

## □ Cyclic Salt Spray Corrosion Chamber



SC-010

**Temperature**  
+10°C ~ +90°C

**Humidity**  
30% ~ 98%RH

**Salt Fog Deposition**  
1 ~ 2ml / 80cm<sup>2</sup> · h



Automobile



Electronics



Battery



Paintings



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Navigation



# Cyclic Corrosion Test Chamber

## 【Technical Parameter】

Model	SC-010	SC-016	SC-020
Internal dimensions (mm)	800*1450*680	1000*1600*800	1000*2000*900
Overall dimensions (mm)	1400*2500*1720	1600*2650*1840	1600*3050*1940
Interior Volume (L)	780	1280	1800
Parameter	Temperature Range	+10 °C ~ +90 °C	
	Temperature Fluctuation	± 0.5 °C	
	Temperature Deviation	± 2.0 °C	
	Humidity Range	30% ~ 98% RH	
	Humidity Deviation	+ 2%, - 3%	
	Salt Fog Deposition	1~2ml / 80cm <sup>2</sup> · h	
Structure	Cooling	Cooling system	Mechanical compression refrigeration system
		Refrigerating unit	French TECUMSEH compressor
		Refrigerant	R404A
	Heating Element	Nichrome heater	
	Humidity	Humidifier	External isolation, stainless steel surface evaporation humidifier
		Water supply system	Water purification system
	Air Preheating	Saturated air barrel (31Liter)	
	Spraying System	Atomizer tower and Spray nozzles	
	Salt Fog Collected	Fog collector and fog measure cylinder	
	Sealing	Pneumatic seal	
	Controller	Programmable color LCD touch screen controller, Ethernet connection, PC Link, USB	
	Sensor	Temperature Sensor	PT100Ω / MV A-class
		Humidity Sensor	Dry and wet bulb sensor
	External Water Solution Tank(mm)	340*230*230 (18L)	
	View Window Size (mm)	800*300	
	Air Circulation	Centrifugal wind fan	
Safety Device	Humidifier Dry-combustion Protection; Over-temperature Protection; Over-current Protection; Water Shortage Protection; Earth leakage Protection		
Material	Glass fiber reinforced plastics		
Standard Configuration	8 round bars		
Power Supply	380V 50Hz		
Maximum Noise	65 dBA		
Standard	IEC60068-2-52, IEC61701-2, ASTM G85, ISO 7253, ASTM B117, ISO9227		
Environmental Conditional	5°C~+35 °C ≤85% RH		

□ Standard & customized

\* pay attention to the environmental condition during installing



## 1. Workroom

The material is glass fiber reinforced plastics which has strong corrosion resistance, one-time forming, Reinforced design, long service life and high temperature resistance. Pneumatic switch lid. The sample holder contains 8 round bars for different tests. Pneumatic seal.



## 2. Salt Spray Device

The spray tower is adjustable in height and spray volume to meet different test standards. Quartz nozzles are easy to clean and resistant to high temperatures, corrosion, and clogging. Spray pressure is 83KPA according to the standard.



## 3. Salt Water Tank

An external 18-liter salt solution tank is equipped with a brine mixing system to keep the solution even.



## 4. Saturated Barrel

The air is preheated in the saturated barrel, and the heating tube is perpendicular to the saturated barrel. The saturated barrel has protection against dry burning. If the water level is low, the spray will stop, and the air source will not be supplied to avoid damage to the equipment.



## 5. Controller

PID programmable touch screen controller, network connection computer. Can edit 100 programs 20 segment. The set system language is English for standard.



## 6. Castor

Install 4 castors for easily moving, and with brakes function. Castor height is adjustable.



## 7. Water Re-circulation

Water purifier: mainly purification from water source to water tank. The filter element is suggested to be replaced once a year. Water re-circulation system that reduced water use and a series of water pipes.



## 8. Pneumatic Open/Close Lid

The equipment is equipped with air source diverting device to distribute the compressed air to the opening system to realize the electrification opening/closing control of the lid.

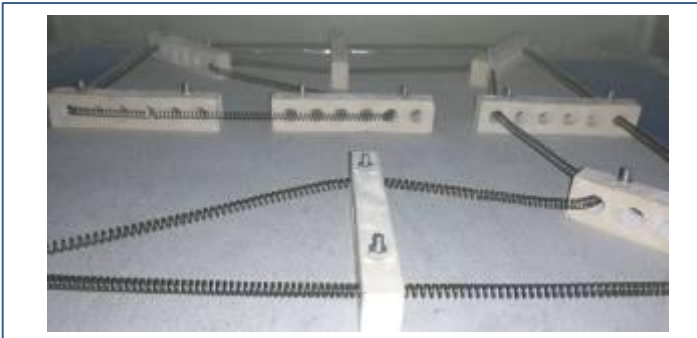


## Core Function



**Spraying System**

It is tower salt spray system. The air generated by the air compressor is purified, preheated, and depressurized, and then enters the nozzle. The solution replenishment system supplies the solution to the nozzle suction pipe. When spraying, the compressed air rushes out of the nozzle, creating a negative pressure above the suction pipe. Under the action of negative pressure, the salt water flows toward the glass nozzle to the tip cone and spreads to the entire working space to form a diffuse state, simulating the salt spray environment.



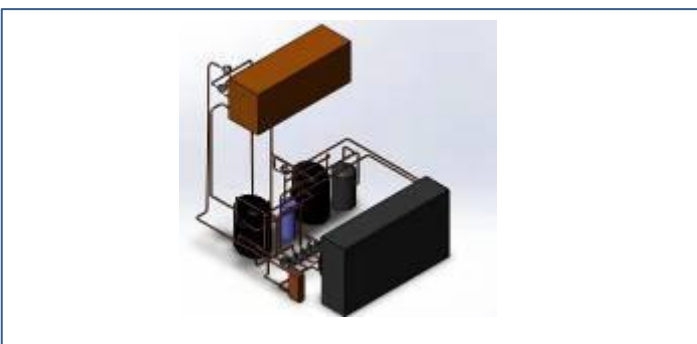
**Heating System**

The bottom of the chamber is equipped with heating wire. When the resistance wire is heated, the air temperature of the chamber rises.



**Air Compressor Control**

The equipment needs a air compressor hole (diameter 13MM), air pressure balance system and water vapor separation system ensure that the pressure during spraying is uniform and constant.



**Cooling System**

After the liquid refrigerant absorbs the heat of the cooled object in the evaporator, it is vaporized into low-temperature and low-pressure steam, sucked by the compressor, compressed into high-pressure high-temperature steam, discharged into the condenser, and radiated to the cooling medium in the condenser, condensed into a high-pressure liquid, throttling through a throttle valve into a low-pressure low-temperature refrigerant, and again entering the evaporator to absorb heat and vaporize, to achieve the purpose of cycle refrigeration.

In this way, the refrigerant completes a refrigeration cycle through four basic processes of evaporation, compression, condensation, and throttling in the system.



**Humidity System**

The water tank supplies water to the humidification system, and an electromagnetic microwave humidifier is installed in the electric humidifier to convert the water into steam.



**Temperature and Humidity Sensor**

PT-100 Class A sensor, real-time accurate detection and display of temperature changes at 0.001 degrees.

A wet gauze and a real-time temperature, converted by temperature difference, showing real-time relative humidity.

Over Temperature Protection  
Water Shortage Protection

Over Current Protection  
Earth Leakage Protection

Humidifier Dry Combustion Protection

**Protection System**

## **Option**

## **Cyclic Corrosion Test Chamber**

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**Air Compressor**

**Salt for Salt Spray Testing**

**Ultrasonic Spray System**

**Salt Solution Tank Temperature Control**

**Workroom Cleaning System**

**Special Sample Holder**

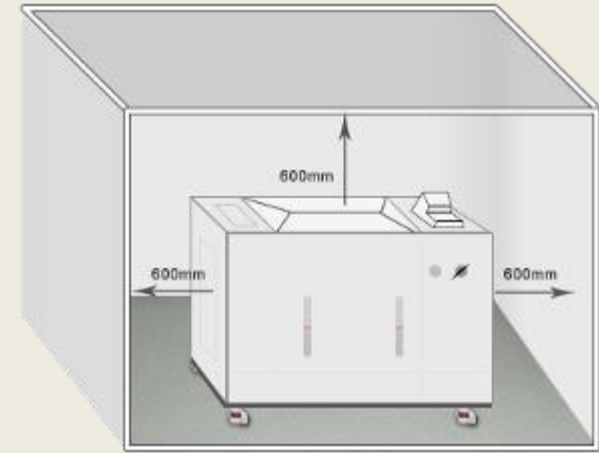
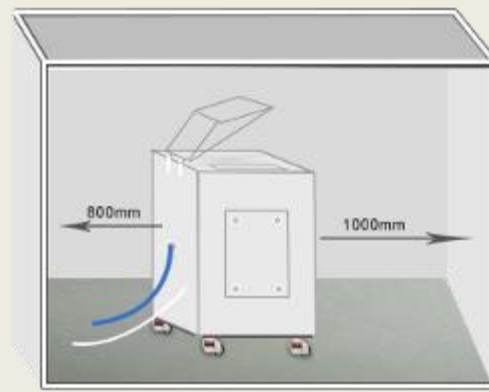
## Install Condition

### Environment Conditions

Temperature: +5°C ~ +35°C  
 Relative Humidity: ≤85%;  
 Pressure: 86 KPa—106 KPa

### Space Conditions

Sufficient space for ventilation



**\*Safety Instruction:** 1. Prohibited to test explosive, inflammable and high corrosive substance  
 2. Chemical exposure to the equipment is prohibited  
 3. Equipment must be safety on the ground to avoid electrostatic induction

## Packaging



First, seal chamber with waterproof plastic film. Protect chamber from seawater corrosion.  
 Second, buffer foam is placed in the four corners of the chamber. It is used for fixing equipment to prevent shaking and damaging chamber during transportation.



Plywood: standard wood export packaging. The wooden box is fixed by sheet metal to prevent damage during transportation.

Gross weight: 627kgs~  
 Package size: 2720\*1480\*1860mm

## Warranty Condition

Our company will repair the product, if the product, the material of the parts, the design and manufacturing of the products raised hardware problems caused by product itself rather than human error within three years warranty period since the date of dispatching by the customer.

Our company repairs the products, but will collect the basic costs of the spare parts after the warranty period, but service is free always.

## Shipping



**Material:** Export standard wooden box

\*Can be used for Sea, Air, Railway, Truck and multimodal transport.

## Warranty & Service

- 3 Years Warranty, Lifelong Follow-up

**Professional After-sales Team**  
 If you have any questions during operation, we will supply solution to you with 24 hours.

## How to Service

1. At first, our test chambers are produced based on 20 years product lifetime.

Normally once test chambers have problems, we judge the problems, and send spare parts to our customers, and teach them how to change new parts on by email or video, all spare parts and shipping cost (by DHL, TNT, and FedEx) paid by LIB.

2. If the customer needs our engineer on-site service, they only need pay the ticket accommodation to our Engineers, service is for free.

3. If products still can't use after our engineers repair, we will produce a new test chamber (same as the old one) to our customers with no charge.

## PROVIDING TEST SOLUTION, PROVIDING TEST EQUIPMENT

Xi'an LIB Environmental Simulation Industry is a lead provider of environmental test chamber in China, with its own brand (LIB) design, production, sales and service since 2009. We continually update technology and develop new products for customer's needs.

Our main products included temperature and climate test chambers, corrosion chambers, weathering testers, IP dust and rain chambers, ozone test chamber, noxious gas SO2 H2S chamber, walk-in chambers. We provide test chamber, we provide test solution. Standard and customized products to meet different customer needs.

By 2018, global market has spread to 53 countries to USA, Canada, Mexico, Brazil, Peru, Russia, German, UK, France, Finland, Netherlands, Poland, Switzerland, Thailand, Philippines, Singapore, Malaysia, Australian, South Africa etc. and the market continues to expand.

At present 7 Tier-one agents around the world provide LIB products, installation and maintenance service for customers. Make things simple and convenient.

### Contact Us

Website: [www.lib-industry.com](http://www.lib-industry.com)  
 Add: No.5 Zhangba First St, Xian High-Tech Area, Shaanxi Province P.R.China 710065  
 Tel: +86 29 68918976  
 WhatsApp: +86 18700875368  
 Skype: serena\_lib  
 Email: [serena@lib-industry.com](mailto:serena@lib-industry.com)

Sales Team: [sales@lib-industry.com](mailto:sales@lib-industry.com)  
 After Sales Team: [asd@lib-industry.com](mailto:asd@lib-industry.com)  
 Shipping Team: [vip@lib-industry.com](mailto:vip@lib-industry.com)  
 Finance Team: [account@lib-industry.com](mailto:account@lib-industry.com)

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## CE ROHS

