

Vacc-Safe

Biomedical freezer

VS-40W301

User's Manual

Before using your product, please read this manual carefully and keep it for future reference.



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1. DECLARATION AND SAFETY TIPS

Declaration

Thank you for choosing and using this series of products. For your safe and convenient use and reasonable maintenance of this product, please read the instruction manual carefully before use and keep it in a safe place for reference.

The Company shall have no obligation or responsibility for any damage to any item caused by the user's failure to follow the "instructions for use" stated in this manual, or for any injury caused by a person's failure to follow the "safety tips".

Users must do the following three things in use:

1. Always use protective equipment correctly (including clothing, gloves, etc.);
2. Always adopt good hygiene practices and strictly follow product instructions;
3. Everyone has an obligation to take responsibility for their own safety.

Due to the continuous improvement or update of the product, the product you get may not be exactly the same as the illustration in this manual, please refer to the physical appearance of the product.

- If there are other requirements for use, please contact us for customization.
- The contents of this manual may not be reproduced or used in any form without the written permission of the Company. Copyright is reserved.
- The contents of this manual are subject to change without notice.

Safety tips

Please read this manual carefully when using this product for the first time!

The maintenance of the equipment can only be done by the Company or our authorized agents. If the operator encounters a situation not mentioned in this manual, please contact the Company or an authorized agent of our products and ask for the correct handling method.

Try to use the parts provided by the Company, if the user wants to use other parts, the Company will not be responsible for the adverse consequences. However, the user can apply to the Company to verify whether the parts meet our requirements.

The freezer must be inspected and maintained at the specified intervals. This series of products is strictly prohibited to store live animals or other items that do not match the storage temperature of this series of products.

To ensure the normal operation of the product and ventilation and heat dissipation, the back and left and right sides of the Low Temperature freezer are at least 30 centimeters away from

the wall, and the air inlet and outlet must not be blocked by obstacles.

Once the power is interrupted during use, wait 5 minutes before reconnecting to avoid damaging the compressor.

If you encounter machine failure or power failure, the temperature inside the freezer of this series of products will rise. If it cannot be repaired within a short time, please take out the stored items Page 3 / 15 and transfer them to other places that meet the temperature requirements of stored items to avoid damaging them.

For your personal safety, please wear safety gloves when accessing items with this series of products.

2. PRODUCT FEATURES, STRUCTURE AND SCOPE OF APPLICATION

Product Features

Adopt foam insulation door which is easy to use, reduce cold loss and save energy consumption.

Adopt advanced optimized refrigeration system, with good heat dissipation and fast cooling speed.

Adopt extra-thick insulation layer which can effectively reduce cold loss, save electricity and prolong service life.

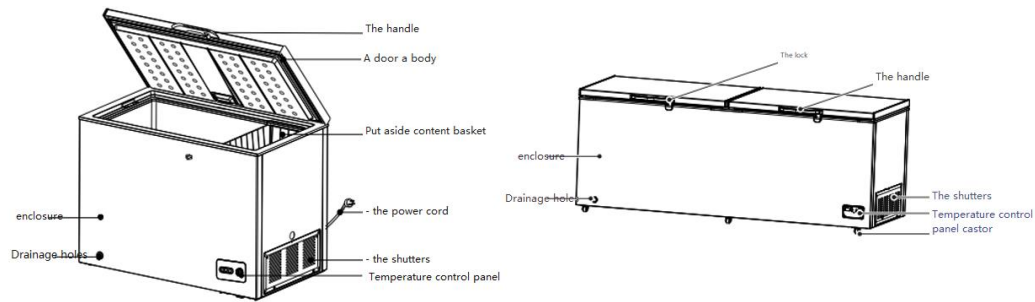
Adopt stainless steel liner and PS blister liner and wire on tube evaporator, with good refrigeration effect and easy to clean.

The freezer is designed with shelf type, so it's easy to access items at a glance.

Adopt temperature controller with micro-computer with precise temperature control to ensure more accurate and safe operation. The temperature inside the freezer is displayed in digital form which is beautiful and easy to use. So that the temperature inside the box and the working state can be viewed and adjusted without opening the door.

Adopt new type of environment-friendly low-temperature refrigerant, and the refrigeration system adopts imported parts to ensure good reliability and long service life.

Product Structure



Note: The above structure diagram is just for an explanation, the actual product shall prevail

Product Scope of Application

These products can be used for scientific research, low-temperature preservation of special ice cream and tuna and other products, as well as low-temperature experiments on special materials, etc. (It is widely used for food freezing), scientific research institutes, industrial and mining enterprises, biological engineering research, electronic chemicals, ocean-going fisheries and other industries.

3. PRODUCT INSTALLATION AND PRECAUTIONS

Product installation

The product is used with the casters adjusted in place and placed on a level ground.

Handling: It shall be done from the bottom when lifting, the angle of the inclined surface shall not be larger than 45 degrees, lightly moving and gently placing.

Do not grasp the door body, door lock or handle as a force-bearing part.

Remove all packaging components (including the protective foam inside the freezer).

Inventory random accessories and information according to the packing list.

The product shall be cleaned once before use.

On a flat surface, this series can be moved by pushing directly.

Environment requirements for using products:

- a) Indoor use with good ventilation;
- b) The surface on which the freezer is installed must be fixed, horizontal, non-combustible

and able to withstand the weight of this series of products in operation.

c) Placed in a place not exposed to direct sunlight and away from heat sources, at an ambient temperature of not more than 32°C.

d) Require this series of products to be surrounded by a space of more than 30 cm to facilitate ventilation and heat dissipation.

e) Must not be placed in an environment that is too cold to freeze;

f) Must not be placed in humid or splash-prone areas;

g) No electromagnetic interference in the surrounding area, which will affect the normal operation of the control system and will directly damage the system in serious cases; Normal operating conditions for this series of products:

a) Ambient temperature: 16°C ~ 32°C;

b) Voltage range: 198V-264V;

c) Relative humidity: ≤ 80% RH;

d) No strong vibration and corrosive gases in the surrounding area;

e) Free from direct sunlight and other sources of heat and cold;

f) Altitudes below 2000 meters;

g) Overvoltage category II;

h) Pollution level (2)

The working system of this series of products: continuous working

WARNING: The packaging base at the bottom of this series of products must be removed before use.

WARNING: When moving this series of products, take care that the bottom foot does not touch the power cord.

WARNING: The bottom front wheel brake of this series of products need to be locked after moving to the designated position.

WARNING: This series of products need to be left to stand for 12 hours before initial power up.

WARNING: When this series of products are just connected to the power supply, do not immediately put the items in to it. After running for a period of time, when the temperature inside the freezer drops to the set temperature, then put the items in batches.

Note: A single batch of items put into the freezer can not exceed 1/4 of the volume.

WARNING: Keep all ventilation openings in the enclosure or, in the structure for building-in, clear of obstruction.

WARNING: Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

WARNING: Do not damage the refrigerant circuit.

For equipment that use flammable insulation blowing gases, the instructions shall include information regarding disposal of the equipment.

Refrigerant and cyclopentane foaming material used for the appliance are flammable. Therefore, when the appliance is scrapped, it shall be kept away from any fire source and be recovered by a special recovering company with corresponding a qualification other than being disposed of by combustion, so as to prevent damage to the

environment or any other harm.



The product with the symbol reads "warning terms";



The product with this symbol reads "prevent fire, stay away from fire sources".

CYCLOPENTANE

The product with this symbol reads "cyclopentane blowing"

Safety precautions:

Power supply voltage: This series of products use 220V-240V/50Hz AC power supply, if the use of voltage lower than 198V or higher than 264V, need to add a suitable automatic voltage regulator with the use.

Use of this series of products requires a low-voltage air circuit breaker and earth leakage protection device for the power supply.

A special power socket must be used and reliable grounding must be carried out, and the length of the power line must not be arbitrarily extended. If extensions are required, copper-core conductors with a cross-sectional area of 2.5mm² or more must be used, and copper-core conductors in the wall connected to the power socket must also have a cross-sectional area of 4mm² or more.

This series of products are strictly prohibited to put into flammable, explosive dangerous goods and strong corrosive acid, alkali and other items;

The keys of this series of products need to be properly stored to avoid accidents when children get them and open the door to play;

Do not connect the zero wire (N terminal) and the ground wire (E terminal) of the power socket together, otherwise it can cause the shell of this series of products to be charged and an electric shock accident can occur; The power cord cannot be bundled and used, cannot be pressed under heavy objects, and cannot be close to heat sources such as compressors.

4. START TEST MACHINE

Plug the power plug into the power socket, and the power indicator lights up. In order to ensure the normal operation of the low-temperature freezer, please use a 10A 3-hole socket and above.

After the power on for 3 minutes, the system will automatically start the compressor and enter the refrigeration cycle mode.

After being electrified for a period of time, the temperature in the freezer drops obviously, indicating that the refrigeration system works normally.

5. CONTROLLER FUNCTION AND BASIC OPERATION



Temperature Setting

- The temperature range is -10~ -40°C
- Press 'SET' for more than 1 second, the screen will show the last set temperature
- Adjust ▲ or ▼ to set the temperature as needed
- Press 'SET' for over 3 second to save the set and exit the temperature setting

Remark: the default temperature is -25°C

High /Low Temperature Alarm

- Alarming methods (sound buzzing alarming, light flashing alarming)
- The High temperature alarm will be triggered once the inner temperature is over -5°C
- The Low temperature alarm will be triggered once the inner temperature is lower-30°C
- Press any key the alarm will stop

If you have special requirement on the High/ Low Temperature Alarm, please contact the after-service.

Sensor Failure alarm

- Alarming methods (sound buzzing alarming, light flashing alarming)
- Press any key the alarm will stop

Power Failure alarm

- Alarming methods (sound buzzing alarming)
- When the mains power off, power failure will be triggered

Controller Discharge

- The controller is equipped with battery , it will keep display the inner temperature for 48 hours when there is power off
- Press 'Fn' for 5 seconds , the controller will be discharged

Temperature Export

Insert USB disk to the USB port, the screen show 'UP' and automatically start upload the history temperature recorder into USB, when the screen show 'ED', it finish upload.

Remark: the USB should be FAT32 type, otherwise temperature export will be impacted.

Recording interval:



1~200minutes can be set (default 6 minutes)



Date saving path :\\USB_DATA\\YEAR*.csv ("*" mean month);



DATA FORM:

Date	Time	Temp
20150202	15:16	20.3

Set the storage module time

Press button  and  for 3 seconds at the same time, can view and set the storage module time.

During normal operation, press button  and  for 3 seconds at the same time, the display will show "t0" (year), then can view and set the storage module time.

Press button  or  to rollover the time code, will see t0(year), t1(month), t2(day), t3(hour), t4(minute)


After choose time code, press button , digital tube displays the current system time.

Press button  or  to adjust the time.

press , return to time code display, time saved automatically.

If need to adjust other time, repeat step 2 to 5.

After modification, press button  for 3 seconds, exit the setting mode.

Attn: If no button is pressed within 10 seconds, will exit the setting mode automatically. And time modification will be invalid if the  key is not pressed.

6. STORAGE NOTES

Start the freezer with nothing in it before storing items. After entering a stable operation state (Best to run empty freezer for more than 4 hours), refrigerated items shall be put into the freezer after the freezer is fully cooled.

The items or other products put in the freezer at one time shall not be overcrowded.

Appropriate gaps shall be ensured to facilitate the circulation of cool air in it.

The low-temperature freezer refrigeration system is used to maintain a low temperature rather than a quick-freezing device. If a large capacity (high water content substance) is to be stored, it shall be stored after pre-cooling in other quick-freezing devices, so as to avoid the long-term operation of refrigeration system without stopping.

When the initial storage capacity is large, the temperature shall be gradually reduced.

Reduce the temperature by 10°C in each step, and keep that temperature for 1-2 hours until it reaches the stored temperature. Keep away from the metal edge when storing plastic bag products, so as not to scratch the plastic bag.

7. MAINTENANCE

Maintenance frequency: To maintain the product, the power supply shall be cut off first.

In order to keep the product in the best working condition, it is recommended to carry out a maintenance process every 6 months.

Freezer cleaning: Use non-corrosive neutral cleaner shall be used to clean the inner and outer surfaces of the low-temperature freezer. After cleaning, dry it with a dry cloth.

Attention: Do not use water to wash the inner and outer surfaces to avoid affecting the electrical insulating performance. Do not use boiled water, cleanser, acid, alkali, gasoline, alcohol, benzene, caustic cleaners and bristle brush to clean freezer.

Use a soft brush or vacuum cleaner to remove dust from the condenser frequently to maintain good condensation effect.

Rub a little talcum powder on the door seal often can prolong the service life of the sealing strip.

When the low-temperature freezer runs for a long time, it is easy to accumulate frost at the door seal, cabinet mouth and inner side wall of the freezer. Excessive frost layer will affect the sealing performance and refrigeration performance. Please defrost regularly with a defroster and wipe it clean with a dry cloth.

Use the non-corrosive neutral cleaner to clean the inner and outer surfaces of the low temperature freezer. After cleaning, dry it with a dry cloth.

Machine shutdown: When the freezer is stopped, unplug the power plug and clean it according to the above methods. After the natural drying process, cover it with plastic bags and place it in a ventilated and clean place.

8. NON-FAULT SIGNS

The sound of flowing water: This is the sound of refrigerant flowing in the pipeline.

Compressor gets too hot: When the compressor works, its surface temperature can reach 70 °C ~ 90 °C.

When the low-temperature freezer works, both sides of the freezer (near the door) can be slightly hot, which is due to the anti-exposure pipe.

Condensation on the door seal: In rainy and humid seasons or environments with high humidity, condensation may appear on the outer surface of the freezer and the edge of the door seal. Only need to dry it.

The temperature sometimes rises above the set value within the temperature control range: This is because the system defrosts regularly and automatically recovers after defrosting.

9. TROUBLE SHOOTING AND MAINTENANCE SERVICE

Alarm Code Display

Alarm Code	Error description
E0	Sensor failure
Lo	Chamber Low temperature
Hi	Chamber high temperature

Trouble shooting:

Some failures may also be caused by improper use. Before entrusting repair, please check by yourself according to the following table:

Problem	Cause
The freezer does not work	Is the power plug charged? Is it plugged in or loose? Is the supply voltage too low or too high?
The compressor does not work	Is the temperature setting correctly?
The temperature continues to drop after reaching the setting value	Is the temperature setting correctly?
The compressor does not work and refrigerate	Is the compressor broken? Are the controller and control circuits damaged?
The temperature does not reach the setting value	Is the door not closed tightly or opened too many times in a short time? Are there too many items in at one time and are the items too hot? Is the ambient temperature too high?
Excessive noise	Does the freezer touch walls or other obstacles?

If you can't judge the cause of the fault, or not able to solve it, please contact the after-sale department of the Company according to the warranty certificate (attached) and tell us your name, address, telephone number, model numbers of this series of products, purchasing date, fault signs, etc. Our professional engineers will be at your service.

Declaration:

1. The after-sales service personnel of the Company will deal with the problem within 24 hours from the time when the user reports repair;
2. In the case of normal over-temperature alarm function of this series of products, the Company will not compensate for the loss caused by the user's failure to transfer the stored items in time;
3. The Company will compensate for the damage of the stored items in the freezer caused by the abnormal over-temperature alarm function of this series of products, but the amount of

compensation will not exceed the price of the equipment when purchasing it.

10. MODEL NUMBER AND MAIN TECHNICAL PARAMETERS

Technical parameter table of low-temperature freezer

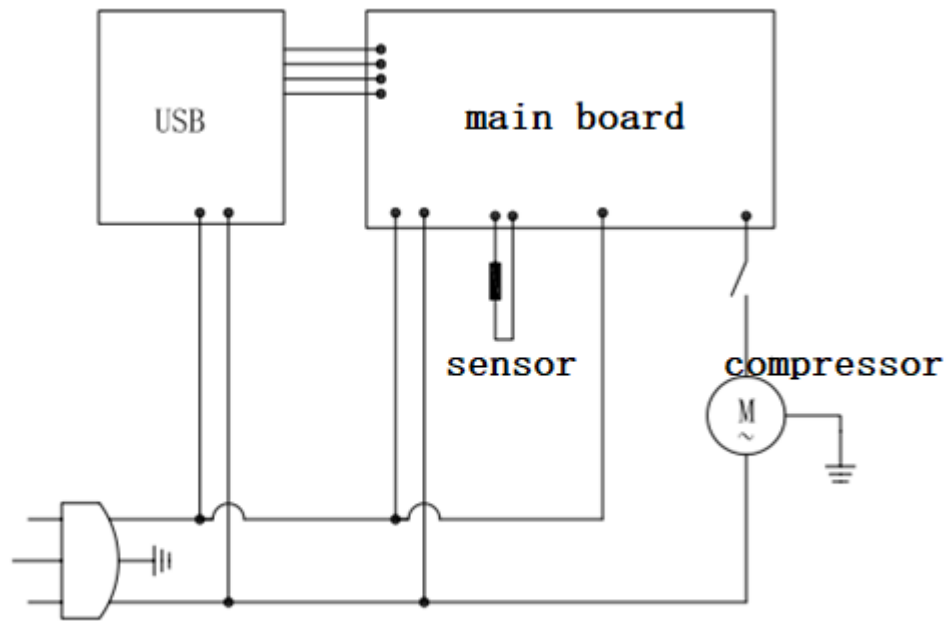
Parameter Model number	Effective volume (L)	Storage temperature (°C)	Rated power (~V/Hz)	Input power (W)	Power consumption (kW-h/24h)	Electric shockproof protection	Alarm mode	Product dimensions W*D*H	Product net weight (kg)
VS-25W198	198	-10 ~ -25	220-240/50	250	1.5	I	Sound light alarm	945*523*850	32
VS-25W288	288	-10 ~ -25	220-240/50	250	1.5	I	Sound light alarm	1115*670*850	47
VS-25W368	368	-10 ~ -25	220-240/50	350	1.8	I	Sound light alarm	1255*745*853	56
VS-25W568	568	-10 ~ -25	220-240/50	400	2	I	Sound light alarm	1870*745*805	75
VS-40W301	301	-20 ~ -40	220-240/50	450	2	I	Sound light alarm	1285*696*850	48

For models with USB data storage function, USB connection mode is USB2.0 and output voltage is 5V. [Note: The technical parameters in this table are measured under the standard state. If there is any change, please refer to the nameplate.]

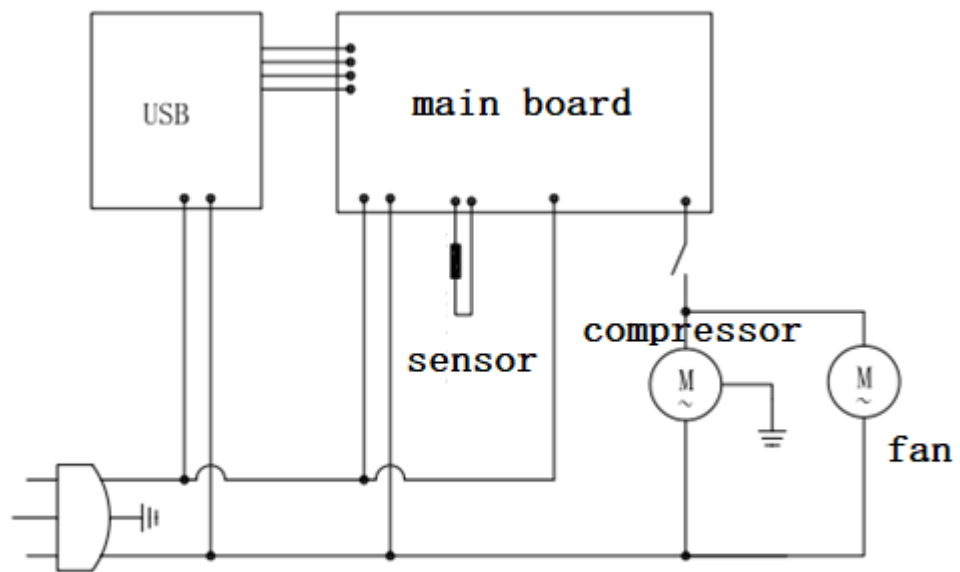
11. PACKING LIST AND ELECTRICAL SCHEMATIC DIAGRAM

Model	Instruction	Key	Defroster	
VS-25W198	One	Two	One	
VS-25W288	One	Two	One	
VS-25W368	One	Two	One	
VS-25W568	One	Two	One	
VS-40W301	One	Two	One	

Electrical schematic diagram:



MD-25W368 MD-25W288 MD-25W198



MD-25W568 MD-40W301