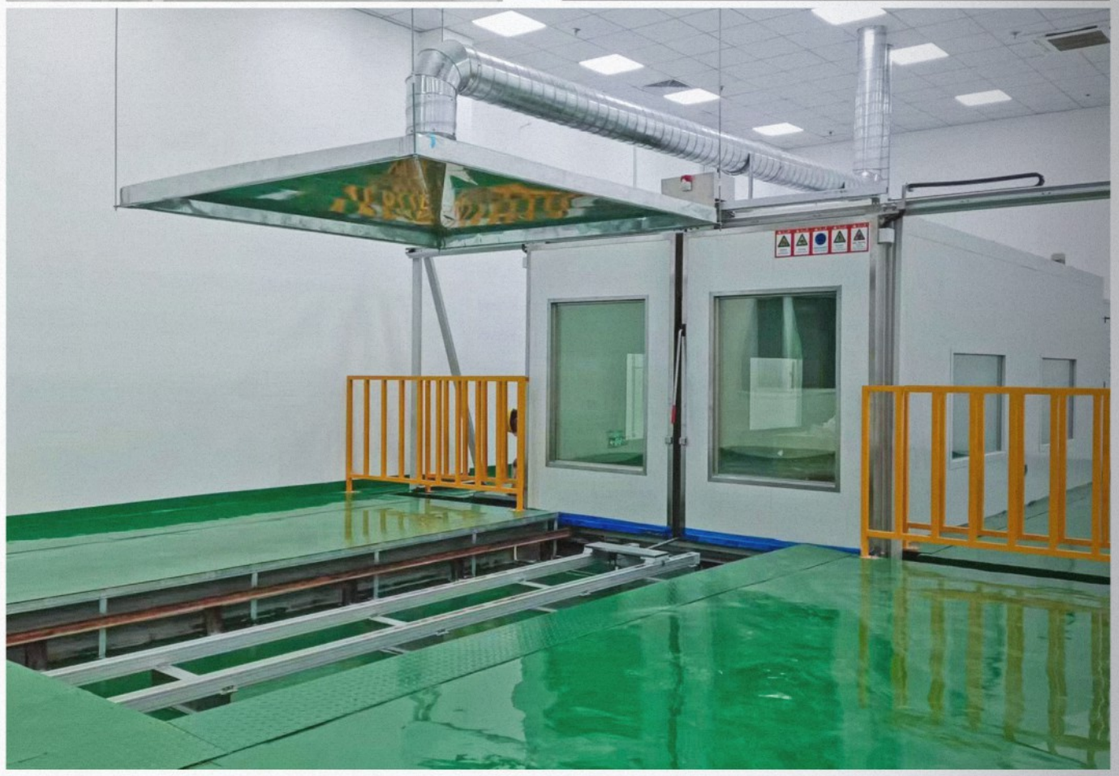
- This equipment can meet the verification of all types of airbag modules, as well as the testing of airbag supporting products such as dashboards, seats, steering wheels, etc.

Standards

- GBT19949.2-2005/ISO12097.2-1996 "Road vehicle airbag components Part 2 Airbag module test"

Technical parameters

Equipment volume	Customized according to user requirements
Temp range	-60°C~+120°C
Humid range	20%-95%RH (Optional)
Temp deviation	≤±2.0°C
Temp gradient	≤2.0°C
Temp fluctuation	≤±0.5°C



Vehicle Temperature and Humidity Integrated Testing Chamber

Application

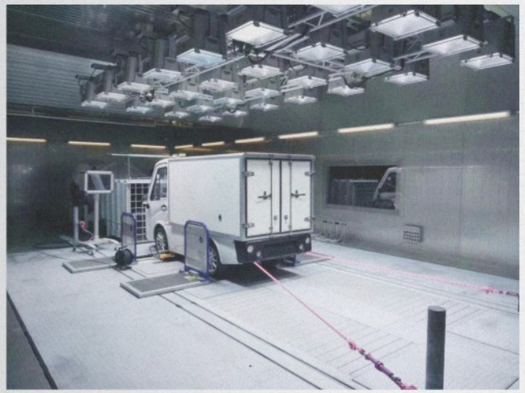
- The vehicle temperature and humidity integrated testing chamber can reproduce natural conditions, simulate environmental temperature and humidity, sunlight intensity, rain corrosion, driving conditions, exhaust emissions and fresh air supply, etc., which can provide an effective platform for the continuous improvement of the comfort, safety and reliability of automobiles and accessories.
- Equipment features The test chamber is mainly composed of the cabin body protection structure, air conditioning system, fresh air system, dynamometer system, exhaust emission system, and solar radiation system.

Vehicle Comprehensive Performance Environmental Test Chamber (Rotary Hub + Light)

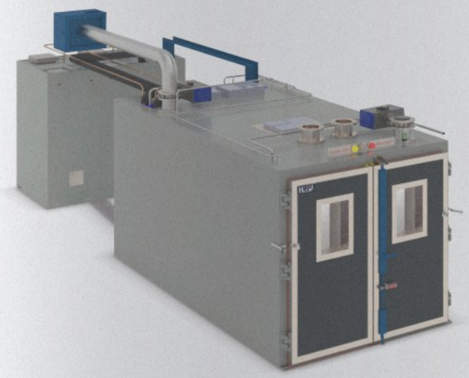
Application

Mainly used for vehicle high and low temperature storage test, vehicle defrosting, defogging performance test, vehicle cold start performance test, vehicle heating and cooling performance test, vehicle thermal balance test, parts high and low temperature resistance test, etc. The product mainly consists of the climate simulation test chamber body, heating and cooling device, fresh air/tail exhaust system, sunlight simulation system, warehouse temperature collection system, and electrical control system.

Please contact us for the parameters



Hydrogen Environmental Simulation Test Chamber



Application

The hydrogen environmental simulation test chamber developed for hydrogen-related environmental simulation test systems is an environmental chamber that can safely and reliably simulate different temperatures and humidity levels for fuel cell system performance testing.

Please contact us for the parameters

HUANYI
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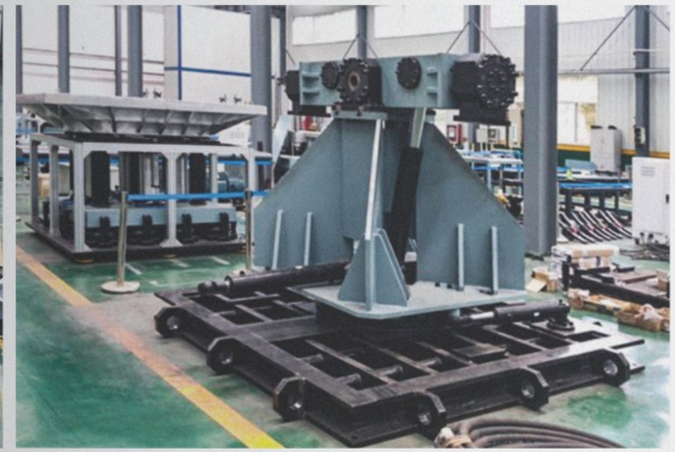
Mechanical Reliability Test Equipment

Production Workshop



Vertical Impact Test Bench

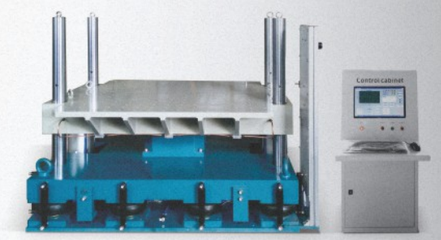
10kg impact bench

50kg impact bench

■ Features

Vertical impact test bench is used for impact testing of various products to assess the functional adaptability and structural integrity of the test products under impact environments.

- Built-in brake mechanism and vibration isolation for the machine base.
- Stepless adjustment of buffer stiffness.
- Digital control of impact height.
- Computer-controlled measurement and automatic generation of test reports.
- No special foundation required.
- Preset impact parameters and automatic application.
- Half-sine, trapezoidal wave, and back-peak sawtooth wave transmitters are available.



1000kg impact bench

■ Technical parameters

Model		HYS-5	HYS-20	HYS-50	HYS-100	HYS-200	HYS-500	HYS-1000
Rated load(kg)		5	20	50	100	200	500	1000
Countertop dimensions(mm)		200×200	300×300	500×500	600×600	800×600	1000×800	1200×1000
Forms of impact		Free-fall (Vertical Impact)						
Peak acceleration (g)	Half sine wave	5~2000	5~1500	10~750	10~600	10~450	10~300	10~250
	Back-peak sawtooth wave	/	10~200			10~100		
	Trapezoidal wave	/	/	15~200		15~100		15~60
Pulse duration (ms)	Half sine wave	0.5~40	0.6~60	1.5~60	2~60	2.5~60	3.5~60	4.5~60
	Back-peak sawtooth wave	3~18					6~18	
	Trapezoidal wave	/	/	3~18		6~18		
Overall dimensions(W×D×H)mm		1000×900×2350	1400×1200×2300	1600×1400×2300	1700×1500×2300	1700×1500×2300	1900×1500×2550	1900×1800×2650
Weight of table body(kg)		1000	1800	3000	4000	4200	5000	8000
Fulfil the criteria		MIL-STD-810F, IEC 60068-2-27, GB/T2423, GJB150, GJB360, GJB548, GJB1217						
Installation conditions	Environment	Temperature : 0~40℃; Humidity: ≤80%RH. (Condensation-free)						
	Power supply	Control measurement: AC220V±10V 50Hz Oil source: AC380V±10V 50Hz						
	Site	Flat cement floor with a working passage of 0.8-1m around the equipment.						

Pneumatic Impact Crash Test Bench

■ Product introduction

- Pneumatic Impact crash test bench is used for impact and collision tests on various products to determine the adaptability of the test piece to withstand multiple repetitive mechanical collisions during use and transportation and to assess the integrity of its structure.

■ Features

- Fully pneumatically driven.
- Control the collision frequency by adjusting the gas pressure to achieve continuous high-frequency collision.
- The test time and number of collisions can be set arbitrarily, and the machine will automatically stop after the test is completed.

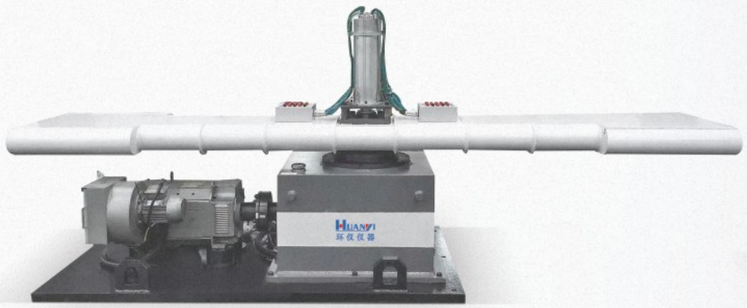
■ Selection factors

Sample information: max. dimensions, max. weight.
Test conditions: acceleration, pulse width, collision frequency, test axis, etc.

■ Technical parameters

Model	HYB-50A	HYB-50B	HYB-100A	HYB-100B	HYB-250	HYB-500	HYB-1000
Max. load(kg)	50	50	100	100	250	500	1000
Pulse waveform	Half sine wave						
Peak acceleration(m/s^2)	50~1500	50~1000	50~400	50~1000	50~400	50~250	50~200
Pulse duration(ms)	30~2	30~2	30~6	30~2	30~6	30~6	30~6
Pulse repetition frequency (times/minute)	0~80(120)	0~80(120)	0~80(120)	0~80(120)	0~80(120)	0~80	0~80
Forms of pulse	Free-fall						
Tabletop dimensions(mm)	400X400	400X400	600X600	600X600	800X800	1000X1000	1000X1000
Overall dimensions (WxDxH)mm	780X650X960	786X720X1140	786X720X1140	786X720X1140	1066X1000X1260	1066X1000X1260	1066X1000X1260
Dimensions of control cabinet(WxDxH)mm	654X560X1100	654X560X1100	654X560X1100	654X560X1100	654X560X1100	660X600X1100	660X600X1100
Power supply and consumption	AC380V±10V 50Hz						
Fulfil the criteria	IEC 60068-2-29, GJB150, GJB360, GB/T2423						

Centrifugal Constant Acceleration Testing Machine (Rotary Arm Type)



Features

Centrifugal constant acceleration testing machine (rotary arm type) simulates dynamic centrifugal motion to assess the load resistance performance of equipment and components. It is mainly used for components, small parts and small complete machines on aircraft.

- Computer real-time control, automatic generation of test reports.
- Real-time display of test curves, tolerances and test time.
- Multi-stage acceleration tests can be realized.
- Automatic and means control can be realized.
- The number and size of current channels of the current collecting slip ring can meet any test requirements.

Technical parameters

Model	HYZD-20	HYZD-50	HYZD-100		HYZD-200	HYZD-500	HYZD-1000
Max. load per side (kg)	20	50	100		200	500	1000
Acceleration(m/s²)	30~1000	30~1000	30~1000	30~2000	30~1000	30~500	30~500
Max. dimensions of test sample(WXDXH)mm	200X200X200	300X300X200	450X450X400		700X700X700	1000X1000X1000	
Calculation radius for specimen center installation(mm)	600	750	1500		2500	3000	3500
Start-up time(mins)	≤5					≤8	≤10
Continuous working time(mins)	60					30	
Power supply and consumption	AC380V 10KVA	AC380V 40KVA	AC380V 40KVA		AC380V 55KVA	AC380V 120KVA	AC380V 250KVA
Power connection device	30 rings 500V 5A						
Overall dimensions (LXWXH)mm	1800X1500X1200	Φ2500X1400	Φ4000X1400		Φ6000X1600	Φ7000X1600	Φ8000X1800
Dimensions of control cabinet(WXDXH)mm	850X1000X1300 (Inverter cabinet 100kg or less: 600X600X1800, more than 100kg: 1200X600X2100)						
Weight(kg)	800	2800	3000	3500	6000	8000	10000
Control system	Industrial computer control						
Fulfil the criteria	MIL-STD-202F, MIL-STD-810F, MIL-STD-883C, IEC68-2-27, GJB150, GJB360, GJB548, GB/T423						
Remarks	The power connection device can be configured according to user requirements, the arm size can be manufactured according to the user's sample size in accordance with relevant standards, and the foundation map will be provided to the user separately						

Centrifugal Constant Acceleration Testing Machine (Rotary Table Type)

Features

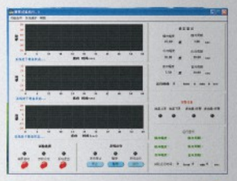
Centrifugal constant acceleration testing machine (rotary table type) is used to determine whether the structural adaptability and performance of electronic components, small equipment and other electrical and electronic products are good under the force (excluding gravity) generated by a steady-state acceleration environment, and to evaluate the structural integrity of some components, and to examine the electrical parameters of the test product under a constant acceleration environment.

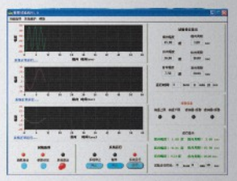
- Computer real-time control, automatic generation of test reports.
- Real-time display of test curves, tolerances, and test time.
- Multi-stage accelerated tests can be realized.
- Open circuit, over-limit, and overspeed protection can be realized.
- Automatic and means control can be realized.
- The number and size of current channels of the current collecting slip ring can meet any test requirements., and the foundation map will be provided to the user separately.

Technical parameters

Model	HYZP-3	HYZP-5	HYZP-10	HYZP-20	HYZP-005	HYZP-004	HYZP-003
Max. load(kg)	3	5	10	20	0.05	0.04	0.03
Total load(kg)	15	20	20	40	0.5	0.4	0.3
Acceleration(m/s²)	30~2000	30~2000	50~1000	50~1000	5000~200000	5000~400000	5000~800000
Permissible height of the specimen(mm)	200	200	300	300	300	300	300
Direction of test specimen	x, y, z three directions respectively				x, y, z three coordinates six directions		
Calculation of the mounting radius of the specimen centre on the turntable(mm)	200	200	750	750	100	80~100	
Start-up time(mins)	≤3	≤4	≤3	≤3	≤4	≤5	≤5
Continuous working time(mins)	60	60	60	60	30	5	5
Power supply and consumption	AC 380V 1.5KVA		AC 380V 5KVA		AC 380V 4KVA	AC 380V 6.5KVA	
Overall dimensions (LXWXH)mm	924X910X1242		1953X470X993		800X800X830		
Power supply device	15 rings 500V 5A		12 rings 500V 5A				
Weight(kg)	1500	1700	2300	2300	2500	1500	1000
Control system	Industrial computer control						
Fulfil the criteria	MIL-STD-810F, MIL-STD-202F, MIL-STD-883C, IEC 60068-2-7, GB/T2423, GJB150, GJB360						
Remarks	Electrical connection device and control accuracy can be configured according to relevant standards or user requirements						

Tilt and Swing Test Bench





Features

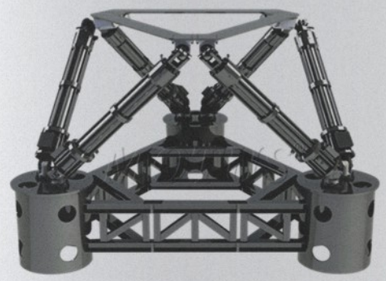
Tilt and swing test bench can simulate the sway and tilt tests of various mechanical, electrical and electronic products installed on ships, seaplanes and other equipment to determine the product's ability to withstand the specified severe level of sway and tilt and the integrity of the structure.

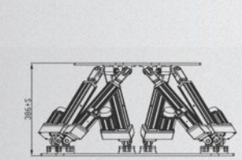
- Based on Windows stable control system, it can automatically control the interface remotely.
- The operation interface is mainly based on the real-time display window of data curve, and also displays the test parameters, system status and test progress.
- It can realize the functions of sinusoidal signal, self-closed loop adjustment, various function control and alarm prompt.

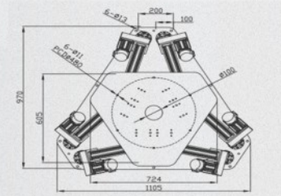
Technical parameters

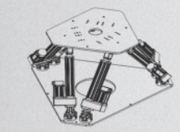
Model		HYRP-100	HYRP-300	HYRP-500	HYRP-1000	HYRP-1500	HYRP-2000	HYRP-3000	HYRP-5000	HYRP-8000	HYRP-10000
Max. load(kg)		100	300	500	1000	1500	2000	3000	5000	8000	10000
Height of specimen centre of gravity(mm)		300		500			700			900	
Yaw	Angle	0~±10°									
	Cycle	3s~7s									
Roll	Angle	0~±45°									
	Cycle	3s~30s									
Pitch	Angle	0~±30°									
	Cycle	4s~30s									
Tilt angle		0~±45°									
Pitch angle		0~±30°									
Control method		Computer controlled measurement									
Countertop dimensions(mm)		800x800	1000x1000	1500x1200	1600x1300		1700x1500	1800x1600	3200x2100	3500x2800	4000x3000
Power supply		AC380V±10V 50Hz									
		20kVA	22kVA		37kVA	45kVA	55kVA	70kVA	90kVA	110kVA	150kVA
Environment		Temperature : 0~40℃; Humidity: ≤80%RH. (Condensation-free)									
Site		Construction according to the drawings provided by the manufacturer									
Fulfil the criteria		GJB150.23, GB2423, GB/T 2424.20									

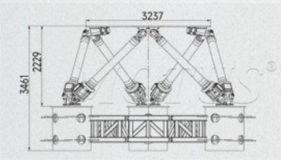
Six-Degree-of-Freedom Swing Test Bench

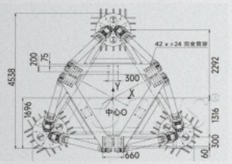


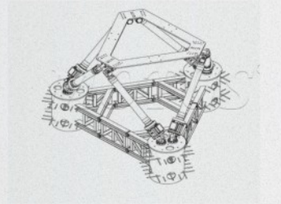












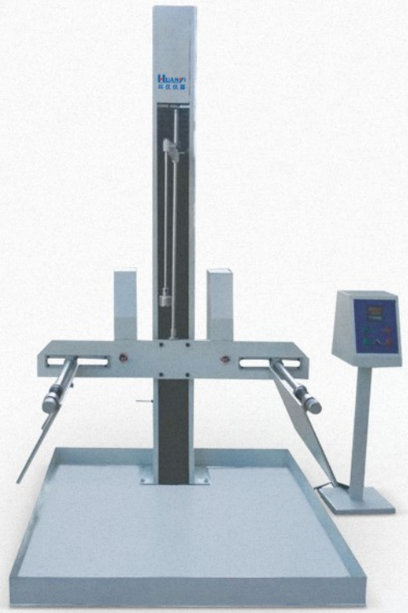
Product introduction

Six-degree-of-freedom swing test bench consists of the six-degree-of-freedom motion platform of the Stewart mechanism, the computer control system drive system, etc. The six-degree-of-freedom motion platform can be widely used in various training simulators, such as flight simulators, ship simulators, naval helicopter take-off and landing simulation platforms, tank simulators, car driving simulators, train driving simulators, earthquake simulators, etc. The six-degree-of-freedom motion platform can also be used in the fields of dynamic movies, entertainment equipment, etc., and can even be used in the docking of spacecraft and the refueling docking of aerial refueling aircraft. In the processing industry, it can be made into six-axis linkage machine tools, dexterous robots, etc.

Technical parameters

	Payload: 100kg-1000kg					
Main parameters	Degree of freedom	Angle or displacement	Speed	Acceleration	Positioning accuracy	Repeating positioning accuracy
	Pitch (α)	±5~±60°	≤50°/s	100°/s²	0.3°	0.03°
	Roll (β)	±5~±60°	≤50°/s	100°/s²	0.3°	0.03°
	Yaw (γ)	±5~±60°	≤50°/s	100°/s²	0.3°	0.30°
	Left and right (X)	±10mm~±450mm	≤1000m/s	≤2.0g	0.03mm	0.01mm
	Forward and backward (Y)	±10mm~±450mm	≤1000m/s	≤2.0g	0.03mm	0.01mm
	Up and down (Z)	±10mm~±800mm	≤1000m/s	≤2.0g	0.03mm	0.01mm
Other parameters	System response frequency is 0Hz~20Hz					
	Operation parameters ≤0.02mm					
	Drift: When the platform system runs continuously for more than 12 hours, the position drift of any electric cylinder will not exceed 0.0025m.					
Control system	The motion platform control system consists of EtherCAT bus control, self-produced core hardware, bus-type servo motors, platform control software, etc.					
	The motion platform integrates the concept of high-dynamic ball screw machinery and perfect simulation design capabilities to achieve higher motion reliability of the platform.					
	The platform control software can be customised according to non-standard requirements, in addition to optional somatosensory algorithms, special effects module algorithms, etc., to provide customers with a set of complete solutions to meet their needs.					

Drop Test Machine



Double Wing Drop Test Machine

Single Wing Drop Test Machine

Features

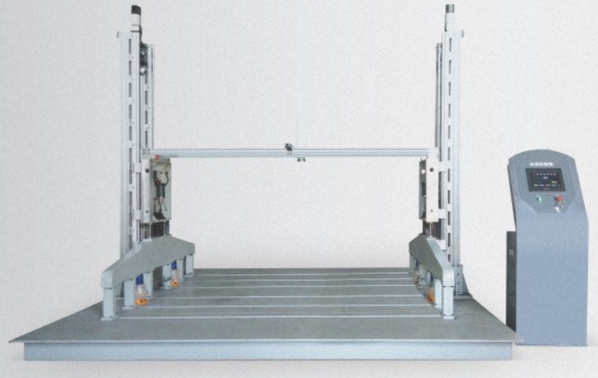
- Drop test machine is suitable for verifying the shock resistance of packaging materials and the impact resistance of the product itself.
- Mainly adopts double-column guidance, the number of height drops can be set, and the edges, faces and corners can be dropped.
- The built-in photoelectric height control processor has fast and accurate positioning, and the LED height display.
- Double-column guidance, hydraulic buffer absorbs the residual function of the swing arm.
- Damping screw lifting mechanism prevents the machine from sliding down by itself.
- Automatic air pressure interlocking prevents the swing arm from abnormally disengaging due to air pressure loss.
- The hard anodized aluminum alloy table and the tough, lightweight swing arm, combined with the innovative high-speed bracket slide design, the bracket disengagement speed exceeds 3g/sec.

Technical parameters

Model	HY-315A(B)	HY-320A(B)
Drop height(mm)	300~1500	300~1500(2000)
Max. specimen weight(kg)	85	85
Max. specimen size(W×D×H)mm	1000X1000X800	1000X1000X800
Impact panel size(W×D×H)mm	1500X1000X20	1500X1000X20
Motor power(kVA)	0.65	0.65
Drop control method	Pneumatic/electric	Pneumatic/electric
Overall dimensions(W×D×H)mm	1500X1000X2250	1500X1000X2250
Net weight(kg)	480	550
Fulfil the criteria	ISO 2248-72(E), JIS Z0202-87, GB/T4857, 5-92	
Power supply	Three-phase AC 380V±10V 50Hz 2kVA	

Zero Drop Test Machine

Zero drop test machine



Bilateral lifting zero drop test machine

Features

During the drop process of the zero drop test machine, due to the release of spring energy storage, the cargo bracket moves downward before the packaging specimen, with an acceleration greater than 4G, which causes the bracket and the packaging specimen to separate quickly, allowing the packaging specimen to fall freely.

Fulfil the criteria

IEC 68-2-27 "Test Method Ea: Impact "
ISO 2248-1985 "Packaging - Vertical Impact Drop Test for Complete and Fully Filled Transport Packages "
ISTA 1, ISTA 2, ISTA 3-2019, GB/T 4857.16-2017, GB/T2423, "Drop Test Method for Packaging and Transport Packages"

Technical parameters

Model	Zero drop test machine	
	HY-015	HY-020
Max. load(kg)	150	300
Drop height of specimen(mm)	0~1200	0~1200
Max. dimensions of specimen(W×D×H)mm	1000X1000X1000	1200X1200X1200
Drop method	Free fall	Free fall
Impact panel dimensions(W×D)mm	1850X1650	2000X1900
Overall dimensions(W×D×H)mm	1900X1700X2800	2100X1700X2800
Power supply	Three-phase AC 380V±10% 50Hz 2KVA	

Model		Bilateral lifting zero drop test machine			
		HY-0502	HY-0802	HY-1002	HY-2002
Max. load(kg)		500	800	1000	2000
Drop height(mm)		0~1200	0~1000		0~800
Max. dimensions of specimen(W×D×H)mm		1400x1400x1400	1500x1500x1500	1600x1600x1600	1800x1800x1800
Lifting accuracy(mm)		±2			
Effective drop base size(mm)		2400x1600	2600x1700	2800x1800	3200x2000
Drop method		Surface, edge, corner			
Installation conditions	Environment	Temperature : 0~40℃; Humidity: ≤80%RH. (Condensation-free)			
	Power supply	AC 380V±10V 50Hz			
	Site	No foundation is required for installation, flat cement floor with a working passage of 0.8-1m around the equipment.			

Aerodynamic Horizontal Impact Response Spectrum Tester

Product introduction

Aerodynamic horizontal impact response spectrum tester uses compressed gas energy storage to provide impact energy, driving the impact hammer to impact the resonance plate, generating high-energy impact. It is the total result of a series of single-degree-of-freedom linear systems with different natural frequencies that respond to the same shock excitation. When subjected to the same shock excitation, the interaction between components with different natural frequencies will cause the product to experience greater stress, more realistically simulating and reflecting the response state of the product when it is subjected to shock. It is mainly used in aerospace, aviation and shipbuilding industries.

Technical parameters

Model		HYCJ-50	HYCJ-100	HYCJ-200	HYCJ-500	HYCJ-1000
Load(kg)		50	100	200	500	1000
Countertop dimensions(mm)		500x500	600x600	800x800	1000x1000	1200x1200
Frequency range (Hz)		10~10000				
Max. acceleration(g)		15000	12000	10000	8000	6000
Rise slope(dB/Otc)		6~9				
Tolerance range(tdB)		±6~9				
Overall dimensions(W×D×H)mm		3700x1200x850	4000x1200x850	4300x1440x850	4500x1640x850	4700x1840x850
Installation conditions	Environment	Temperature : 0~40℃; Humidity: ≤80%RH.(Condensation-free)				
	Power supply	AC220V±10V 50Hz				
	Air source	≤1MPa				
	Site	No foundation is required for installation, flat cement floor with a working passage of 0.8-1m around the equipment.				
Weight(kg)		4000	5000	6000	7000	8000
Fulfil the criteria		MIL-SID-810, GB/T2423, GJB150A				

Incline Impact Testing Machine

Technical parameters

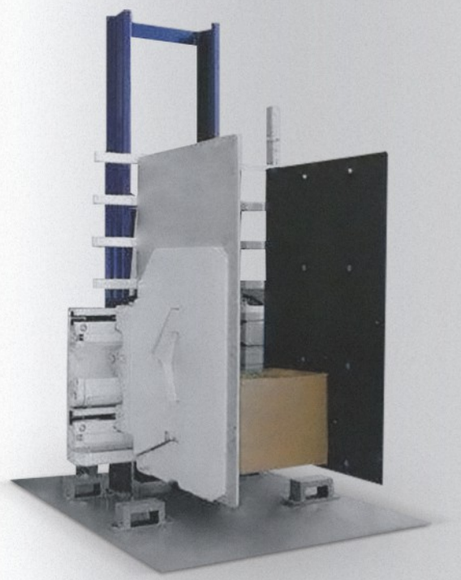
Model	HYXK-200	HYXK-300	HYXK-500	HYXK-2000
Load(kg)	200	300	500	2000
Size of working table(mm)	1100X1100		1300X1300	
Impact panel size(mm)	1300X1300	1500X1700	1600X1800	
Max. sliding length and width(mm)	4000 (to agreed value)		4000 (to agreed value)	
Impact speed range(m/s)	1.2~3.87	1.2~3.87	1.2~3.87	0.59~2.35
Impact error	≤±5%		≤±5%	
Overall dimensions (W×D×H)mm	7000x1400x1700	7000X1500X2150	7500X1600X2300	
Power supply	Three-phase 380V, 50/60Hz			
Fulfil the criteria	ISO 2244, GB/T4857, GJB/T6868			
Environment	Temperature : 0~40℃; Humidity≤80%RH. (Condensation-free)			

Features

It simulates the impact and collision environment of the packaged goods during transportation, and is used as a common test equipment for inclined impact in scientific research institutions, colleges and universities, packaging technology testing centers, packaging material manufacturers, foreign trade, transportation and other departments.

- The table can be adjusted to a horizontal level, which is convenient for customers to install test pieces.
- It adopts PLC+ human-machine interface control, which is simple to operate and integrates control and measurement.
- It can display data such as the number of small impacts and the final impact velocity.

Clamping Force Testing Machine



Features

Clamping force testing machine is used to simulate the impact of the clamping force of two plywood on the packaging and goods when the packaging is loaded and unloaded by a clamp truck, and evaluate the anti-pinching strength of the packaging. It is suitable for finished product packaging such as kitchenware, furniture, home appliances, toys, etc., especially for the packaging anti-pinching strength test required by SEARS in the United States.

Technical parameters

Model	HYJK-8600A	HYJK-8600B
Clamping capacity(kg)	0~1000	0~2000
Clamping plate size (mm)	1000X1000	1200X1200
Clamping plate spacing(mm)	400~1000	400~1200
Lifting height(mm)	0~300	0~300
Overall dimensions(mm)	Body: 1200X1000X900 Hydraulic station: 1200X700X900	Body: 1200X700X900 Hydraulic station: 1200X700X900
Table weight(kg)	1300	1500
Measurement and control system	PLC or computer control (optional)	
Site requirements	Flat cement floor	
Power supply	Three-phase AC380V, 50Hz	
Environment	Temperature : 0~40℃; Humidity: ≤80%RH.(Condensation-free)	
Fulfill the criteria	USA SEARS Corporate Standard, or ASTM D6055, Standard Test Methods for Mechanised Handling of Uniformly Loaded and Large Shipping Containers and Loading Crates	
Remarks	Clamping capacity, clamping plate size, clamping plate spacing, lifting height and other parameters can be customized according to user needs	

Tensile Test Machine

Product introduction

It is mainly used to test the mechanical properties of various materials. With different test fixtures, it can test the mechanical properties and related physical parameters of various materials under the conditions of tension, compression, bending, shearing, tearing, peeling, puncture, etc. Tensile testing machine testing items: tension, compression, three-point bending, four-point bending, shearing, tearing, peeling, puncture of finished shoes, carton holding pressure, foam cycle compression, spring tension and compression and various dynamic and static cycle tests of various materials.

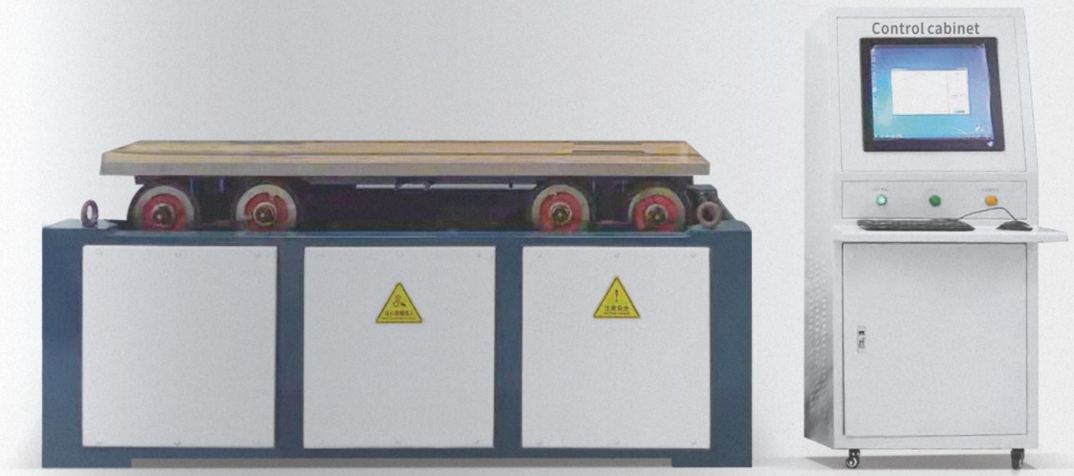
Fulfil the criteria

ASTM E8/E8M-13a, ASTM D638, ISO 6892-1.ISO 527, GB/T 228.1-2010, GB/T 1040.1-2006, JIS Z2241, JIS K 7161

Technical parameters

Model	HY-1301A	HY-1301B	HY-1201A	HY-1201B
Load cell capacity	5N, 10N, 50N, 100N, 500N, 1kN, 2kN, 5kN, optional	100N, 200N, 300N, 500N, 1kN, 2kN, 5kN, optional	10N, 50N, 100N, 200N, 1kN, 2kN, 5kN, 10KN, 20KN, optional	50kN/100kN
Accuracy grade	Level 0.5			
Measuring range of test force	0.4% ~ 100%FS			
Relative error of test force	±0.5%			
Displacement rate adjustment range	0.005 ~ 500mm/min			
Relative error of displacement rate	≤±0.5% of indicated value			≤±1% of indicated value
Deformation measurement range	0.2% ~ 100%FS			1/500000FS
Relative error of deformation value	≤±0.5% of indicated value			
Force control rate adjustment range	/	0.005 ~ 5%FS/s	/	0.005 ~ 5%FS/s
Relative error of force control rate	/	≤±1% of indicated value	/	≤±1% of indicated value
Power supply	AC 220V±10%, 50Hz			
Overall dimensions(W×D×H)mm	450×500×1260	450×500×1260	784×550×1700	890×600×1850
Weight(kg)	About 75	About 75	About 165	About 350

Simulated Transport Vibration Tester



Product introduction

Simulated transport vibration tester simulates the actual road conditions such as impact and vibration that various items with specific loads are subjected to during highway transportation, and evaluates the impact of actual working conditions on the loading and unloading, transportation, packaging, packaging or internal structure of items, so as to evaluate or confirm the items and their packaging.

Features

The frequency band approach method is used to simulate broadband random vibration. Each frequency band contains a main natural frequency and satisfies the power spectrum of the frequency band. The vibration level and operation time of the test bench are consistent with the actual road spectrum.

- Using truck chassis suspension technology, the acceleration factor can be adjusted.
- AC variable frequency control.
- No special foundation is required, and no other complicated operations or installations are required.

Technical parameters

Model	HYMN-200	HYMN-300	HYMN-600	HYMN-1000	HYMN-2000	HYMN-3000	HYMN-4000	HYMN-6000
Max. load(kg)	200	300	600	1000	2000	3000	4000	6000
Vibration waveform	Broadband random vibration							
Instantaneous probability density function	Approximate normal distribution							
Total RMS value of acceleration(g)	0.32							
Simulation of vehicle speed(km/h)	20~80							
Simulation of road surfaces	Intermediate road surface of third-class highway and intermediate and low-class road surface of fourth-class highway							
Reinforcement level	1:1							
Height of center of gravity of specimen(mm)	<500	<600	<700	<800	<900	<1000	<1200	<1500
Size of working table(mm)	1500x700	2000x1200	2200x1200	2700x1650	2700x1800	3600x2600	4000x2800	5000x3500
Power consumption(kVA)	6	10	12	25	30	40	70	90
Overall dimensions (W×D×H)mm	1700x850x950	2000x1500x950	2200x1500x950	2900x2200x1250	2950x2250x1250	3600x2600x1450	4000x2800x1550	5000x3500x1750
Weight of table(kg)	1600	2500	3000	5000	6000	8000	10000	15000
Environment	Temperature : 0~40℃; Humidity: ≤80%RH.(Condensation-free)							
Site	No foundation is required for installation, flat cement floor with a working passage of 0.8-1m around the equipment.							

Note: The parameters in the table are for reference only, and shall be subject to the parameters agreed upon by supply and demand.

Electrodynamic Vibration Test Bench

Features

- Aluminum/magnesium alloy table.
- 10# cast steel magnetic shell, dual magnetic circuit structure.
- Ear shaft vibration isolation does not require a dedicated foundation.
- High switching power amplifier efficiency.
- The horizontal slide adopts linear bearing guidance, which has strong anti-subversion ability.
- The digital vibration controller is fully functional, with sine vibration, random vibration, sine plus random, broadband plus narrowband, and classic pulse shock response spectrum test functions.
- Platform flipping structure.

Vertical Vibration Test System

Selection factors

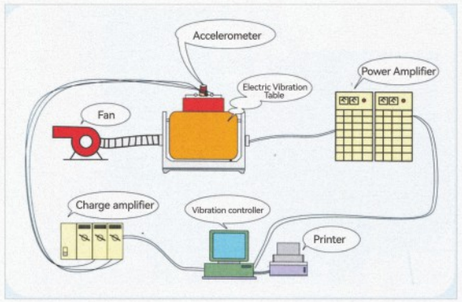
Main parameters of the test

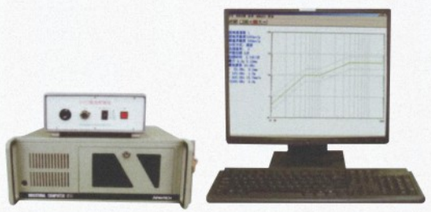
- Main parameters of the test
- Test acceleration value
- Test displacement
- Test speed
- Test frequency range
- Test reference standard
- Test specimen dimensions
- Test specimen mass
- Test specimen center height
- Test specimen installation environment
- Test specimen fixing method

Calculation of thrust

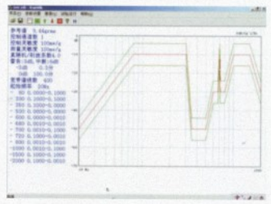
- Calculation formula: F = N * (M1 + M2 + M3) * a
- F = thrust (N)
- N = safety factor (recommended value 1.3)
- M1 = mass of the moter coil (kg)
- M2 = mass of the working table (kg)
- M3 = mass of the specimen and tooling (kg)
- a = test acceleration value (m/s^2)

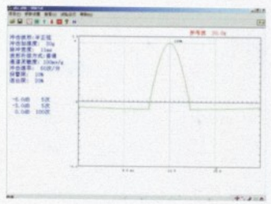
Supporting usage examples

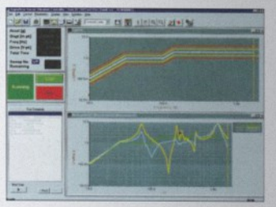




Vertical + Horizontal Vibration Test System



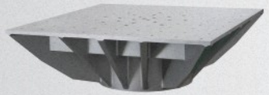




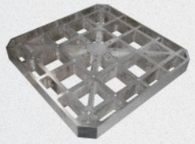
Technical parameters

Model	HYEV-300	HYEV-600	HYEV-1000	HYEV-2000(T)	HYEV-3000(T)	HYEV-4000(T)	HYEV-5000(T)	HYEV-6000(T)	HYEV-7000(T)
Rated random/sinusoidal excitation force(kN)	3	6	10	20	30	40	50	60	70
Impact excitation force(kN)	6	12	20	40	60	80	100	120	140
Frequency range(Hz)	5~4000	5~3500	5~3200	5~3000(2800)	5~2000(2600)	5~2700(2600)	5~2700(2500)	5~2700(2500)	5~2500
Max.acceleration(m/s^2)	1000	1000	1000	1000(650)	545(850)	800(1000)	1000(850)	1000	1000
Max.speed(m/s)	2	2	2	2(1.8)	2(2.4)	2(2.4)	2(2.4)	2	1.8
Max.displacement p~p(mm)	25	51	51	51(100)	51(100)	51(100)	51(100)	51(100)	100
Max.load(kg)	120	300	300	300(400)	500	800(500)	800	800	1000
Model of table body	HYEV-300	HYEV-600	HYEV-1000	HYEV-2000(T)	HYEV-3000(T)	HYEV-4000(T)	HYEV-5000(T)	HYEV-6000(T)	HYEV-7000(T)
Dia. of tabletop(mm)	150	230	240	320(340)	550(370)	445(370)	445	445	480
Equivalent mass of moving parts(kg)	3	6	10	20(30)	30(35)	50(35)	50(60)	50(60)	70
Weight(kg)	About 480	About 590	About 900	About 1700	About 2540	About 4500(3000)	About 4500	About 4500	About 4500
Vibration isolation frequency (Hz)	3	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Dimensions(W×D×H)mm	756×618×660.5	826×618×720	930×688×787	1222×760×1052	1328×854×1158	1730×1139×1272	1730×1139×1272	1730×1139×1272	1650×1130×1280
Power amplifier model	HYDA-3	HYDA-6	HYDA-10	HYDA-20	HYDA-30	HYDA-40	HYDA-50	HYDA-60	HYDA-70
Power amplifier power(kW)	3	6	10	20	30	40	50	60	70
Power supply requirement (kW)	6.5	16	21	44	54	73	82	95	108
Weight(kg)	About 200	About 240	About 400	About 450	About 500	About 550	About 550	About 700	About 700
Dimensions(W×D×H)mm	607×1003×1545				620×1010×1950				
Cooling method	Forced air cooling								
Fan model	B-200	B-1000	B-1000	B-3000	B-3000	B-5000	B-5000	B-7000	B-7000
Power(kW)	0.75	4	4	7.5	7.5	15	15	22	22
Flow rate(m^3/s)	0.1	0.3	0.3	0.52	0.52	1.05	1.05	1.47	1.47
Air pressure(kPa)	2	4.5	4.5	5.8	5.8	5.6	5.6	7.3	7.3
Weight(kg)	30	115	115	180	180	255	255	340	340

(Figure 1)



(Figure 2)



(Figure 3)

The extension tabletop is used to expand the original tabletop of the electric vibration table, greatly increasing the load-bearing area of the original tabletop. The large extension tabletop has additional auxiliary supports and guides, which greatly improves the vibration table's testing capacity for heavy and overweight specimens.(Figure 1)

As an extension of the electric vibration table, the horizontal sliding table can help the electric vibration table to perform three-directional tests on the test product.(Figure 2&3)

Technical parameters

Vertical extension table							Horizontal slide table						
Dia. of tabletop(mm) / Extension countertop(mm)	150	230 / 240	320	370	445 / 480	550	Dia. of tabletop(mm) / Extension countertop(mm)	150	230 / 240	320	340	370	445 / 480	550
300X300	7	9	Equivalent mass(kg) Aluminum alloy				300X300	30	Table thickness (mm)					
	2000	2000	Frequency upper limit (Hz)					12/8.5	Equivalent mass of moving parts (kg) Aluminum alloy/Magnesium alloy					
400X400	10	14	16				400X400	30	30					
	2000	2000	2000					18.5/13	21/15.5					
500X500	20	23	32	35			500X500	40	40	40	40	40	40	
	2000	2000	2000	2000				35.5/24.5	38/27	40/29	44/33	44/33	51/40	
600X600		30	33	39	38		600X600	40	40	40	40	40	40	
		1800	1800	1600	2000			49/33.5	52/36	54/38	58/42	58/42	65/49	
700X700		33	58	69	70		700X700	45	45	45	45	45	45	
		800	1500	2000	2000			73/49	76/52	78/54	82/58	82/58	89/65	
800X800		37	64	70	72	85	800X800		45	45	45	45	45	45
		500	800	1200	1500	1800			96/66	98/68	102/72	102/72	109/79	122/92
1000X1000					140	150	1000X1000			45	45	45	45	45
					1000	1100				147/100	151/104	151/104	158/111	171/124
1200x1200					250	260	1200x1200				45	45	45	45
					500	600					209/143	209/143	216/150	229/163

Note: (1) The table size and screw hole layout can be made according to user requirements; (2) To reduce the moving mass, users can choose a magnesium alloy table.