


Product	Model	Internal Dimension (D*W*H) mm	External Dimension (D*W*H) mm	QTY
UV Aging Test Chamber	LRHS-NZY	450×1170×500	Approx.680×1420×1510	1
Package Information		Net Weight: Approx.140KG Gross Weight: Approx.200KG Package: Enhanced plywood case Package Dimension: 700×1460×1740mm		

Specification

Product Model	UV Weathering Aging Test Chamber LRHS-NZY (Touch Screen)
Picture for reference	
Prohibition of test specimen	<p>The test equipment prohibits:</p> <ul style="list-style-type: none"> Testing or storing inflammable, explosive and volatile test specimen. Testing or storing corrosive test specimen. Testing or storing biological test specimen. Testing or storing strong electromagnetic emission source test specimen. Testing or storing radioactive test specimen. Testing or storing toxic test specimens. Testing or storing the test specimens that may produce toxic substances during testing or storing process.
Principle/Application	<p>UV weathering test chamber can reproduce damages caused by sunlight, rain or dew drop to recreate damages caused in the outdoor environment during several months or years of time. To simulate outdoor weathering, it is a reliable device for testing weathering resistance ability of machinery, automotive, plastic, rubber, industrial product, mobile phone, aluminum structure, hardware lighting parts, fabric, wooden floor, furniture, and toy. It simulates the effects of sunlight using special fluorescent UV lamps. It simulates dew and rain with condensing humidity and/or water spray.</p>

1. Technical Parameters

Temperature range	RT+10°C~70°C
Humidity range	≥95% R.H
Temp uniformity	≤0.5°C (No loaded)
Space between lamps	70 mm
Distant between lamps and specimens	50 mm
UV lamp	8PCS (UVA-340), 40W/PCS
UV wavelength	290nm~400nm
Condensation Simulation	Condensation system time is adjustable
Time range exposed to UV light	Adjustable between 1~99 hrs
Irradiance range	≤ 0.49~1.10W/m ²
Test time	1~9999H (adjustable)
Total power	Approx.4KW
Sample holder size	365×75 (mm)
Sample holder plates	24 blocks
Power supply	AC220V±10%, 1Ph, 50±0.5Hz (Or customize)

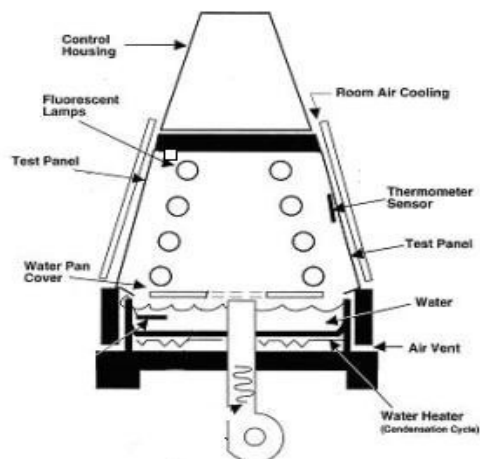
2. Structure & Material

Materials	Exterior Material: A3 Steel board with powder coated Interior Material: Imported SUS stainless steel plate The sample shelf consists of a gasket and a tension spring, both of which are made of aluminum alloy material. Condensate tray: stainless steel
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Standard configuration of test chamber	8 UV lamps are installed on two sides of the working room. Quantity of fixture of sample shelf: 24 blocks Dimension of fixture of sample shelf: 365×75mm Picture of the specimen holder
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	Working principle diagram
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Others

It introduces the heating method through internal bladder water tank with fast heating speed and even temperature distribution.

Drainage system introduces the vortex-type and U-type deposition device.

The sample surface is parallel to and 50mm far away from the surface of UV lamp Test specimen and the shelf constitute the trapezoidal inner wall of the chamber. Tank water level automatic replenishment.

Chamber cover introduces the two-way flip type for easy opening and closing.

The bottom of the test chamber adopts high quality fixed type PU movable wheel.

3. Control System

Display

Songhua Touch-screen controller
 PLC module controlling, full-featured, stable and reliable performance



NO.	Alarm name	NO.	Alarm name
0	OH1	10	
1	OH2	11	
2		12	
3		13	
4		14	
5		15	
6		16	
7		17	
AL1		AL3	
AL2		AL4	

Controlling

Temperature controlling uses co-channel P.I.D + S.S.R systems coordinated-control, to improve the stability and lifetime of interface and controlling components. P.I.D. automatic calculation function provided more convenience for users.

Touch screen controlling, digital and direct display

Irradiation, condensation, water spray tests can be performed separately or alternately. Test time is adjustable.

Alarm signal shows up if there is a failure happening during tests.

Schneider components and Philips rectifier.

Module

Main Menu Function Module Fixed Value Irradiation Program Setting
 Historical Data and Curve

Blackboard Temperature control

Black aluminum sheet is used to connect temperature sensor
 Black panel thermometer is used to control heating so as to obtain more stable temperature.

Radiation measurement

Radiometer introduces the probe type (it is portable and can be taken out if the test is not required).
 The radiation quantity shall be displayed and measured by a special UV audiometer;
 Radiation quantity shall not exceed 10W/M².

Light source

3.5.1 Eight UV fluorescent lamps of rated power of 40W as light source. The lamps are installed on two sides of the machine equally. UVA-340 and UVB-313 light sources are available for selection (optional).

3.5.2 The spectral energy distribution of UVA-340 lamp focus on wavelength of 340nm.

3.5.3 The spectral energy distribution of UVB-313 lamp focus on wavelength of 313nm.

3.5.4 Since the light energy output of fluorescent lamp decrease with time, in order to Reduce impact of decreasing light energy on the test, the test chamber introduces the design that a new lamp shall replace an old lamp after 1/4 service life of the lamp, in this way, the UV light source shall always include new lamps and old lamps so that constant light energy output shall be realized;

3.5.5 All lamps are imported from America with active service life of 1600~1800 hours, and the service life of 2500 hours may be achieved by irradiation adjustment.

Adjustment of spraying uniformity

Take use of the artificial control function of the controller to observe the spraying status when the door is open, thus to exert adjustment or replace the nozzle;

Monitoring of spraying status	The machine is equipped with spraying device, which can imitate the drastic change of temperature and rain erosion under rain. There are several nozzles to ensure even spraying. When the spraying starts and how long the spraying lasts shall be set by the customer freely; The customer shall prepare pressured deionized water.
4. Heating System	
Heating structure	Introducing U-shaped titanium alloy fast heating pipe Temperature control system and lighting system are totally separated. Temperature control output power by microcomputer calculus, to achieve high precision and high efficiency of electricity efficiency. Over temperature protection function of heating system.
5. Condensation System	
Condensation method	Humidification and condensation of saturated steam
Heating of water tray	The water tray introduces the direct heating method through the heating plate on its bottom so that the water can be heated evenly. Easy to clean incrustant.
Water supply	City Running Water
Water level control	Water level sensor of magnetic level switch
6. Product Application	
Illumination description	The UV in sunshine is the main reason causing reduction of durability of most materials. We use UV lamp to imitate the short-wave UV in the sunshine, which can produce a little spectral energy of visible light and infrared light. We can select UV lamp of different wavelength according to test requirements, since every lamp has different UV spectral energy and wavelength.
Humidity condensation environment	In most outdoor environments, the humidification time of material per day is as long as 12 hours. Research shows that the main factor causing the outdoor humidification is the dew but not the rain. UV aging chamber can imitate the erosion due to outdoor moisture through unique condensation function. During condensation cycle of the test, the water in the water storage tank on the bottom of the test chamber shall be heated to produce steam, and the chamber shall be filled with such heat steam with relatively humidity of 100% and relative high temperature. Test specimen shall be fixed on the side wall of the chamber so that the test surface can be exposed to external air in the chamber.
Spraying circulation system	Water spraying can better imitate the environmental conditions for final use, and is very effective in imitation of heat impact or mechanical erosion due to drastic change of temperature and rain wash. Under practical application conditions, for example, under the sunshine, when the accumulated heat disperses due to sudden rain, the temperature of the material shall have a great change and form heat impact, which is a big challenge for many kinds of materials.
7. Safety Protection	
Protective door	When the lamp is on, if the chamber door is opened, the machine shall cut off the power supply of the lamp and enter balance status for cooling automatically to prevent causing injury to human body. The safety door lock meets the IEC 047-5-1 safety protection requirements.
Chamber over-temperature protection	When the temperature in the chamber exceeds $70^{\circ}\text{C}\pm 10\%$, the machine shall cut off power supply of the lamps and heater and enter balance status for cooling automatically.
Others	Sink low water level alarm, to prevent the heater empty burning Circuit breaker;leakage protection, current overload protection security protection

8. Configuration Table of Main Parts

Name	Brand	Place of Origin
Lamp	Q-LAB	U.S.
AC contactor	schneider	France
Overload protector	schneider	France
Miniature circuit breaker	schneider	France
Miniature relay	schneider	France
Over-temperature protector	RAINBOW	Korea
Switch	Light Country	Taiwan
Silicone rubber seal	ShinEtsu	Japan
Spray system	LINPIN	Shanghai
Temperature Module	LINPIN	Shanghai
Humidification system	LINPIN	Shanghai
Housing	Baosteel	Shanghai
Working room	Baosteel	Shanghai

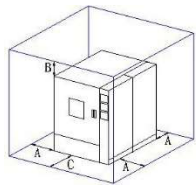
9. Attached materials

- 9.1 Certificate of quality, warranty card, circuit diagram
9.2 Instructions: Operation method, cautions, basic accessories, notes for maintenance

10. Reference Standards (NOT LIMITED, ONLY FOR REFERENCE)

ASTM D4329、D4587、D5208、G151、G154、G53 ; ISO 4892-3; SAE J2020

11. Equipment Installation

Installation site	The ground is flat and well ventilated; There is no strong vibration around the device; There is no strong electromagnetic field around the device; There are no flammable, explosive, corrosive substances and dust around the equipment.
Installation requirement	Appropriate use and maintenance space around the equipment, as shown: A: No less than 60cm B: No less than 60cm C: No less than 120cm (Note: Equipment Angle should not exceed 15 °C) 
Ambient	Temperature: 5°C ~ +28°C Relative Humidity: ≤85%RH Pressure: 86kPa ~ 106kPa
Power supply	AC220V±10%, 1Ph, 50±0.5Hz (Or changeable as per your requirement)
Water supply	Equipment spray water to be used pure water or deionized water (solid content of less than 20ppm)

12. After-sales Service

Duration	2 years after the B/L date, with lifetime technology support.
After-sales Methods	1. Via email, telephone, social software (wechat, skype, whatsapp, etc), video conference, etc. 2. Engineers going to site for installation or troubleshooting with reasonable charges (especially for non-standard walk in climatic chambers)

Charges

3.If parts were broken not artificially during warranty, the new parts will be sent to you without charges or express cost (FedEx, DHL, TNT, etc).

