S.A.G. GLASS

Testing & Laboratory Equipment

Environmental test chambers · Mechanical testing machines



Salt spray chamber



Temperature & humidity chamber



Universal testing machine

Machinery import · Electrical system repair · After-sales service in Thailand

In cooperation with Xiamen Dongshi Testing Equipment Co., Ltd.

ABOUT US

Your testing equipment partner

S.A.G. GLASS CO., LTD. imports industrial machinery into Thailand and supports every machine with local electrical repair and after-sales service. We supply environmental test chambers and mechanical testing machines to factories, laboratories, universities and research institutes.

Our manufacturing partner

Established in December 2003, our partner develops, manufactures and sells environmental test equipment and mechanical testing equipment, with production bases in Dongguan and Jintan (Changzhou), China. Its equipment is used in aerospace, electrical and electronics, chemicals, medical, machinery and new-materials manufacturing.

Guided by the principle "technology as the foundation, service as the guarantee", every step from design to delivery is controlled to ISO 9001, and electrical control parts follow CCC quality standards.

Environmental test equipment

- Combined temperature / humidity / vibration chambers
- Walk-in temperature & humidity rooms
- Programmable temperature & humidity chambers
- Thermal shock chambers
- Xenon-arc and UV weathering chambers
- Sand & dust and rain test chambers
- Ozone ageing and salt spray chambers
- Steam ageing chambers, precision ovens, tunnel ovens

Mechanical testing equipment

- Computer-controlled electronic universal testing machines
- Hydraulic universal testing machines
- Electronic tensile testing machines
- Carton / box compression testers
- Drop testers
- Vibration test tables









Products in this catalogue are manufactured in cooperation with Xiamen Dongshi Testing Equipment Co., Ltd. (China). S.A.G. GLASS CO., LTD. is the importer and service partner for Thailand.

SERVICE IN THAILAND

Buy with confidence, supported locally

Test equipment has to run accurately for years. As the Thai importer, we handle import and set-up — and stay with you after the equipment is running.

Import & delivery

We manage import, customs and delivery to your site.

Installation & start-up

Set-up, power connection and first-run checks.

Operator training

Hands-on guidance on operation, programs and daily care.

Electrical system repair

Fault finding and repair of power, control and refrigeration electrics.

Spare parts

Sensors, fixtures, seals and other wear parts.

Thai-language support

Talk to a local team by phone or on site.

Why it matters

Less downtime, faster answers and one local contact for the equipment, its electrical system and its parts — from the day it arrives.

01

Mechanical testing equipment

Electronic universal testing machines (WDW series)

Electronic tensile testing machines

Hydraulic universal testing machines

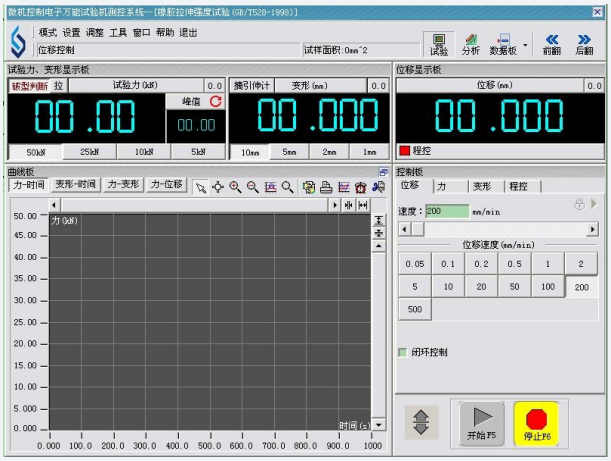
Drop testers

Vibration test tables

Electronic universal testing machine



Computer-controlled electronic UTM



Control software interface

Product introduction

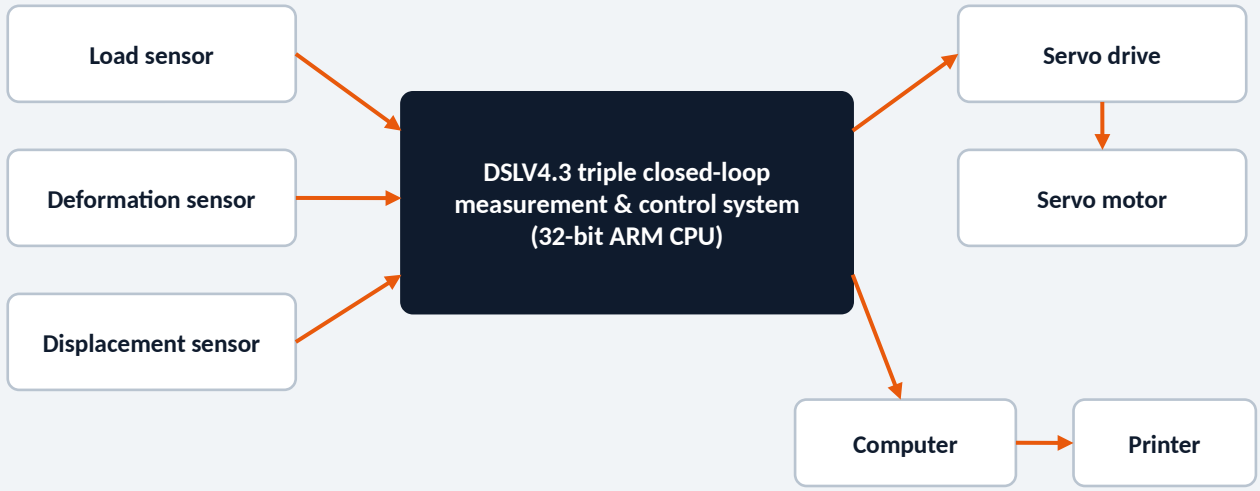
The WDW series is a new generation of computer-controlled electronic universal testing machines — easy to operate, stable and reliable. A door-frame structure provides tension space above and compression space below.

A fully digital Panasonic servo drive with a purpose-designed synchronous reducer and high-precision ball screws moves the crosshead for tension, compression, bending and other mechanical tests. A fully digital triple closed-loop controller sits at the core, greatly improving reliability, with a clear user interface.

With a wide range of fixtures, it suits metal and non-metal testing in quality inspection, teaching and research, aerospace, steel and metallurgy, automotive, rubber and plastics, and textiles.

Control system and specifications

Load and deformation measurement with crosshead displacement control



Technical specifications

Model	WDW-10	WDW-20	WDW-50	WDW-100	WDW-200	WDW-300
Max. test force	10 kN	20 kN	50 kN	100 kN	200 kN	300 kN
Accuracy class	Class 1					
Force measuring range	2%–100% of max. test force					
Force indication error	≤ ±1% of reading					
Force resolution	1/200,000 of max. test force					
Deformation / displacement error	≤ ±1% of reading					
Displacement resolution	0.001 mm					
Speed range	1–500 mm/min or 0.05–500 mm/min, stepless					
Speed indication error	≤ ±1% of reading					
Frame size (mm)	680 × 525 × 1660		920 × 620 × 1900		1000 × 700 × 2400	
Tension / compression stroke	650 mm		550 mm		550 mm	
Effective test width	370 mm		480 mm		500 mm	
Frame weight	500 kg		1,000 kg		1,500 kg	
Power supply	3 kW, AC 380 V ±10%, 3-phase 4-wire					

Standard configuration and software

No.	Item	Qty	Remarks
1	**Main frame**	1 unit	In-house built frame
2	**Panasonic AC servo motor & drive**	1 set	Drive power source
3	**Controller / data acquisition unit**	1 set	Force acquisition, display and control (works without PC)
4	**Speed reducer**	1 set	Motor speed reduction
5	**Software**	1 set	Dedicated materials testing software
6	**Ball screw assembly**	2 sets	Power transmission
7	**Servo transformer**	1 set	Power transformation
8	**Load cell**	1 pc	Force sensing
9	**Extensometer**	1 pc	Specimen elongation
10	**Photoelectric encoder**	1 pc	Tension / compression displacement
11	**Computer & printer**	1 set	Runs software, displays and prints reports
12	**Tensile grips – flat jaws**	1 set	Flat specimens
13	**Tensile grips – round jaws**	1 set	Round specimens
14	**Compression fixture**	1 set	Compression tests
15	**Bending fixture**	1 set	Bending tests

Software functions

Auto zero: measurement resets when a test starts

Auto return: crosshead returns at high speed after break

Auto save: data and conditions saved — no loss on power cut

Full PC control: testing, measurement, display and analysis

Live display: data and curves update during the test

Result recall: open any result and re-analyse curves

Comparison: overlay and zoom curves in different colours

Curve choice: stress–strain, force–time, strength–time

Batch testing: set once, test a series of specimens

Limit protection: software and mechanical levels

Overload protection: auto stop above 10% of rating; emergency stop

Independent operation of frame and computer

Electronic tensile testing machines



DSZX-225 box compression



DSLL-210 double-column



DSLL-218 single-column

A fully digital servo motor and speed control system in one integrated structure drives the crosshead through a precision screw for tension, compression and other tests. Frame, controller, LCD display and data processing, and fixtures are independent and separately replaceable. High frame stiffness, high control accuracy, low noise and long service life. Used for plastic film, rubber, metal wire and foil, strapping, nets, waterproof materials, woven bags, paper, wire and cable, wood-based panels, geotextiles, non-wovens, safety belts, building materials and electrical components. Available with electronic display control or computer control.

Model	DSZX-225	DSLL-210	DSLL-218
Max. test force (kg, optional)	1000 / 2000 / 5000	1000 / 2000 / 5000	10 / 20 / 50 / 100 / 500
Accuracy class	Class 1		
Force measuring range	2%–100% of max. test force		
Force indication error	≤ ±1% of reading		
Force resolution	1/200,000 of max. test force		
Displacement indication error	≤ ±1% of reading		
Displacement resolution	0.001 mm		
Speed range (optional)	1–500, 25–250, 50–250 or 0.1–500 mm/min		
Stroke (customizable)	1000 or 1500 mm	600 mm	600 mm
Effective width (customizable)	1000 × 1000 mm	370 mm	130 mm
Power supply	AC 220 V ±10%		

Hydraulic universal testing machines



Electro-hydraulic servo, computer-controlled



Hydraulic, computer screen display



Hydraulic, digital display

Product introduction

The oil cylinder is mounted below the frame. Load is applied hydraulically, measured by an oil-pressure sensor and shown on screen, for tension, compression and bending tests. Simple to operate, stable, reliable and long-lasting, with Class 1 force accuracy.

Applications

Mainly for tension, compression and bending of metal and non-metal materials. With simple accessories it also tests adhesive tape, chains, wire rope, welding rods and structural parts, with data and curve analysis and printing. Ideal for machinery, building materials, metallurgy, research institutes, universities, quality inspection centres and commodity inspection. Test operation and data processing meet GB/T 228 (metallic materials — tensile testing at room temperature).

Detailed specifications for each capacity are available on request — contact our team for a quotation.

Drop testers



Single-arm drop tester



Double-arm drop tester

Tests how packaged products are damaged when dropped and evaluates impact resistance during handling and transport, with face, corner and edge drops. A digital height display with encoder tracking gives a precise drop height, within 2% or 10 mm of the set value. Electric reset, electric drop release and electric lifting make it easy to use, while a hydraulic buffer greatly improves service life, smoothness and safety.

Model	DSDLD-1500 single-arm	DSDLS-1500 double-arm
Drop height	300–1500 mm, adjustable	400–1500 mm, adjustable
Test load	0–70 kg	0–60 kg (more on request)
Max. specimen size	1000 × 800 × 1000 mm	1000 × 800 × 700 mm (larger on request)
Base plate	1200 × 1400 × 18 mm	1200 × 1400 × 18 mm
Arm size	240 × 290 × 8 mm	approx. 700 × 350 × 10 mm (each side)
Machine weight	approx. 750 kg	approx. 800 kg
Power supply	AC 220 V or 380 V, 50 Hz	

Vibration test tables



Transport simulation vibration table

Simulates transport vibration for toys, electronics, furniture, gifts, ceramics and packaging. Meets US and European transport standards: EN, ANSI, UL, ASTM, ISTA.

DSMZ-100	
Rotation speed	150–300 rpm, stepless
Speed display	1 rpm
Vibration mode	Reciprocating, rotary
Amplitude	25.4 mm (1 in)
Load	100 kg (more on request)
Table size	1.2 × 1.0 m (larger on request)
Timer	0 s – 300 h
Motor	1 HP
Speed control	DC
Power	220 V, 50 Hz
Weight	approx. 180 kg



DSDP-50 electromagnetic vibration table

Predicts defects or damage caused by impact and vibration during transport, use and storage. Sine, FM, sweep, programmable, multiplier, logarithmic, amplitude modulation and time control modes.

DSDP-50	
Table size	500 × 500 mm
Direction	Vertical + horizontal
Max. load	100 kg
Frequency	1–600 Hz (0.01 Hz display)
Amplitude	0–5 mm
Max. acceleration	20 g
Waveform	Sine; sweep up/down
Programs	1–15 segments, cyclic
Timer	Up to 1 year, in seconds
Vibrator power	2.2 kW
Power	220 V ±10%, max. 7 A

02

Environmental test equipment

Combined temperature / humidity / vibration chamber

Thermal shock chambers

Programmable temperature & humidity chambers

UV and xenon-arc weathering chambers

Sand & dust and rain test chambers

Ozone ageing and salt spray chambers

COMBINED ENVIRONMENT · DSSZX-680

Combined climate & vibration chamber



Overview

Tests temperature, humidity and vibration together. A hydraulic lift on moving rails positions the chamber for vertical or horizontal vibration tests under temperature and humidity. It can also be used on its own as a vibration, temperature or humidity unit.

Model	DSSZX-680
Work space (W×D×H)	1000 × 850 × 800 mm
External size (W×D×H)	2000 × 1500 × 1900 mm
Power	380 V, 50 Hz, 3-phase 5-wire, 17.5 kW

Temperature & humidity performance

Temperature range	-40 °C to +150 °C	**Humidity range**	30–90% RH (at 30–85 °C)
Temp. fluctuation	≤ ±0.5 °C	**Humidity fluctuation**	≤ ±1% RH (no load)
Temp. uniformity	≤ ±1.5 °C	**Humidity uniformity**	≤ ±2% RH (no load)
Heating rate	≥ 5 °C/min	**Average cooling rate**	2 °C/min

Construction & materials

- Inner chamber: SUS304 mirror stainless steel
- Outer chamber: painted cold-rolled steel
- Insulation: ultra-fine glass wool + PU foam
- Door: double silicone seal with door heater; upper/lower latches
- Heater: stainless finned tubes (no open flame)
- Humidifier: external tank type
- Chamber on movable hydraulic lift, soft-connected to the vibration head
- Air: high-temp motor, aluminium centrifugal fan, top-rear supply

Systems, safety and vibration unit

Refrigeration

- Tecumseh (France) hermetic compressors, cascade system
- Refrigerants R404A / R23
- Air-cooled coil condenser; multi-stage finned evaporator
- Danfoss expansion valve; Alco (USA) filter drier; Castel (Italy) solenoid valve; oil separator

Controller (vibration controlled separately)

- TEMI1500 programmable controller, colour LCD touchscreen, Chinese/English
- PT100 Class A sensor; balanced temperature control
- PID; 120 programs, 1,200 segments; repeat and loop functions
- RS232 port with PC software for curve recording and printing

Safety protection

- Over-temperature; phase loss / reversal
- Auto water supply and low-water protection
- Compressor high-pressure and over-current protection
- Earth-leakage breaker; fuses; shrouded terminals
- Fan overheat protection; fault names shown on screen

Accessories & standards

- Φ50 mm cable port with rubber plug
- Heated double-glazed window — no condensation
- Concealed Philips low-power cold light; Schneider electrical parts
- Meets ISO 16750-3, GB/T 2423.1/.2/.3/.10, JJG 190-97

FD-600 electrodynamic vibration system (vertical)

Model	Description	Qty
FD-600	Vibration generator (with cooling fan)	1
A-6	Switching power amplifier (excitation, power amp, pre-amp, protection)	1
RDVC-3	Multi-function vibration controller with interface box, PC, printer, piezo accelerometer and low-noise cable — sine, random, shock, sine + random, auto ranging, programmable charge amplifier, analysis software	1
V05	Vertical expansion table, 400 × 400 mm	1
Overall size	790 × 630 × 580 mm (W × D × H)	

Thermal shock test chambers



DSWDCJ series

For electronic products, components and materials that must withstand rapid temperature change in storage, transport and use. Samples are switched instantly between high and low temperatures to verify that their physical and related properties still meet requirements.

-60 to +125 °C

shock temperature range

≤ 5 min

temperature recovery time

Specifications

Item	2-zone chamber	3-zone chamber
Model	DSWDCJ-2-(volume)	DSWDCJ-3-(volume)
Inner volume (L)	80 (50×40×40 cm) · 150 (60×50×50) · 250 (78×63×52) · 500 (70×80×90) · 800 (80×100×100) · 1000 (100×100×100)	
Chambers	Pre-heat, pre-cool	Pre-heat, pre-cool, test
Method	Stainless basket moves up/down	Pneumatic dampers switch 3 zones
Temperatures	Shock -60 to +125 °C · pre-heat +50 to +200 °C · pre-cool -78 to +5 °C	
Heat / cool time	+20 → +200 °C ≤ 20 min · +20 → -78 °C ≤ 70 min	
Recovery time	≤ 5 min (depends on cooling water, temperature span, dwell time and load)	
Accuracy	Fluctuation ±1 °C · deviation ≤ ±3 °C	
Safety	Overload, over-temp, short circuit, refrigerant high/low pressure, oil shortage, alarm	
Standards	MIL-STD-883C, GB/T 2423.13, GJB 150.5, GJB 1217-91	

Temperature & humidity chambers



DSGDJS series

For electronics, instruments, components and materials stored, transported and used under high/low temperature and damp-heat conditions. Used for cold, heat, humidity and dryness resistance tests and for QC reliability testing.

-70 to +150 °C

widest temperature range (type C)

30–98% RH

humidity range

Specifications

Item	High/low temp	Temp cycling	Temp & humidity	T & H cycling
Model	DSGDJS-(volume)			
Inner volume (L)	80 · 100 · 150 · 225 · 250 · 500 · 800 · 1000			
Control	Temp, fixed	Temp, programmable	T & H, fixed	T & H, programmable
Temp. range	A: -20 to 150 °C · B: -40 to 150 °C · C: -70 to 150 °C			
Humidity range	30–98% RH			
Accuracy	Fluctuation ≤ ±0.5 °C · uniformity ≤ ±2 °C · humidity +2 / -3% RH			
Heat / cool rate	Heating approx. 1 °C/min · cooling approx. 0.7 °C/min			
Safety	Leakage, short circuit, over-temp, low water, motor overheat, compressor over-pressure, over-current; power-failure memory			
Power	AC 380 V ±10%, 50 Hz, 3-phase 5-wire			
Standards	GB/T 2423.3-93, GB/T 2423.4-93			

UV weathering test chamber



DSZ-UV

Fluorescent UV lamps closely simulate the UV band of sunlight. Combined with temperature and humidity control, the chamber reproduces the heat, humidity, condensation and dark cycles that cause fading, loss of gloss and strength, cracking, peeling, chalking and oxidation — a standard way to evaluate weathering resistance.

280–400 nm

UV wavelength range

8 lamps

life over 1,500 hours

Specifications

Chamber size	1100 × 450 × 500 mm
Temperature	Exposure 50–70 °C ±2 °C (black panel) · condensation 50 °C ±2 °C
Humidity	Exposure 25–75% RH · condensation 75–98% RH · spray ≥ 95% RH
Sample-to-lamp distance	50 ±2 mm; lamp spacing 70 mm
Irradiance	5–8 W/m², auto-compensated; 8 lamps in 2 rows, life > 1,500 h
Effective exposure area	380,000 mm²
UV wavelength	280–400 nm (peak 313, 340 or 365 nm)
Safety	Earthing, overload/short-circuit breaker, control fuses, low water, over-temp
Power	220 V, 50 Hz ±10%, 6 kW total
Standards	ASTM G154, GB/T 16422.3-1997

Xenon-arc weathering test chamber



DSSN-9000

Xenon-arc testing is the common choice for lightfastness and weathering. A long-arc xenon lamp simulates and intensifies natural weathering, giving accelerated results close to outdoor ageing for plastics, rubber, paints and coatings, textiles and dyes.

550–1100 W/m²

adjustable xenon irradiance

3 kW

full-spectrum long-arc lamp

Specifications

Chamber size	950 × 950 × 950 mm
Temperature	55–78 °C (uniformity ±2 °C)
Humidity	65–98% RH (uniformity ±3% RH)
Irradiance	550–1100 W/m² (350–850 nm), adjustable
Sample rack speed	≥ 1 r/min, stepless
Arc-to-sample distance	350–380 mm
Light / spray cycle	60 / 12 min or 102 / 18 min
Xenon lamp	3 kW air-cooled, full-spectrum long-arc; life 1,000 h
Safety	Earthing, overload/short-circuit breaker, control fuses, over-temp
Power	220 V, 50 Hz ±10%, 6 kW total
Standards	GB/T 16422.2, ASTM D529, ISO 4892-2

Sand & dust test chambers



DSSC series

A fan drives a set concentration of sand and dust across the sample at a controlled speed. It evaluates resistance to dust penetration, abrasion or blockage by sand, and the ability to be stored and operated in dry sand or dusty air. Vertical circulating dust flow with on/off, timed or continuous control.

≤ 45 µm

test dust particle size

IP5X

dust-proof testing

Specifications

Model	DSSC-500	DSSC-800	DSSC-010	DSSC-015
Size D×W×H (mm)	800×800×800	800×1000×1000	1000×1000×1000	1000×1500×1000
Power	0.5 kW	1 kW	1.2 kW	2.5 kW
Dust	Dry talc 2 kg/m³; air speed 1–3 m/s			
Particle size	≤ 45 µm (more than 50% of particles)			
Sieve wire / mesh	Wire 50 µm · mesh spacing 75 µm			
Temperature / humidity	Ambient +10 to 50 °C · < 45% RH			
Safety	Short circuit, blower over-current, earthing, over-temp			
Power supply	220 V, 50 Hz (with test power socket)			
Standards	GB 10485, GB 4942.1-85, GB 7000.1 (IP5X)			

Rain test chambers



DSLY series

Simulates rain to test the water resistance of specimens — mainly automotive low-voltage electrical parts, instruments and lamps. Meets enclosure protection levels IPX3 and IPX4.

IPX3 / IPX4

enclosure protection levels

±45° to ±180°

oscillating spray tube

Specifications

Item	DSLY-500	DSLY-010
Size D×W×H (mm)	800 × 800 × 800	1000 × 1000 × 1000
Power	2 kW	3.5 kW
Spray ring radius	375 or 500 mm	
Pipe diameter	Φ16 mm	
Nozzle hole / spacing	50 µm holes at 50 mm spacing	
Oscillation angle	±45°, ±60°, ±90°, ±180°	
Turntable	1 r/min (stepless optional)	
Safety	Leakage, short circuit, motor overheat	
Power supply	220 V, 50 Hz (with test power socket)	
Standards	GB 10485-89, GJB 150.8-86	

Ozone ageing test chambers



DSQYL series

Ozone is present only in tiny amounts in the air, yet it is a main cause of rubber cracking. This chamber simulates and intensifies atmospheric ozone to quickly evaluate rubber's resistance to ozone ageing and the effectiveness of anti-ozonants — helping extend product life.

0–500 ppm

ozone concentration

360°

rotating sample rack

Specifications

Model	DSQYL-100	DSQYL-250	DSQYL-500	DSQYL-010
Size D×W×H (mm)	450×450×500	500×600×750	700×800×900	1000×1000×1000
Power	3 kW	3.5 kW	4.5 kW	6.5 kW
Temperature	0–70 °C; fluctuation ±0.5 °C			
Humidity	≥ 65% RH			
Ozone concentration	0–200 ppm or 0–500 ppm			
Sample rack	360° rotating, 1 r/min			
Gas flow	12–16 mm/s			
Safety	Leakage, short circuit, over-temp, motor overheat, over-current			
Power supply	AC 380 V ±10%, 50 Hz, 3-phase 5-wire			
Standards	GB/T 7762-2003, GB/T 3642-92			

Salt spray test chambers



DSYW series

Simulates a marine climate for accelerated corrosion testing of electrical equipment, metals, and plated or coated products.

1–2 ml

salt fog fallout per 80 cm² · h

5 sizes

from 450 × 600 to 900 × 2000 mm

Specifications

Model	DSYW-108	DSYW-250	DSYW-400	DSYW-650	DSYW-010
Size D×W×H (mm)	450×600×400	600×900×500	750×1100×500	850×1300×600	900×2000×600
Power	1.3 kW	1.5 kW	1.8 kW	4.5 kW	6.5 kW
Temperature	Ambient +5 to 55 °C; fluctuation ±0.5 °C; uniformity ≤ ±2 °C				
Humidity	85–95% RH				
Salt fog fallout	1–2 ml / 80 cm² · h				
Gas flow	12–16 mm/s				
Spray mode	Continuous or cyclic				
Test timer	1–999 s / min / h, adjustable				
Power supply	AC 220 V ±10%, 50 Hz				
Standards	GB/T 2423.17, IEC 60068-2-11, GB/T 10587				

From the factory floor to your laboratory



Partner production workshop



Vibration tables in production



Environmental test equipment showroom



Laboratory set-up for a customer



Laboratory set-up for a customer

S.A.G. GLASS

S A G GLASS COMPANY LIMITED
บริษัท เอส เอ จี กลาส จำกัด

Machinery import · Electrical system repair · After-sales service

Your sales contact

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