

□ Benchtop Temperature Test Chamber



Model: T-50A T-50D

TEMPERATURE

A: -20°C ~ +150°C

B: -86°C ~ +150°C



Automobile



Material



Electronics



Aerospace



PV panels



Navigation



Commodity



Paintings



Battery



Pharmaceutical

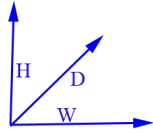


Military



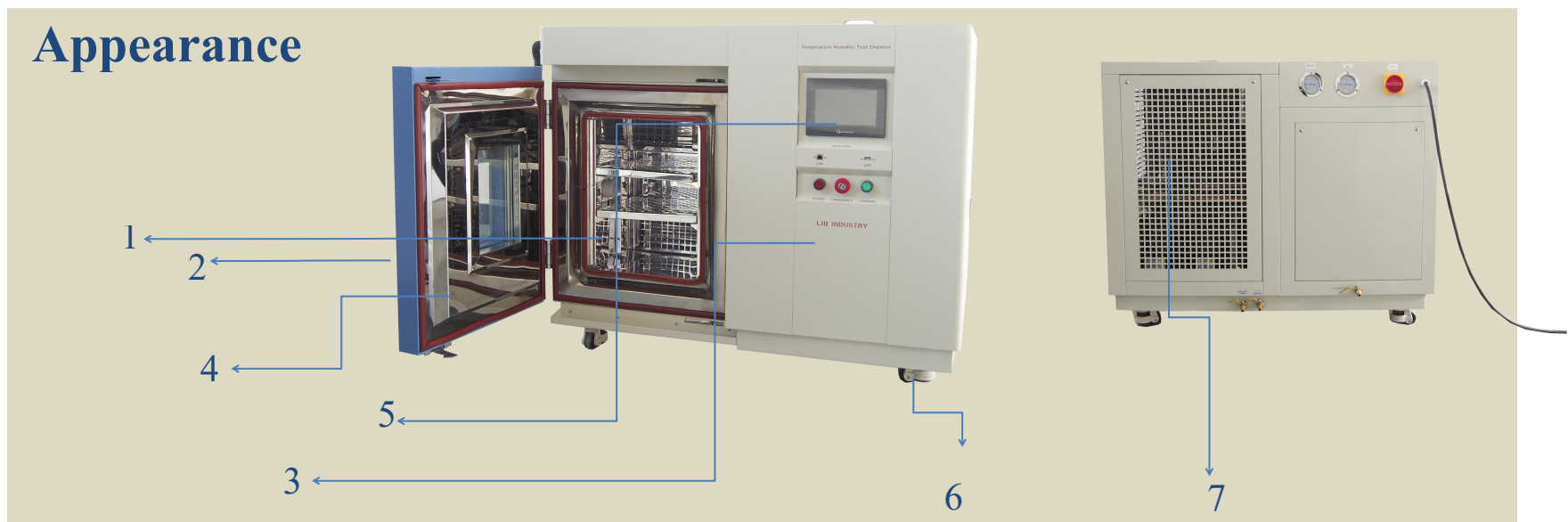
Cable

【Technical Parameter】



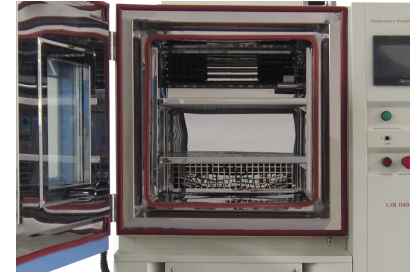
Model		T-50	
Internal Dimension (mm)		320*350*450	
Overall Dimension (mm)		800*1050*950	
Interior Volume		50L	
Heat load		1000W	
Parameter	Temperature Range	A : -20℃ ~ +150 ℃	D : -86℃ ~ +150 ℃
	Temperature Fluctuation	± 0.5 ℃	
	Temperature Deviation	± 2.0 ℃	
	Cooling Rate	1 ℃ / min	
	Heating Rate	3 ℃ / min	
Structure	Cooling	Cooling system	Mechanical compression refrigeration system
		Refrigerating unit	French TECUMSEH compressor
		Refrigerant	R449A, R508B
	Heating Element	Nichrome heater	
	Controller	Programmable color LCD touch screen controller	
		Ethernet connection, PC Link	
	Temperature Sensor	PTR Platinum Resistance PT100Ω/MV A-class, accuracy 0.001℃	
	Build-in Water Tank(mm)	150*350*180	
	View Window Size(mm)	120*150	
	Air Circulation	Centrifugal wind fan	
Safety Device	Over-temperature Protection; Over-current Protection; Refrigerant High-pressure protection; Earth leakage Protection		
Material	Exterior Material	Steel Plate with protective coating	
	Interior Material	SUS304 stainless steel	
	Thermal Insulation	Polyurethane foam and insulation cotton	
	Observation Window	Interior lighting, double-layer thermo stability silicone rubber sealing	
Standard Configuration	1 Cable hole (Φ 50,) with plug; 2 shelves		
Power Supply	230V 50Hz 1P		
Maximum Noise	65 dBA		
Environmental Conditional	5℃~+35 ℃ ≤85% RH		

Appearance



1.Workroom

- The internal material is 304 stainless steel, mirror surface,
- Rust-proof to high and low temperature and moisture corrosion;
- Nice ruggedness and long life.



2.Sample Shelf

- SUS304 stainless steel punching sample shelf 2pcs;
- Standard load of 50KGS for each layer of sample shelf;
- The height of the shelf is adjustable and can be removed directly to facilitate the various sizes of test samples.
- Conducive to the air circulation.



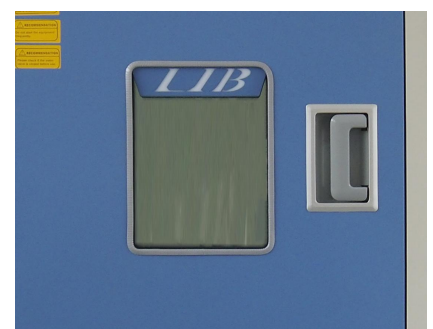
3.Cable Hole

- located at the left side of the work room, is provided with a sleeve inside to prevent moisture
- from entering the insulation layer. Equipped with flange.
- The standard inner hole diameter is 50mm.
- Soft silicone plug seal; Metal enclosure closed, beautiful designed.



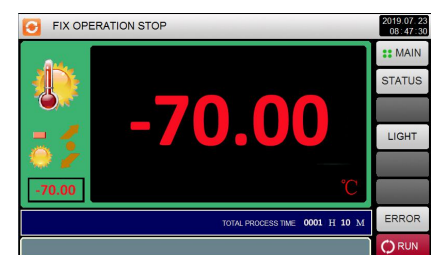
4.Viewing Window

- Double layer insulating glass 8cm thick, made of tempered glass.
- The conductive film is located on the interior glass to prevent window frosting,
- built-in LED light for the work room lighting ;can clearly observe samples.
- The light control button is located below the controller
- Manual bidirectional mother-child lock

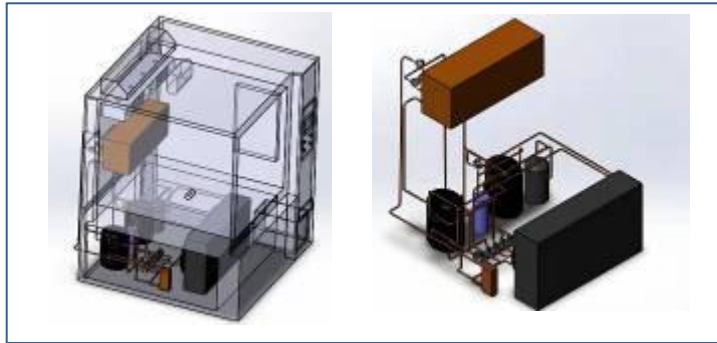


5.Controller

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

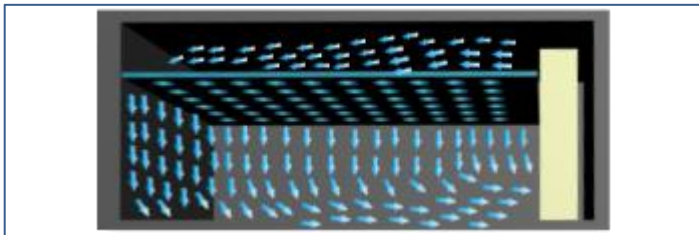


Core Function



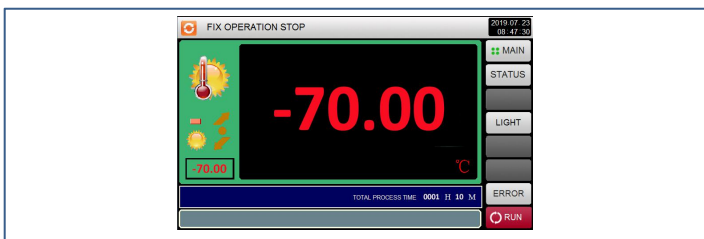
Cooling System

- ❖ The refrigerant completes a refrigeration cycle through four basic processes of evaporation, compression, condensation, and throttling in the system.
- ❖ Mechanical compression refrigeration system
- ❖ Refrigerating unit is French TECUMSEH compressor
- ❖ Environment friendly refrigerant R449A for first stage



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.



Controller System

- ❖ The PID controller as the main control unit to command, operate, detect and redistribute the various components of the equipment to achieve maximum effective use
- ❖ The temperature control adopts P.I.D. S.S.R. system synchronous coordinated control, which can improve the stability and life of the control components and interface.
- ❖ Screen display function: LCD display, which can display test conditions (including temperature section, cycle number, running time and remaining time, etc.).



Temperature Sensor

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

- | | | |
|--------------------------------|------------------------------|---|
| 1) Over Temperature Protection | 2) Over Current Protection | 5) Refrigerant High Pressure Protection |
| | 3) Earth Leakage Protection | |
| | 4) Phase Sequence Protection | |

Protection System

【Packaging】

- 1) Seal chamber with waterproof plastic film. Protect chamber from seawater corrosion.
- 2) 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
- 3) Plywood: standard wood export packaging. The wooden box is fixed by sheet metal to prevent damage during transportation.



【Shipping】

- ❖ **Material:** Export standard wooden box

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



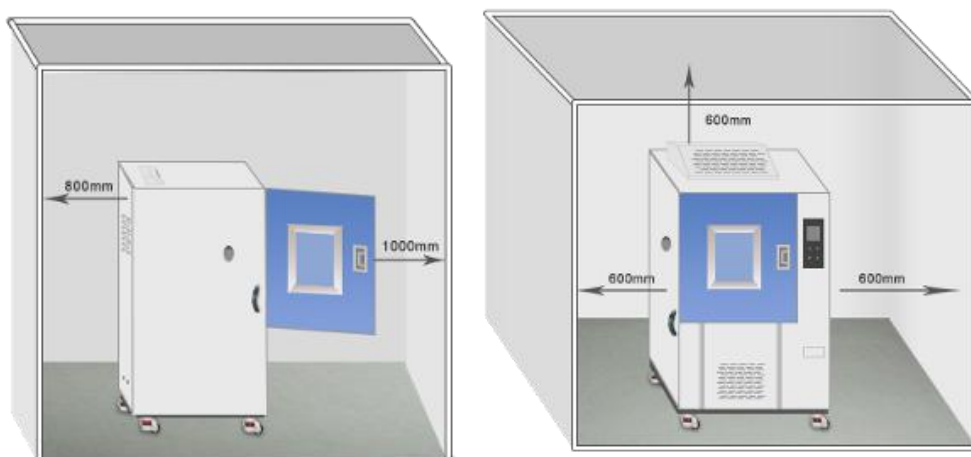
【Installation】

Environment Conditions:

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

Space Conditions:

- ❖ Chamber shall be installed on flat floor, with good ventilation
- ❖ No combustible material, explosive material or strong vibration around.
- ❖ No direct sunlight or other heat sources direct radiation.
- ❖ No strong airflow around.
- ❖ No strong electric field around



- *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

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.

[Warranty Condition]

- ❖ **Within three years warranty period** since the date of dispatching by the customer, LIB 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.
- ❖ **After the warranty period**, LIB repairs the products, and will collect the basic costs of the spare parts , but service is free always.

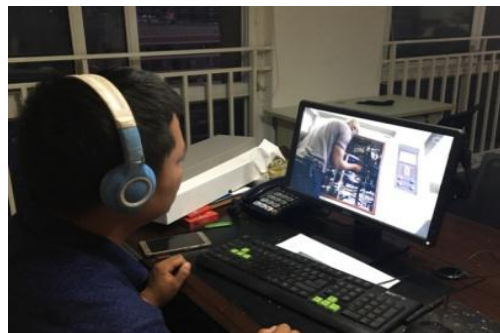
[How to Service]

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

[After Sale Service Ways]



Response within 12 hours



Online Service



Teach through Video



Engineers On-site installation, Commissioning, training



On-site repair and Maintenance



Produce a new chamber

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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PARTNER

LIB Industry®

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



CE ROHS

