

CHEST FREEZER

SERVICE MANUAL

MODEL: PFR90WC

PFR90SC PFR140WC PFR180WC

This product is for domestic use only

Use & Care Manual Important Safeguards

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## Main feature and Product appearance





No.	Parts Name	Quantity	Note
1	Door	1pcs/2pcs	
2	Hinge		
3	Basket	1pcs/2pcs	
4	4 Freezer Cabinet		
5	5 Thermostat cover		
6 Compressor base		1pcs	
7 Condensate Water Drain cap		1pcs	
8 Wheels		4pcs	

### **Specifications**

Models	PFR90SC	PFR90WC	PFR140WC	PFR180WC
Net capacity ( cu.ft)	9.4	9.4	13	18
Color	Gray	White	White	White
Power Supply (V/Hz)	110~/60	110~/60	110~/60	110~/60
Rated Input Power (W)	130	130	210	270

### Mark illustrations

Marning Wrong operations will cause users damaged or even dead

Attention Wrong operations will cause users or the appliance damaged

The wrong operations should be prohibited



The right operations should be performed strictly



It is a high temperature danger warning

## Safety information

Marning and Attention

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by a person responsible for their safety. If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.

If the supply cord is damaged, it must be replaced by the manufacture, its service agent or similarly qualified persons in order to avoid a hazard.



Must use separate, well-earthed and 3 wires power socket with 10A or higher fuse. Do not use the appliance with any other appliance on the same socket to avoid hazard.



Do not plug in or plug out by wet hand to avoid to get an electric shock.



Plug in and plug out in a proper way. When plugging in, make sure good connection between the plug and socket. When plugging out, pull the plug and do not pull the cord to avoid loosing in plug or damage



Do not spray on the appliance by water. It will damage the insulation or speed up the rusting on the metal parts.



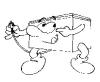
The socket must be well-earthed. The earthed terminal must not connect any gas pipe, water pipe, telephone cable, lightning rod and zero line. The socket should be with a current leakage protector as well.



Plug out at once if there is a abnormal working. Before eliminating the abnormity, do not plug in. Any abnormal working may cause hazard.



Do not squeeze, fold, knot or damage the cord. When the cord is damage ,it must be replaced by the service agent or similar qualified person to avoid danger. Or it will cause electric shock and even fire.



Plug out before maintaining the appliance to avoid electrical shock.



## Safety information

Marning and Attention





When there is some flammable gas (e.g. coal gas, natural gas etc) around the appliance, open the window and let the gas out firstly. Do not plug in or close thermostat to avoid an explosion cause from electrical fire.

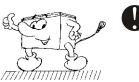




When the appliance is stopped or kept for a period, please keep the appliance in a place where no children play, and let the door not closed wholly to avoid children inside and asphyxial.



The refrigerant and the foaming material is flammable. When the appliance is abandoned, it should be kept from fire sources and not treated with fire. The appliance should be recycled by appointed institutions. Personal handling may cause danger.





To avoid a hazard due to instability of the appliance, it must be fixed in accordance with the instructions.



In the cabinet, do not store flammable, explosive or volatile goods. In the cabinet, do not corrosive goods such as acid or alkali.





Children should be supervised to ensure that they do not play with the appliance.





Do not spray explosive agent near the appliance to avid fire or explosion.





Do not damage the refrigerant circuit.

## Safety information

Marning and Attention



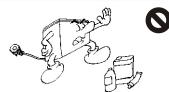
Do not touch the bare pipes or wires to avoid a potential scald or electrical shock.



If the appliance has not been used for a long time, plug out for safety.



Do not spray cold water onto the cabinet to avoid any damage on inner shell or safety problem.



Do not store any medicine or study material which require a very accurate temperature.





The working voltage should be 220V +10% /-15 %. That is from 187V to 242V. If the working voltage is too low or too high, the compressor will be damaged.



Do not touch any pipes or electrical parts inside the appliance to avoid scald. Sometimes the pipes or electrical parts inside the appliance are at a high temperature.



Do not touch the refrigerant pipes inside the cabinet to avoid low-temperature burns on skin.

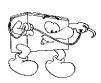


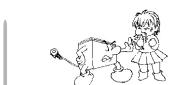


Do not store any goods which are easily cracked after freezing (e.g. bottles or cans), when the temperature is under -18℃.

## Safety information

Marning and Attention





Remove the door seal to avoid asphyxia if children inside the cabinet, when the appliance is abandoned.





Plug out and take all the stored goods out before moving to avoid the appliance damaged or the users hurt.





Remove the flammable bottom polyfoams before using to avoid fire.



Connect to potable water supply only.

Do not touch the surface to avoid any scald during working or right after plugging out. At this moment, the surface is at a high temperature.





Do not let children take goods out by themselves to avoid any hazard.





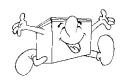
The refrigerant is flammable. Do ask Service Dept to repair if the cooling system has some problem. Do not disassemble, repair or modify the appliance by yourselves to avoid any refrigerant leakage. The refrigerant may ignite or cause eye injuries.

WARNING: Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

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

WARNING: Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of type recommended by the manufacturer.

## Carrying and installing





Carry the appliance carefully and avoid collisions and big shakes .



The incline angle should be less than 45° during carrying to avoid damages of the cooling system.



The ground should be flat, sturdy and horizontal for a stable installing. It is not only for safety, but also for a stable working of the compressor without big shocks and noises.



Install the appliance in a dry place. The appliance will get rusted and have a poor insulation if in a place with humidity or water for a long time.

Do not install the appliance in the outside place where rain can reach.





Check all the positions for the package. Pack the appliance according to the original one before carrying.



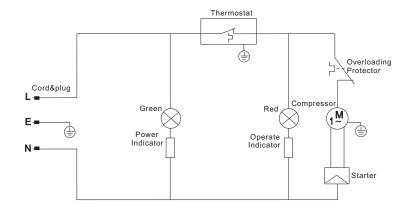
Do not place the appliance under sunshine or near heating sources.

It will increase the power consumption and decrease plastic parts or surface coatings life.

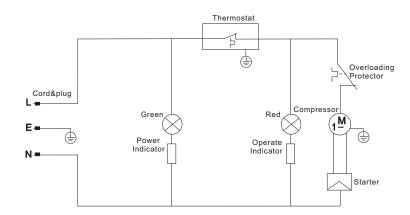


The appliance should have some distance from circumferences for good ventilation, heat radiation and power consumption decreasing.

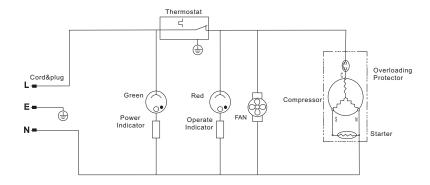
## Elctrical Diagrame



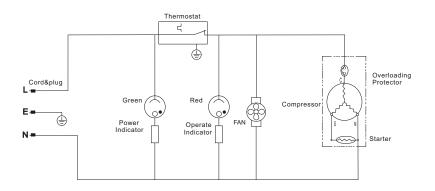
# PFR90SC



PFR90WC



# PFR140WC



PFR180WC

## Maintenance and trouble shoting

(A). Not cool completely	Compressor doesn't run, but power indicator is on.		Measure the insulation resistance by meg-ohm meter, if the insulation resistance $< 1$ M $\Omega$ , the unit can't be used for long time.	The winding is burnt.
		Power supply voltage	too low. (Maybe lower than 175V)	can't start because of under voltage.
	Compressor can	Cooling system	There is no sound of refrigerant flowing in cooling system and it leaves oil on the welding point There is no sound of	Leakage of refrigerant
			refrigerant flowing in cooling system and no oil on the welding point.	Inside leakage of cooling pipe or the pipe is blocked.
		Compressor	No air is discharged out on the discharging mouth of the compressor.	Compressor valve is breakdown
			There is abnormal sound inside compressor	Compressor is breakdown

## Maintenance and trouble shoting

(B) Compressor runs but cooling effect is not good.	Incorrect using	Check the thickness of frost(>5mm?)  Thermostat is set at higher temperature (lower digit)?  There is too more food in cooling compartment, too crowded, ensure good air circulation inside freezer	The frost is too thick  Set it to lower temperature  Too more food
		Is there high temperature food, like hot soup etc., inside freezer?	Hot temperature food let the temperature inside freezer cooling compartment rise.
		Too more times of opening of the door	It will affect the cooling effect
	Leakage of cooling air	Check the door gasket sealing strip is broken or deforming	Broken of the door gasket sealing strip
		Check the door is warded off by the food and the door is closed tightly or not.	The door is not closed tightly
	The unit is not placed at good position	The freezer is inside direct sunshine  The back of the unit is too close	The unit can not dissipate the heat because sunshine
		to the wall	affect the heat dissipation
		There is heat source near the unit.	Over-hot environment will affect the heat dissipation
(C), Temperature is too low	Abnormal action of thermostat	Check the sensor head of the thermostat is loosing or not	Incorrect temperature sensing of thermostat

## Maintenance and trouble shoting

		Thermostat is not at good quality	Thermostat is breakdown
(D), Water condensate	There is condensed water on the closure	The environment is too wet	The relative humidity is too high
(E)、 Leakage of electricity	Electrical shock sense on the enclosure	Confirm the insulation resistance is lower than 1 $M\Omega$ by the meg ohm meter	Insulation is not good
		Check the electrical parts of the unit are wet	Insulation is not good
		Check the electrical parts touch with the metal enclosure or not, and the grounding lead is not grounded properly	Electricity leakage
		Check it have static electricity influence	Static electricity influence
(E)	There is sound inside compressor	Check the compressor has abnormal sound or not.	Compressor abnormal
(F), Too noisy and vibration	There is vibration sound	Check the pipe is touched each other or not  Check the installation ground is flat and the feet is adjusted at	Pipe touching produce resonance The unit is not placed evenly
		proper position or not	

- (-), Note of the cooling system maintenance with R134a refrigerant:
  - —, The requirement of the cooling system parts:

Because refrigerant R134a and its lubricating oil grease is of strong water absorbability and oxidation ability, and will cause catalysis reactivity with chloride to produce impurity to be silt. So during service process, you should pay more attentions to the water quantity, oxide quantity, chloride quantity, oil quantity and impurity quantity in the cooling system, and control it more strictly.

- Left water quantity control:
- 1) If the cooling system parts, like condenser, evaporator, compressor, or the dry filter etc., need to be replaced, the replaced parts should be stored charging with dry nitrogen with pressure  $0.2\sim0.3$ Mpa, and if these parts have leakage of nitrogen, they must be dried in the high temperature chamber and be taken out of the water before using.

### Maintenance and trouble shoting

- 2) The molecular dry desiccant inside dry filter must be controlled strictly, guaranteed that the left water quantity must be lower than 1.5 WT%. And normally, after the dry filter is opened from vacuum package, must be welded to the pipe system within 5 minutes. If at wet condition (relative humidity>50%), must take measure to be protected from humidity, and the dry filter must be connected to the system pipe at once after removing from package, so as to produce the sealing system.
- \_\_. The requirement of the service equipment:
  - ①No need recycling equipment, except charging machine, if the equipment is special for R134a refrigerant system, must mark it clearly to avoid use each other. (except welding machine, pliers, electronic balance)
- $\ensuremath{\textcircled{2}}$  The vacuum machine and charging machine are special used for R134a refrigerant system.
- 三、Service Procedure:

Special requirement during service process:

- (a). Duration of from opening of compressor to vacuuming process must be less than 10 minutes, and for other parts not more than 12 minutes.
- (b). Vacuuming duration should not loess than 20 minutes.
- (c). If refrigerant leakage happens, it need to replace the compressor. Before welding, dry the cooling system by the nitrogen air.
  - (d). If the dust blockage happens in cooling system pipe, if can be blow out by the nitrogen, don't need to replace the compressor, otherwise the cabinet is no useful (and the evaporator is no useful).
  - (e). If ice blockage happens in the system pipe, must replace the compressor.
- f. Change the dry filter only if the system is opened.
- 四、Main point of service:
  - $\ensuremath{\boxdot}$  The replaced compressor must return back to the compressor manufacturer to be treated.

  - ③If the system pipe is opened for a long time or leakage happens, you can dry the system by nitrogen during service.
  - ④All of the welding material must be protected from wet condition. And ensure to use a little as enough as possible.
  - ⑤Check the compressor is pressurized or not when opening.
- Twhen storing the R134a refrigerant, must keep it sealed and not touch with atmosphere directly.

After completing the service, normally need to be done test running for 1-2days. When proved to be safely and good cooling performance, then move to the customer or user. During test running, we suggest that you can do following item:

1. Insulation and safety:

Before plugging in, use the DC 500 meg-ohm meter to measure the insulation

## Maintenance and trouble shoting

resistance between the live parts and dead metal enclosure, ensure the result is not lower than 1 meg-ohm.

#### 2. Starting capability:

The compressor can start smoothly, and can start or stop normally. If the unit can't start or stop normally, must find the root cause and delete the cause, then you can plugging it in to let it run.

#### 3, Cooling performance:

After running for 24 hours, check that the frost on the surface of the cabinet linear is oven or not, and there is no frost on the suction pipe.

#### 4. Electrical structure and safety:

After service, check all of the electrical parts, ensure the connection terminal of the electrical parts don't loose and the grounding wire is ok.

#### 5. Leakage checking:

After running for 24 hours, check one by one of welding point by using halogen leakage detecting device or suds. If leakage happens again, then should service again.



Manual de uso y cuidado Precauciones importantes Este producto es para uso domestico únicamente