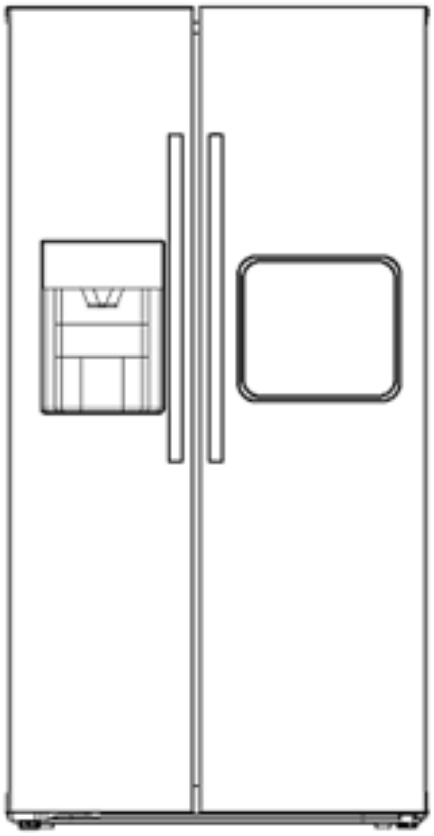
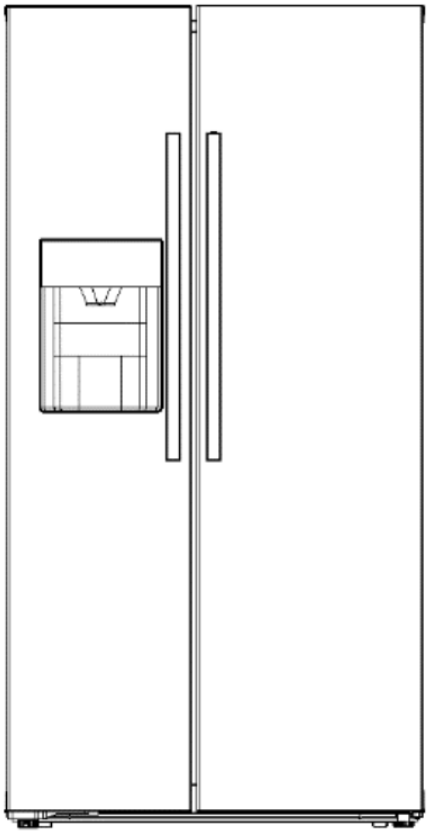
Service Manual

SBS Series

Model Name	Product specification	Abbreviation
FR-FV1DAIM0IX	Ice maker + minibar	Type A
FR-FV1DAI0IX	Ice maker	Type B
FR-FV1DI0BK	Recessed handle, Black	Type C
FR-FV1DI0IX	Recessed handle, Inox	Type C
FRFV1DA0BK	Grip handle, Black	Type D
FRFV1DA0IX	Grip handle, Inox	Type D

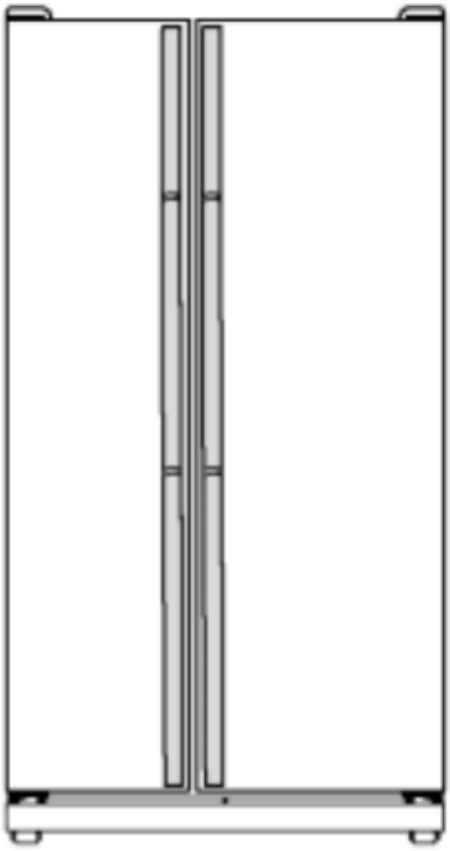


(Type A)



(Type B)

(Type C)



(Type D)

The picture in this service manual is only for reference, and specific appearance and configuration are subject to the real product.

This manual mainly teaches the method, the specific work skill needs engineer to accumulate through the daily work.

⚠ WARNING

Important Safety Notice

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

⚠ WARNING

Important Safety Notice

The Maintenance Manual is only for the use of maintenance personnel with certain experience and background in electrical, electronic and mechanical field.

Any attempt to repair main devices may lead to personal injury and property loss.

Manufacturers or distributors are not responsible for the content of the Manual and interpretation thereof.

Contents

1. Specifications

Category	System	Model name	Certifications	Product size (mm)(WxDxH)	Color	Energy Class	Description of Goods
SBS	Total No Frost	FR-FV1DAIM0IX	CE	897x761x1765	Inox	F	664mm Grip handle, SBS, Inox, Electronic control, On door display, Total no frost, 220V-240V/50hz, VDE Plug, Energy class F, Automatic ice maker+ Mini bar
SBS	Total No Frost	FR-FV1DAI0IX	CE	897x761x1765	Inox	F	664mm Grip handle, SBS, Inox, Electronic control, On door display, Total no frost, 220V-240V/50hz, VDE Plug, Energy class F, Automatic ice maker
SBS	Total No Frost	FR-FV1DI0BK	CE	897x706x1765	Black	F	Recessed handle, SBS, Black, Electronic control, On door display, Total no frost, 220V-240V/50hz, VDE Plug, Energy class F, Twist ice maker
SBS	Total No Frost	FR-FV1DI0IX	CE	897x706x1765	Inox	F	Recessed handle, SBS, Inox, Electronic control, On door display, Total no frost, 220V-240V/50hz, VDE Plug, Energy class F, Twist ice maker
SBS	Total No Frost	FR-FV1DA0BK	CE	897x761x1765	Black	F	664mm Grip handle, SBS, Black, Electronic control, On door display, Total no frost, 220V-240V/50hz, VDE Plug, Energy class F, Twist ice maker
SBS	Total No Frost	FR-FV1DA0IX	CE	897x761x1765	Inox	F	664mm Grip handle, SBS, Inox, Electronic control, On door display, Total no frost, 220V-240V/50hz, VDE Plug, Energy class F, Twist ice maker

2. Safety Warning

2.1 Warning for operation safety

Important Safety Instructions

	**CAUTION** **RISK OF ELECTRIC SHOCK** **DO NOT OPEN** 
	This symbol indicates that dangerous voltage constituting a risk of electric shock is present within your freezer.
	This symbol indicates that there are important operating and maintenance instructions in the literature accompanying your freezer.

WARNING

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this appliance near water.

6) Clean only with a damp cloth.

7) Do not block any ventilation openings.

8) Install in accordance with the manufacturer’s instructions.

9) Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus that produce heat.

10) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

11) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the appliance.

12) Do not attempt to modify or extend the power cord of this appliance.

13) Unplug this appliance during lightning storms or when it will not be used for long periods of time.

14) Make sure that the available AC power matches the voltage requirements of this appliance.

CONNECTING ELECTRICITY

WARNING **Electrical Shock Hazard.**

Plug into a grounded 3-prong outlet.
Do not remove the ground prong.
Do not use an adapter.

Failure to follow these instructions can result in death, fire, or electrical shock.

WARNING

Electric Shock Hazard
Failure to follow these instructions can result in electric shock, fire, or death.

1) WARNING–Keep ventilation openings, in both the freezer and the built-in structure, clear of obstruction.

2) WARNING–Do not touch the interior of the freezer with wet hands. This could result in frost bite.

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

4) WARNING–Do not damage the refrigerant circuit.

5) WARNING–Do not damage the refrigerant tubing when handling, moving, or using the freezer.

6) WARNING–DANGER–Never allow children to play with, operate, or crawl inside the freezer. Risk of child entrapment. Before you throw away your old freezer:

6-1) Take off the doors

6-2) Leave the shelves in place so that children may not easily climb inside

7) Unplug the freezer before carrying out user maintenance on it.

8) This freezer can be used by children age eight years and older and persons with reduced physical or mental capabilities or lack of experience and knowledge if they are given supervision or instruction concerning the use of the freezer in a safe way and understand the hazards involved. Children should not play with the freezer. Cleaning and maintenance should not be performed by children without supervision.

9) If a component part is damaged, it must be replaced by the manufacturer, its service agent, or similar qualified persons in order to avoid a hazard.

10) Please dispose of the freezer according to local regulations as the freezer contains flammable gas and refrigerant.

11) Follow local regulations regarding disposal of the freezer due to flammable refrigerant and gas. All refrigeration products contain refrigerants, which under the

guidelines of federal law must be removed before disposal. It is the consumer's responsibility to comply with federal and local regulations when disposing of this product.

12) This freezer is intended to be used in household and similar environments.

13) Do not store or use gasoline or any flammable liquids inside or in the vicinity of this freezer.

14) Do not use extension cords or ungrounded (two-prong) adapters with this freezer. If the power cord is too short, have a qualified electrician install an outlet near the freezer. Use of an extension cord can negatively affect the freezer's performance.

Grounding requirement

This freezer must be grounded. This freezer is equipped with a cord having a grounding wire with a grounding plug. The plug must be inserted into an outlet that is properly installed and grounded.

Improper use of the grounding plug can result in a risk of electric shock. Consult a qualified electrician or service person if the grounding instructions are not completely understood, or if doubt exists as to whether the freezer is properly grounded.

2.2 Safety instruction for refrigerant

Explosion Hazard.

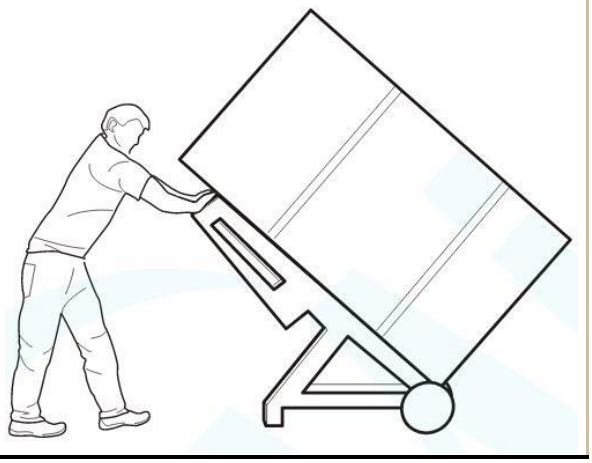
Keep flammable materials and vapors, such as gasoline, away from freezer. Failure to do so can result in fire, explosion, or death.

Safety instruction for refrigerant

DANGER–Risk of Fire or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Use Mechanical Devices. Do Not Puncture Refrigerant Tubing. CAUTION–Risk of Fire or Explosion. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Service This Product. All Safety Precautions Must be Followed. CAUTION–Risk of Fire or Explosion. Dispose of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used. CAUTION–Risk of Fire or Explosion Due To Puncture Of Refrigerant Tubing; Follow Handling Instructions Carefully.
Flammable Refrigerant Used.

3. Installation and commissioning

3.1 Handling

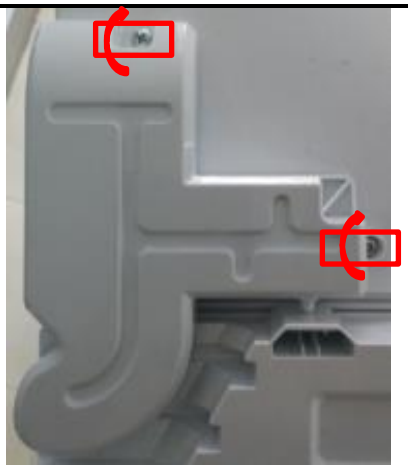
Handling	
1) Protect the refrigerator in moving. Please move it by handcart with cushion 2) Remove all packing materials and bottom cushion, then move into house for placement 3) After moving it to appropriate location, wait for 2 hou rs before power on.	

3.2 Door Disassembly and Assembly

If the whole refrigerator cannot enter the room, the door can be disassembled, then assembled after entering separately.

Remarks: Below description is for ice maker model Type A and Type B. Type C and Type D model have similar structure but no water pipe under the door

Disassembly of Freezer door	
1) Use cross screwdriver to remove the screws, then take out the plastic protective cover.	
2) Pull out the spacing guard sheet at the two ends of water connector, and then push the locked cushion inwards, meantime pull out water pipe. Note: please make sure the wiring connector can't be left at the end of water pipe of door.	

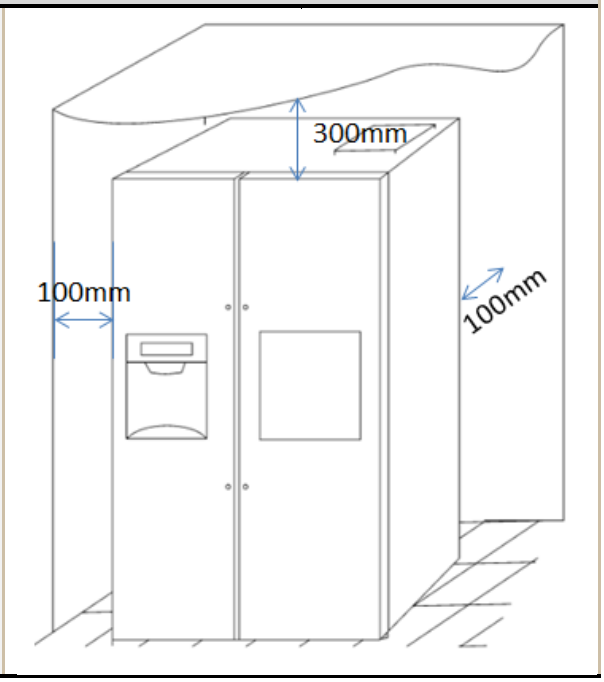
3) As shown as right photos, use screwdriver to remove 2 pcs screws, and then remove the upper hinge cover.	 
4) Disconnect the connectors, then use cross screwdriver or socket spanner to remove the 2pcs M5 screws and 1 pc grounding screw by anticlockwise, then remove the upper hinge.	
5) Lift up the freezer door until the hinge axis and water pipe separated from the axis hole of door, then carry the door to a suitable place.	

Disassembly of refrigerator door	
1) Use screwdriver to remove the 2 pcs screws, and then remove the upper hinge cover.	
2) Use cross screwdriver or socket spanner to remove the 2 pcs M5 screws by anticlockwise, and then remove the upper hinge. Note: please make sure the refrigerator door fit closely to the cabinet; otherwise the refrigerator door may fall down during above operation.	 
3) Lift up the refrigerator door until the hinge axis separated from the axis hole of door, then carry the door to a suitable place.	
Assembly of freezer door	

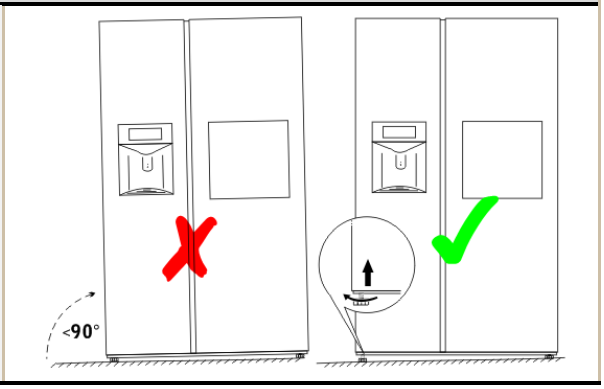
1) Put the freezer door down gently until the axis of hinge inserted into the axis hole of door completely.	
2) Put the upper hinge on suitable position, then use cross screwdriver or socket spanner to fix the 2 pcs M5 screws and 1 pc grounding screw by clockwise, and connect the 6 pcs wiring connectors.	
3) Put the cover of upper hinge on suitable position, then use screwdriver to fix the 2 pcs screws	
4) Push the locked cushion of water connector inwards, then insert the water pipe into the water connector to the end, and finally assemble the spacing guard sheet. Note: the water pipe can't be connected incorrectly, only the water pipes in same color can be connected	

5) Assemble the protective cover and fix the screws	
assembly of refrigerator door	
1) Put the refrigerator door down gently until the axis of hinge inserted into the axis hole of door completely, and then closes the door, to make sure the refrigerator door fit the cabinet closely.	
2) Put the upper hinge on suitable position, then use cross screwdriver or socket spanner to fix the 2 pcs M5 screws.	
3) Put the hinge cover on suitable position, and then use the screwdriver to fix the 2 pcs screws.	

3.3 Installation location

Installation location	
Please select a ventilated place to place the refrigerator, and reserve space according to the recommended size in the picture, which is conducive to heat dissipation, performance improvement and energy consumption reduction.	

3.4 Leveling of the refrigerator

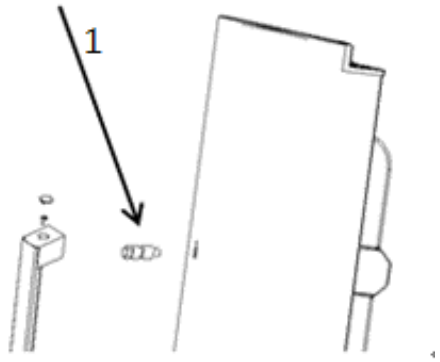
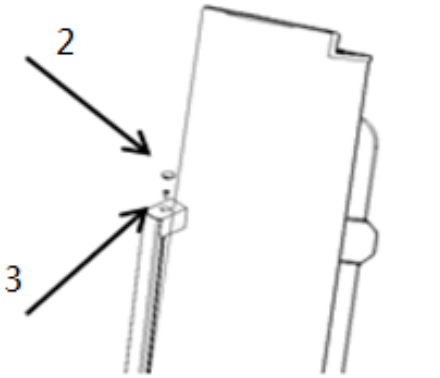
Leveling of the refrigerator	
If the refrigerator cannot be placed steadily, adjust the footing to level it. Turn the feet clockwise to raise the refrigerator; turn the feet counterclockwise to lower the refrigerator.	

3.5 Left or right open door reversal (None)

3.6 Installation of handle

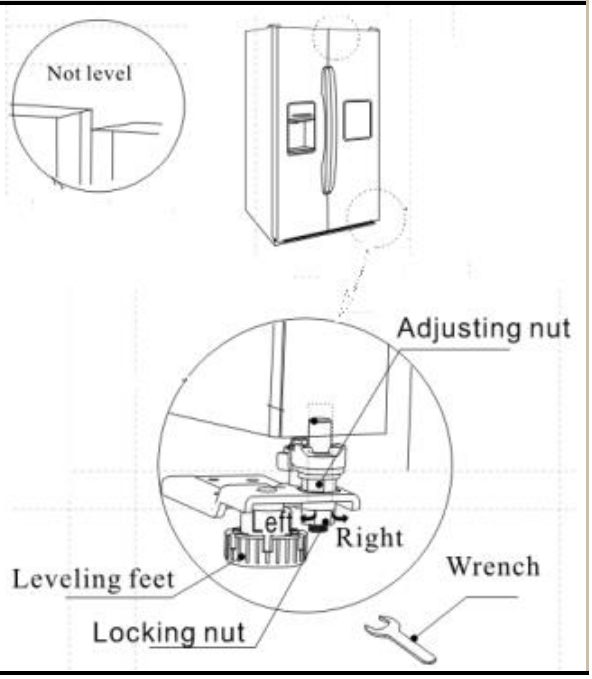
Remarks: This step is for Type A, Type B and Type D. No handle for Type C.

Installation of handle

1) Take out 4 bolts from the plastic bag containing the user manual, and fix the bolts in the screw holes on the door with a cross screwdriver.	
2) Install the door handle onto the bolt, tighten the screw in the handle side hole with the Allen wrench in the plastic bag, install the screw cover, and complete the installation.	

3.7 Installation of door lock（None）

3.8 Adjustment to level the door

Adjustment to level the door（Up and down ）	
1) Refrigerator door lower: loosen locking nut counterclockwise, then rotate the adjusting nut counterclockwise to adjust the height of door, at last tighten the locking nut clockwise. 2) Refrigerator door higher: loosen locking nut counterclockwise firstly, then rotate the adjusting nut clockwise, at last tighten the locking nut clockwise.	

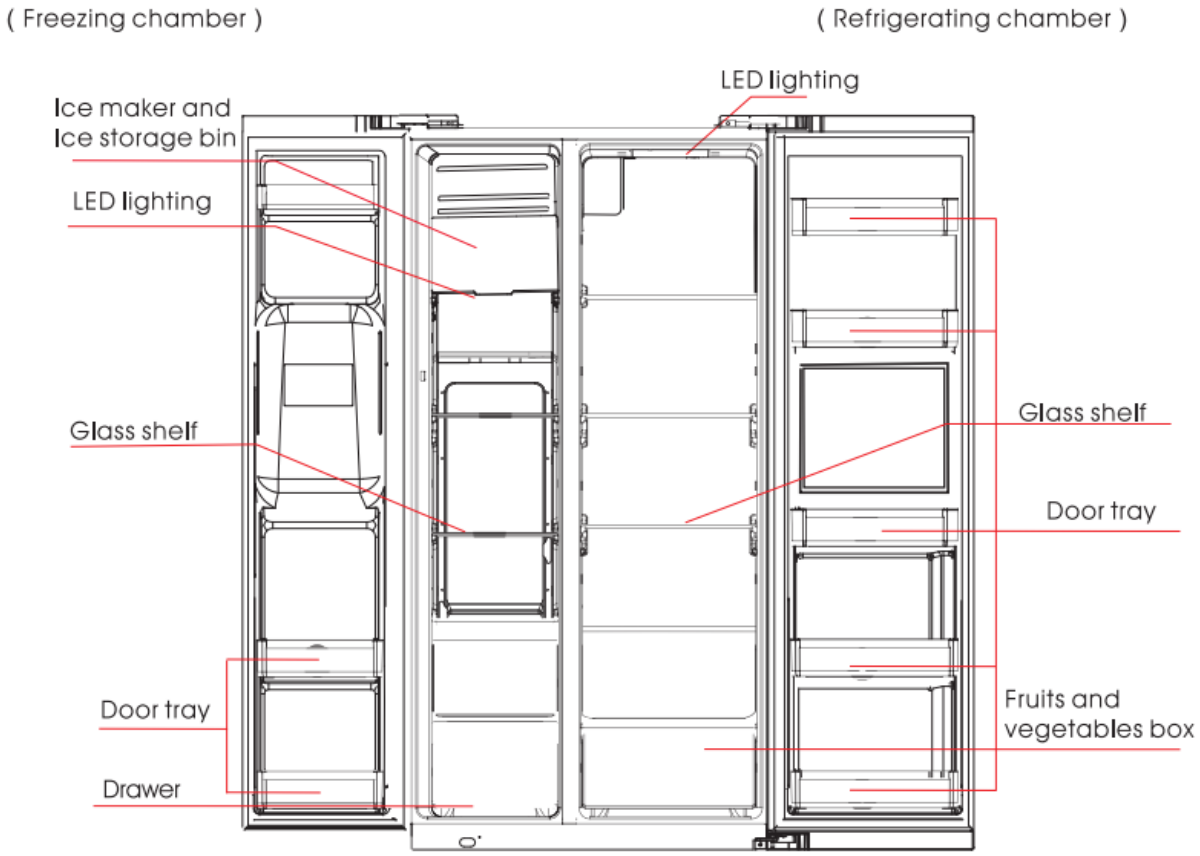
Adjustment to inhomogenous aperture the door (Up and down)	
1) Use screwdriver to remove the 2 pcs screws, and then remove the upper hinge cover. 2) Use screwdriver to loosen the 2 pcs screws, right and left adjust the upper hinge to make door aperture be homogeneity. 3) Put the hinge cover on suitable position, and then use the screwdriver to fix the 2 pcs screws.	 
Adjustment to plane the door (left and right)	
1) Use screwdriver to remove the 2 pcs screws, and then remove the upper hinge cover. 2) Use screwdriver to loosen the 2 pcs screws, front and back adjust the upper hinge to make door aperture be homogeneity. 3) Put the hinge cover on suitable position, and then use the screwdriver to fix the 2 pcs screws.	 

4. Main parts and external dimension

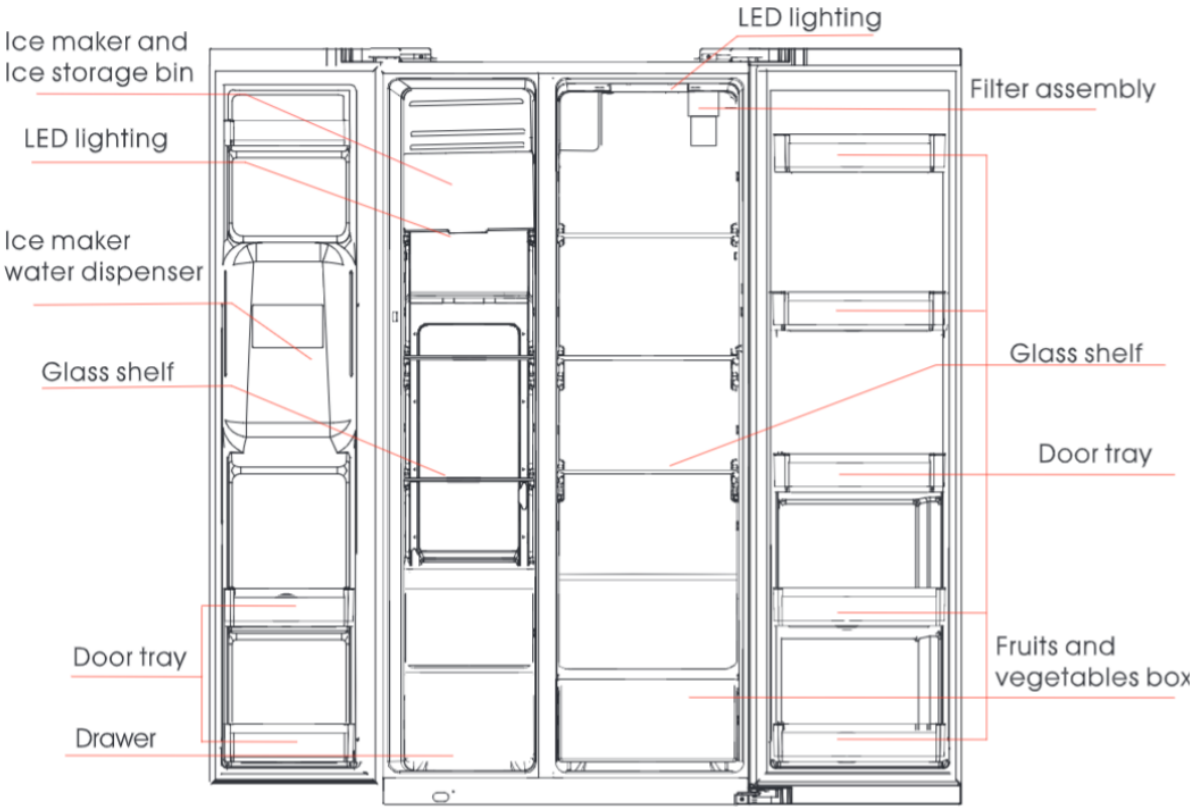
4.1 Main parts

(The picture is only for reference, and specific appearance and configuration are subject to the real product)

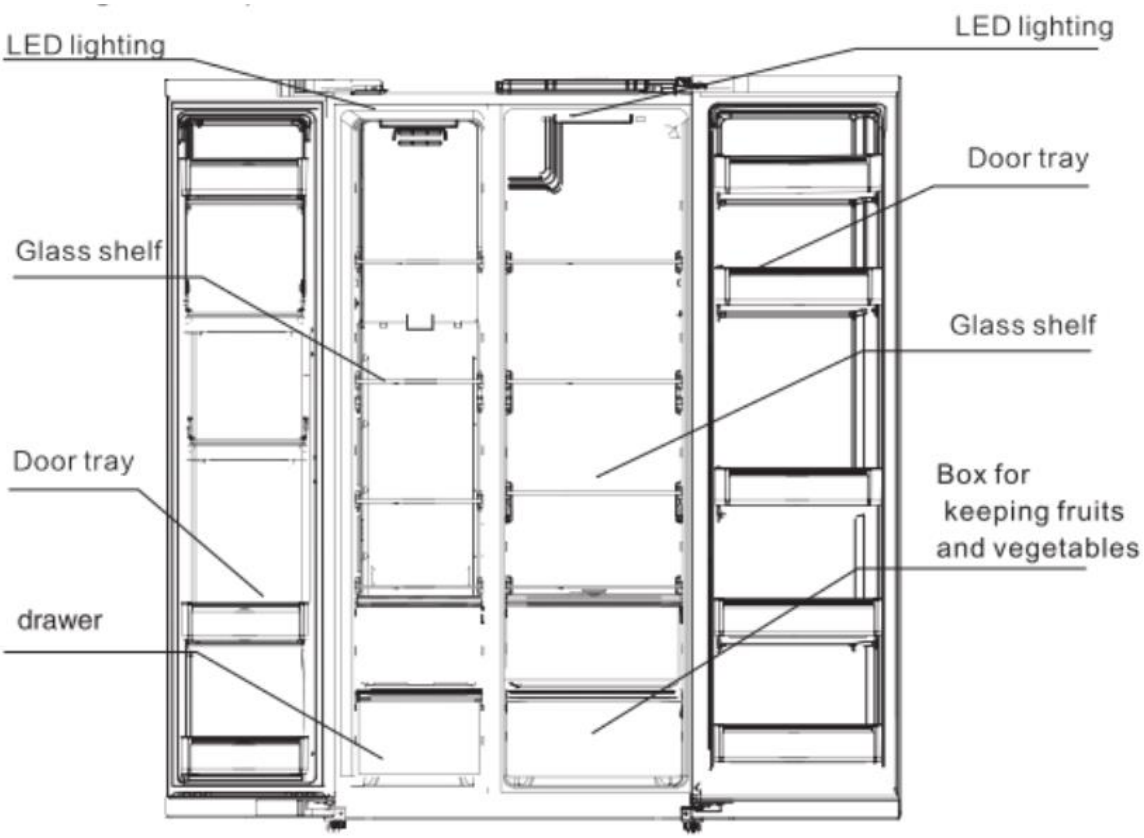
Type A



Type B

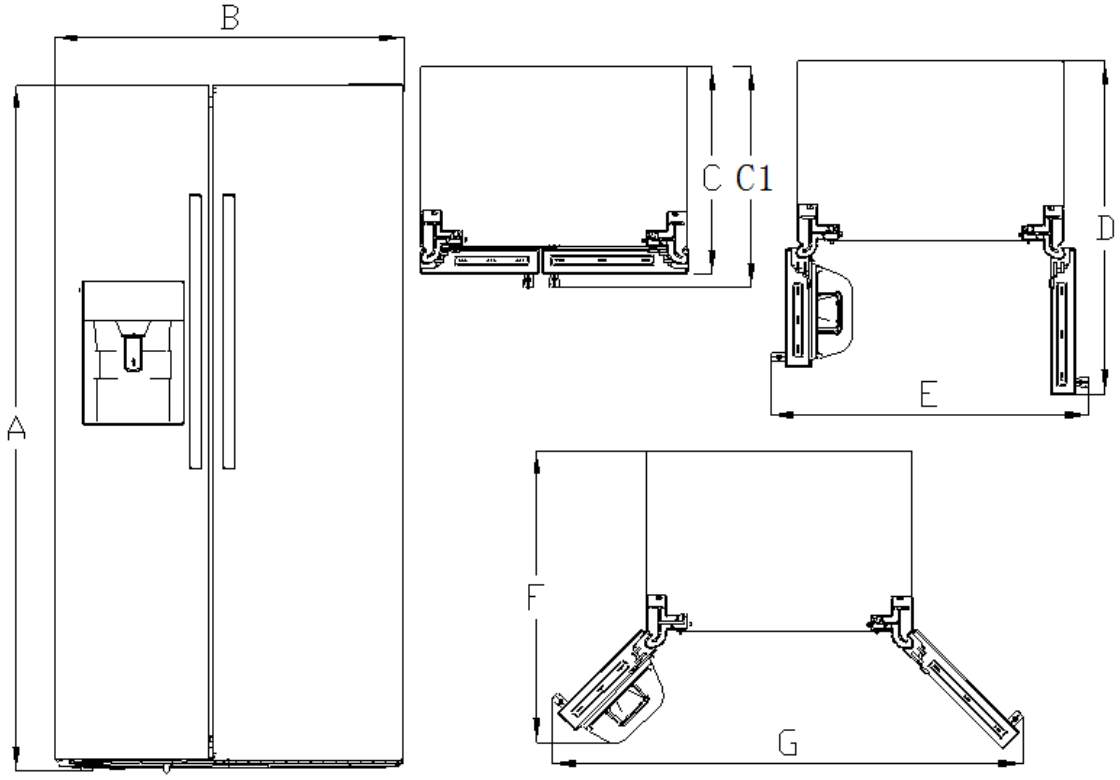


Type C and Type D



4.2 External dimension

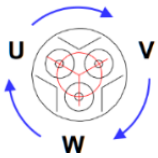
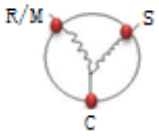
Description	Code	Type A	Type B	Type C	Type D
Height to top of cabinet	A	1788	1765	1788	1700
Width	B	890	895	895	890
Depth w/Handle	C	690	690	690	750
Depth w/Handle	C1	745	745	706	750
Depth (Door open 90 deg. w)	D	1112	1112	1135	1112
Width (Door open 90 deg. w)	E	1087	1087	972	1087
Depth (Door open 130 deg. w)	F	941	941	975	941
Width (Door open 130 deg. w)	G	1557	1557	1465	1557



(The picture is only for reference)

5. Electric control system

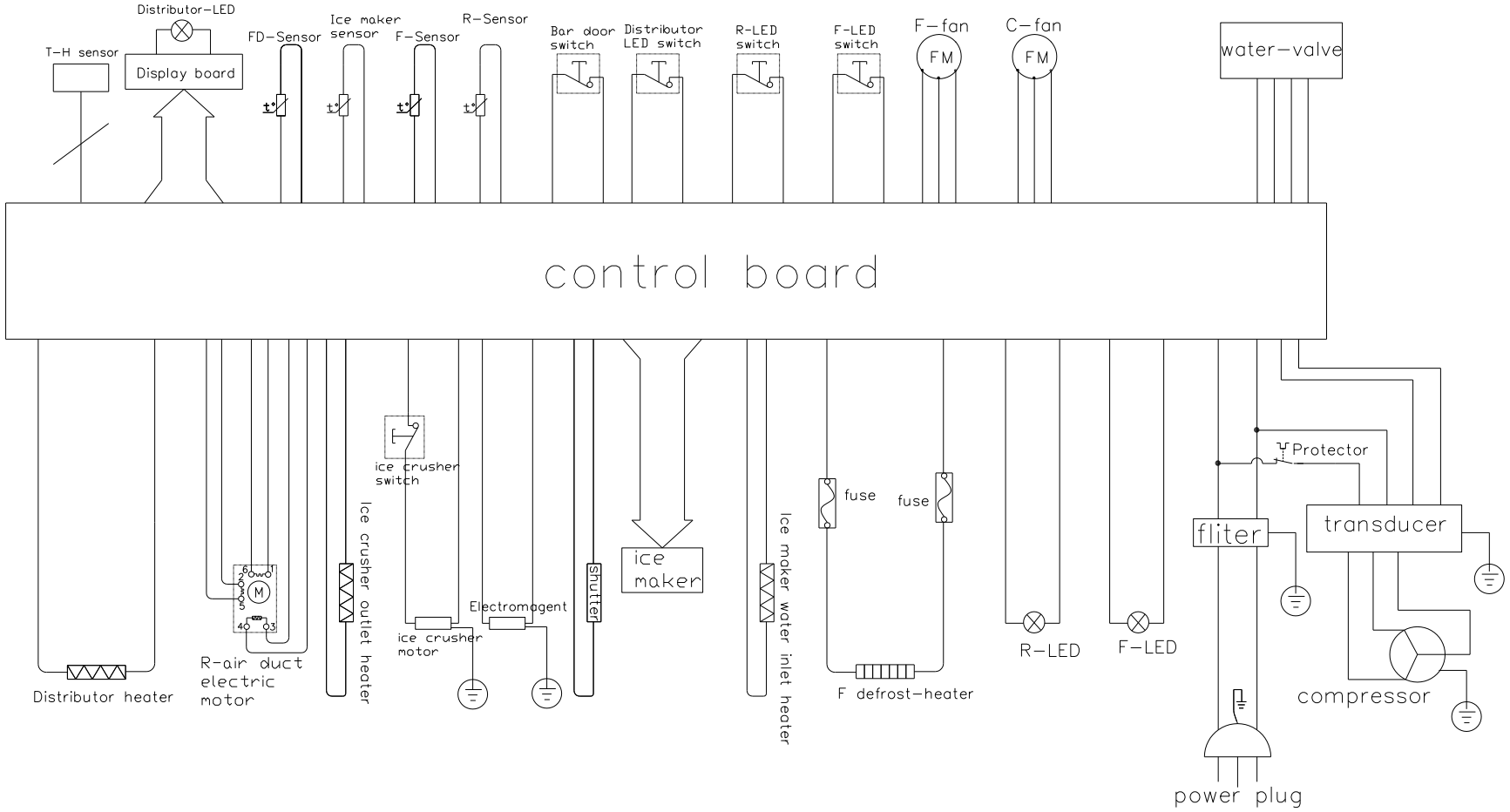
5.1 Electrical parts parameters

Product Model	Type A and Type B	Type C and Type D
Rated Voltage	200-240V, 50Hz	200-240V, 50Hz
Item	**Specification**	**Specification**
Refrigerant	R600a	R600a
Compressor	Lu118PY1	PZ120H1Y (GMCC) (Part code : 11101010015037)
Starting device type	DC Inverter	Fixed Speed
The COP of compressor	1.65 (W/W)	1.85 (W/W)
The max cooling capacity of compressor	265 W	210W
Winding resistance of compressor wiring terminal (20℃)	U-W: 9.2Ω ± 15% U-V: 9.2Ω ± 15% W-V: 9.2Ω ± 15%	Rmc: 16.10Ω±7% Rsc: 15.30Ω±7% Rms = Rmc + Rsc
Winding resistance picture		
Starter(PTC)	None	QP2-15 (Part code : 12031000001062)
Overload protector(OLP)	B69-120 P A	DRB19T61A1 (Part code : 12031000001277)
Integrate PTC+OLP	None	None
Variable frequency driver board	Have (Part code : 11101020002064)	None
Capacitor	None	5.0μF 400/450V
Power filter (EMI)	250V、4A	None
Power reactor (EU EMC)	115/230V、3A	None
Motor		
Fan motor of the freezing chamber	DC12V、1250r/min	DC12V/≤3W
Fan motor of the refrigerating chamber	None	None
Condensation fan motor in compressor case	None	None
Electric damper	DC12V	DC12V
Electric damper heater	0.5W	0.5W

Ice maker motor	DC12V、0.6W	None
Crushed ice motor	110~115V、130W	None
Open door motor	DC12V、7W	None
Lights		
Lights inside the freezing chamber	DC12V、≤2.5W	DC12V、≤2.5W
Lights inside the refrigerating chamber	DC12V、≤2.5W	DC12V、≤2.5W
Others Lights	DC5V、≤0.4W	DC5V、≤0.4W
Switch of the lights	■Mechanical switch	■Mechanical switch
Other electrical parts		
Water valve	230V、20W	None
Water pump	None	None
Electric exchange valve	None	None
Defrosting parts		
Defrosting sensor	NTC B3839 (B5/25=3839K±2%)	
Fuse in freezing chamber	230V、77(0,-4) ℃	
Defrost heater in freezing chamber	230V、240W	

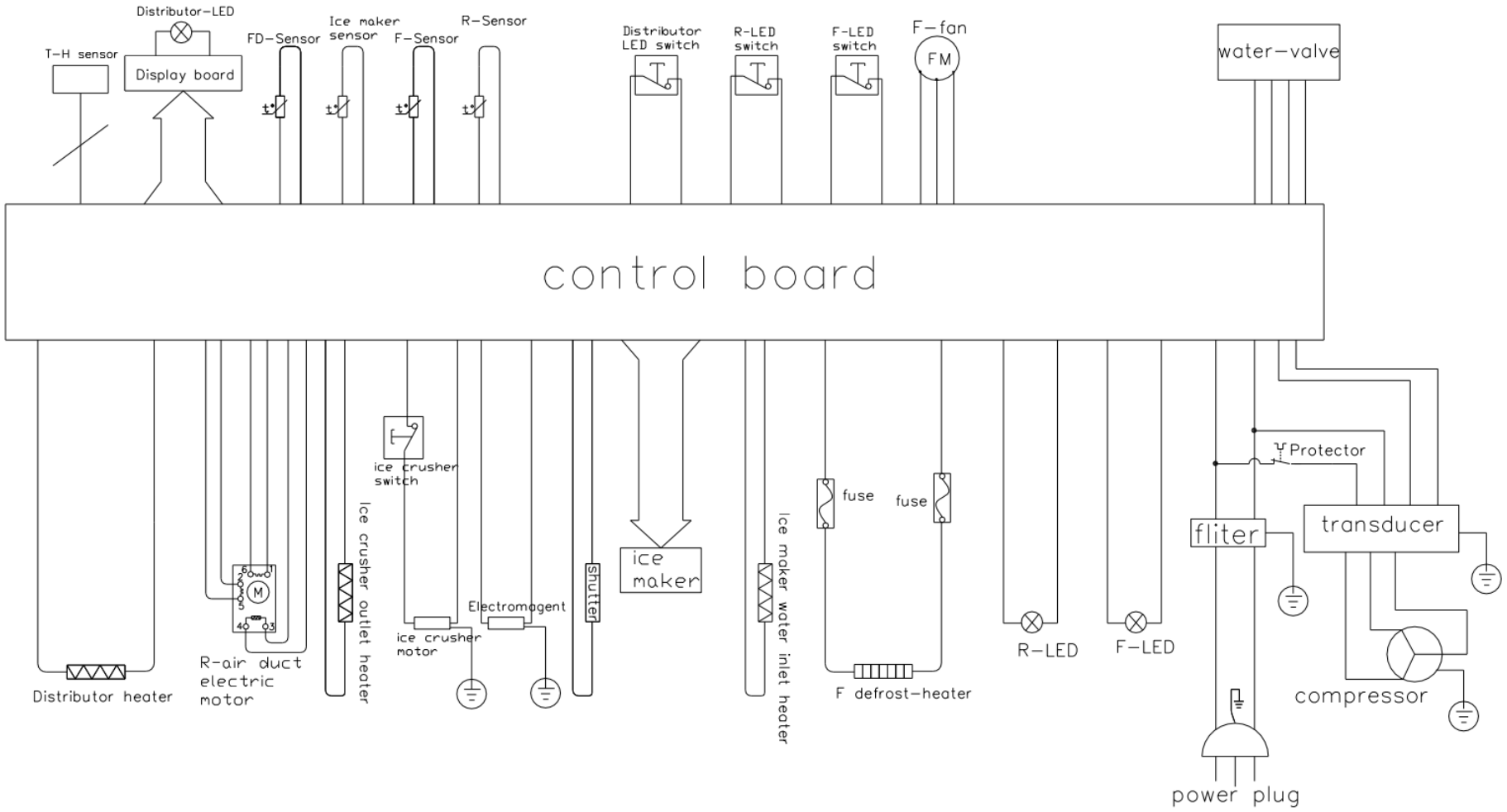
5.2 Circuit diagram

Type A



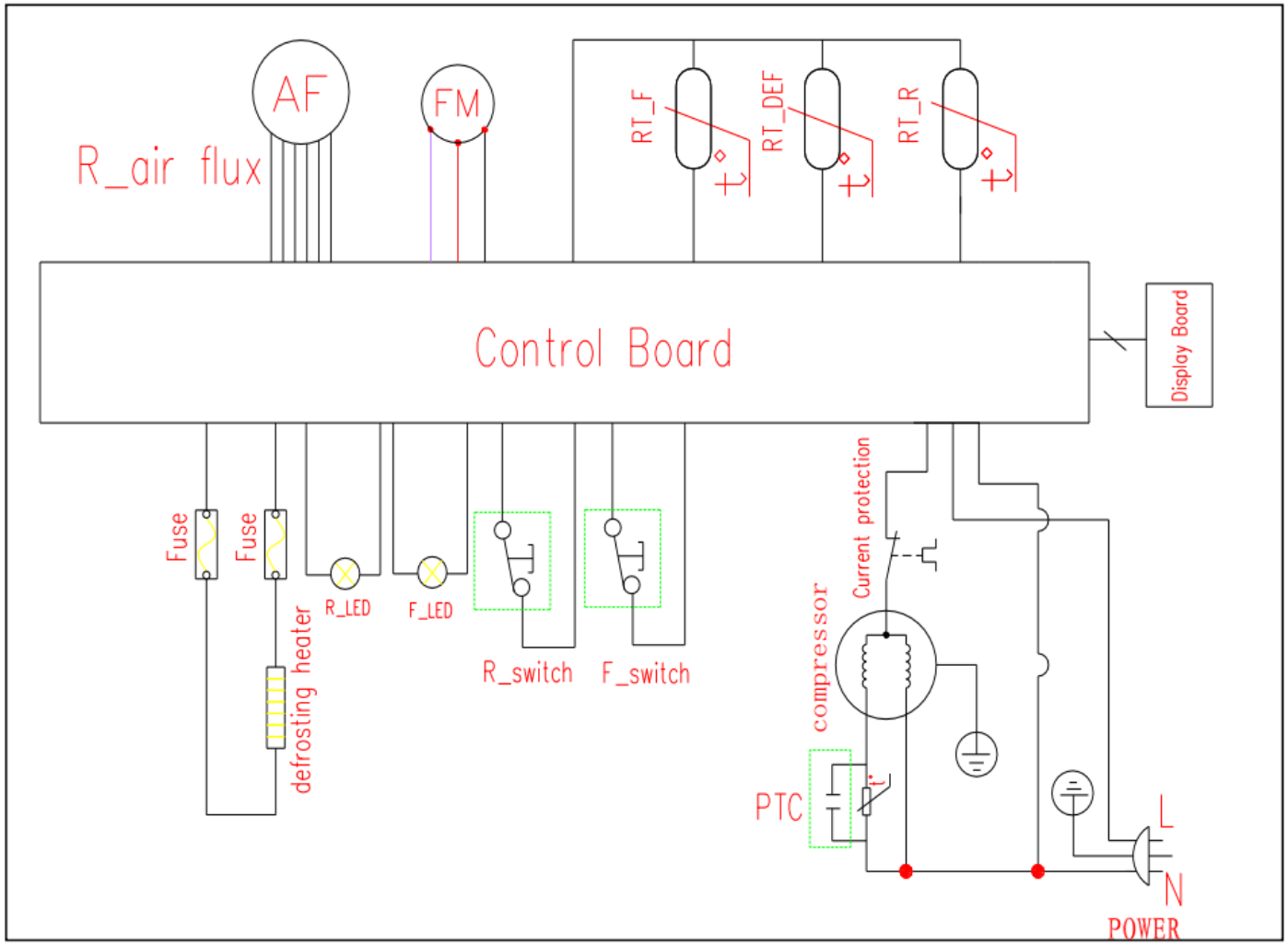
F: Freezer R: Refrigerator FD: Freezer defrost C: Condensation T-H: Temperature and humidity

Type B



F: Freezer R: Refrigerator FD: Freezer defrost C: Condensation T-H: Temperature and humidity

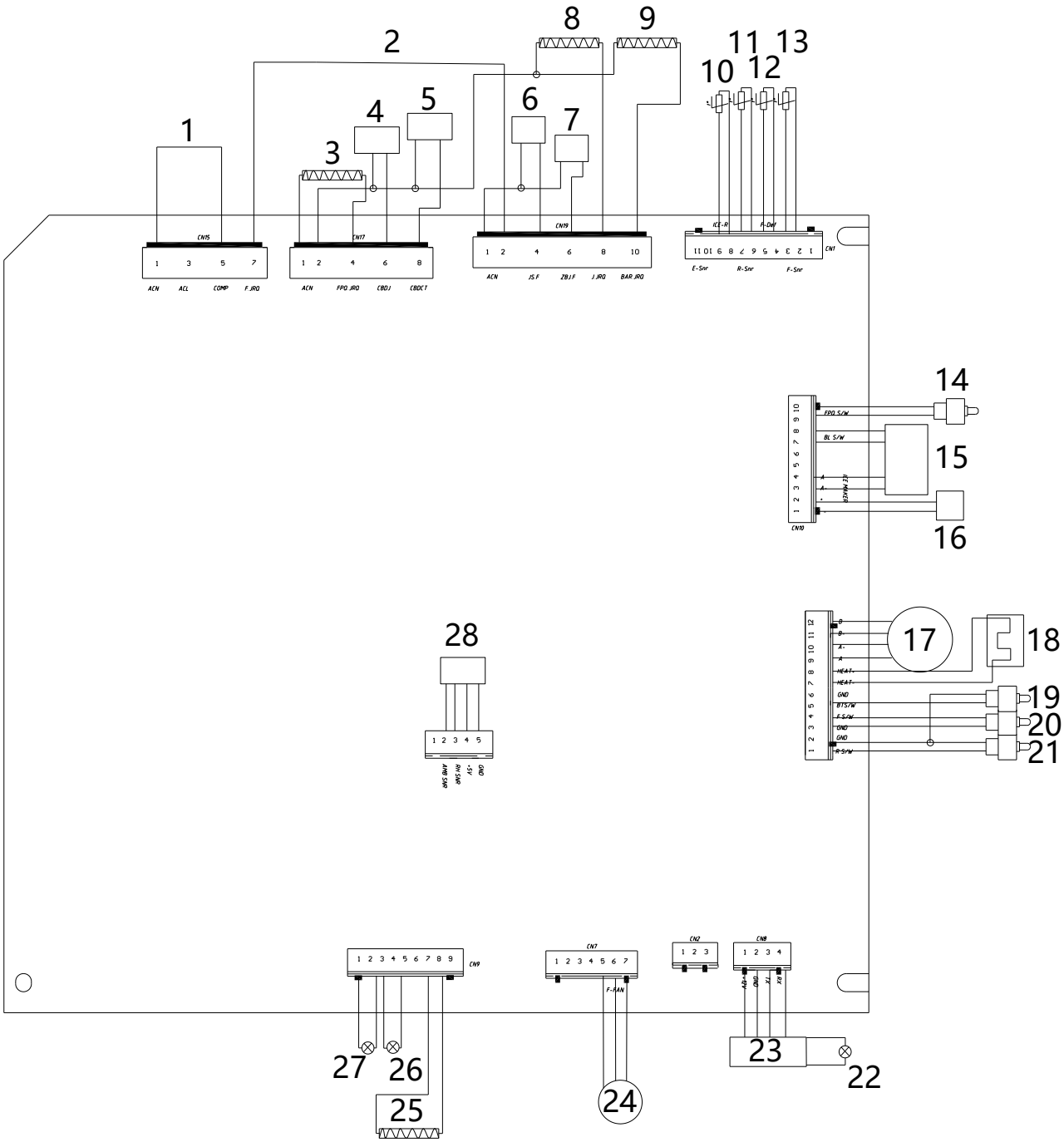
Type C and Type D



F: Freezer; R: Refrigerator; FD: Freezer Defrost; C: Condensation;.A:ambient temperature

5.3 Main PCB terminal connection diagram

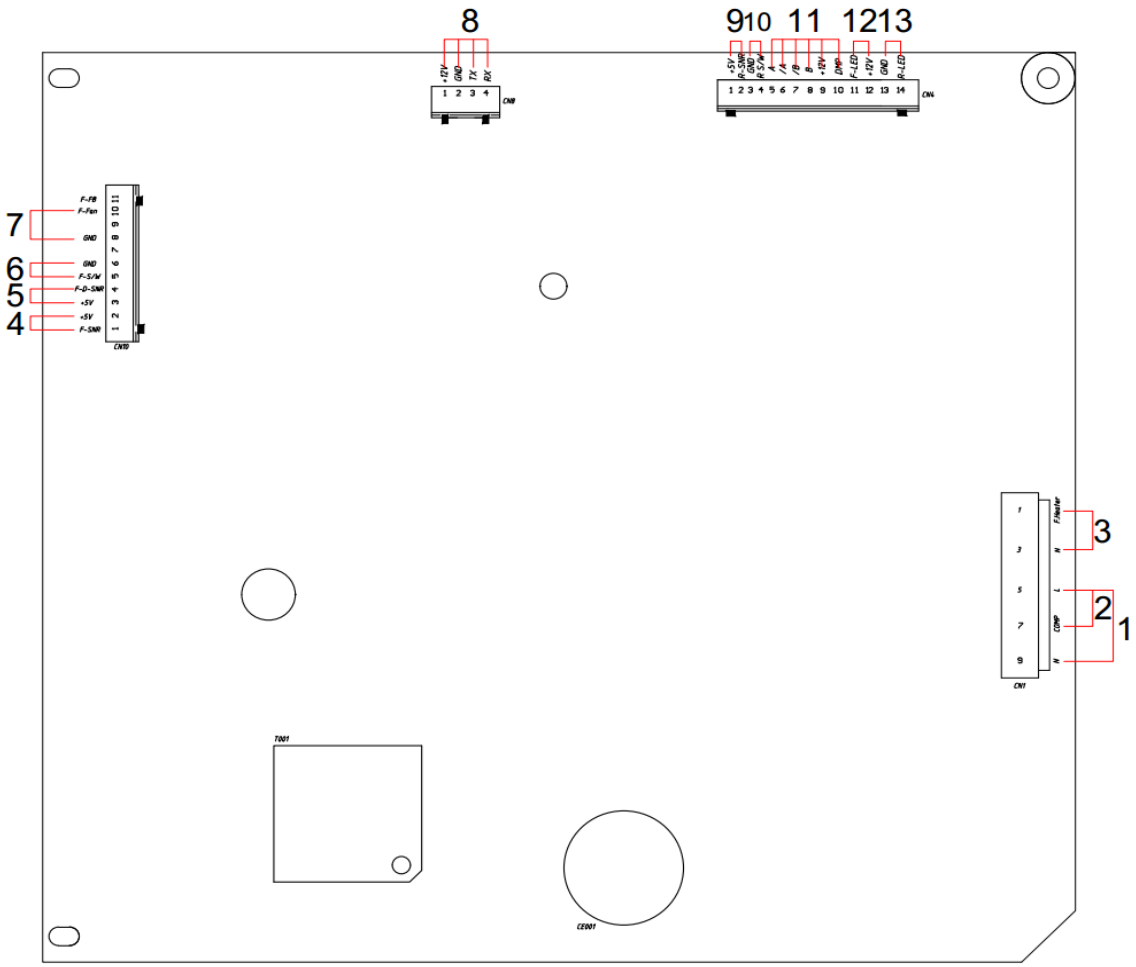
Type A and Type B



NO.	Connecting terminals	NO.	Connecting terminals
1	Compressor	15	Ice maker motor
2	Defrosting heater in freezing chamber	16	Open door motor
3	Distributor heater	17	Electric damper
4	Crushed ice motor	18	Electric damper heater
5	Ice output electromagnet	19	Bar door switch

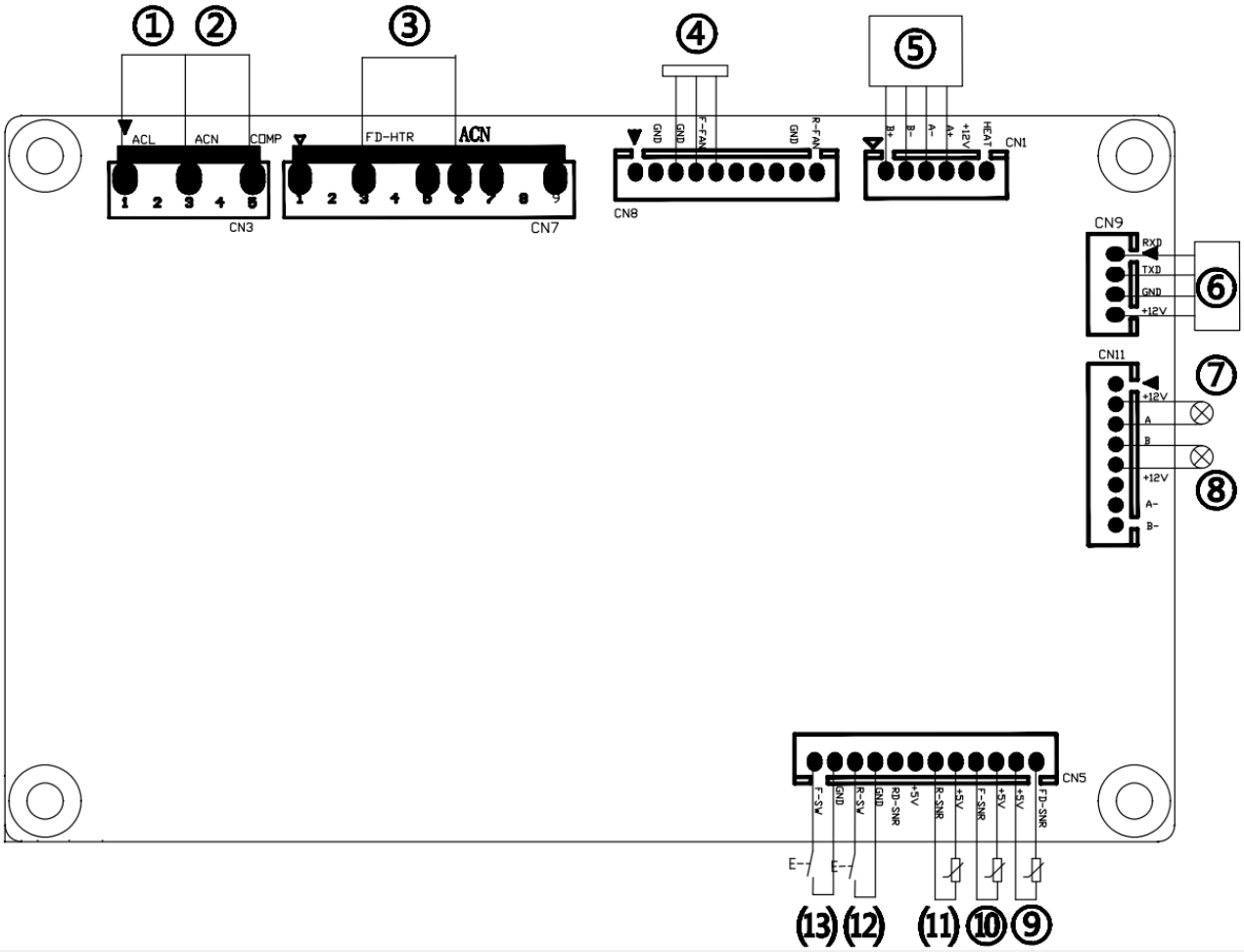
6	Distributor input water valve	20	Freezing-light switch
7	Ice maker input water valve	21	Refrigerating-light switch
8	Ice maker heater in water inlet	22	Lights inside the distributor
9	Bar door heater	23	Display control board
10	Ice maker sensor	24	Fan motor of the freezing chamber
11	Refrigerating sensor	25	Ice crusher outlet heater
12	Defrosting sensor in freezing chamber	26	Lights inside the freezing chamber
13	Freezing sensor	27	Lights inside the refrigerating chamber
14	Distributor LED switch	28	Humidity sensor

Type C



NO.	Connecting terminals	NO.	Connecting terminals
1	power supply	8	Display control board
2	compressor	9	Refrigerating sensor
3	Defrosting heater in freezing chamber	10	Refrigerating-light switch
4	Freezing sensor	11	Electric damper
5	Defrosting sensor in freezing chamber	12	Lights inside the freezing chamber
6	Freezing-light switch	13	Lights inside the refrigerating chamber
7	Fan motor of the freezing chamber		

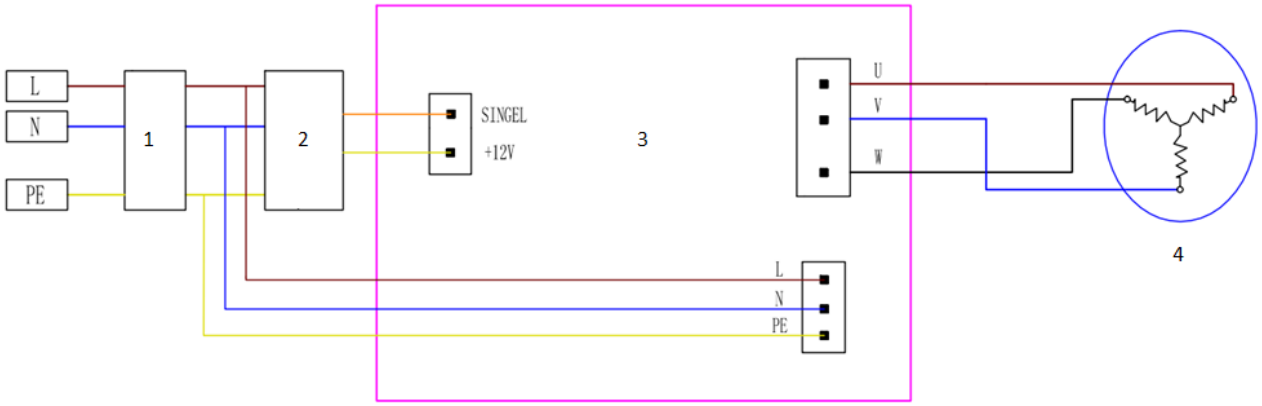
Type D



NO.	Connecting terminals	NO.	Connecting terminals
1	Power supply	8	LED of freezer room
2	Compressor	9	Defrost sensor of freezer room
3	Freezer Defrost heater	10	Temperature sensor of freezer
4	Freezer fan	11	Temperature sensor of refrigerator
5	Electric air damper	12	Refrigerator door LED switch
6	Display control panel	13	Freezer door LED switch
7	LED of fridge room		

5.4 Inverter board terminal connection diagram

Type A and Type B



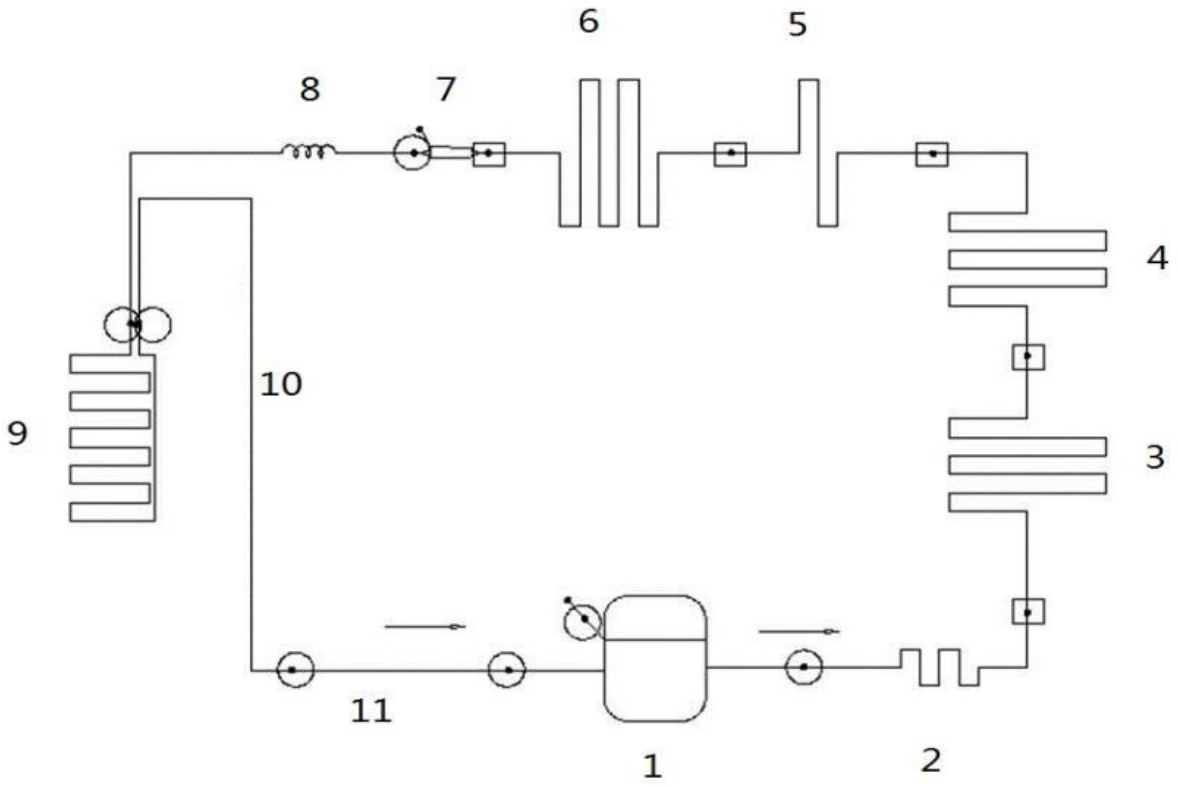
1. Filter	2. PCB	3. Inverter Board	4. Compressor

6. Refrigeration system

6.1 Refrigeration system working principle

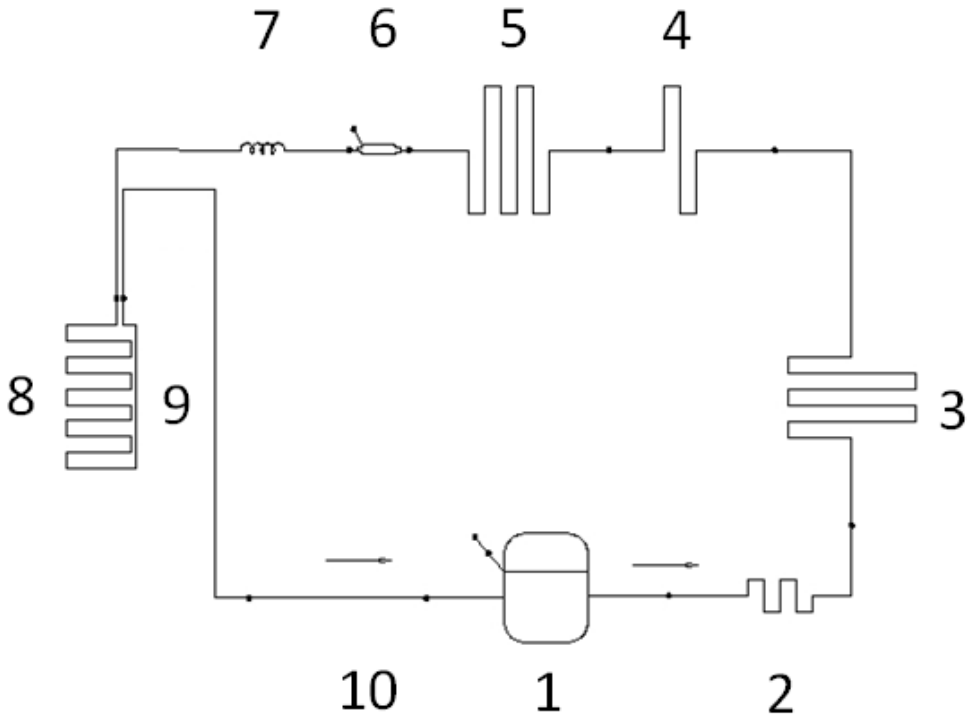
Type A and Type B

1 Compressor→2 Transition pipe→3 Back Condenser→4 Left Condenser→5 Anti-water condensed pipe→6 Right Condenser→7 Drier→8 Capillary Tube→9 Evaporator→10 Suction Pipe→11 Suction connection Pipe→1 Compressor

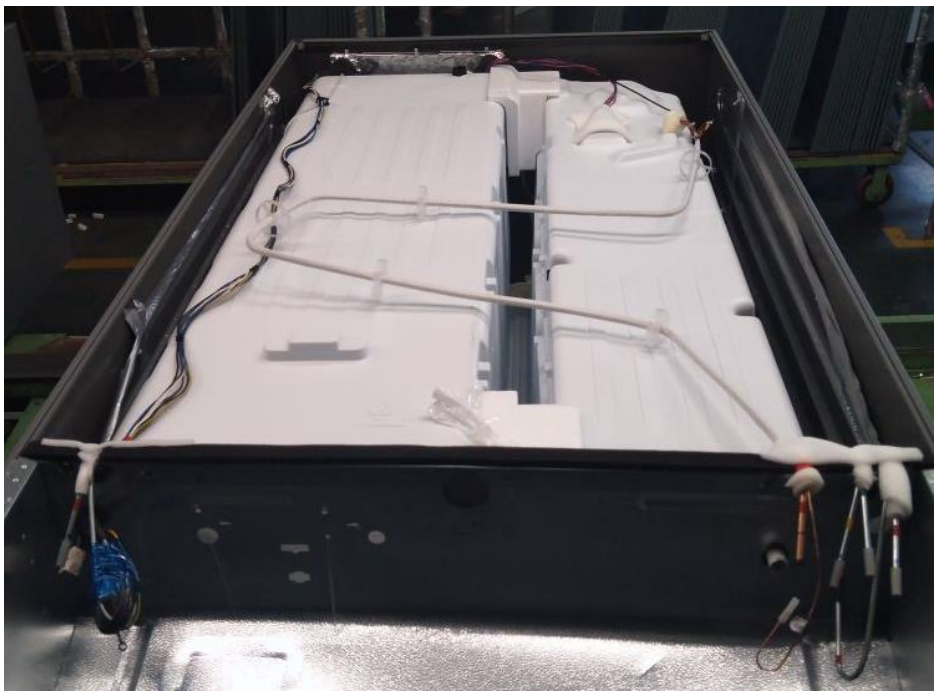


Type C and Type D

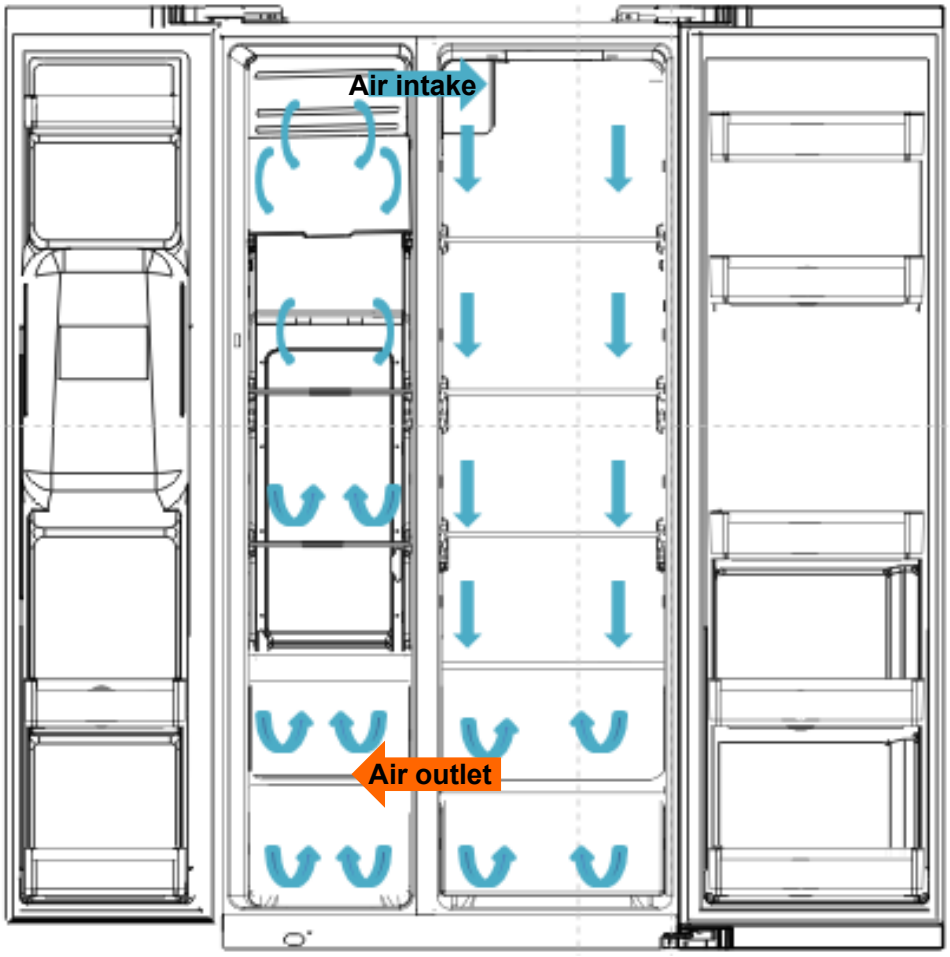
1.Compressor→2.Exhaust transition pipe→3.Left condenser→4.Anti-condensationg tube→5.Right condenser→6.Dry filter→7.Capillary tube→8.Evaporator→9.Return pipe→10.Return transition pipe



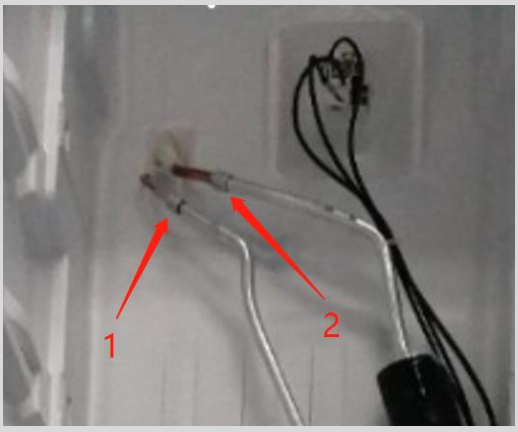
6.2 Cooling pipeline and drain pipe inside the cabinet



6.3 Circulating route of cooling air



6.4 Welding points in chambers or foam layer

points on freezer evaporator	

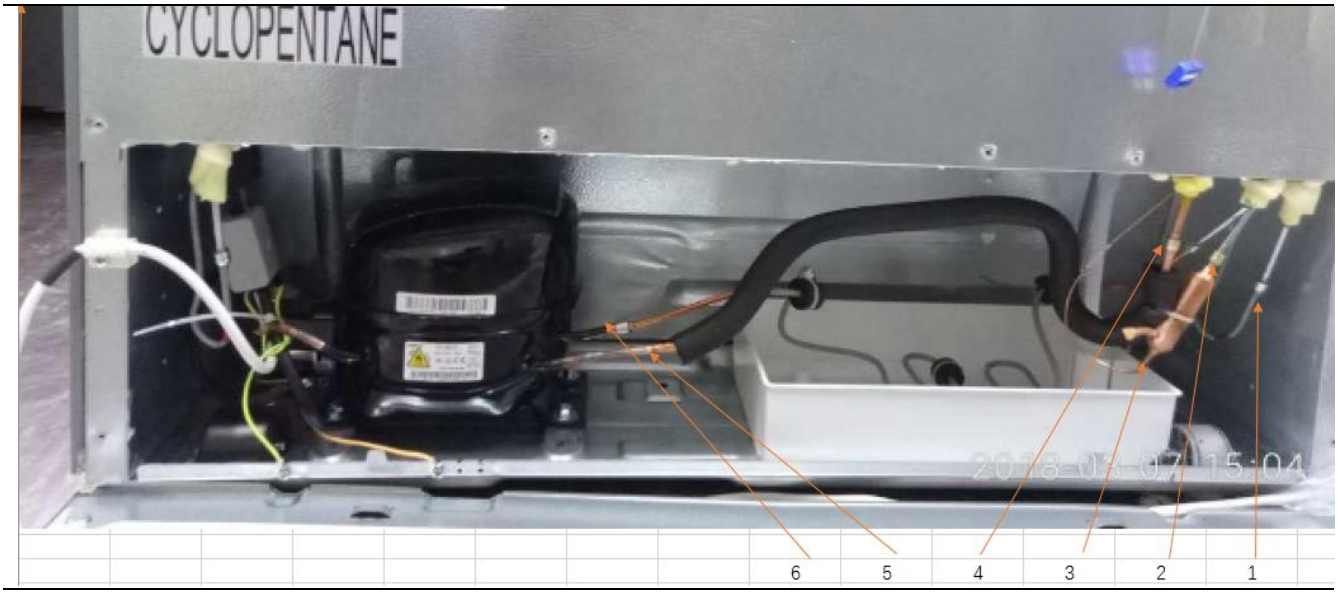
Welding point	Pipe outer diameter (mm)	
1-Freezing capillary and inlet of evaporator	Copper pipe: Φ3.0	Aluminum pipe: Φ5.1
2-Heat transition tube and outlet of evaporator	Copper pipe: Φ6.35	Aluminum pipe: Φ8

6.5 Welding point in the compressor case

Type A and Type B

Welding point	Pipe outer diameter (mm)	
1-Compressor outlet tube and inlet of transition pipe	Copper pipe: Φ6.93	Steel pipe: Φ4.76
2-Inlet of back condenser tube and outlet of transition pipe	Steel pipe: Φ4.76	Steel pipe: Φ4.76
3-Outlet of back condenser tube and inlet of left condenser	Steel pipe: Φ4.76	Steel pipe: Φ4.76
4-Outlet of left condenser and inlet of anti-condensation pipe	Steel pipe: Φ4.76	Steel pipe: Φ4.76
5-Outlet of anti-condensation pipe and inlet of right Condenser	Steel pipe: Φ4.76	Steel pipe: Φ4.76
6-Outlet of right condenser and inlet of dry filter	Steel pipe: Φ4.76	Copper pipe: Φ6.33
7Outlet of dry filter and inlet of freezing capillary	Copper pipe: Φ4.0	Copper pipe: Φ1.8
8-Heat transition tube and Suction connection tube	Copper pipe: Φ6.35	Copper pipe: Φ6.0
9-Suction connection pipe and Compressor intake tube	Copper pipe: Φ6.0	Copper pipe: Φ8.16

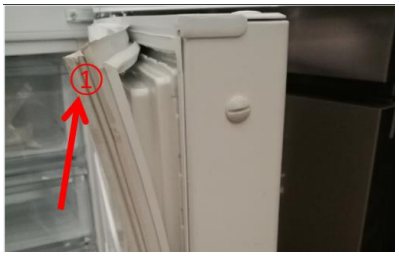
Type C and Type D



Welding point	Pipe outer diameter (mm)	
1-Inlet of anti-condensation tube and outlet of condenser	Steel pipe: Φ4.76	Steel pipe: Φ4.76
2-Outlet of anti-condensation tube and inlet of dry filter	Steel pipe: Φ4.76	Copper pipe: Φ6.33
3-Outlet of dry filter and inlet of freezing capillary	Copper pipe: Φ4.0	Copper pipe: Φ1.8
4-Heat transition tube and Suction connection tube	Copper pipe: Φ6.35	Copper pipe: Φ6.0
5-Suction connection pipe and Compressor intake tube	Copper pipe: Φ6.0	Copper pipe: Φ8.16
6-Compressor outlet tube and inlet of condenser	Copper pipe: Φ6.93	Steel pipe: Φ4.76

7. Dismantling of parts

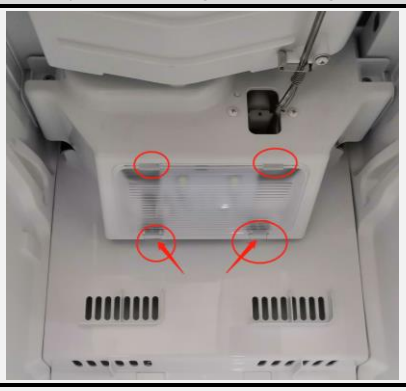
7.1 Parts on the door

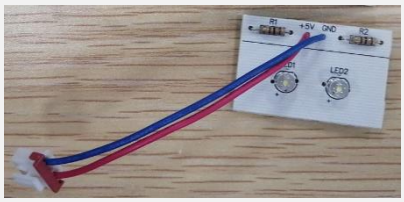
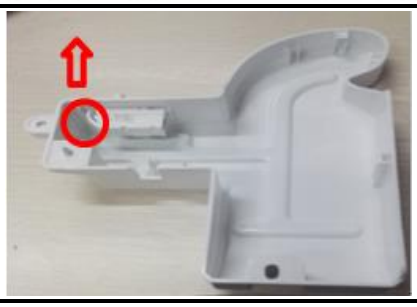
Door seal	
Door seal is installed into door liner groove. 1)Open the refrigerator door; 2)Take the door seal ① out of door liner;	
Door tray	
While squeezing it inward, lift up the door tray and take it out from door liner.	

7.2 Parts inside the refrigerator

Refrigerator Fruit box cover	
1）Take out the crisper firstly. 2） Lift up the Fruit box cover, and then pull out it.	
Shelves	
1）Lift up the division plate with a proper force and pull it out towards yourself;	
Freezer Drawer	
1)Pull the drawer out completely; 2)Lift it up slightly and take it out from the refrigerator.	

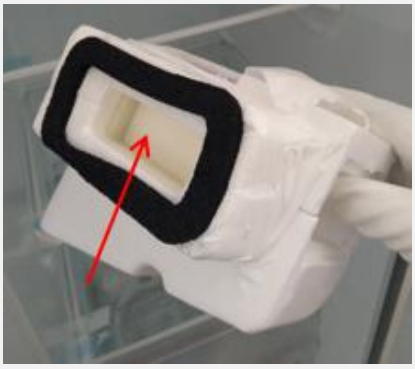
7.3 Light system

Light	
Light of the refrigerating	
1）Take the lamp cover down	
2）Push away the hook with your hand along the arrow direction shown in the picture and separate LED light panel from the hook; then take down LED light panel	
3）Remove the connecting terminals on LED light panel and take down the LED light panel.	
Light of the freezing (Type A and Type B as below, Type C and Type D as light of refrigerating)	
1）Turn over the lampshade hard with flat-blade screwdrivers at two grooves marked with red circles shown in the picture and take it down.	
2）Remove the wiring connector on LED light panel and take down the LED light panel.	

Lights inside the distributor (Type A and Type B)	
1）Use a suction cup to suck at the upper left corner of the display control panel , pull it outwards with force.	 
2）Remove the connecting terminals and take down the LED light.	
Light switch	
1） As shown in the picture, loosen by screwdriver 3 fixing screws of the hinge cover and take it down	
2）Press the snap joint in the circle and push it outward along the arrow direction. Complete the disassembly of door light switch.	

7.4 Air duct in refrigerating chamber and electric damper

Air duct components refrigerating chamber	
1） Remove by cross screwdriver the screws on the positions shown in the picture anticlockwise.	
2） Pull the decoration cover of refrigerating air duct to the right along horizontal direction, take out the decoration cover of refrigerating air duct.	
3）Catch hold of air duct foam in refrigerating chamber and pull it towards the right along the arrow direction shown in the picture.	
4） Remove connecting terminals of ventilation door and take out refrigerating air duct foam.	
Electric damper	

Tear off the adhesive tape, open the foam and remove the electric damper to complete the replacement.	

7.5 Ice maker (Type A and Type B)

Disassembly of ice maker	
1) As shown in the photo, hold the front bottom edge of ice storage box, raise it ❶ then pull outwards ❷ gently.	
2) Hold the ice maker framer and pull it outwards with big force, until it is separated from the liner.	 

3) Use cross screwdriver to remove the fitting screw of wiring connector box, then remove the box. Unplug all connecting terminals .	 

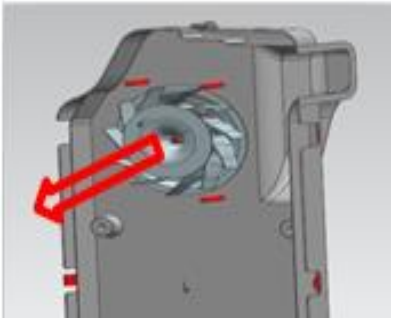
7.6 Crashing ice motor (Type A and Type B)

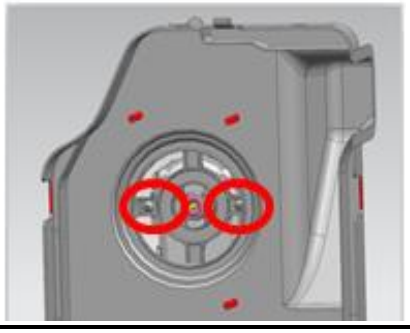
Disassembly of crashing ice motor	
1）Use cross screwdriver to remove 4 fitting screws of crashing ice motor.	
2）Take out crashing ice motor to complete the replacement.	

7.7 Air duct components in freezing chamber and fan motor

Type A and Type B

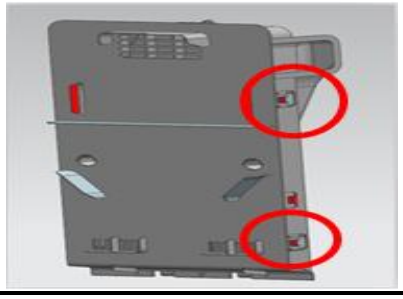
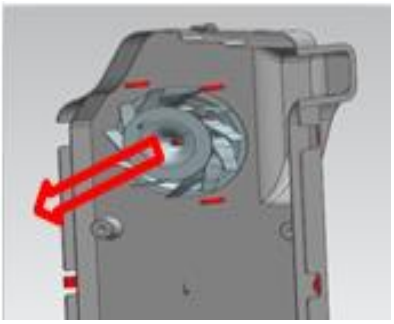
Air duct components in freezing chamber	
1） First, remove the fitting screws of guiding rail (3 pcs fitting screws for each guiding rail) .	
2）Remove aluminum foil on screw hole caps，then use knife to take off the screw hole caps.	
3）Remove the 2 fitting screws of upper front cover of freezer air duct.	
4）Hold the front cover and pull outwards with big force until it is separated from the liner.	

5）Unlock all plastic hooks of back cover, then take it out.	 
6） Unplug the connecting terminals.	
7） After the removal of upper air duct in freezing chamber. Catch hold of cover plate of freezing lower air duct shown in the picture, pull it out along the arrow direction and take it out.	
Fan motor of air duct	
1） After the removal of cover plate of upper air duct in freezing chamber. Pull the motor fan outward to make the fan blade separate from the motor.	

2） Remove by screwdriver the two fixing screws. Complete disassembly of the motor	

Type C and Type D

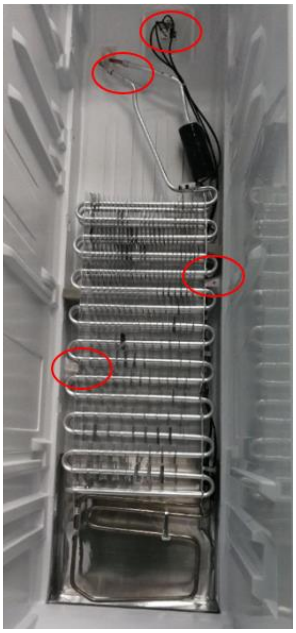
Air duct components in freezing chamber	
1）Remove aluminum foil on screw hole caps，then use knife to take off the screw hole caps.	
2）Remove the 2 fitting screws of upper front cover of freezer air duct.	
3）Hold the front cover and pull outwards with big force until it is separated from the liner.	

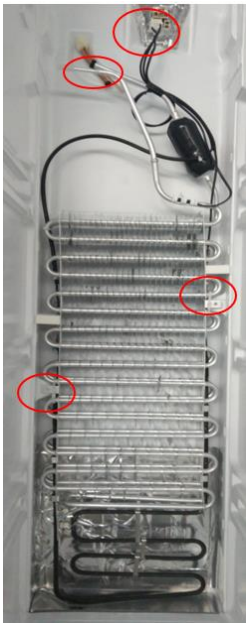
4） Unplug the connecting terminals.	
5） After the removal of upper air duct in freezing chamber. Catch hold of cover plate of freezing lower air duct shown in the picture, pull it out along the arrow direction and take it out.	
Fan motor of air duct	
1） Pull the snap joint of upper air duct outward to make cover plate of upper air duct in freezing chamber fall off from air duct.	
2） After the removal of cover plate of upper air duct in freezing chamber. Pull the motor fan outward to make the fan blade separate from the motor.	

7.8 Evaporator and Defrost system

Evaporator in freezing chamber

1）Remove the air duct components in freezing chamber.
2）Disconnect all connecting terminals.
3）Remove the welding on inlet and outlet tubes.
4）Remove two screws which are used to fix the evaporator and remove the evaporator.





Defrost heater components on the evaporator

This defrost heater with defrost sensor and fuse can be dismantled separately, it DOES NOT need to replace the evaporator assembly if only heater fail to work.

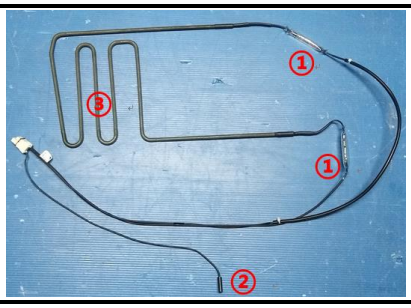
Defrosting fuse ①

Defrost sensor ②

Defrost heater ③

1）Disconnect the connecting terminals.
2）Cut off the band.

3）Use nipper plier to unlock all metal hooks of heater pipe, separate the components from the evaporator.

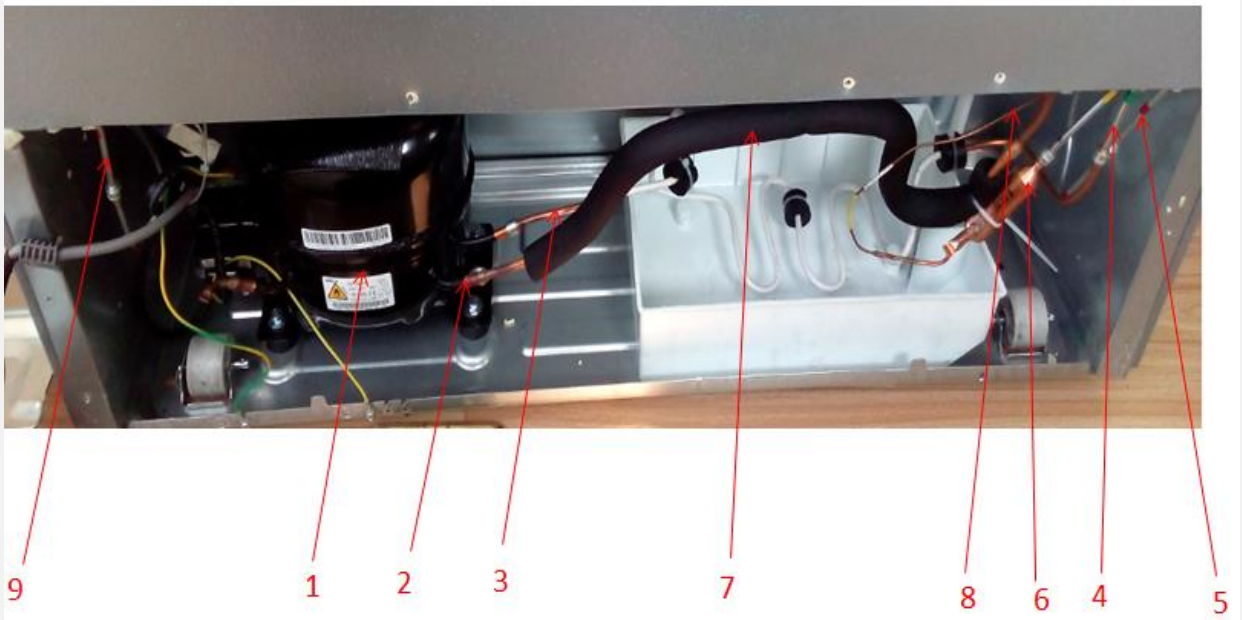


7.9 Compressor case

Rear cover

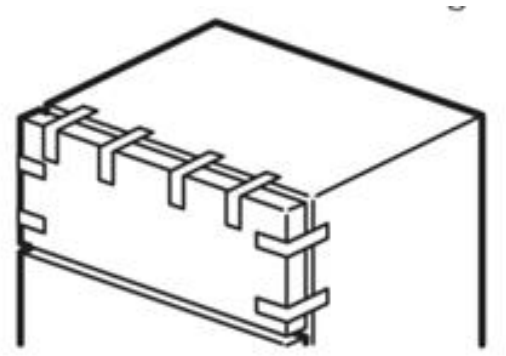
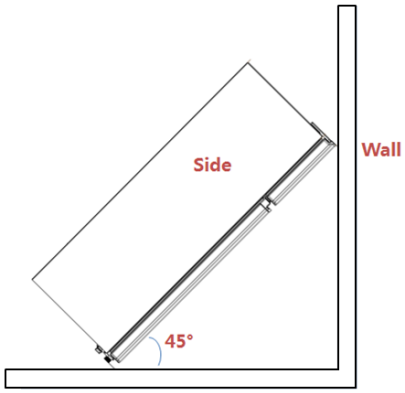
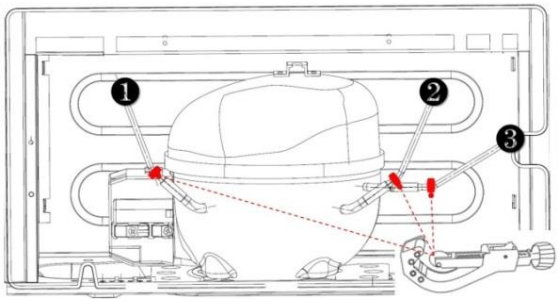
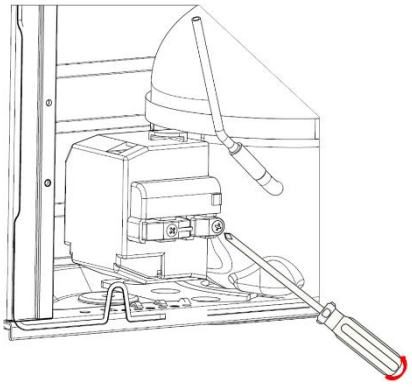
1）Remove the screws fixing back cover plate.
2）Take down the back cover plate upward.

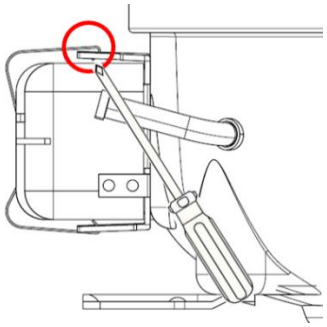
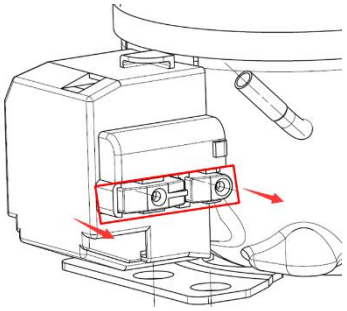
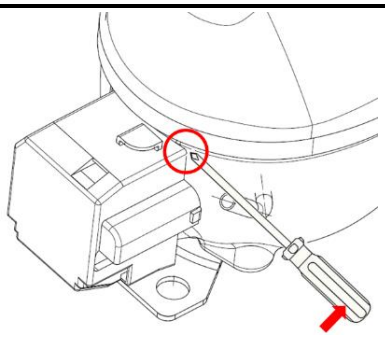
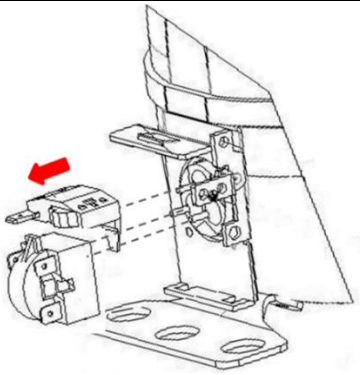
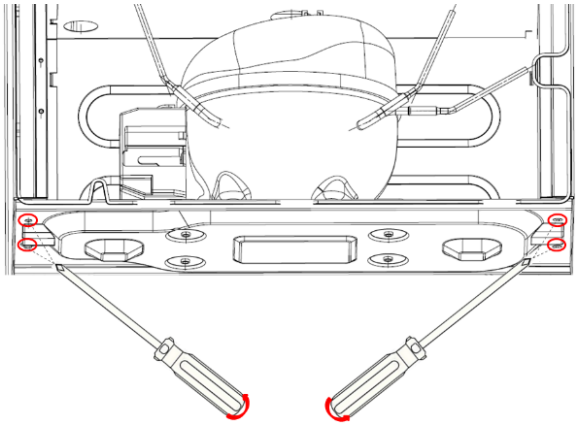
Piping and parts in the compressor case

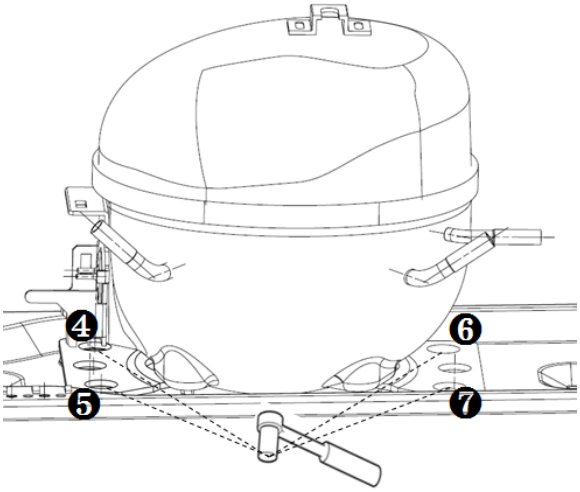
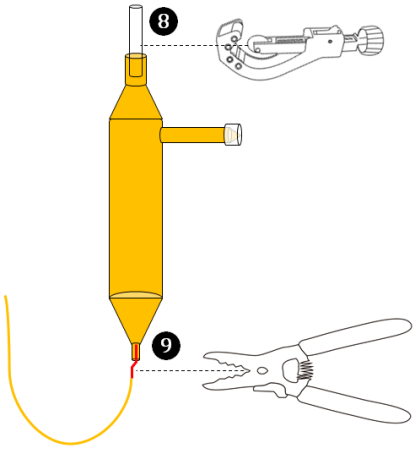
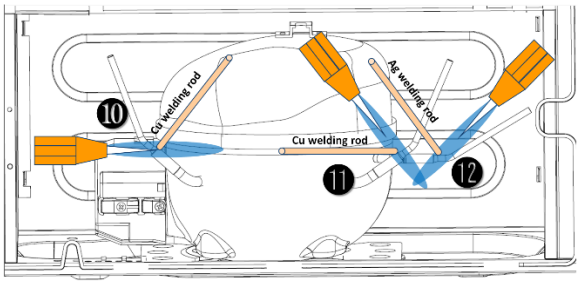
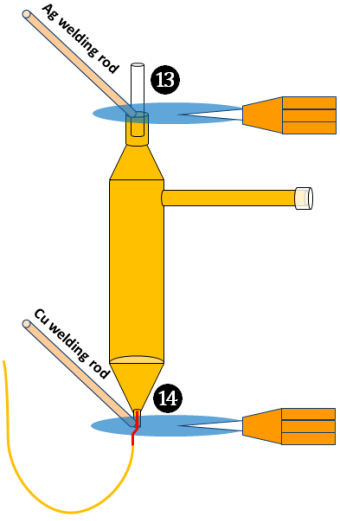


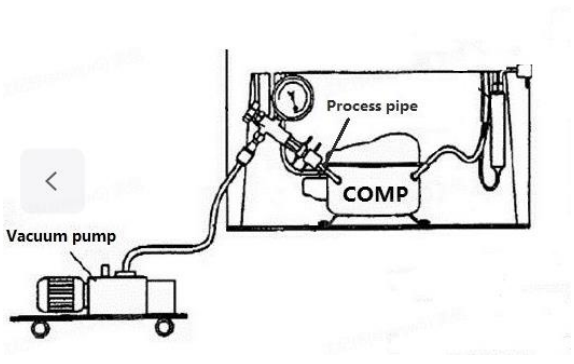
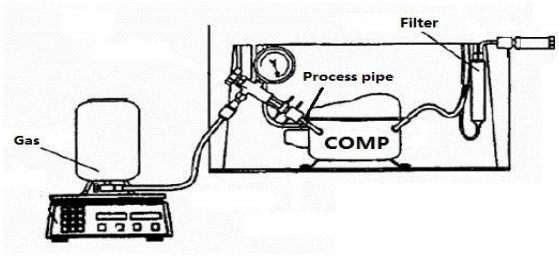
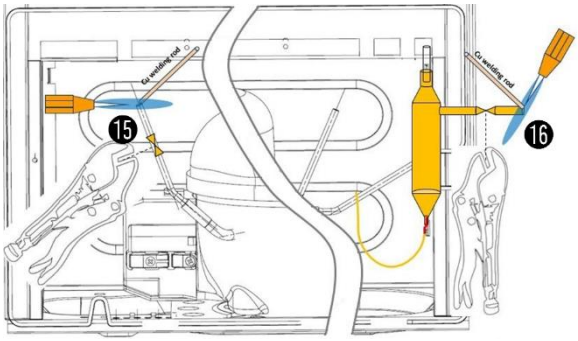
1. Compressor	6. Filter
2. Compresssor suction pipe	7. Suction pipe
3. Transition tube	8. Capillary
4. Left condenser	9. Right condenser
5. Anti-water condensation pipe	

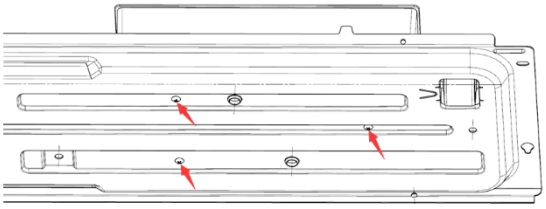
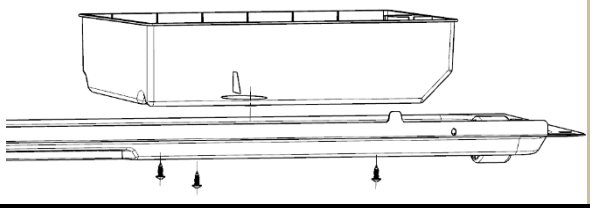
Disassembly and assembly of compressor

1）Cut off the power, remove the goods in the refrigerator, with the tape to make the door fixed firmly and prevent the door dropping when the refrigerator dumping.	
2）Slowly tilt the refrigerator forward, relying on the wall or a solid enough object, leaving space to facilitate the operation. For safety, it should be carried by someone to prevent its falling.	
3）Cut off the compressor pipeline. -❶ Cut off the process pipeline. -❷ Cut off the low-pressure muffler. -❸ Cut off the high-pressure exhaust pipe.	
4-1）**Remove the screws(for some models)** - Two screws outside - One screw inside	

4-2）**Remove the metal clamp(for some models)** -Disassembly the metal clamp that is fix the electric appliance shield	
5）**Remove the clipping strip** Slowly pull it out	
6）**Remove the protective cover** -Pry the protective cover slowly from the upper part, -Pull it out and remove it.	
7）**Remove the starter and protector** Unplug the starter and protector (you can use a screwdriver to pry it slowly)	
8）Loosen the screw of the compressor bottom plate, remove the floor together with the compressor from the box.	

9）Use the wrench to remove the bolts by steps❹❺❻❼, replace the compressor and reverse process can complete installation.	
10）Use Pipe cutter cut off the condenser tube❽, then Shear off capillary ❾ by the capillary tube scissors.	
11）Replace the compressor and welding the compressor pipeline. -❿ Welding the process pipeline. -⓫ Welding the low-pressure muffler. -⓬ Welding the high-pressure exhaust pipe.	
12）Replace the filter, Cu-Fe tubes welding ⓭ used Ag welding rod, Cu-Cu tubes welding⓮ used Cu welding rod.	

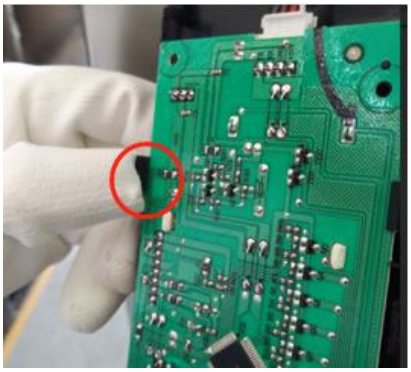
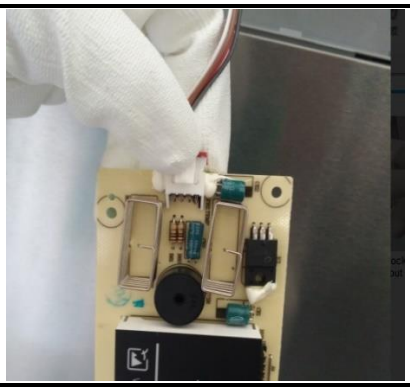
13）Vacuum system,The degree of vacuum below 6Pa.	
14）Perfusion refrigerant.	
15）Use the vise grip pliers clamp the middle of the process pipe, then seal welding process tube⓯⓰.	
Condenser fan motor	
	None
Water valve (Type A and Type B)	
1）Remove the fixing screw as shown in the figure	

2）Take out the water valve and pull off the connecting terminal	
3）Press the position shown in the figure, take out the water pipe and complete the replacement of water valve.	
Drain tray	
1）Remove the bottom screws of the compressor bottom plate	
2）Replace the drain tray, the reverse process can complete installation.	

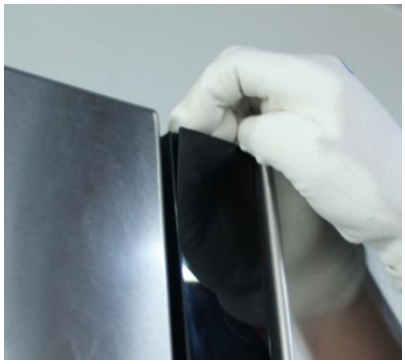
7.10 Display control board

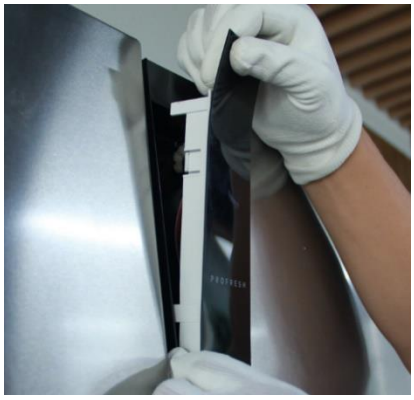
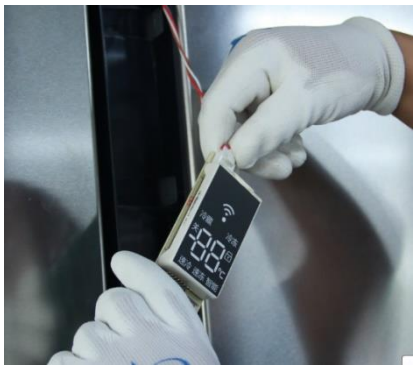
Type A, Type B and Type D

Display control board	
1）Use a suction cup to suck at the upper left corner of the display control panel , pull it outwards with force.	

2）Remove the fitting screws of display control board, unlock all plastic hooks.	 
3）Disconnect the connecting terminals, then change the display control board and control panel. NOTE :The ambient temperature sensor is integrated on display PCB	

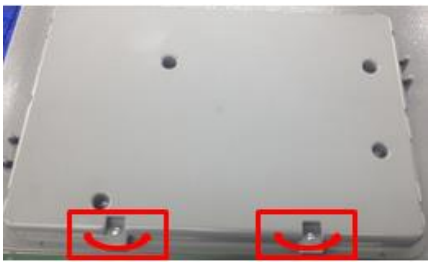
Type C

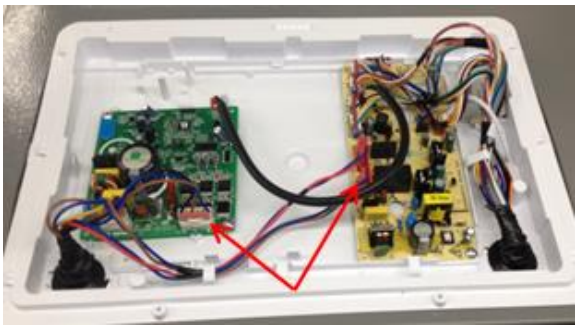
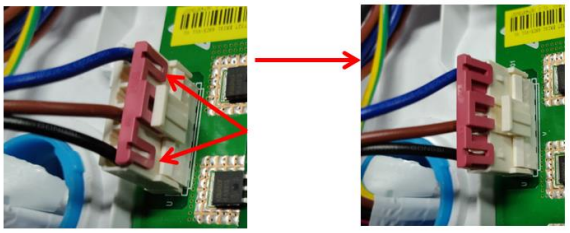
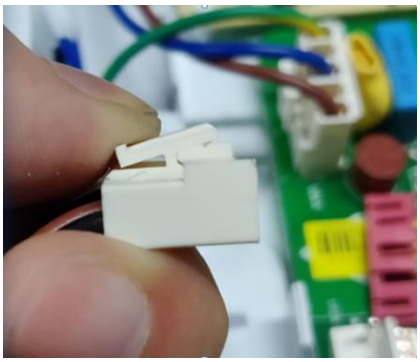
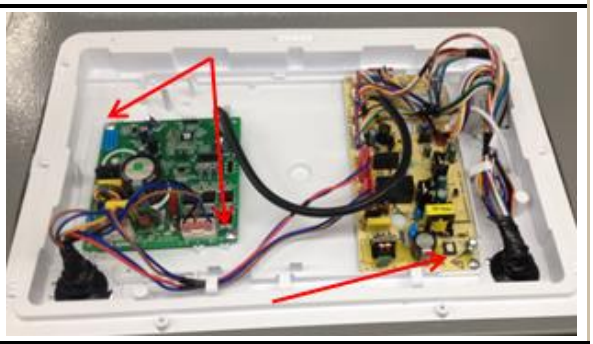
Display control board	
1）Pry up the display control panel membrane from top side.	

2）Remove the display panel assembly.	
3）Remove the 2 fitting screws of display PCB.	
4）Unplug the wiring connector of display PCB, the PCB can be take out for replacement.	

7.11 Main control board

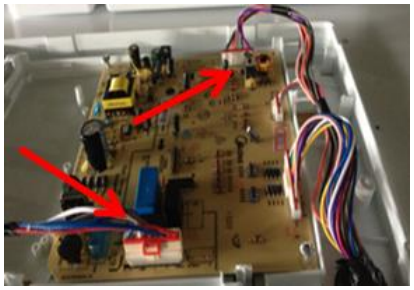
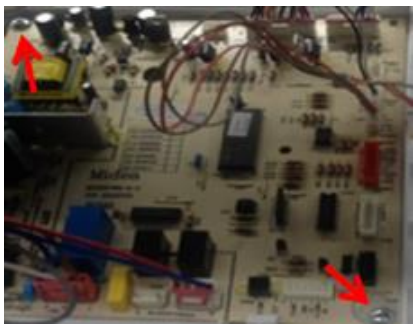
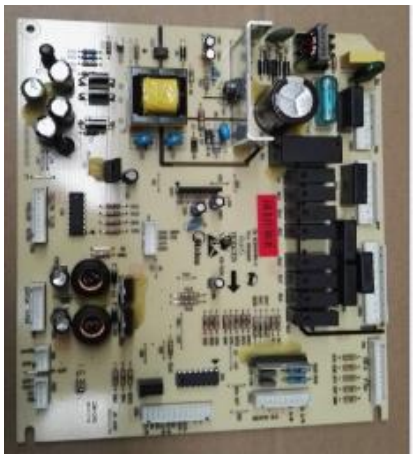
Type A and Type B

Main PCB and variable frequency driver board	
1) Remove 2 screws, then remove the PCB housing cover.	

2) Disconnect all the wiring connectors.	
The connecting terminals remove： a. Use a needle tool to remove the lock at the arrow and remove the lock upward; b. After the lock is removed, press the hook to remove the wiring connectors	 
3) Remove the screws , then remove the main PCB and variable frequency driver board.	

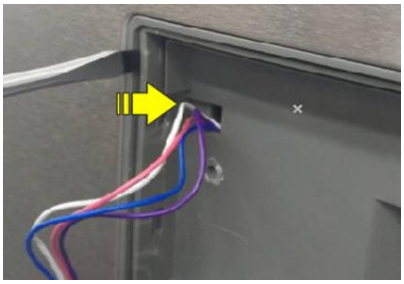
Type C and Type D

Main PCB without variable frequency driver board	
1) Remove 2 screws, then remove the PCB housing cover.	

2) Disconnect all the wiring connectors.	
3）Remove the screws , then remove the main PCB.	 

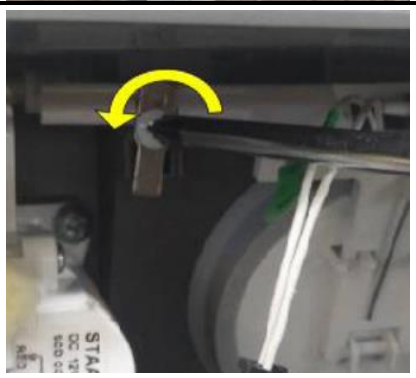
7.12 Distributor (Type A and Type B)

Disassembly and installation of distributor on the door	
1) After removing the display control panel, use a screwdriver to remove the two screws as shown in the figure.	

2) Use a slotted screwdriver to pry off the clips around the plastic back cover.	
3) Grasp the position as shown in the figure and pull the distributor down firmly.	 

7.13 Open door motor and ice blocking plate (Type A and Type B)

Open door motor	
1) After removing the distributor, use a screwdriver to remove the screw as shown in the figure.	

2) Take out the open door motor.	
3) Take out the connecting terminal, complete motor replacement.	 
4) Use cross screwdriver to remove the screw of ice blocking plate.	
5) Take out the connecting terminal, complete the ice blocking plate and the assistive heater replacement.	

7.14 Bar counter (Type A)

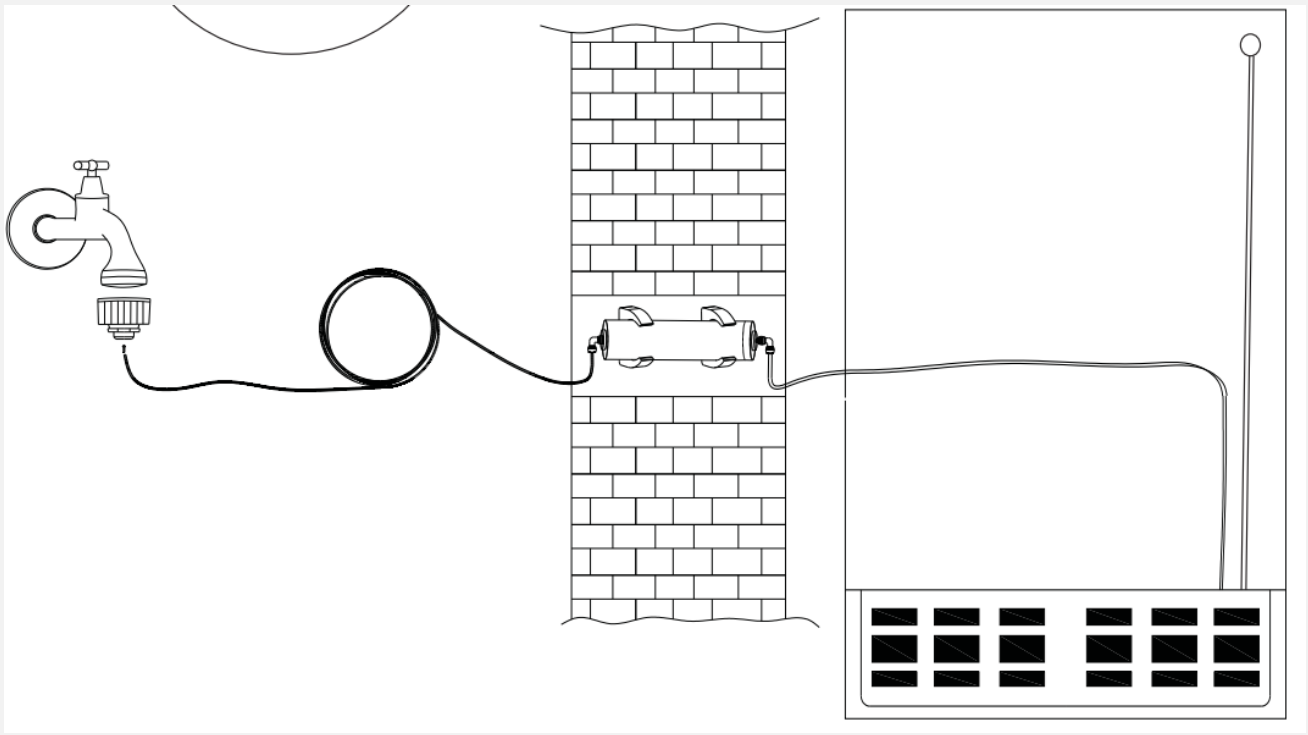
Disassembly and installation of bar counter	
1) Find the position of counter shaft hole , as shown in the right picture.	
2) Use the tool knife to raise the plug hole of the counter bar along the arrow position.	  
3) Using a flat-blade screwdriver, cut the seal inside the plug to see the groove of the bar shaft	
4) Insert a slotted screwdriver into the groove and pull in the direction of the arrow to pull out the spindle, remove the bar.	

7.15 Water dispenser（None）

7.16 Waterway system (Type A and Type B)

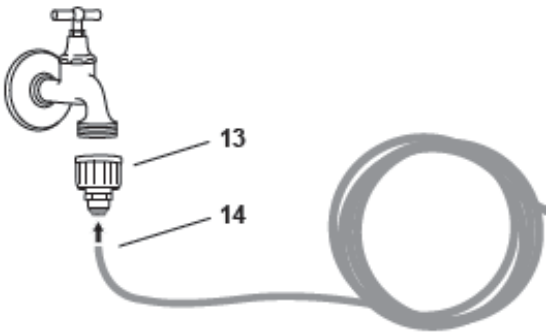
Disassembly of external water filter

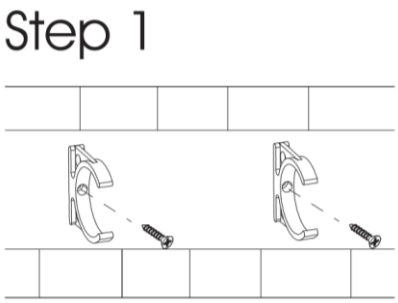
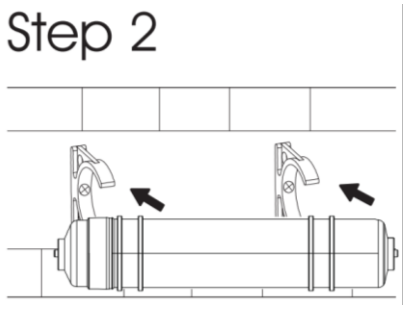
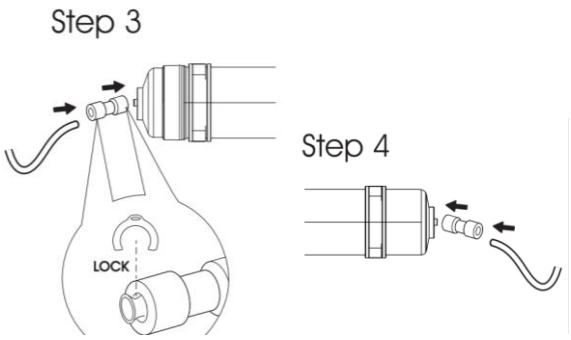
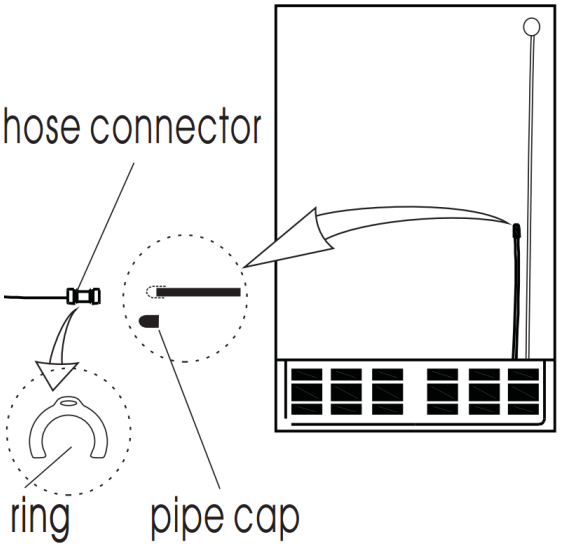
Installation of external waterway



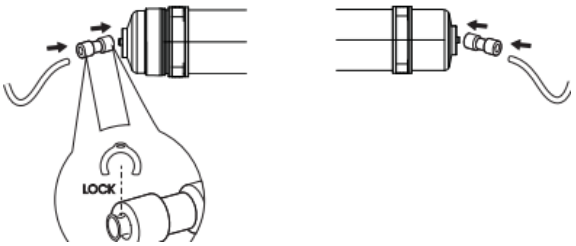
You need a suitable pipe connector for connecting the water pipe with the water tap.

1) Please insert the water pipe (14) into one end of pipe connector (13), fix another end of pipe connector on the water tap.



2) Fix the two plastic clips on the wall by screws.	
3）Put the filter in the clips for fixing.	
4）Assemble the fast connector to one inlet of filter, and insert the water supply pipe into another end of fast connector, then use the snap ring to lock the connection. 5）Assemble the fast connector and water pipe to outlet of filter by same operation method.	
6) Pull the pipe cap off the white water pipe on the refrigerator , insert the end of white water pipe into one end of hose connector; Note: the size of hose connector and water pipe is generally 1/4 in.	
Disassembly and installation of water filter	

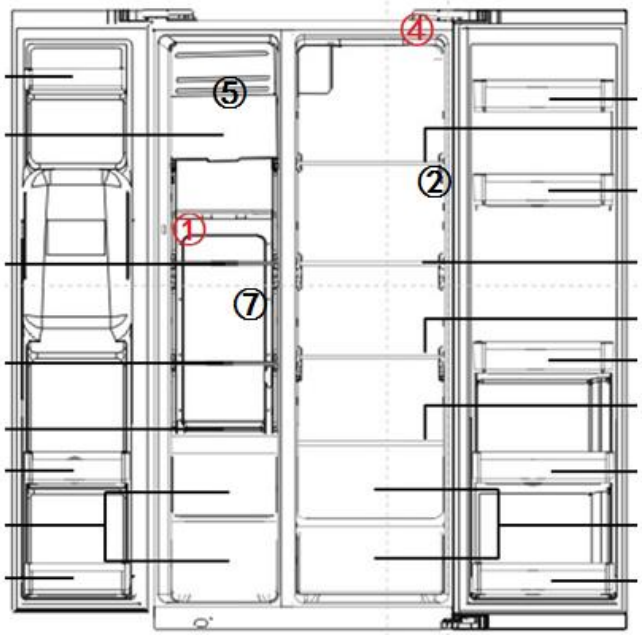
1) After being used for 6 consecutive months, the icon on display panel will blink. If that happens, please replace the water filter.
2) Pull out the plug. Turn off the water intake. Take off the filter and the snap ring on the quick connector and then pull out the water pipe.
3）Insert the new filter into the quick connector and then install the snap ring.
4）Re-supply water and check whether there is water flowing out.
5）After changing the water filter, reset the water filter by pressing and holding the **DISPENSER** button for 3 seconds. When the filter status is reset, the corresponding icon will turn off from the display panel.
Note: Check the water pressure, automatic ice-making run requires a water pressure of around 147-834KPa (1.5-8.5kgf /cm), if not , you may need to buy a booster.



8. Temperature sensing system

8.1 Position of sensors

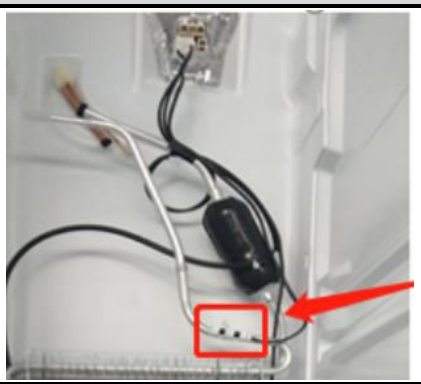
Type A and Type B

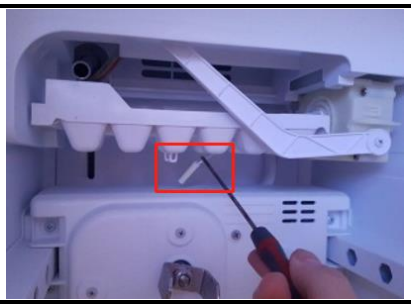
Position of sensors	
Have 5 sensors ① Sensor in freezing chamber ② Sensor in refrigerating chamber ④ Ambient temperatureor humidity sensor ⑤ Ice maker sensor ⑦ Defrost sensor freezing chamber	

Type C and Type D

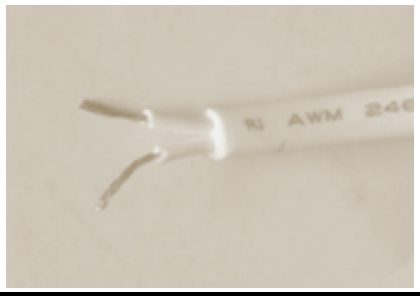
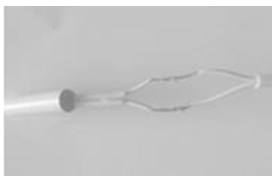
Position of sensors	
Have 3 sensors ① Sensor in freezing chamber ②Sensor in refrigerating chamber ③ Defrost sensor freezing chamber	

8.2 Replacement of sensors

Sensor in freezing chamber
1）To remove the sensor cover, you may squeeze it up and down; 2）Take the sensor out from card slot; 
Sensor in refrigerating chamber
Refer to the method of disassembling the freezer compartment sensor. 
Ambient temperature and humidity sensor (Type A and Type B)
The sensor used for measurement of ambient temperature is located within upper hinge cover of refrigerating chamber door; 
Defrost sensor in freezing chamber
The defrost sensor is located on top of the evaporator. 1）Disconnect the connector of defrost sensor 2）Cut off the band which fixes the sensor. 3）Separate the sensor and the evaporator. 
Ice machine sensor (Type A and Type B)

After taking out the ice storage box assembly, use a screwdriver to remove the ice maker sensor at the position shown in the figure.	

8.3 Sensor without terminal replacement

Sensor replacement guidelines	
Cut off the damaged head of sensor.	
Strip off the sensor wiring.	
Take out a new sensor to cut the head of sensor. (Spare parts code：11201007000795) Its technical specifications apply to all VESTEL refrigerators.	
Strip off the head of the sensor and connect it.	 
Wrap the two wires together with insulation tape.	 

Wrap the two wires together.	

8.4 Sensor R/T table

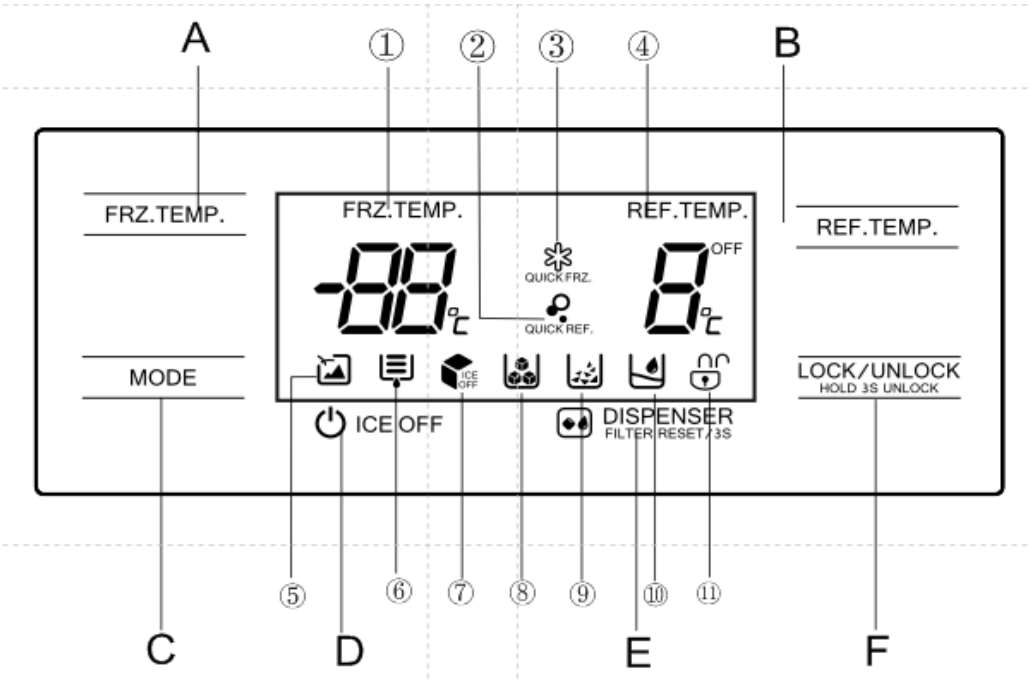
Tx(℃)	Tx(℉)	R (KΩ)	Tx(℃)	Tx(℉)	R (KΩ)	Tx(℃)	Tx(℉)	R (KΩ)
-30	-22.00	33.81	-5	23.00	8.392	20	68.00	2.501
-29	-20.20	31.85	-4	24.80	7.968	21	69.80	2.391
-28	-18.40	30.01	-3	26.60	7.568	22	71.60	2.287
-27	-16.60	28.29	-2	28.40	7.190	23	73.40	2.188
-26	-14.80	26.68	-1	30.20	6.833	24	75.20	2.094
-25	-13.00	25.17	0	32.00	6.495	25	77.00	2.005
-24	-11.20	23.76	1	33.80	6.175	26	78.80	1.919
-23	-9.40	22.43	2	35.60	5.873	27	80.60	1.838
-22	-7.60	21.18	3	37.40	5.587	28	82.40	1.761
-21	-5.80	20.01	4	39.20	5.315	29	84.20	1.687
-20	-4.00	18.90	5	41.00	5.060	30	86.00	1.617
-19	-2.20	17.87	6	42.80	4.818	31	87.80	1.550
-18	-0.40	16.90	7	44.60	4.589	32	89.60	1.486
-17	1.40	15.98	8	46.40	4.372	33	91.40	1.426
-16	3.20	15.12	9	48.20	4.167	34	93.20	1.368
-15	5.00	14.310	10	50.00	3.972	35	95.00	1.312
-14	6.80	13.550	11	51.80	3.788	36	96.80	1.259
-13	8.60	12.830	12	53.60	3.613	37	98.60	1.209
-12	10.40	12.160	13	55.40	3.447	38	100.40	1.161
-11	12.20	11.520	14	57.20	3.290	39	102.20	1.115
-10	14.00	10.920	15	59.00	3.141	40	104.00	1.071
-9	15.80	10.350	16	60.80	2.999	41	105.80	1.029
-8	17.60	9.820	17	62.60	2.865	42	107.60	0.989
-7	19.40	9.316	18	64.40	2.737	43	109.40	0.951
-6	21.20	8.841	19	66.20	2.616	44	111.20	0.914

9. Function and operation

9.1 Display operation panel

Type A and Type B

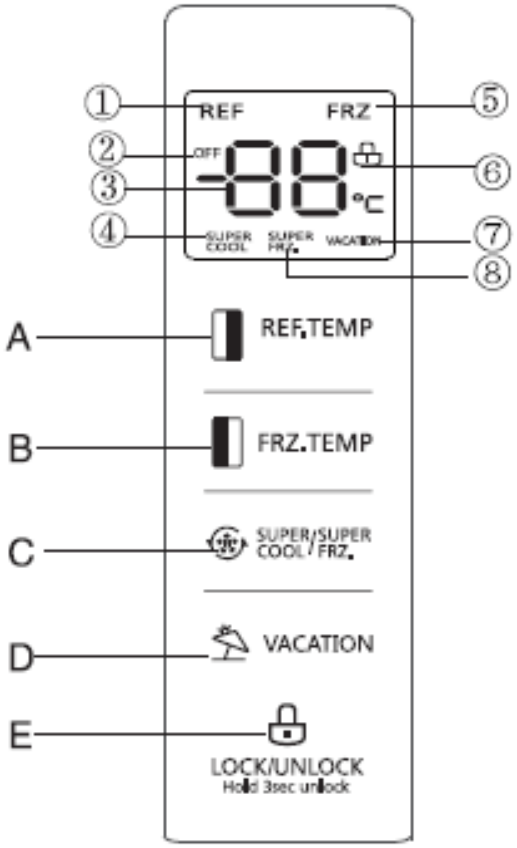
Icons	Button
① Freezing chamber temperature display area ② Quick cooling ③ Quick freeze ④ Refrigerating chamber temperature display area ⑤ Vacation mode ⑥ Filter change reminder ⑦ Ice maker shut off ⑧ Take the whole ice ⑨ Take crushed ice ⑩ Take cooling water	A. Freezer chamber temperature setting B. Refrigerating chamber temperature setting C. Mode setting D. Ice maker on / off setting E. Take whole ice, crushed ice, cooling water setting, and filter change reset F. LOCK/UNLOCK setting



Type C

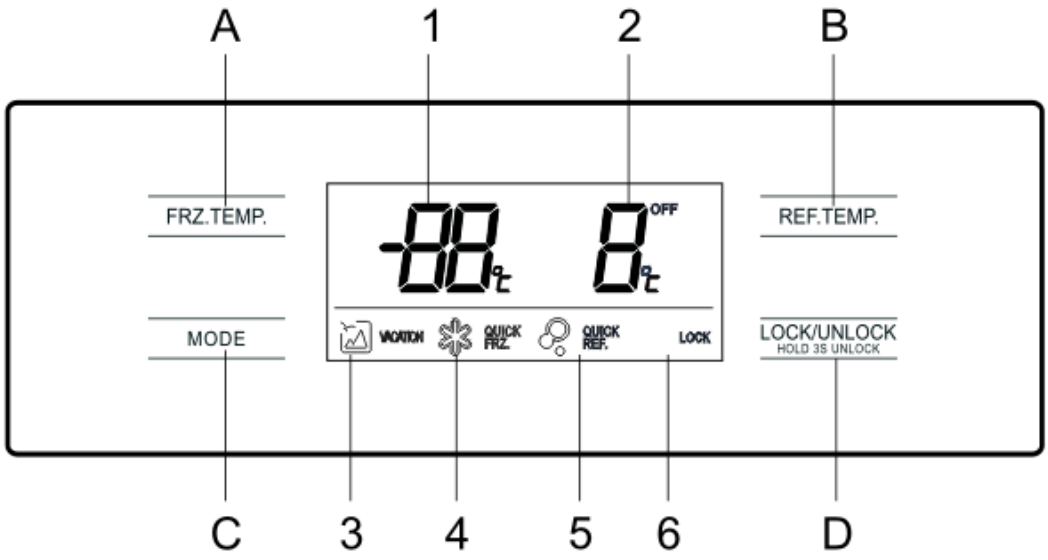
Icons	Button
① refrigerator icon ② off icon ③ display zone of temperature ④ Quick cooling by freezing ⑤ freezer icon	**A** FRZ.TEMP. **B** REF.TEMP. **C** MODE **D** VACATION **E** LOCK/UNLOCK

⑥ Unlock
⑦ vacation icon
⑧ Quick cooling by refrigerating



Type D

Icons	Button
1. Freezing chamber temperature display area **2.** Refrigerating chamber temperature display area **3.** Vacation mode **4.** Quick freeze **5.** Quick cooling **6.** LOCK	A. Freezer chamber temperature setting B. Refrigerating chamber temperature setting C. Mode setting D. LOCK/UNLOCK setting



9.2 Temperature control

9.2.1 Temperature setting of refrigerating chamber

The temperature setting range of refrigerating chamber is 2℃ ~ 8℃, the temperature can be set circularly, press the button **"Fridge"** once, the temperature turn by 1℃. The setting is effective after being locked.

8℃→7℃→……...→2℃→3℃→……..→8℃

9.2.2 Temperature setting of freezing chamber

The temperature setting range of freezer chamber is -24℃～-16℃. The temperature can be set circularly, press the button **"Freezer"** once, the temperature turn by 1℃. The setting is effective after being locked.

-16℃→ -17℃→……...→ -24℃→ -23℃→ -22℃→……..→ -16℃

9.3 Mode setting

9.3.1 Quick cooling、Quick freeze、Vacation mode

◆ Press **MODE** button, fridge mode will cycle in the following order, corresponding icon will illuminate:

Vacation →Quick FRZ. →Quick REF. + Quick FRZ.→ Quick REF. →None →Vacation

◆ Running status of each mode

1) **Quick cooling mode**

The "**Quick REF.**" icon will illuminate, the refrigerating chamber will automatically run at 2℃ for 2.5 hours and then exit. After exiting, the refrigerating chamber will return to the previous set temperature.

2) **Quick freeze mode**

The “**Quick FRZ.”** icon will illuminate, the freezing chamber will automatically run at -24℃ to setting off time and then exit. After exiting, the freezing chamber will return to the previous set temperature.

3) **VACATION MODE**

The icon will illuminate, the refrigerating chamber cooling is off and no temperature display, **“OFF”** icon will illuminate. The freezing chamber will automatically run at -18℃.

Press the "**FRZ.TEMP.**" or "**REF.TEMP.**" button once to exit this mode, and the refrigeration and freezer will return to the previous set temperature.

◆ Setting of super freezing time

1) The default setting is 26 hours

2) After setting “SUPER FRZ.” mode, long press the “FRZ.TEMP” button for 3 seconds, the display will shows "48", which means that time of super freezing has been set at 48 hours. And press “FRZ.TEMP” button again, the display will shows "26", which means that time of super freezing has been set at 26 hours.

9.3.2 Locking and unlocking

In unlocking state, keep pressing the lock button for 3 seconds to lock, and the locking beeping will be rang.

In locking state, keep pressing the lock button for 3 seconds to unlock, and the unlocking beeping will be rang.

The refrigerator enters into locking state automatically 30 seconds after no button operation.

Except for the door open alarm and failure alarm can be carried out in the locking state, others button operations shall be conducted in unlocking state.

9.4 Setting of ice maker and filter (Type A and Type B)

1) Ice maker on/off

Press “ICE OFF” button, when the icon ICE OFF light up, the ice maker turn off. On the contrary, when the icon goes out, the ice maker starts to work. The initial default setting is the ice maker turn off.

2）Options for ice /cooling water

Press “**DISPENSER**” button to choose “ice taking”, “crushed ice taking” and ”cooling water taking” circularly, the corresponding icons will light on/off.

3) Time setting of water intake of ice maker

Press both “FRZ. TEMP” button and “REF. TEMP” button last for 2 s, the control panel will enter into setting status, press “REF.TEMP” button or “FRZ. TEMP” to increase or reduce the intake time (The adjustable range is from 5s to 25s), the setting time is displayed in FRZ. Temperature zone. Lock the panel or press both “FRZ. TEMP” button and “REF. TEMP” button last for 2 s will quit the setting status.

4）Filter set

After the refrigerator is running, the working time of the filter starts to count. When the filter is used for 150 days, the icon on the display will be on for a long time, and the icon will continue to flash after 180 days. At this time, the filter needs to be replaced.

After replacing the filter, press the " **DISPENSER** " key for 3 seconds, the "filter reset" function will be executed, the icon will stop flashing, and the filter working time will start timing again.

9.5 Defrosting function

◆ **Defrosting theory:**

The defrosting of evaporator is realized by the heating of heater, following the temperature rise, the frost on evaporator becomes water, and the water flow into the evaporating pan via the draining system, the water in evaporating pan evaporate away finally

◆ **Defrosting steps:**

Compressor shutdown--- fan motor is turned off after 3~10 minutes (for different model refrigerator, the time is different)--- electric damper closed---the heater start working---the heater stop when the temperature rise to setting--- after 7 minutes, if the start-up condition is reached, the compressor will start---the electric damper resets once---after 3 minutes, the fan motor will start work

◆ **Meet one of the following conditions , defrost heating exit:**

1) When the frozen defrosting sensor has no fault, the measured temperature Tfd ≥ the set temperature which defrost heating exit
2) When the frozen defrosting sensor has no fault, the defrosting time is ≥ 60 minutes
3) When the frozen defrosting sensor is faulty , the heater will stop after work 20 minutes

9.6 Open door alarm

When refrigerator door or freezer door is open, light up, a notification tone will sound. If refrigerator door or freezer door is open last for 120s, there will be a buzzer alarm, afterwards give alarm one time per second until the door is closed, or press any buttons on control panel can cancel this buzzer alarm.

Note: When open the door, the display panel will light on. When the door is closed, the display panel will be light off after 30s if there is no any operation on display panel.

9.7 Error code and solutions

Error code	Fault Type	Troubleshooting and Solutions
E0	fault of ice maker	**Step 1**: Check whether the connection terminals on the ice maker and the main PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: Enter the forced ice making mode and check whether the ice maker works normally. **Step 3**: If the ice maker does not work, replace the ice motor. **Step 4**: If the fault still occurs, replace the main PCB.
E1	Temperature sensor fault in refrigerating chamber	**Step 1**: Check whether the connection terminals are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the corresponding connection terminal on the main PCB, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal.
E2	Temperature sensor fault in freezing chamber	

E3	Temperature sensor fault in variable chamber	**Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main PCB.
E4	Defrost sensor fault in refrigerating chamber	**Step 1**: Check whether the connection terminals are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the corresponding connection terminal on the main PCB, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal. **Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main PCB.
E5	Defrost sensor fault in freezing chamber	
E6	Communication failure	**Step 1**: Check whether the connection terminal on the display control panel, hinge cover and main PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out all connection terminals, use a multimeter to check the resistance value of the wire between the display control board and the main PCB to see if it is broken. If test value is ∞Ω, the wire is broken.(If the wire in the door is broken, replace the door. Other conditions cannot be repaired.) **Step 3**: If the wire is OK, replace the display control board. **Step 4**: If the fault still occurs, replace the main PCB.
E7	Ambient temperature sensor fault	**Step 1**: Check whether the connection terminals are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the corresponding connection terminal on the main PCB, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal. **Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main PCB.
E8	Defrost sensor fault in variable chamber	
E9	High temperature alarm in freezing chamber	**Step 1**: Check whether the door is not closed, or whether there is leakage between the door gasket and the cabinet. **Step 2**: Check whether the door gasket is deformed and causes leakage, reshape or replaced with a new one. **Step 3**: Check whether the freezing frost is OK, if there is ice on the evaporator and the fan motor is frozen, replace a new defroster heater. **Step 4**: Check whether the light switch is damaged, replace new one. **Step 5**: Check whether the freezer fan stops working, plug and unplug connection terminals, replace a new fan motor. **Step 6**: Check if the pipeline is leaking or blocked. After maintenance, vacuum and refill the refrigerant.

EE	Circuit fault of ice maker sensor	**Step 1**: Check whether the connection terminal s on the ice maker and the main PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the connection terminal on ice maker, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal. **Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main PCB.
EH	Circuit fault of ambient humidity sensor	**Step 1**: Check whether the connection terminal s in the hinge cover and the main PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the connection terminal on the hinge cover, use a multimeter to check the voltage value of the sensor, and confirm whether it is normal. **Step 3**: If the voltage value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main PCB.
EF	Water tank installation failure	**Step 1**: Check whether the water tank is installed in place, pull out the water tank and install it again; **Step 2**: Check whether the connection terminals behind the water tank seat is plugged in place and whether there are foreign matters in it; after cleaning the terminal, plug it in again. **Step 3**: Check whether the switch in the water tank seat is damaged, replace a new switch.

9.8 Test mode

All below functions are only for diagnosis and test purpose, we advise to restart the refrigerator by power on/off if have used these functions.

Test items	Setting Method	Setting result
Enter Test Mode	Keep pressing the “LOCK” and “FRZ. TEMP” button for 3 seconds and release	LED indicators display “0”, then the refrigerator enters into test mode
	After entering into test mode, if no button is pressed within 30 seconds	then the refrigerator will exit the test mode and return to normal operation mode
Select to enter into forced cooling mode	Enter into test mode and press “FRZ. TEMP” button for the first time	LED indicators display “1”, then the compressor and the fan will start working
	In forced cooling mode, if no button is pressed within 36 hours,	then the refrigerator will exit the test mode and return to normal operation mode

Select to enter into forced defrosting mode	Enter into test mode and press “FRZ. TEMP” button for the second time	LED indicators display “3”, then the compressor and the fan will stop working, defrost heater starts to work.
	In forced defrosting mode, when the defrosting sensor reach a temperature of 7°C and the defrosting heater has been working for at least 2 minutes.	then the refrigerator will exit the test mode and return to normal operation mode
	In forced defrosting mode, if the temperature of defrosting sensor is always lower than -12°C and the defrosting heater has been working for 60 minutes,	then the refrigerator will exit the test mode and return to normal operation mode
Select to enter into ice maker forced operation mode	Enter into test mode and press “FRZ. TEMP” button for the third time.	LED indicators display “4”, then ice maker motor will turn ice twice, water valve starts to supply water to ice maker.
Select to exit the test mode	Enter into test mode and press button for the four time	LED indicators display “0”, then the refrigerator will exit the test mode and return to normal operation mode

9.9 Demo mode（None）

9.10 Backup data for power fail

1) The running state of the refrigerator is remembered after compressor running for 1 hour continuously.

2) The running state of the refrigerator is remembered after change function settings and lock.

3) When the refrigerator is out of power and recharged, the running state of the refrigerator is same as before.

10. Compressor

10.1 Compressor on and off control specifications

1.1 When one of the following conditions is met, the compressor stops:

1) Measured temperature in freezer room ≤ Shutdown temperature of freezer room
2) Enter defrosting cycle
3) The compressor runs continuously for more than 3 hours, will stop at least 5 minutes

1.2 When all the following conditions are met, the compressor starts up:

1) Measured temperature in freezer room ≥ Start up temperature of freezer, or when refrigerator is set to forced cooling mode or fast cooling or fast freezing mode
2) Compressor shutdown time has been more than 5 mins

★When 1.1 and 1.2 are not satisfied, the compressor maintains the original state

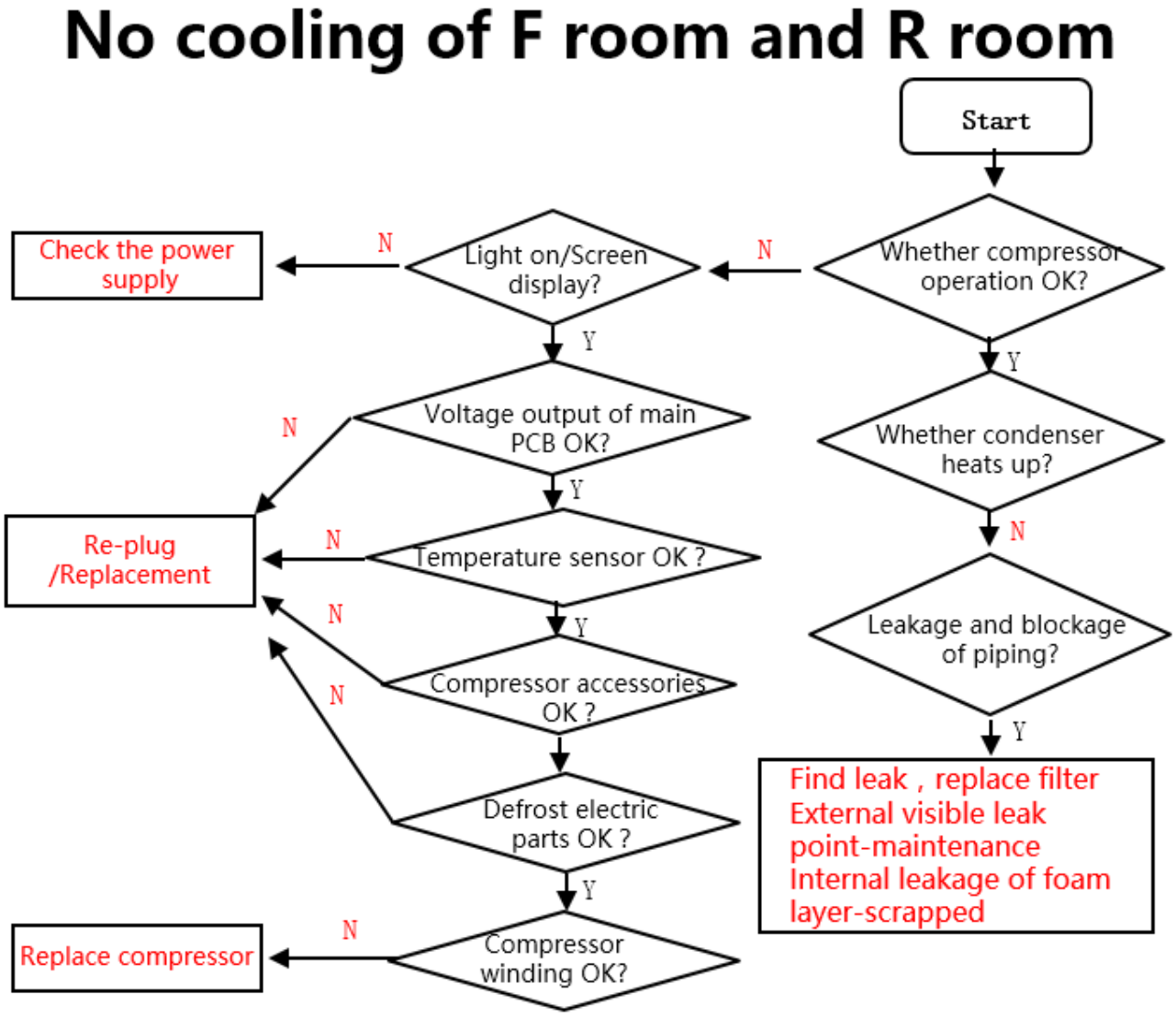
10.2 Iverter board fault analysis（Type A and Type B）

Running status of LED	Fault Type	Troubleshooting and Solutions
Not light	Standby	Step 1: Test the voltage between the two pins of communication, it should be ＞1V, the voltage between pins of L and N, it should be 220V Step 2: If the test result of step 1 is fine, replace a new inverter board Step 3: If there is no voltage output between the pins of L and N, please check the power supply and power cable Step 4: If there is no voltage output between the two pins of communication, please check the connection and connection wire between main PCB and inverter
Blink once: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Overcurrent protection	Step 1: Measure whether the U-V-W resistance of compressor is same Step 2: If ok, replace a new inverter board Step 3: If the fault still occurs, replace a new compressor
Blink twice: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Overvoltage	Measure the voltage between L and N 1）If it is less than 260V, replace a new inverter board 2）If more than 260V, please check the power supply and power cable
Blink three times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Under voltage	Measure the voltage between L and N 1）If it is less than 160V, replace a new inverter board 2）If more than 160V, please check the power supply and power cable

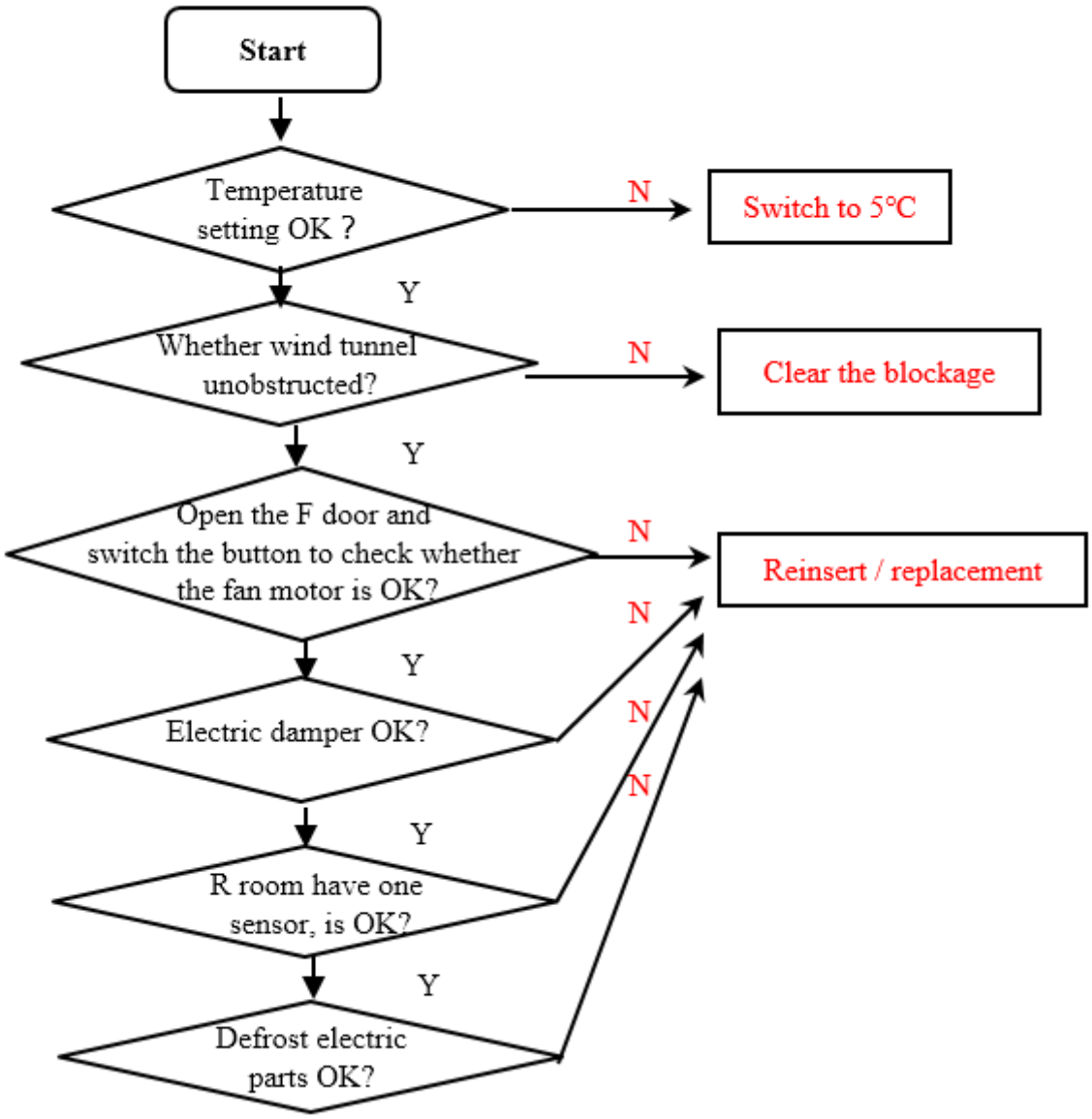
Blink eight times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Lack phase	Step 1: Measure whether the U-V-W resistance of compressor is same Step 2: If ok, replace a new inverter board Step 3: If not same, please check the wiring connection to compressor Step 4: If the connection is fine, replace a new compressor
Blink eight times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Misstep	Step 1: Measure whether the U-V-W resistance of compressor is same Step 2: If ok, replace a new inverter board Step 3: If the fault still occurs, replace a new compressor
Blink eleven times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Starting failure	Step 1: Measure whether the U-V-W resistance of compressor is same Step 2: If ok, replace a new inverter board Step 3: If the fault still occurs, replace a new compressor

11. Troubleshooting Method

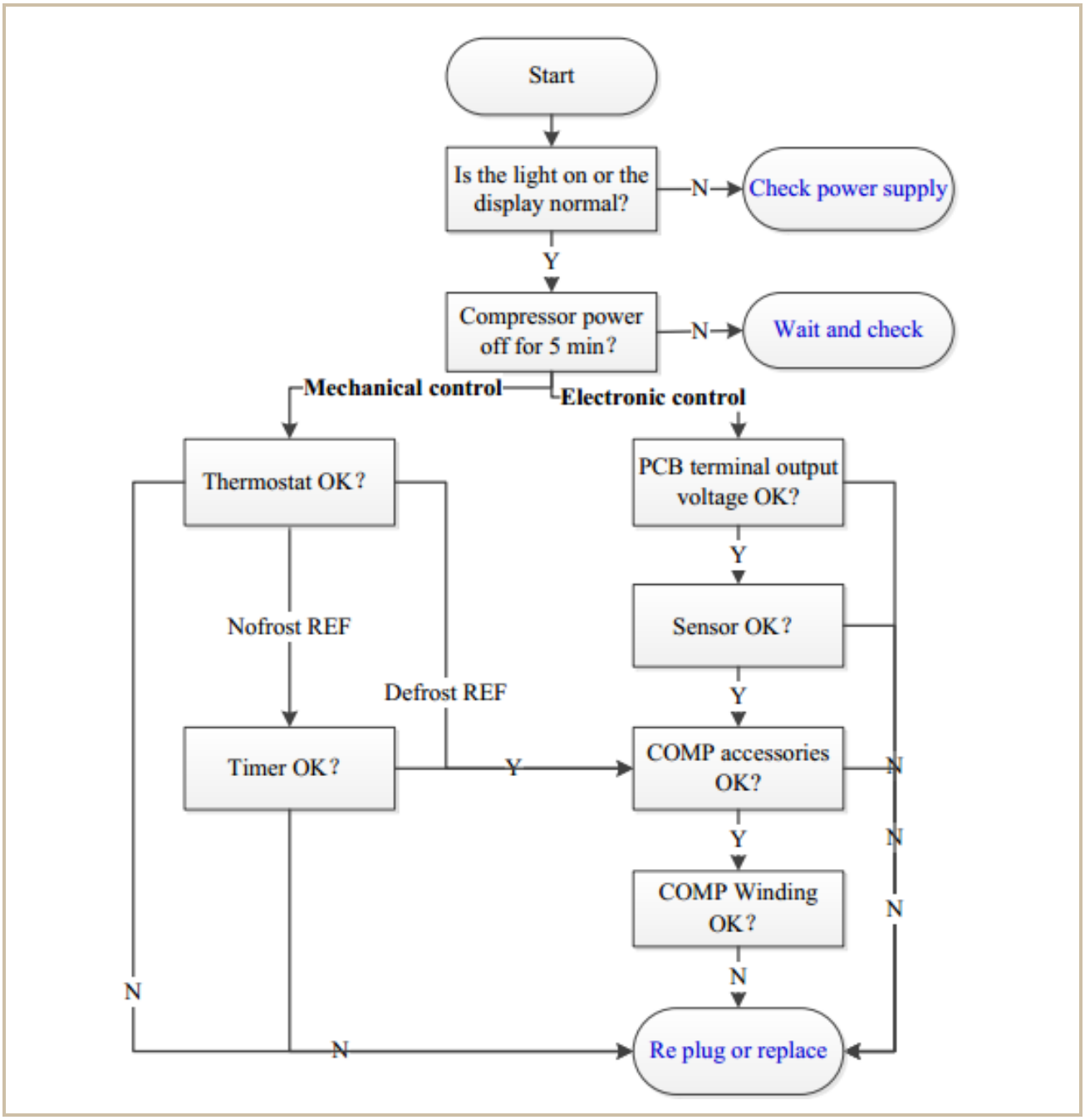
11.1 No cooling (Air cooling-Electronic)



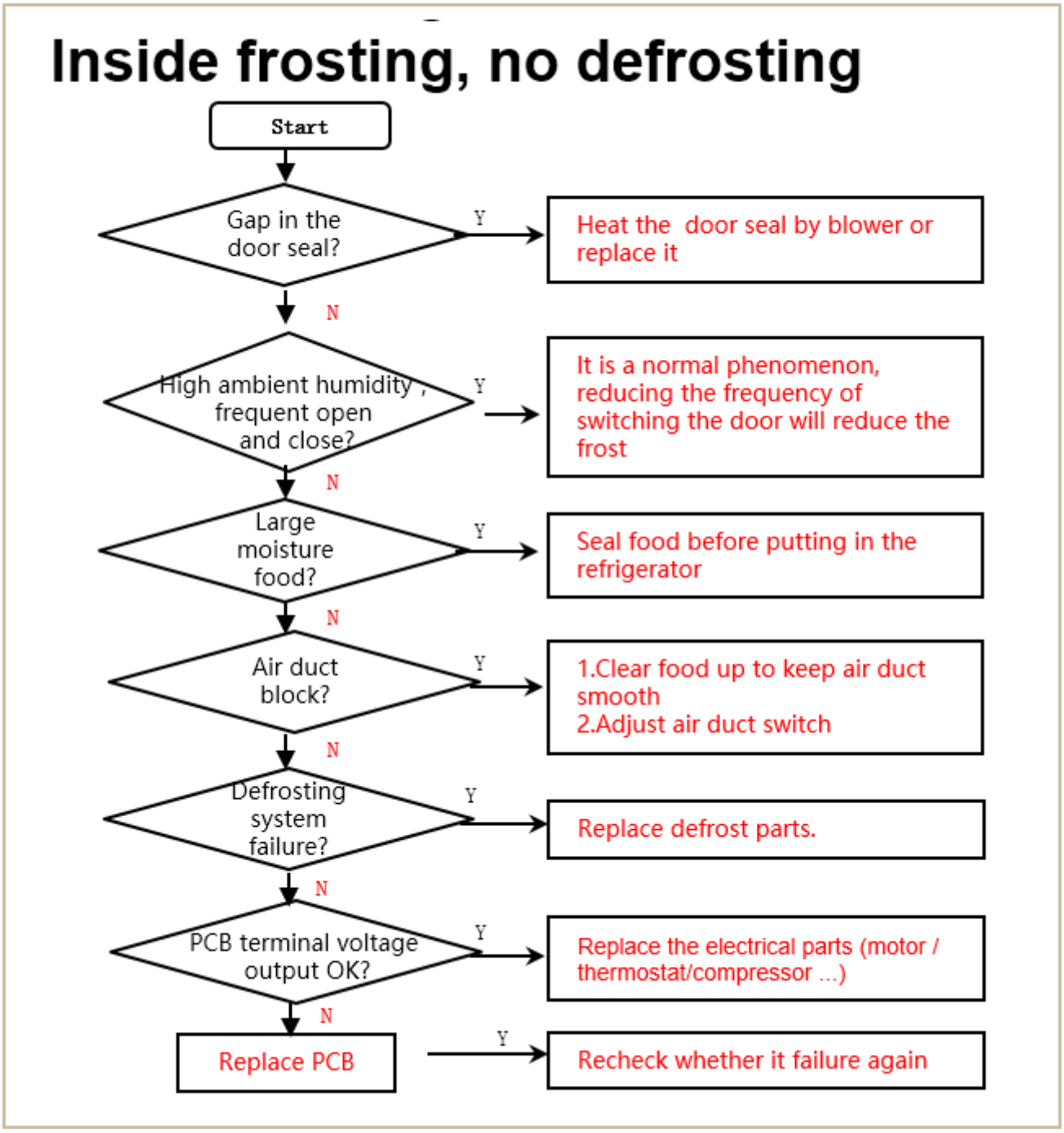
F room cooling、 R room no cooling



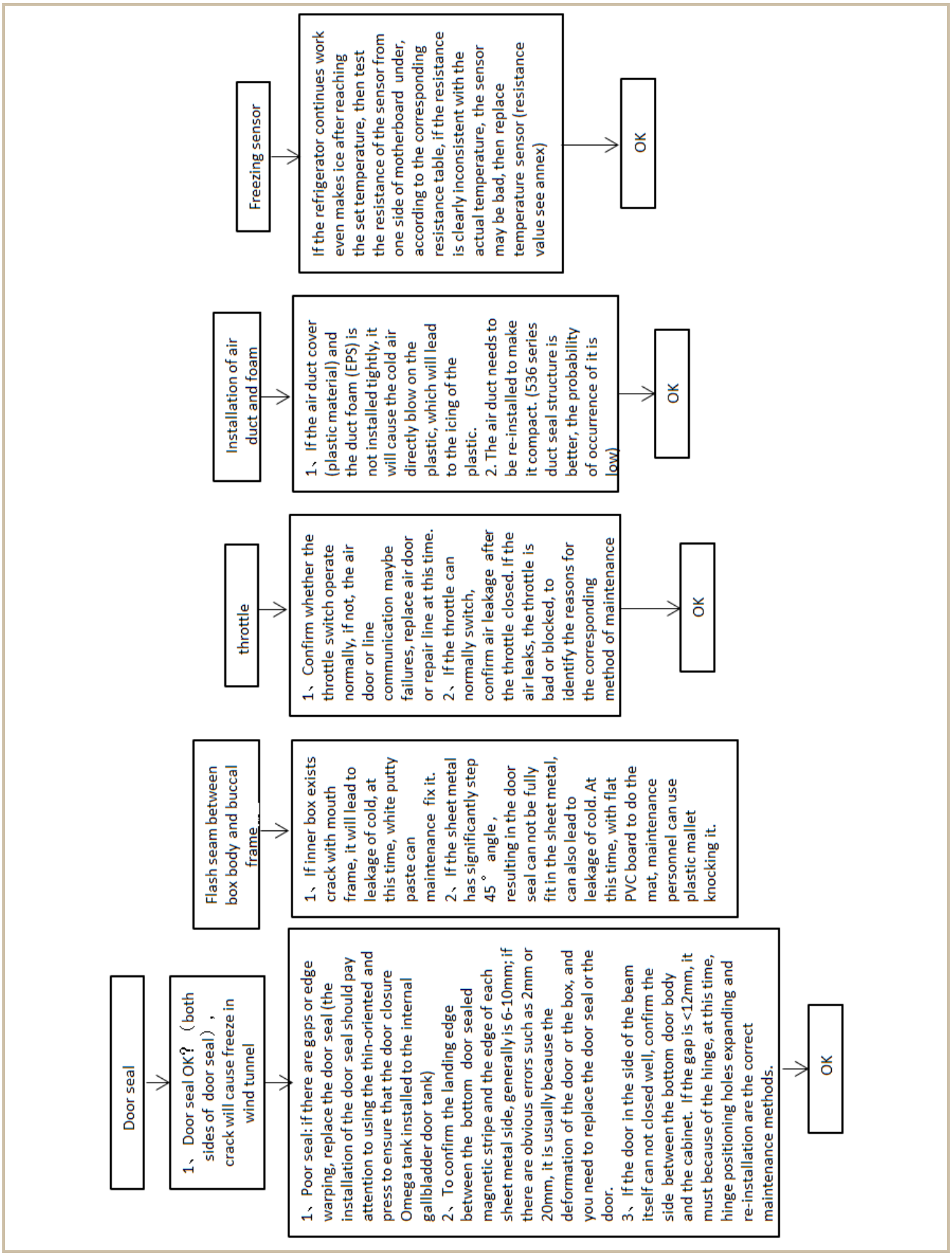
11.2 No working of compressor

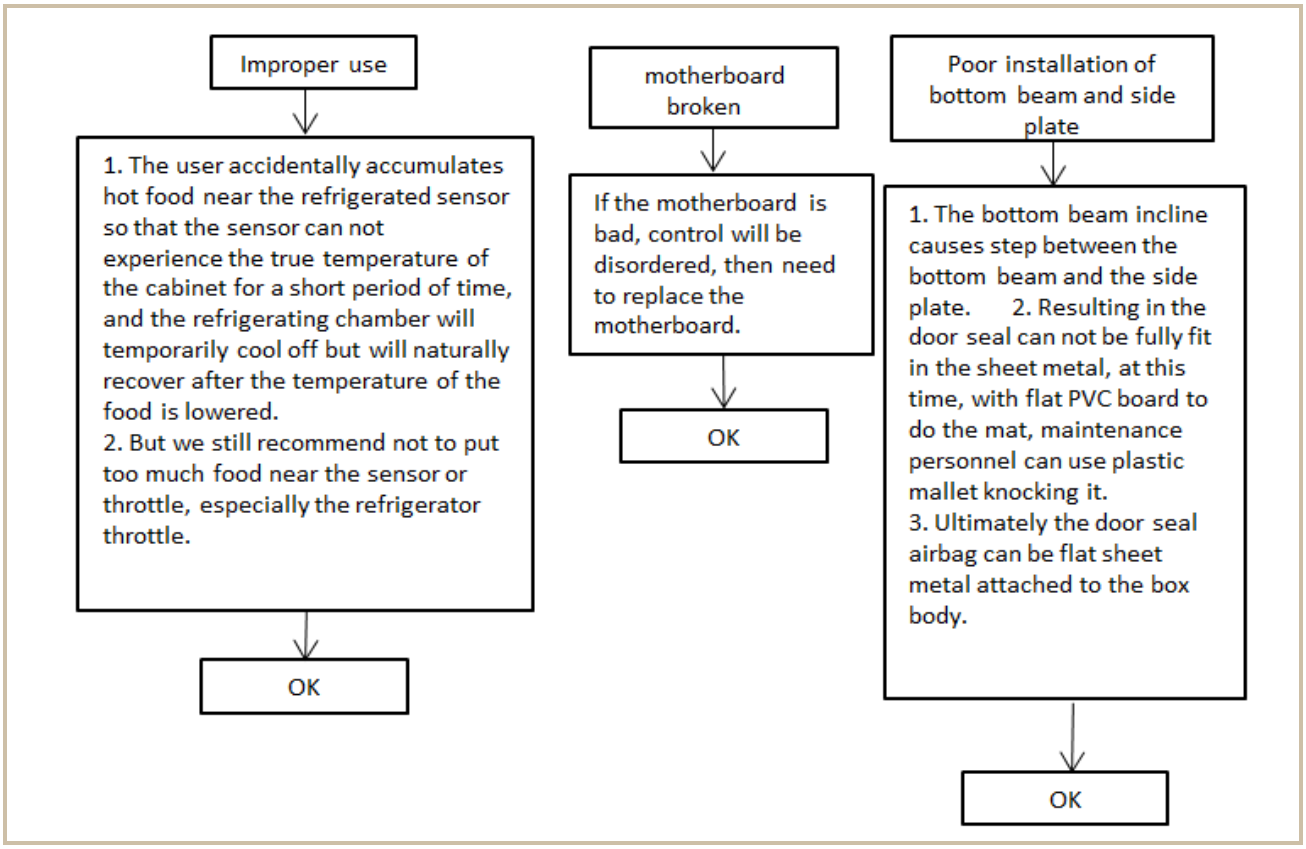


11.3 Inside frosting, no defrosting

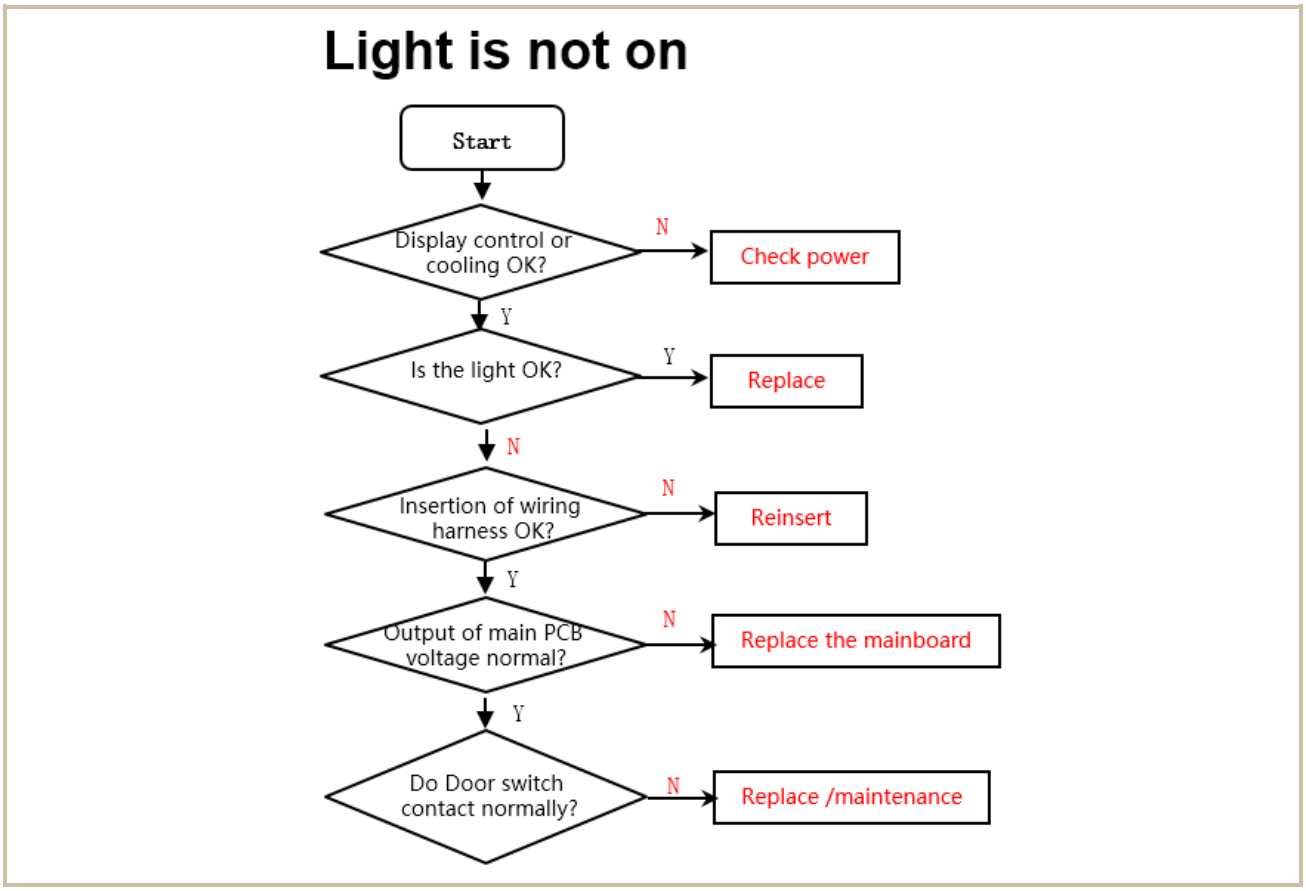


11.4 Inside frosting, no defrosting-Maintenance guidelines

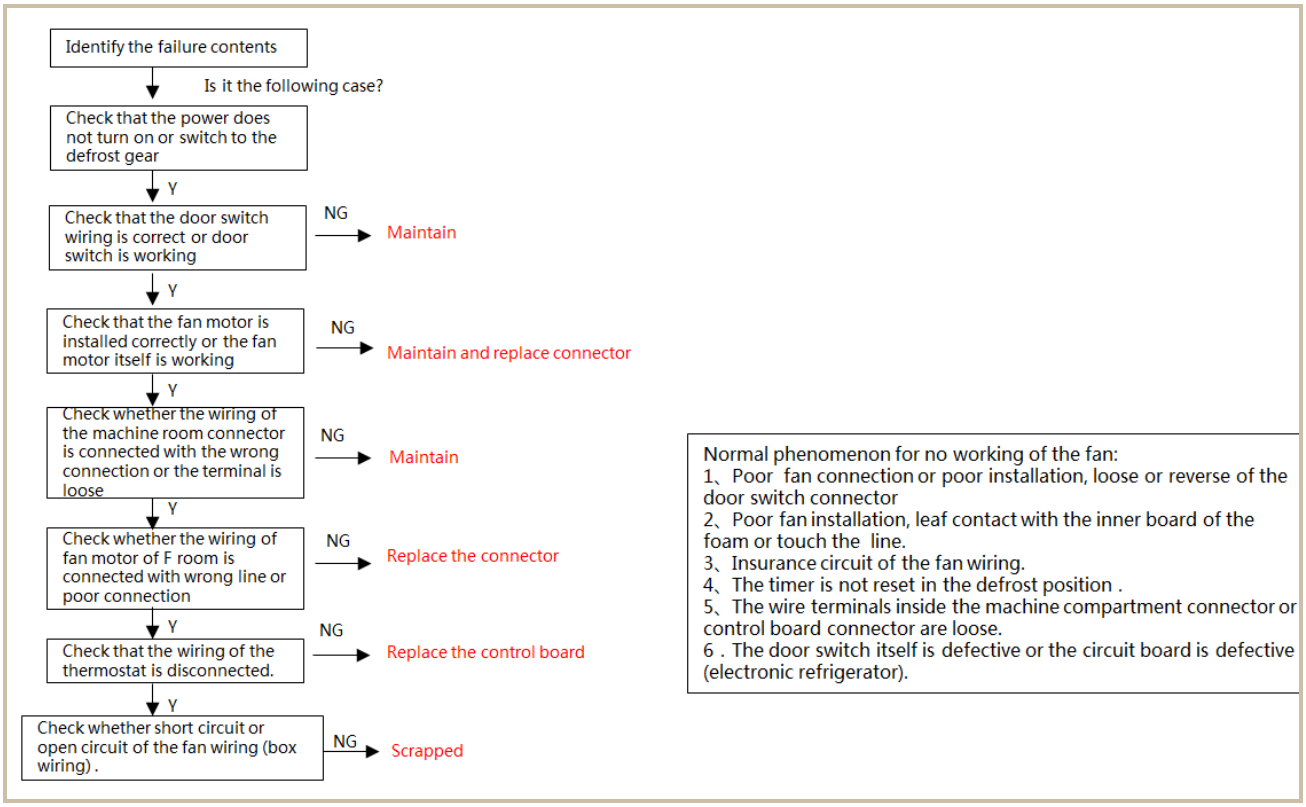




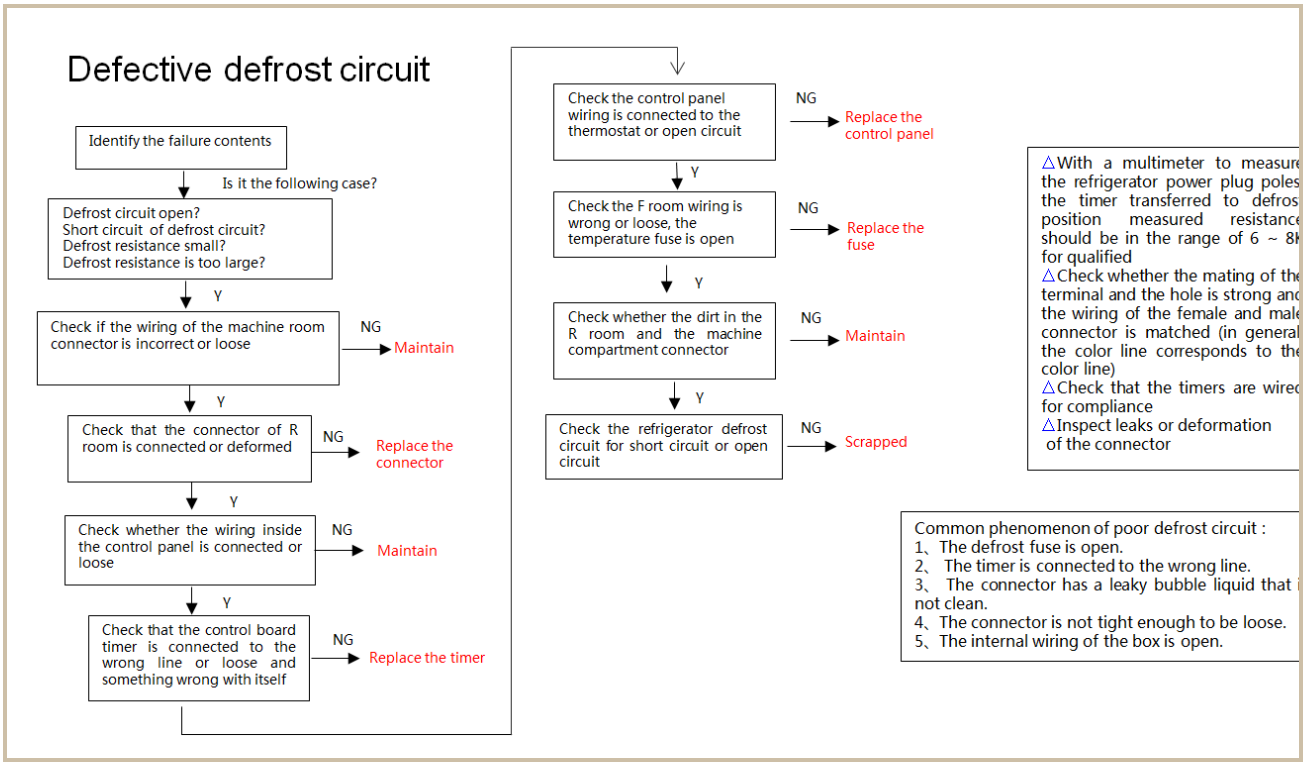
11.5 Light is not on



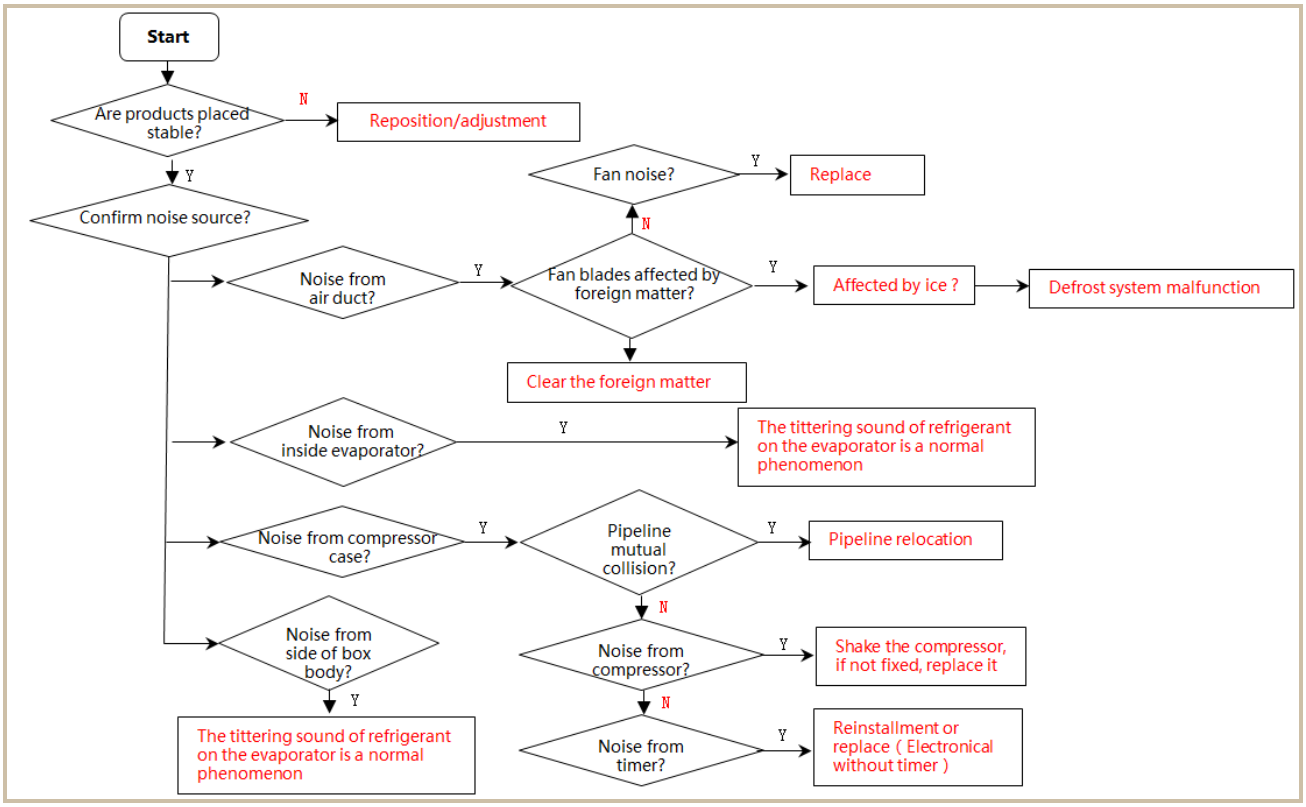
11.6 Fan failure



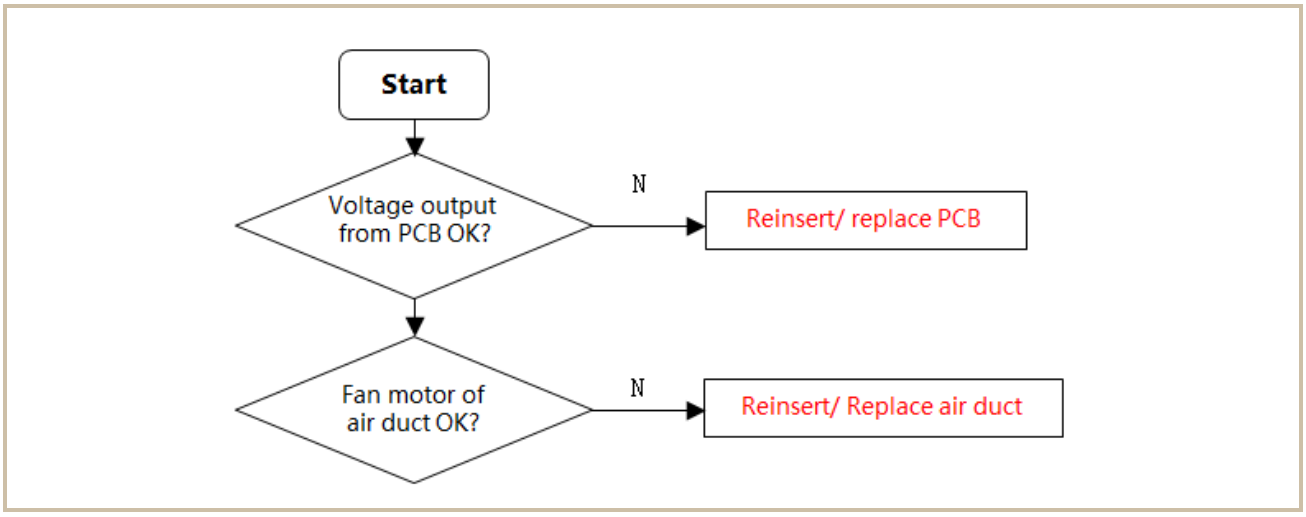
11.7 Defective defrost circuit



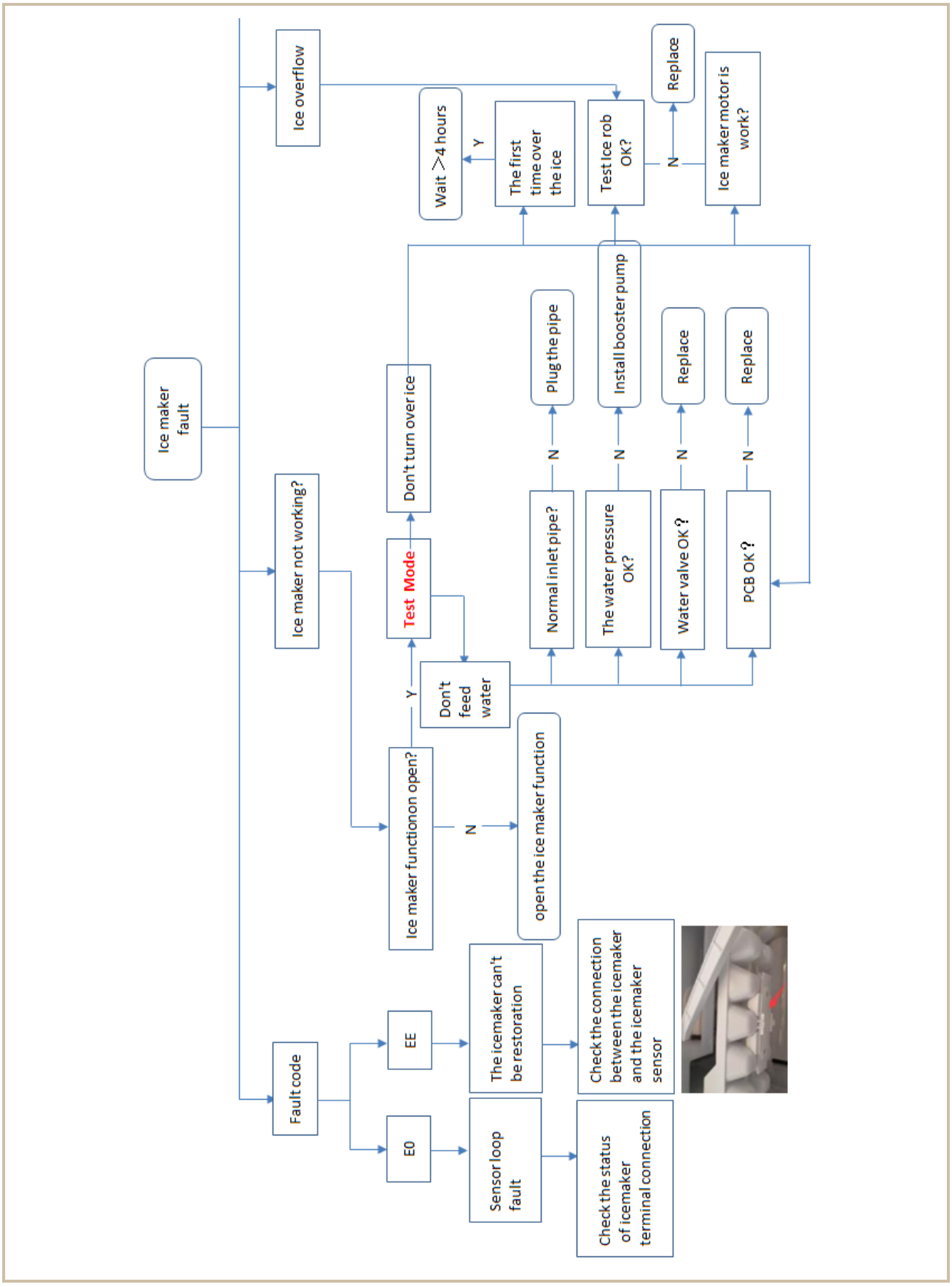
11.8 Noise



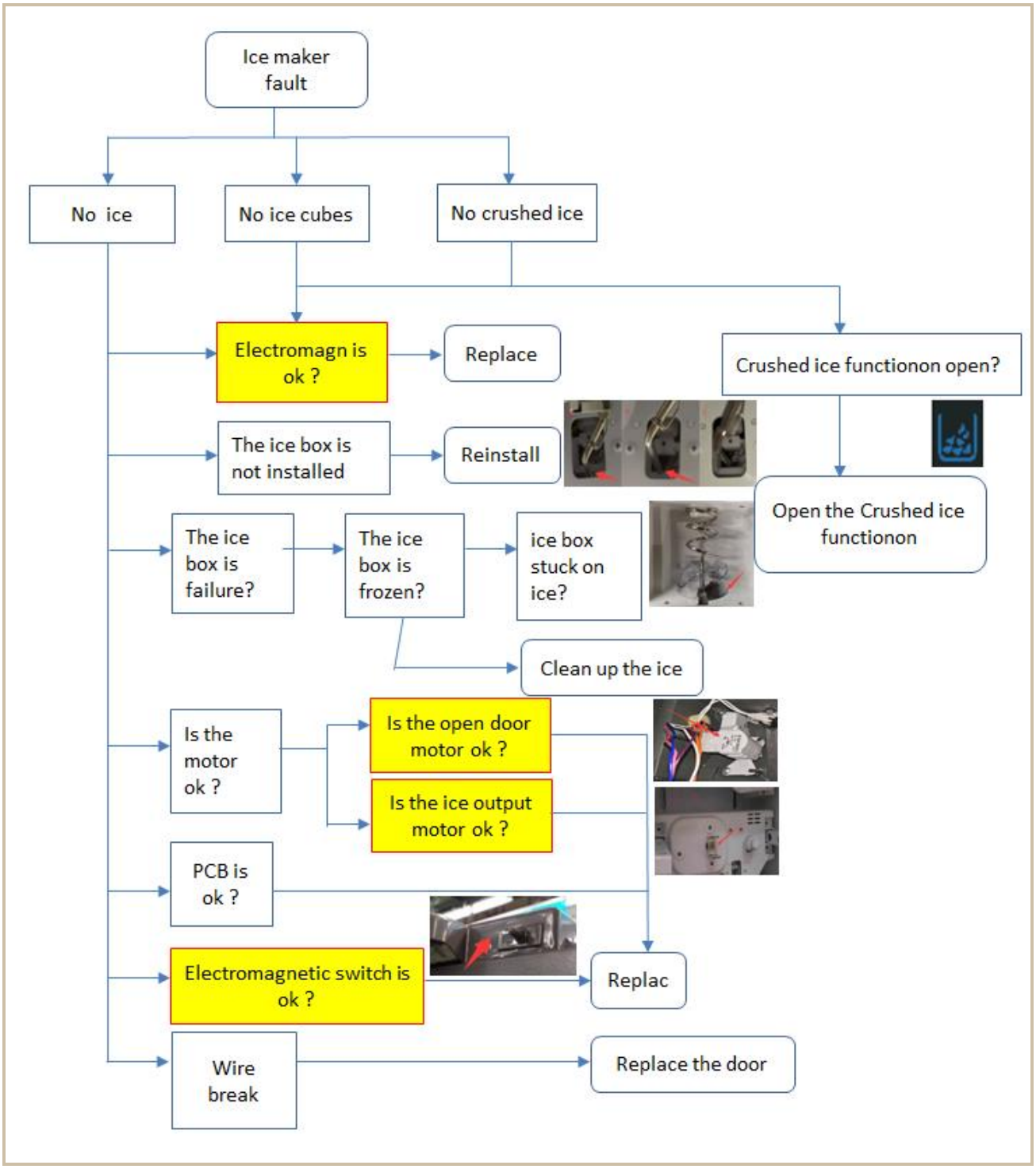
11.9 Air duct not operated



11.10 Ice maker not make ice（Option）



11.11 No ice or crushed ice falling off the distributor（Option）



The symbol on the product or its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste for recycling, please contact your local authority, or where you purchased your product.

Vestel Electronics (ShangHai) Tranding Co., Ltd.

ShenZhen Branch

If you need to get detailed technical information from the manufacturer, please contact:

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