

Blast Freezer User Manual



Model: BF210



Model: BF310

The introduction

Thank you for choosing our BF series blast Freezers, and the BF series of blast Freezers are our latest developed products, with good appearance, excellent performance, the product passed the strict safety testing and performance testing, please feel free to use. And we believe that it will bring you a great user experience.

Disclaimer

Please read this instruction manual carefully before use. This instruction manual contains all safety instructions related to the machine and aims to provide information required for proper installation, operation and maintenance for qualified

personnel. Please operate the machine in strict accordance with the relevant instructions in the manual. Our company will not be responsible for any consequences caused by failure to follow the operation instructions.

Application

Quick-freeze is a method of cooling food quickly to prevent bacteria from growing. Bacteria grew fastest between 8°C (46°F) and 68°C (154°F). Therefore, rapid cooling of cooked food, from 90°C (158°F) to 3°C (37°F) within 90 minutes, will make food storage and subsequent consumption safer. This method of food preservation is common in the catering industry. Recently, due to its characteristics of ensuring food safety and quality, it has been popularized in ready-to-eat food.

At present, it mainly appears in small and medium-sized catering operators, bars, restaurants, small hotels, nursing centers and schools.

Catalogue

| | |
|--|----|
| Important safety instructions | 1 |
| Installation, transportation and handling, storage, demolition | 5 |
| Packing and shipping | 5 |
| Stacking limit | 6 |
| Unpacking..... | 7 |
| Installation | 7 |
| Storage..... | 8 |
| Demolition | 8 |
| Function Description..... | 9 |
| Quick cooling program | 9 |
| Quick freezing program | 9 |
| Save program | 10 |
| Food storage | 10 |

| | |
|--------------------------------------|-----------|
| Control panel and functions | 12 |
| Technical Parameters..... | 24 |
| Maintenance | 25 |
| Safety..... | 25 |
| Cleaning | 26 |
| Special maintenance | 27 |
| Periodic inspection..... | 28 |
| Fault code and troubleshooting | 29 |
| Machine fault code | 29 |
| Troubleshooting..... | 32 |
| Warranty and service | 35 |
| Acknowledgement | 37 |

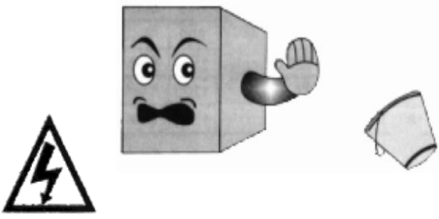
Important safety instructions

- Before connecting the power to the machine, make sure the voltage and frequency are consistent with those on the rating label.
- Be sure to connect the machine to a suitable high sensitivity leakage switch (30mA)
- The socket must meet the requirements of current national laws and regulations, and the safety laws and regulations require the grounding of the machine mandatorily. To protect the machine from electrical overload or short circuit, the power supply is connected through a differential leakage switch with manual reset and high sensitivity
- Be sure to disconnect the power supply before performing any cleaning or maintenance

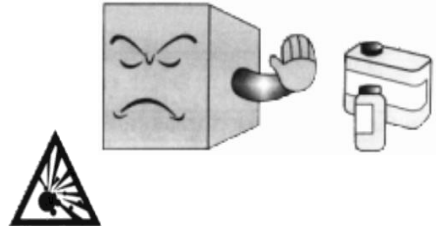
- Wear gloves for maintenance of the motor and the refrigeration system located within the machine
- Do not insert a screwdriver or other device into the protective fence (e.g. heat exchange vent, evaporator, etc.)
- Do not touch electric parts with wet hands or bare feet
- Do not block the heat exchange port of compressor or evaporator to ensure good operation of the machine
- Only can be operated by properly trained people
- Installation, routine and special maintenance (e.g. cleaning and maintenance of cleaning systems) shall be performed only by authorized technicians who are professionally trained and have a good knowledge of refrigeration and electrical systems.
- This device is not suitable for use by persons (including children) with physical, sensory or intellectual decline or

lack of experience and knowledge

- Children should be supervised to make sure they don't play around machines
- If the machine power supply device fails, be sure to ask the identified professionals of manufacturer to replace, so as to avoid safety accidents
- It is absolutely forbidden to modify or remove the safety devices provided (protective grilles, hazard labels, etc.).
The manufacturer shall not be responsible for the consequences caused by the violation of this instruction
- In the event of a fire, do not water the fire. Use a carbon dioxide fire extinguisher to cool the motor room as soon as possible



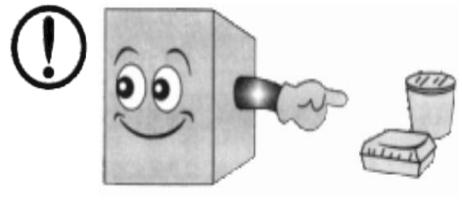
warning electric shock



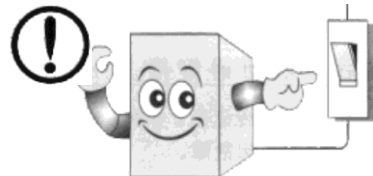
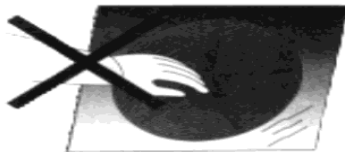
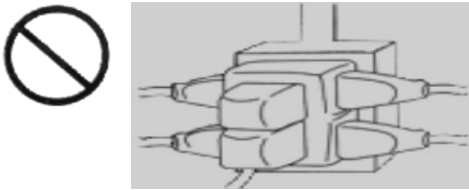
Caution burst



Prohibit



No touching



Caution whirlabout

Installation, Transportation, Storage and Demolition

The packing and shipping

- Packed in wooden cases, the machine should be transported with appropriate equipment, do not move manually
- When using a lifting system, such as forklifts or pallets, pay special attention to balance and prevent tipping
- Normally, the machine should be fixed on wooden pallets to ensure safety during transportation and storage

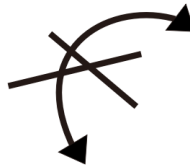
- A warning symbol shall be printed on the package to remind the instructions to be followed and ensure that the machine will not be damaged during loading, unloading and transportation.



fragile



upward



Do not turn



Stay dry

Stacking limit

- When storing or handling machines, the maximum stacking quantity shall be two machines, unless otherwise specified on the appropriate sticker.
- As the center of gravity of the machine is not consistent with the geometric center, take care not to tilt during handling

unpacking

- Due to the packing of wooden cases, please use tools for operation during the unpacking. After the unpacking, if any damage is found, please inform the carrier immediately.

Installation

- Do not push or pull the machine during handling to avoid capsizing or damage to parts
- Do not lean the machine against the door
- The machine should be placed in a well-ventilated place, and away from heat sources, away from explosive objects
- The installation plane shall be flat
- Comply with minimum clearance requirements ($\geq 100\text{mm}$) to ensure good operating performance,

ventilation and maintainability

- Before connecting the power to the machine, make sure the voltage and frequency are consistent with those on the rating label. To allow normal voltage variations of +/-10%, the machine should be connected to a valid ground connection.

storage

- Turn off the power and unplug the machine
- Empty the refrigerated bin and clean it carefully
- Keep the door slightly open to ensure ventilation and avoid mildew or odors

demolition

Temporary storage of special wastes may be permitted before disposal or final disposal

In all cases, the applicable environmental laws of the user's country must be complied with

Functional specifications

Rapid cooling process

This program can quickly reduce the temperature of cooked food (from +90°C to +3°C in 90 minutes) to avoid being in the critical range of +8°C to +68°C, thus preventing spoilage.

Quick-cooled cooked food can be stored in refrigerator at +3°C for up to five days

Quick-frozen program

Quick-freeze (reduced from +90°C to -18°C in 240 minutes) prevents the formation of ice crystals in foods, thereby reducing loss of juice and vitamin.

This procedure applies to cooked and raw foods. Frozen cooked and raw foods can be stored at -18°C for up to 2 months and 12 months respectively.

Save program

At the end of each quick-cooling or quick-freezing program, the machine will automatically enter the preservation program, and keep the food center temperature unchanged after the quick-freezing and quick-cooling program. In this program phase, the machine will be used as an ordinary refrigerator, but it is not recommended to store for a long time.

Food storage

For optimal performance, food storage should follow the following instructions:

Save program stage

- Do not place hot food or uncovered liquids in the machine

- Wrap or protect foods, especially if they contain aroma
- Arrange your food properly so that it doesn't block air flow. Avoid placing food on paper trays, cardboard, or wooden boards, which may hinder air flow
- Try to avoid frequent or prolonged door opening

Quick-cooling or quick-freezing process stage

- Do not open the door from the beginning to the end of the program
- In order to achieve faster and better quick-cooling and quick-freezing efficiency of food and better low-temperature sterilization effect of the machine, please start the machine at the lowest temperature and run it for 20 minutes before quick-cooling and quick-freezing food.
- Keep food open, do not cover or wrap the food in film or place food in a closed container

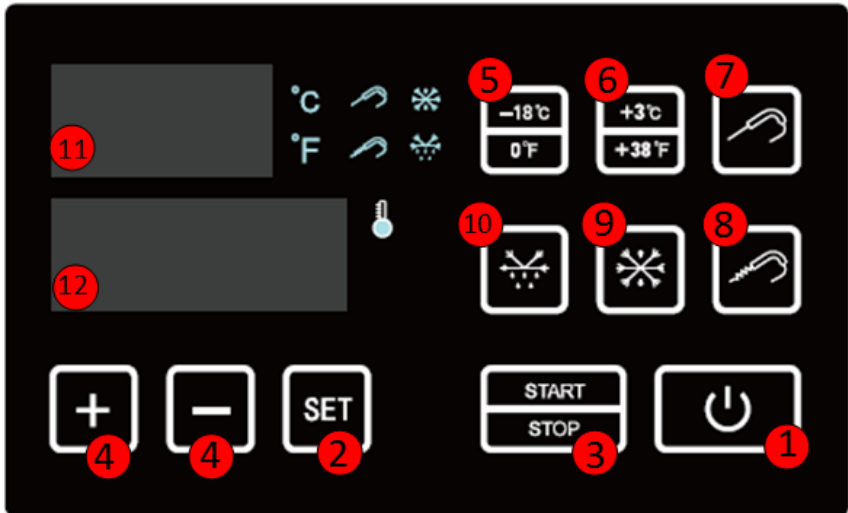
- Do not use trays or containers deeper than 65mm
- Do not stack food, and the thickness of the food should be less than 40mm.
- Use aluminum or stainless steel containers without a lid

Control panel and functions

BF100



BF200/BF210/BF300/BF310



1. (🔌) Power button

-- --When the power is connected, the machine is in standby

mode. In the standby mode, press the Power key to enter the work preparation mode. At this time, the temperature displays the current temperature in the cabinet, and the time displays the time value set last time.

-- -- When the machine is in the work preparation mode or during the work, press the Power button and the machine returns to the standby mode.

2. The Set key

-- -- Under preparation mode, press the SET button to switch temperature, time (hour or minutes) setting. When the temperature flashes, set the temperature by "+" and "-", the range can be set :- 30 °C ~ +25 °C (-22 °F ~ +77 °F); When the digits of the hours and minutes flash, set hour and minutes by "+" and "-", the range can be: 00:10 ~ 99:59. Press the SET button to back after all setting are done.

** It will exit automatically if no other setting is taken after you press SET. Temperature will be the room temperature or the food sensor temperature in the display.

-- --In the work preparation mode, the temperature unit (°C and °F) can be switched by pressing and holding the SET button and the “-” button for three seconds while the temperature value and time value are not set.

-- --While the machine is working, press and hold the SET button to view the set temperature and time.

3. $\begin{matrix} \text{START} \\ \hline \text{STOP} \end{matrix}$ Start/stop button

-- --After setting the required temperature and time, press the START/STOP button, the machine starts to work, the cooling indicator lights up, and the time starts counting down.

-- --Pressing the START/STOP button during work stops the

machine and the temperature indicates the temperature inside the cabinet (if the food probe button is pressed, the food probe temperature is displayed).

****** (1) Considering the problem of the internal pressure of the compressor, in order to protect the life of the compressor, the compressor should not be started frequently in a short time, so the cooling equipment should be delayed for a few minutes after the machine is restarted, that is, delayed start, press the START/STOP button. After 2 minutes, the compressor starts, and after another 2 minutes, the evaporator fan starts.

(2) In the soft quick freezing mode, when the START/STOP button is pressed to start, if the temperature inside the cabinet is less than or equal to the set temperature, the compressor will not start until the temperature in the cabinet is greater than or equal to the set temperature, and the compressor will

start.

(3) In the hard quick freezing mode, when the START/STOP button is pressed to start, if the food probe temperature is less than or equal to the set temperature, the compressor will not start until the food probe temperature is greater than or equal to the set temperature, and the compressor will start. **

4. (+-) Adjust button

-- -- Use the SET button to choose the content, and adjust the temperature and time by "+" and "-" button.

5. ($\frac{-18^{\circ}\text{C}}{0^{\circ}\text{F}}$) Quick freeze shortcut keys (except BF100)

-- -- Press this shortcut key, the temperature has been set to -18 °C / 0 °F, the time is 04:00; then press the START / STOP

button, the machine starts to work with the set target temperature and time.

6. ($\frac{+3^{\circ}\text{C}}{+38^{\circ}\text{F}}$) **Quick cold shortcut keys(except BF100)**

-- --Press this shortcut key, the temperature has been set to +3 °C / +38 °F, the time is 01:30, then press the START / STOP button, the machine starts to work with the set target temperature and time.

7. () **Food probe keys**

-- --Insert the food probe into the inside of the food and press the key. The probe icon will light up and the temperature digital tube shows the temperature of the food probe. Then press the key to switch back to the temperature

inside the cabinet.

8. **Heat probe for food (except BF100)**

-- --When the food probe needs to be pulled out from the frozen food, press the button, the food probe heating icon is illuminated, the probe heating function is performed, the temperature indicates the temperature of the food probe, and when the food probe heating icon is off, The probe is heated and the food probe can be removed from the food.

BF100 food probe extraction method: After the quick freezing process is completed, the food probe can be twisted by a slight rotation, and then pulled out

Food probe use precautions

(1) The tip portion (A) of the food probe is a temperature

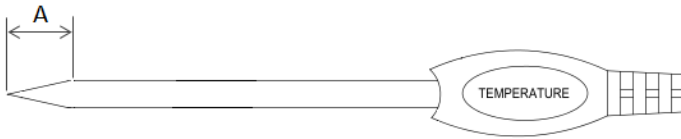
sensor. When inserted into the food, the tip portion cannot be leaked out, otherwise the temperature of the hard freeze monitoring is not accurate;

(2) The food probe heating function is only used when the probe needs to be pulled out from the food. It is recommended to operate after the set program is completed. If you need to operate in the middle, please press the START/STOP button to stop the machine and then execute the food. Probe heating function; (except BF100)

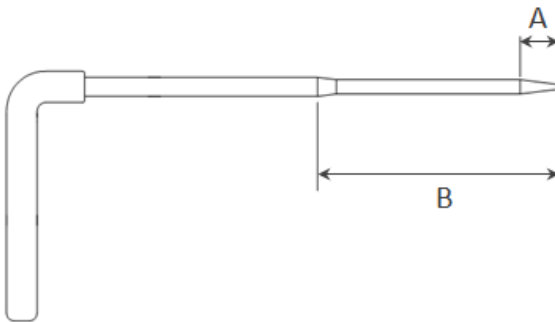
(3) After the probe is pulled out of the food, the residual temperature of the probe will rise. In this case, please do not touch the heating section (B) of the food probe to avoid hotening; (except BF100)

(4) Pull out the food sensor is prohibited in any situation.

Food probe schematic (BF100) :



Food probe schematic (BF200/BF210/BF300/BF310) :



9. () **Hard frozen Button**

-- --Press this button, the hard quick freeze indicator lights, and the machine runs at the target temperature of the food probe, which is hard frozen. Without pressing this button, the machine runs at the target temperature of the cabinet, which is soft frozen.

**To use the hard freeze mode, make sure the food probe is inserted into the food and press the hard freeze button before pressing the START/STOP button. Otherwise, you need to stop the machine work first, press the hard freeze button and start the machine. **

10.  **Defrost button (except BF100)**

-- --Press this button, the defrost indicator lights, the machine performs the defrost function, when the defrost is completed, the defrost indicator is off. During the cooling process, the program automatically defrosts every 6 hours by default.

11. Temperature digital tube

-- --Display the current temperature inside the cabinet after

power on

-- --Display the actual temperature value inside the cabinet or probe during the working process

12. Time digital tube

-- --Display the last set time value after starting

-- --Show the remaining working time during the working process

Temperature return difference function

During the cooling process, when the temperature reaches the set value, the compressor stops working. The compressor will not restart until two minutes have elapsed and the temperature is greater than or equal to the set temperature of 3 °C (5 °F).

Technical parameters

| model | BF100 | BF200/210 | BF300/310 |
|----------------|-----------|-----------|-----------|
| voltage, power | 110~120V~ | 110~120V~ | 110~120V~ |

| | 60Hz, 210W | 60Hz, 280W | 60Hz, 250W |
|--|----------------------------|---|---|
| | 220~240V~ 50Hz, 285W | 220~240V~ 50Hz, 550W | 220~240V~ 50Hz, 550W |
| rapid cooling capacity (food centre temperature) +90°Cto+3°C in 90mins | 4kg | 7kg | 14kg |
| quick-frozen ability (food centre temperature) +90°Cto-18°C in 240mins | 3kg | 4kg | 12kg |
| foaming agent | C5H10 | C5H10 | C5H10 |
| refrigerant | R290 | R290 | R290 |
| copies | 2 × GN1/2 (325 × 265mm) | 3 × GN1/2 (325 × 265mm) × 40~65mm) 3 × GN2/3 (355 × 325mm × 40~65mm) | 3~5 × GN1/1 (530 × 325mm × 40~65mm)、3~5 (600*400 Oven tray) |
| Overall size W×D×H mm | 450 × 507 × 647 | 630 × 585 × 475 | 750 × 730 × 842 |
| Cavity Size W×D×H mm | 335 × 300 × 200 | 330 × 380 × 235 | 624 × 410 × 375 |
| NW. (Kg) | 32 | 39 | 66 |

The Maintenance

This section is applicable to routine maintenance by

properly trained personnel. Special maintenance and program related contents shall be performed by authorized professionals.

- In order to ensure the stability of the whole machine, cleaning and maintenance must be carried out.
- The refrigeration system (condenser) must be cleaned by a professional.
- The drain hole should be cleaned regularly to avoid being blocked. Be sure to cover the drain hole plug when cleaning.

Safety

It is necessary to turn off the machine power before performing any cleaning and maintenance.

- For daily maintenance, it is forbidden to remove the

protective/safety device (grid and sticker, etc.)

Machine cleaning

Before the initial cleaning operation, clean the interior and accessories with a small amount of water and a mild soap to remove the characteristic "new" odor. Properly arrange all the accessories in the cabinet.

- Use a damp cotton cloth to carefully clean the outer surface of the machine as described below
- Use a neutral detergent, do not use chlorine or abrasive cleaners to avoid the formation of dirt residues
- Do not use utensils that may cause scratches and rust, use water to rinse and dry carefully
- If hard residue occurs, use soap and water or a neutral detergent, if necessary, use a wooden or plastic scraper

- Rinse with a little water and dry thoroughly after cleaning
- Do not sprinkle water directly onto the machine because water can seep into the electrical components, affecting their normal function.
- Clean the lower part of the machine and adjacent areas daily with soap, water, and non-toxic chlorine-free cleaners
- If the food probe is black, it can be washed with lemonade.

Special maintenance (only performed by professionals)

- Clean the condenser regularly
- Check door seal strip to ensure good seal
- Check electrical system is working properly

- Check the surrounding heating elements (using amps)
- To repair or replace parts, provide the serial number of the machine

Regular inspection

- Check that the plug is correctly plugged into the power socket
- Check if it is affected by heat source
- Check if the machine is placed horizontally
- Check if the door seal is sealed
- Check if the heat exchange tuyere is blocked
- Check if the condenser air filter is full of dust. If found, clean the air filter immediately.

Fault code and troubleshooting

Machine fault code: HI, LO, E01 (except BF100)

HI: cabinet temperature probe high temperature alarm, cabinet temperature high temperature alarm temperature set to 45°C/113°F.

Press the START/STOP button to start the cooling. After 2 hours, check the temperature inside the cabinet. If the cabinet temperature is greater than or equal to the high temperature alarm temperature of 45 °C / 113 °F, the temperature display column alternately displays the cabinet temperature and HI until the temperature is lower than the alarm temperature. At this time, check whether the door of the machine is closed, or stop the machine to check whether the temperature probe or compressor is faulty.

LO: The cabinet temperature probe is low temperature alarm, and the cabinet temperature low temperature alarm temperature is set to -45 °C / -49 °F.

Press START/STOP to START the refrigeration, and test the temperature inside the cabinet 2 hours later. If the temperature of the cabinet is less than or equal to the low temperature alarm temperature of $-45^{\circ}\text{C}/-49^{\circ}\text{F}$, the temperature display bar will alternately display the temperature of the cabinet and LO until the temperature is higher than the alarm temperature. At this time to stop the cabinet temperature probe and other devices to check whether there is a fault.

Communication failure code E01 (except BF100) : if the motherboard and panel cannot communicate normally, the panel displays E01. At this time to power off and restart the machine or check the connection between the motherboard and the panel cable is connected to the right.

Restore factory value parameters: **In the work preparation**

mode, press the "+" and "-" keys simultaneously for 3 seconds,

the temperature bar will display "rS", and then automatically

shut down. Press the Power button to start the machine, and

the machine parameters will be restored to factory Settings.

The factory value parameter is: temperature unit: °C; Set the

temperature value: -18°C; Setting time: 4:00.

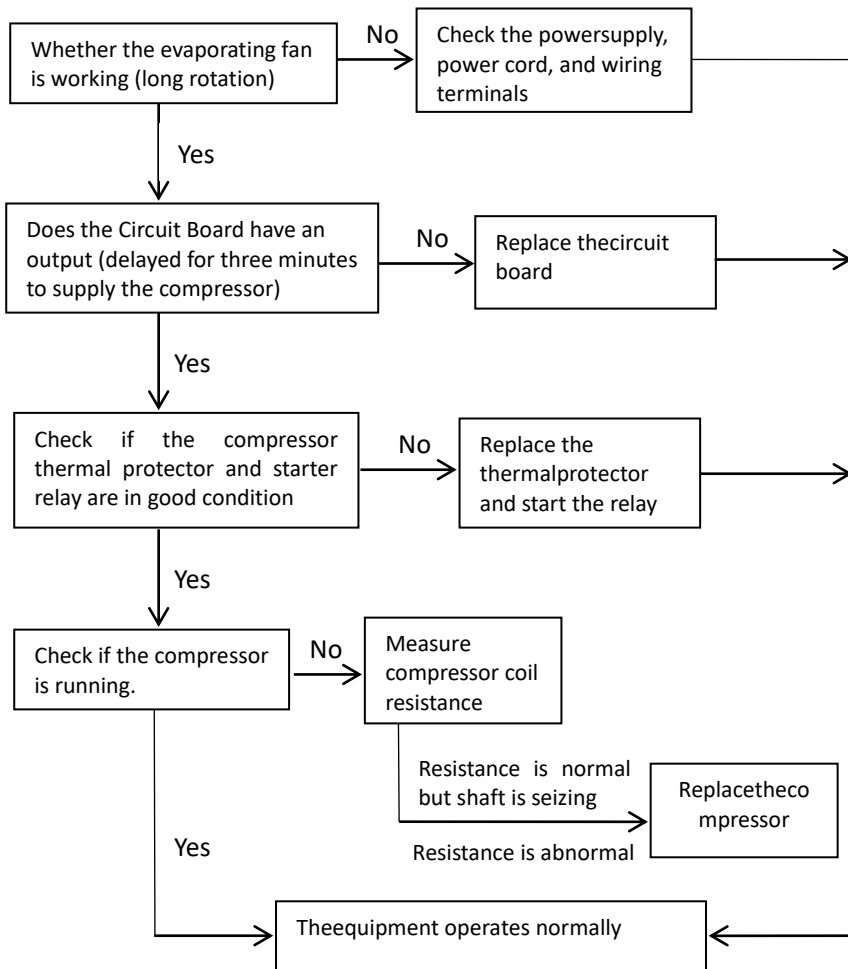
If there is no mention of the fault, do not disassemble the

machine at will. Please contact our authorized professionals

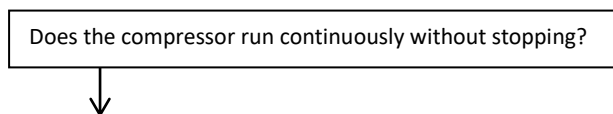
for related testing and maintenance to avoid safety failure.

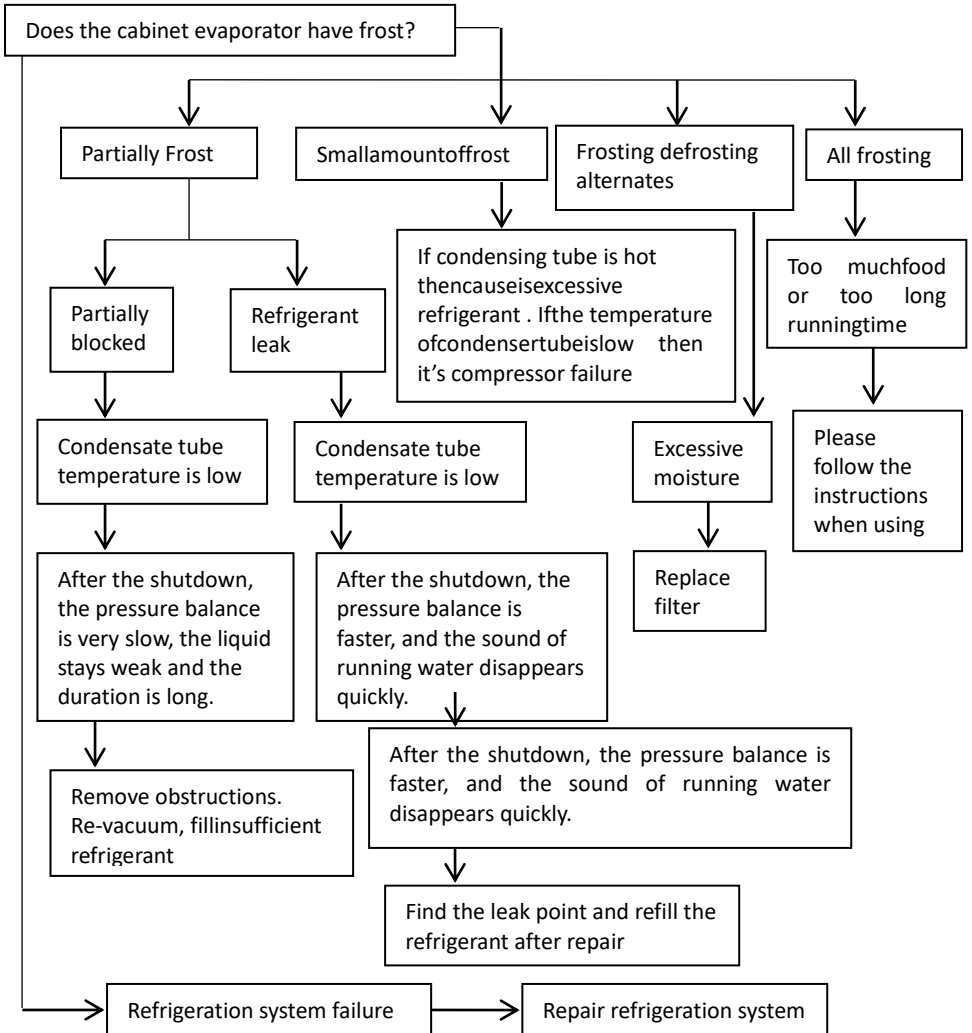
Troubleshooting

No power supply, compressor does not work

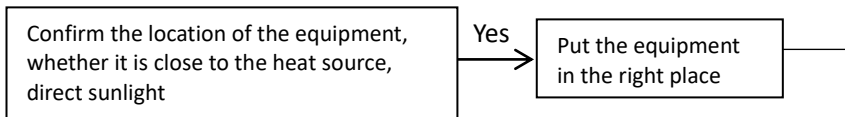


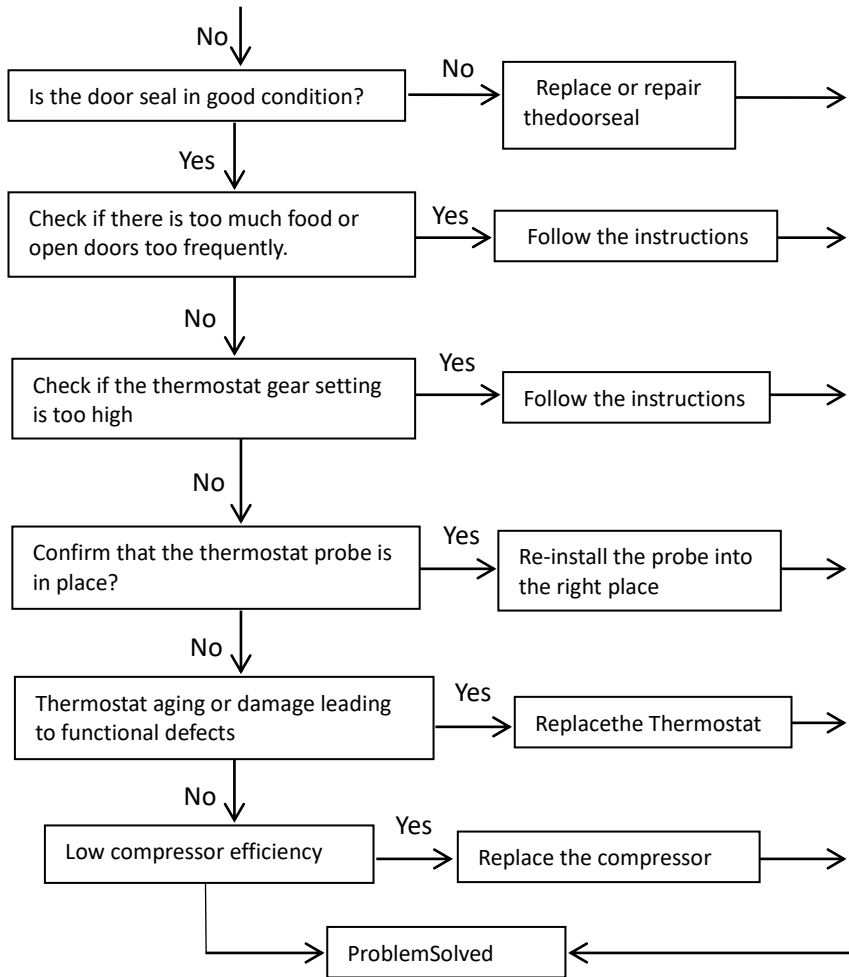
No cooling, compressor works





Poor refrigeration effect





Warranty and service

1. During use, please ensure that the work area is flat, clean

and tidy.

2. The warranty is limited to production defects and damage caused prior to household use.

3. Part cost and maintenance fee will be charged for damage caused by improper use or other quality problems other than the product itself.

4. Please keep relevant purchase voucher

Repair card

Customer Name: Contact Number:

Contact Email: Contact Address:

Product model: Date of purchase:

Dealer:

| Maintenance records | Repair date | Maintenance reason | Maintenance staff |
|---------------------|-------------|--------------------|-------------------|
| | | | |
| | | | |
| | | | |