

□ **MIL-STD- 810 Sand and Dust Test Chamber**



**DIM-1000**

**TEMPERATURE**  
10°C ~ 80°C

**BLOWING DUST**  
10.7 ± 7g/ m<sup>3</sup>

**BLOWING SAND**  
0.18+0.2g/m<sup>3</sup>; 1.1+0.3g/m<sup>3</sup>; 2.2+0.5g/m<sup>3</sup>

## 【Technical Parameter】

Model	DIM-1000	
Internal Dimension	1000*1000*1000mm D*W*H	
Overall Dimension	2800*3500*2000mm D*W*H	
Interior Volume	1000L	
Parameter	Blowing Dust	
	Air velocity	1.5 -8.9m/s
	Concentration of dust	10.7±7g/ m <sup>3</sup>
	Dust particles	< 150μm
	Blowing sand	
	Air velocity	18.0 -29.0m/s
	Concentration of sand	0.18+0.2g/m <sup>3</sup> ; 1.1+0.3g/m <sup>3</sup> ; 2.2+0.5g/m <sup>3</sup>
	Sand particles	149μm - 600μm, 600μm - 850μm
Structure	Specimen Power Outlet	Dust-proof socket 16A
	Heating Element	Nichrome heater
	Vacuum System	Equipped with a pressure gauge, air filter, pressure regulator, connecting tube
	Controller	Programmable color LCD touch screen controller
		Ethernet connection, PC Link
	View Window Size(mm)	300*300
	Door Lock	Electromagnetic lock
	Testing Platform Diameter	600mm
	Testing Platform Speed	1-7 r.p.m
	Dust Detector	Integrated dust detector
	Dust collection and cleaning	Equipped with a vacuum cleaner interface, an electric vibrator is installed on the entire air duct and the wall of the test box, which can shake off and disperse the dust absorbed on the wall.
	Safety Device	Over-temperature Protection; Over-current Protection; Earth Leakage Protection; Phase Sequence Protection
Material	Exterior Material	A3 Steel Plate with protective coating
	Interior Material	SUS304 stainless steel
	Observation Window	Interior lighting, double-layer thermo stability silicone rubber sealing
Standard Configuration	Lighting, dust wiper, 4 castors	
Power Supply	380V 50Hz	
Maximum Noise	65 dBA	
Environmental Conditional	5℃~+35℃ ≤85% RH	
Standard	MIL-STD- 810	



**Safety protect system**  
 Over Temperature Protection  
 Over Current Protection  
 Earth Leakage Protection  
 Phase Sequence Protection

## 1. Workroom

The internal material is 304 stainless steel, mirror surface, rust-proof, high temperature and corrosion resistance; Nice ruggedness and long life.  
 The workroom is equipped with a single-phase 16A internal power interface to power up the test specimen. The



## 4. Large Centrifugal Fan

The large centrifugal fan is cut from high-hardness raw steel, with high hardness and high temperature resistance. 3 fans are at the rear of the equipment, the rotating circulating air duct is connected to the workroom



## 7. 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. Turntable

The turntable is made of 304 stainless steel, the speed can be adjusted  
 Sample should be firmly fixed on the turntable.  
 The maximum load of the sample rack is 100kgs



## 5. Wind Speed Sensor

Built-in wind speed sensor, through the wind speed sensor signal output, self-adjusting fan speed.



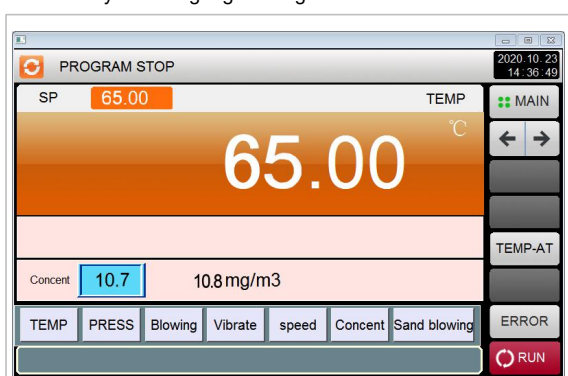
## 8. Viewing Window

Double-layer tempered glass, specially designed seal, with good impact resistance and prevention of sand and dust leakage. Equipped with manual water wiper for easy observation samples



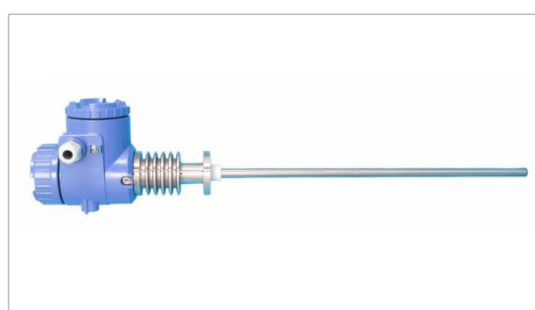
## 3. Controller

PID programmable color touch screen controller, network connection computer.  
 Can set 120 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. Dust Concentration Sensor

The built-in sand dust sensing probe can display the sand dust concentration in real time.  
 The concentration is automatically controlled.



## 9. Build-in lighting

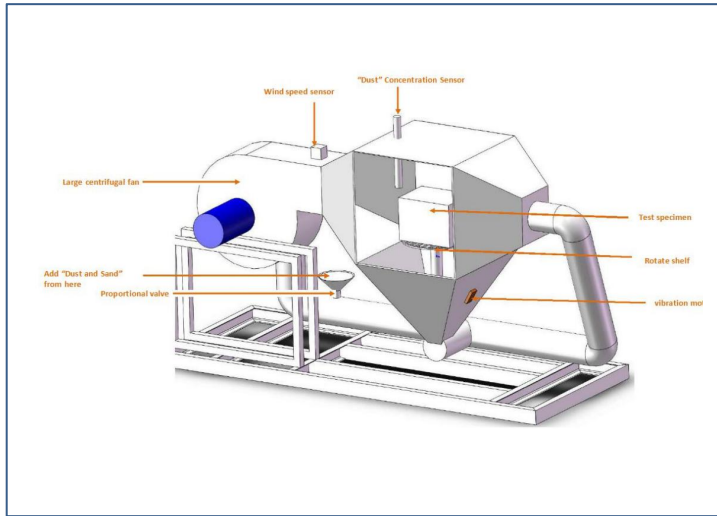
The built-in waterproof LED lighting inside the workroom makes it clear to observe the test specimen. The light can be turned on and off at the control panel button.



## 10. Wiring System

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

## Core Function

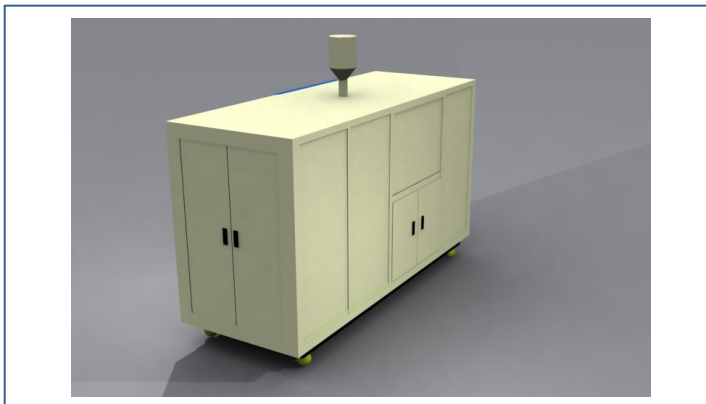


**Equipment Structure**

The MIL-STD sand dust test chamber is in the form of an integral frame (slewing) structure, the workroom is located in the middle of the equipment, the fan is at the rear of the equipment, the rotating circulating air duct is connected to the workroom, and the sand dust inlet unit is at the air outlet of the test chamber.

The temperature control and dehumidification system is located at the lower rear of the chamber, and the control system is located in the middle of the test chamber.

There is a rotating sand dust feeding device at the air inlet of the workroom to meet the needs of blowing sand and dust. The wind sand dust separator is located at the outlet of the test chamber.



**Temperature Control**

Due to the heat generated by the fan and the intense friction between the wind and the inside of workroom, a large amount of heat will be generated, so temperature control is particularly important. The entire temperature control is divided into two parts. In the first part, the air duct of the entire body and the outer wall of the test chamber are welded to a layer of small water tanks. In this way, the heat will be cooled by the cooling water. In the other part, the cold capacity of the refrigeration unit is directly injected into the workroom through a fan, and is constant through PID.



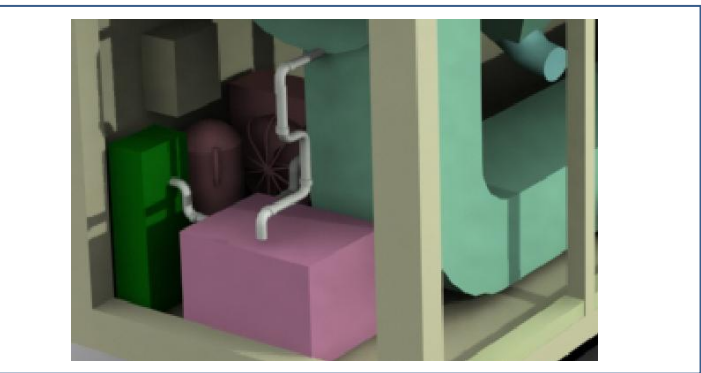
**Wind Speed Control**

Wind speed is adjustable, and can be set on the controller.

Built-in wind speed sensor, through signal output, self-adjusting fan speed.

The air duct is welded by SUS304 stainless steel plate, and the adjustable deflector is installed inside to facilitate the adjustment of the wind speed.

After the adjustment is completed, fix the deflector.



**Concentration Control**

The inlet for adding sand and dust is installed above the workroom. The concentration is set on the controller, and the system runs automatically.

The built-in dust sensing probe can display the sand dust concentration in real time.

The concentration is automatically controlled, and the screw is controlled by the servo system to squeeze sand and dust into the working chamber.

Copper tape is wrapped around the entire workroom and the air duct wall and grounded to prevent static electricity generated by friction from attracting dust.

Over Temperature Protection

Over Current Protection

Earth Leakage Protection

**Protection System**

Phase Sequence Protection

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: 600kgs~  
 Package size: 2100\*1400\*2300 mm

## 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 Services

**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

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## LIB Industry®

LIB became a registered trademark of our company since 2017 year.

## PARTNER



## CE ROHS

CERTIFICATE OF CONFORMITY

Certificate No. : BKC-1905230246C

### Certificate of Conformity

**Applicant** : Xi'an LIB environmental simulation industry  
No.5, Zhangba First Street, Xi'an High-Tech Area, Shaanxi Province, P.R.China 710065

**Manufacturer** : Xi'an LIB environmental simulation industry  
No.5, Zhangba First Street, Xi'an High-Tech Area, Shaanxi Province, P.R.China 710065

**Trademark** : LIB

**Product** : DUST TEST CHAMBER

**MIN** : DI-1030  
DI-605, DI-1500, DI-2000, DIM-605, DIM-1030, DIM-1500.

**Test Standard** : EN ISO 12160:2010  
EN 60204-1:2006+A1:2009+AC:2010

The certificate of conformity is based on an evaluation of a sample of the above mentioned products. It does not imply an assessment of the whole production. It is possible to use CE marking to demonstrate the compliance with the MD Directive 2006/42/EC and LVD Directive 2014/35/EU. It is only valid in connection with the test report number: BKC-1905230246B.

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CERTIFICATE OF CONFORMITY

Certificate No. : BKC-1905230247C

### Certificate of Conformity

**Applicant** : Xi'an LIB environmental simulation industry  
No.5, Zhangba First Street, Xi'an High-Tech Area, Shaanxi Province, P.R.China 710065

**Manufacturer** : Xi'an LIB environmental simulation industry  
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**Trademark** : LIB

**Product** : DUST TEST CHAMBER

**MIN** : DI-1030  
DI-605, DI-1500, DI-2000, DIM-605, DIM-1030, DIM-1500.

**Test Standard** : IEC 62321-4:2013+A1:2017  
IEC 62321-6:2013  
IEC 62321-6:2015  
IEC 62321-7-1:2015  
IEC 62321-7-2:2017  
IEC 62321-8:2017

The product described above has been consolidated by us and found in compliance with the council RoHS 2.0 Directive 2011/65/EU Annex II (EU) 2015/863 as last amended by Directive (EU) 2017/2012. It is only valid in connection with the test report number: BKC-1905230247R.

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