

□ **SO<sub>2</sub> Noxious Gas Corrosion Chamber**



SO-010

**Temperature**

15°C ~ 80°C

**Humidity**

30% ~ 98%RH

**SO<sub>2</sub> Concentration**

25±5 ppm

## 【Technical Parameter】

	SO-100	SO-225	SO-500	SO-800	SO-1000
Internal Dimensions (mm)	400*500*500	500*600*750	700*800*900	800*1000*1000	1000*1000*1000
Overall Dimensions (mm)	860*1050*1620	960*1150*1860	1180*1350*2010	1280*1550*2110	1500*1550*2110
Interior Volume (L)	100	225	500	800	1000
Parameter	Temperature Range	15 °C ~ 80 °C			
	Temperature Fluctuation	± 0.5 °C			
	Temperature Deviation	± 2.0 °C			
	Humidity Range	30% ~ 98% RH			
	Humidity Deviation	±1% RH			
	SO <sub>2</sub> Concentration	25±5 ppm			
	Air Change Rate	3~5 /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		
			Automatic water supply		
	Dehumidification	Evaporator			
	Controller	Programmable color LCD touch screen controller			
		Ethernet connection, PC Link			
	Sensor	Temperature Sensor	PT100Ω / MV A-class		
		Humidity Sensor	Dry and wet bulb sensor		
		Gas Sensor	SO <sub>2</sub> gas sensor		
	Build-in Water Tank(mm)	270*300*400	270*300*450		
	View Window Size (mm)	250*280		300*330	330*370
Air Circulation	Centrifugal wind fan				
Door Lock	Electromagnetic lock				
Gas Exhaust Device	SO <sub>2</sub> Exhaust Unit				
Safety Device	Humidifier Dry-combustion Protection; Over-temperature Protection; Over-current Protection; Water Shortage Protection; Earth leakage Protection				
Interior material	SUS304 stainless steel +Glass fiber reinforced plastics				
Exterior material	Steel Plate with protective coating				
Power Supply	380V 50Hz				
Maximum Noise	65 dBA				
Standard	IEC60068-2-42; IEC60068-2-60				
Environmental Conditional	5 °C ~ +35 °C ≤85% RH				

□ SO<sub>2</sub> cylinder will be prepared by the user;



## 1. Workroom

The inner material is a double-layer material made of SUS304 stainless steel to ensure the robustness, and the outer layer is affixed with Fiber Reinforce Plastic for corrosion protection.  
Standard configuration of two sample holders made of FRP.



## 4. SO<sub>2</sub> Exhaust Device

The SO<sub>2</sub> exhaust device is equipped with an NaOH solution tank to dilute SO<sub>2</sub> to make workplace clean and safe.  
Exhaust the gas after the test, automatic controlled on controller.



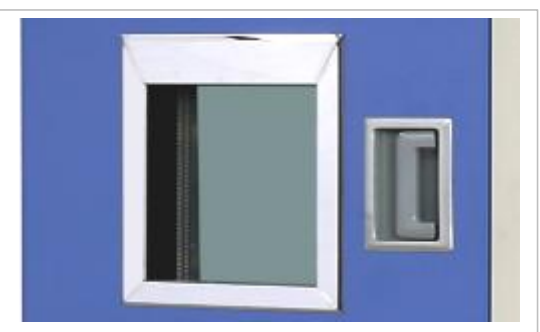
## 8. Electromagnetic Lock

Door lock is an electromagnetic lock, which will generate a strong suction force and tightly attract the iron plate to lock the door.  
Unlocking is operated on the controller for safety and prevent malfunction.



## 2. Viewing Window

The door material is a double-layer material made of SUS304 stainless steel and the outer layer is affixed with Fiber Reinforce Plastic for corrosion protection.  
The conductive film is located on the interior glass to prevent window frosting, built-in LED light for the work room lighting for clearly observing samples.



## 5. 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.



## 9. Insulation

10cm thick polyurethane foam and insulation cotton;  
Better insulation performance, degradation resistance, environmental protection, noise reduction.



## 3. Controller

PID programmable color touch screen controller, network connection computer.  
Can edit 100 programs 20 segment.  
LIB also can preset program into the controller based on user testing requirements.  
The set system language is English for standard.



## 6. Castor

Install 4 castors for easy to move, and with brakes function.  
Castor height is adjustable.



## 7. SO<sub>2</sub> Sensor

SO<sub>2</sub> gas concentration detection transmitter  
High accuracy, easy to exchange



## 10. External Materials

A3 steel plate with galvanized coating;  
Electrostatic treatment; High and low temperature corrosion resistance; High hardness, anti - impact  
Very high safety factor;  
Color can be customized.

## Core Function



Cooling System

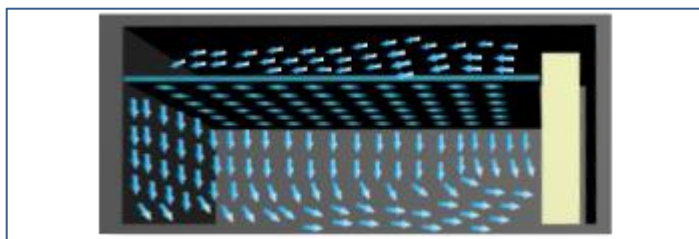
After the liquid refrigerant absorbs the heat of the cooled object in the evaporator, it is vaporized into low-temperature and low-pressure steam, sucked by the compressor, compressed into high-pressure high-temperature steam, discharged into the condenser, and radiated to the cooling medium in the condenser, 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

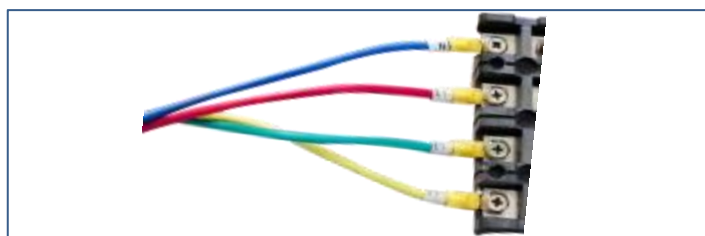
When the current humidity is less than the set point humidity, the equipment is automatically humidified. The humidification of is automatically heated by the humidification tank. When the water is heated, steam is generated, and then the steam is injected into the working room to increase the test humidity.

## SO<sub>2</sub> Control System



Air Circulation

The centrifugal fan is installed at the rear of the chamber body, and the air is uniformly distributed through the air outlet. Air circulation adopts air outlet at top and air return at bottom, and the wind speed and pressure are in compliance with the test standard, and the temperature is stabilized at the moment of switching. The high-quality centrifugal fan is used to strongly supply air circulation, making the temperature distribution in the test area uniform.



Wiring System

Voltage 380V 50Hz 3 phase.  
L1, L2, L3, PE, N, grounding protection.  
Standard 2m long cable,

Over Temperature Protection  
Water Shortage Protection

Over Current Protection  
Earth Leakage Protection  
Phase Sequence Protection

Humidifier Dry Combustion Protection  
Refrigerant High Pressure Protection

## Protection System

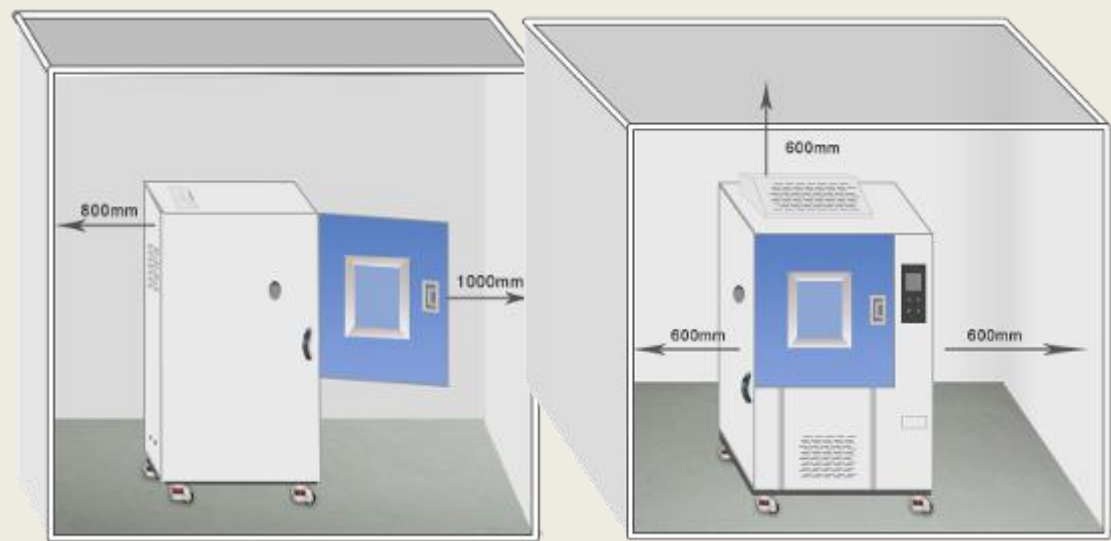
## Install Condition

### 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: 342kgs~  
 Package size: 1110\*1130\*1800mm

## 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.

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