EN

COLUMN WINE
USER MANUAL & SERVICE
TROUBLE SHOOT

MODEL

ZONA PER TARGHETTA

UWFC18 - 18" Column Wine
UWFC24 - 24" Column Wine

EN | User's manual

Intertek

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Serial Number

The serial tag is located on either the upper left-hand wall of the Wine cooler section, or bottom of the compartment, beneath the large crisper drawer.

SAVE THESE INSTRUCTIONS

REVIEW ALL SERVICE INFORMATION IN THIS SERVICE MANUAL BEFORE BEGINNING REPAIRS.

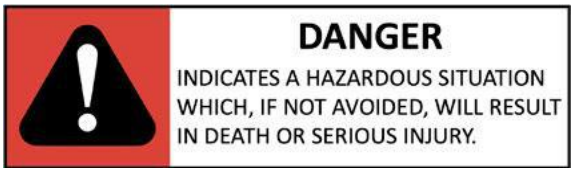
This product should only be serviced by a qualified service technician, who is familiar with the standard safety producers required forservicing this product. The technician should be equipped with the proper tools, parts, and test equipment before beginning.

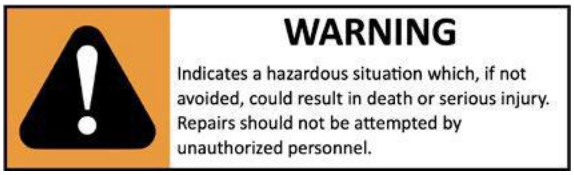
Safety Information

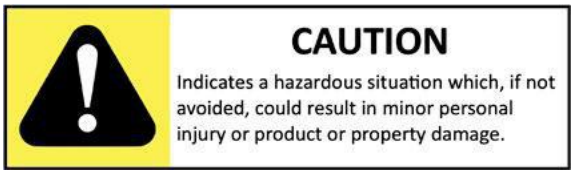
We have provided many important safety messages in this manual and on the appliance. ALWAYS READ AND OBEY ALL SAFETY MESSAGES.

This is the safety alert symbol 

This symbol alerts you to hazards that could cause death or injury to you or others, or cause damage to product or property. Each occurrence will identify the hazard, describe how to reduce the chance of injury, and describe what can happen if the instructions are not followed. The symbol will be surrounded by a color which corresponds to are particular type of hazard. Red for DANGER, Orange for WARNING, and Yellow for CAUTION.
These categories are defined in the boxes to the right







Safety Instructions

The manufacturer reserves the right to make changes in the technical specifications in order to improve the appliance quality without any prior notice. Figures included in this manual are for schematic purposes only and may not match the appliance exactly. Values stated on the markings of the appliance, or in other printed documents supplied with the appliance, are obtained under laboratory conditions as per relevant standards. These values may vary according to the usage of the appliance and ambient conditions.

Proper Installation - Be sure your appliance is properly installed and grounded by a qualified technician.

If the supplied electrical cord is damaged, it must be replaced by a power cord or assembly from the manufacturer. It must also be installed by a qualified servicetechnician.

Service repairs must always be performed by an Authorized Servicer. Installations must be performed by a Certified Installer (This can include certified and licensed electrician or plumbers. The Manufacturer cannot be held responsible for damages caused by operations performed by unauthorized, uncertified or unlicensed persons.

- If the Wine cooler is malfunctioning, it must not be operated until it is repaired by an Authorized Servicer. There is a risk of electrical shock!
- The unit should be plugged into a three-prong, grounded and polarized 15A, 110V, 60Hz dedicated wall outlet. Our company will not be responsible for damages incurred while using the product in a way that does not comply with the electrical code of the location where the product is installed.
- If the unit is not going to be used for an extended period of time, turn off the power to it via the circuit breaker, shut of the water supply, and leave the doors open.
- Never wash the Wine cooler by spraying or pouring water on it. There is a risk of electric shock!
- Caution should be used when unplugging the unit for service. Make sure your hands are not wet, and always hold the plug when disconnecting from the outlet, not the cord. If the outlet is loose, have a licensed electrician repair or replace theoutlet.
- This unit was designed to operate on a normal 60Hz, 110VAC electrical grid system. If it is connected to any energy saving system, alternative power, or solar power system, etc. and is experiencing any operational issues, please contact your local electrical provided for further information.
- Shut off power to the Wine cooler at the circuit breaker during installation, cleaning near exposed electrical components, or service repairs.

Installation, Electrical & Plumbing Requirements

- The Wine cooler must not be located too close to a heat source. Be sure it is installed at least 12” (30cm) from cooktops, ovens, radiators or stoves, and at least 2” (5cm) from electric ovens. Also, be sure the unit is not subject to direct sunlight or exces-sively humid locations.
- Do not install the Wine cooler in place where the temperature falls below 50OF/10OC.
- Do not block the ventilation grill in the bottom to ensure proper ventilation (cooling air intake).

1 3/4” (4cm) between them.

- This product requires a 110VAC, 60Hz service.
- The electrical connection must comply with national regulations.
- Be sure power cable is accessible after installation.
- Do not make connections via extension cords or multi-plugs.
- Rated total current draw is 2.7A. A circuit breaker above this amount must be used,in compliance with local regulations.
- GFCI outlets will provide added protection, but any failure of the GFCI could cause food spoilage, which is not covered by the manufacturer’s warranty.

WARNING: A damaged power cord must be replaced by an Authorized Service Technician.

- The Wine cooler should only be connected to the cold water line.
- Operating pressure should be between 25psi (1.7 bars) and 125 psi. (8.6 bars)
- If water pressure exceeds 80psi (5.5 bars), a pressure limiting device should beused.
- Reverse Osmosis systems are not recommended due to decreased water pressure and excessive air in the line.

Theory of Operation

Compressor & Evaporators

The Wine cooler has one evaporator, but only one compressor, charged with R600a refrigerant.

Display

The Display is the operational interface for the customer. For information about each key and option, see the description below

Temperature Sensors

There are seven thermistors on this product - one for the exterior top of the wine cooler (one for ambient temperature) and six for the refrigerator (three for the inside of the case and three for the evaporator).All of these sensors are NTC thermistors.Temperature information is transmitted to the main board via changes in their resistance. These thermistors ensure that the product operates according to the parameters set by the system software.

Heating Elements

There are three heaters - a Fridge heater.
After the press runs for 25 hours (non-cumulative operation, i.e., total start-stop time), it enters into air defrosting, the upper, middle and lower evaporator fans are turned on, and the defrosting sensor temperature is ≥ the start-up point +5°C or the time is ≥ 60 minutes to shut down the machine.

Fans

The product has four fans, three cyclic fans located inside the wine cooler case and one condensing fan located at the bottom of the wine cooler case, all of which are powered directly from the main control board at 12 V. The fans are powered by the main control board.

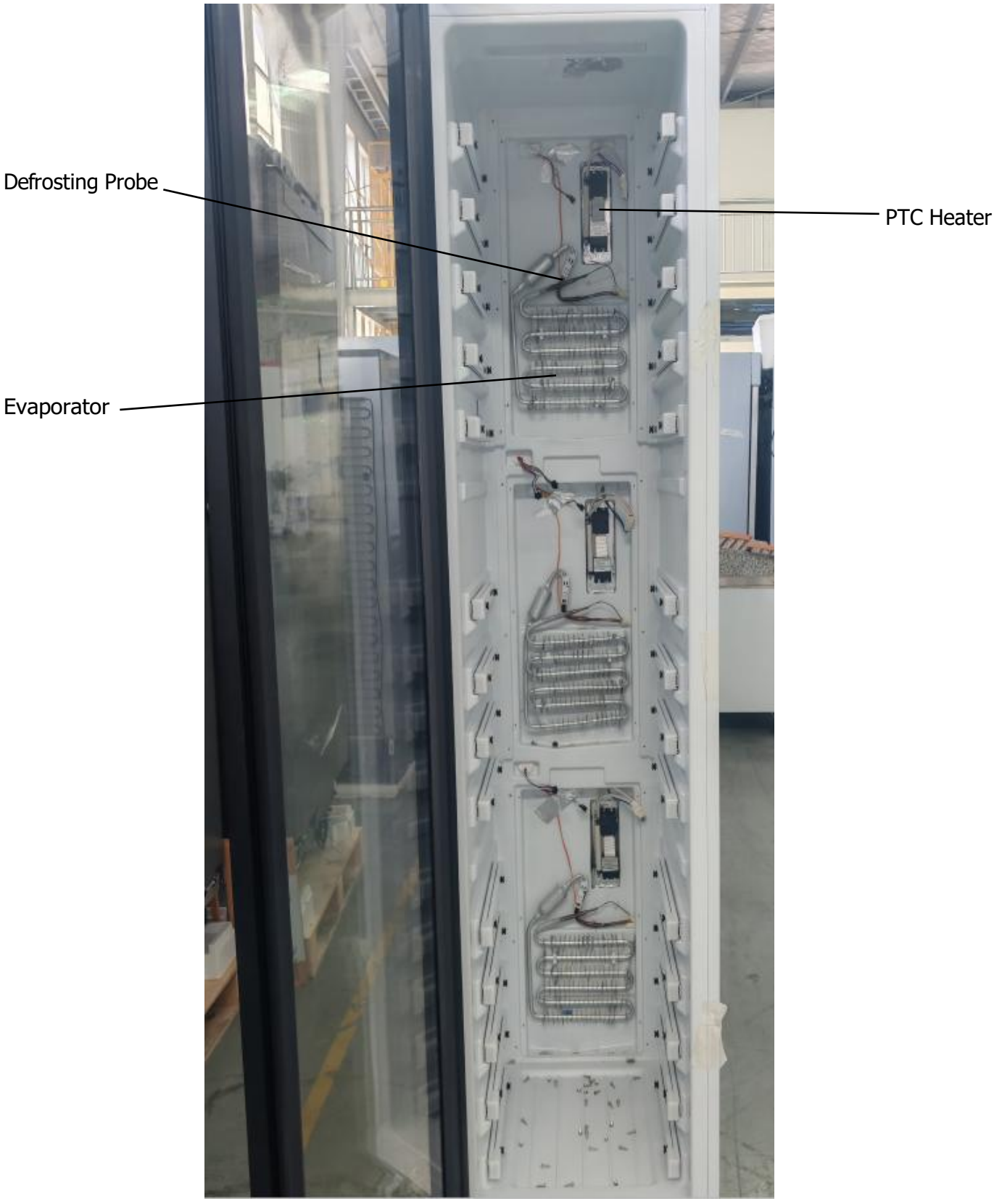
Lights

12V DC LED light panel is used to illuminate the refrigerator. Reed switch on top of the door activates the lighting when the door is opened.

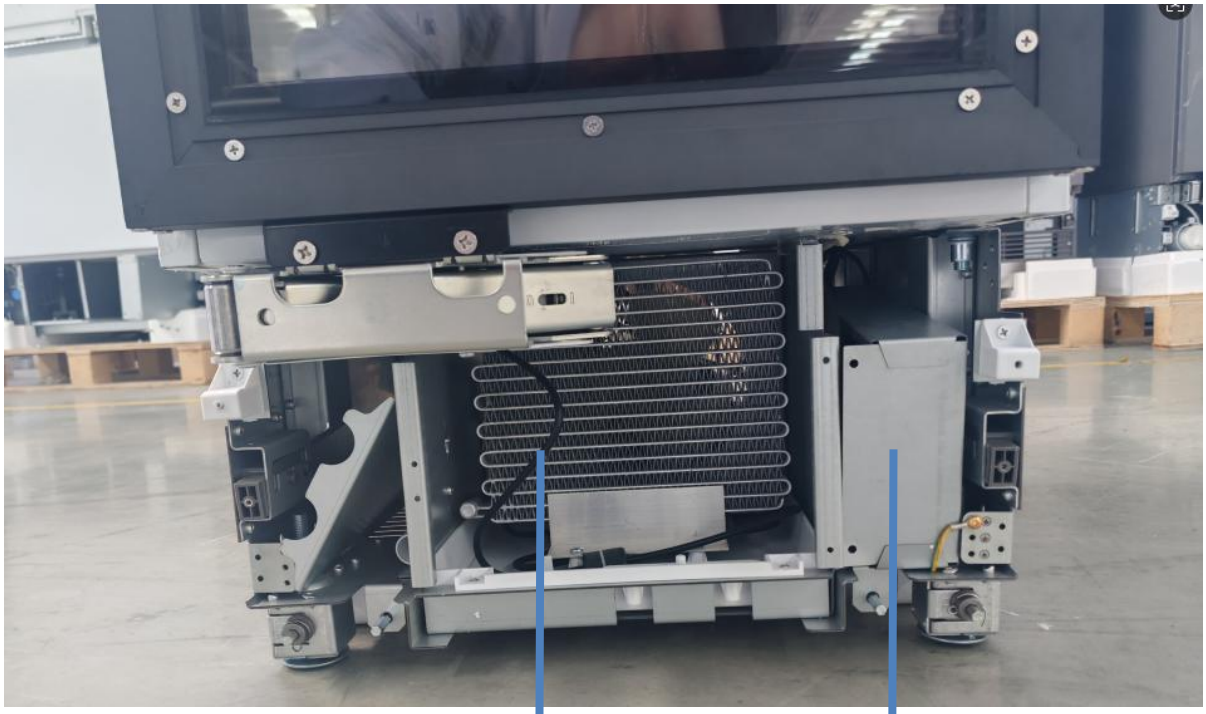
Controller

All the components listed above are operated by the Main Control Board located at the top of the product.
Access to this, and all other components, is explained in the disassembly section of this manual.

Wine cooler Components

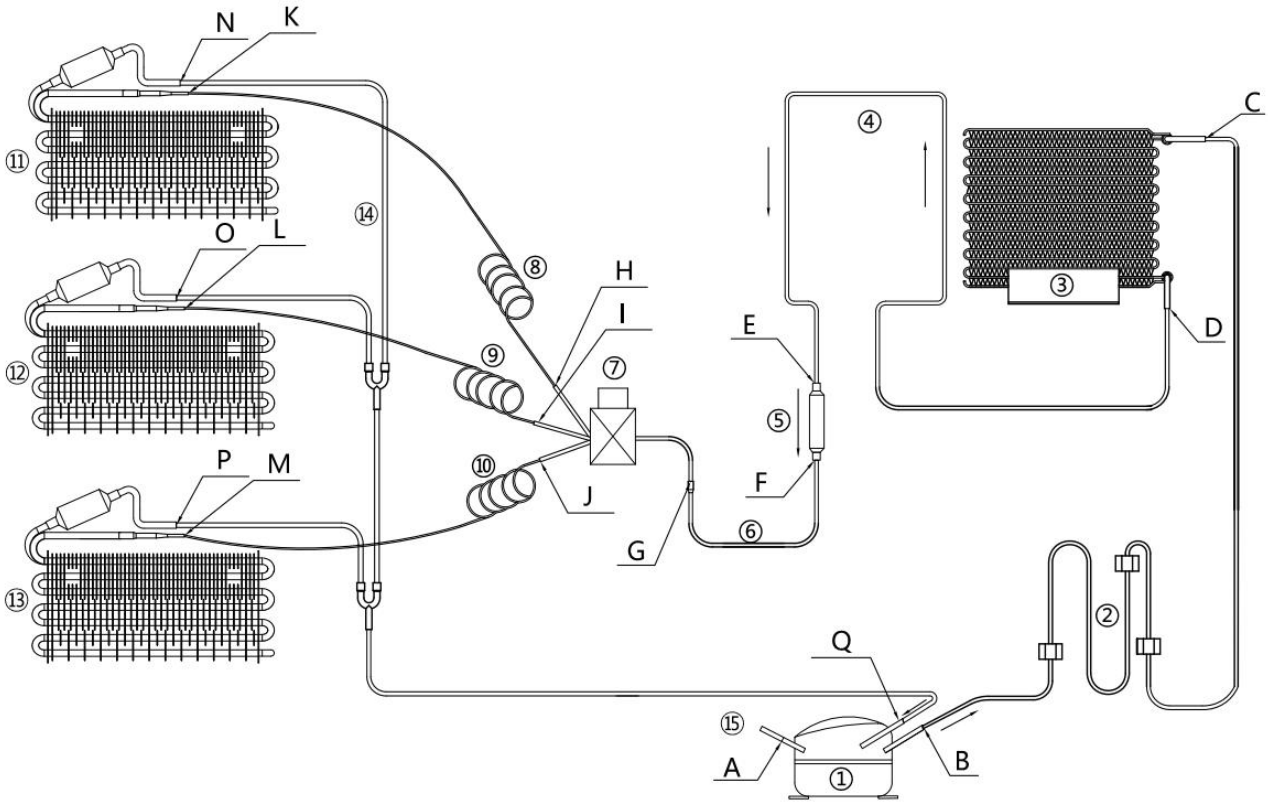

Defrosting Probe
PTC Heater
Evaporator

Rear & Compressor Area Components



Gas Flow Diagram & Parts

This Wine cooler utilizes a cooling system using R600a refrigerant. Take care to avoid damaging the cool- ing system and its pipes while using and moving the unit. This gas is flammable. If the cooling system is damaged, keep the unit away from potential sources of fire and ventilate the room immediately.



Cooling System Components
1- Compressor
2- Exhaust evaporation tube
3- Condenser
4- Freezer heater pipe
5- Drier
6- Drier and solenoid valve pipe tube
7- Solenoid valve
8- Upper zone capillary
9- Middle zone capillary
10- Lower zone capillary
11- Upper zone evaporator
12- Middle zone evaporator
13- Lower zone evaporator
14- Connecting pipe of Service pipe
15- Service pipe

Welding Point
A- Connector pipe / Compressor
B- Compressor / Exhaust evaporation tube
C- Exhaust evaporation tube / Condenser
D- Condenser / Freezer heater pipe
E- Freezer Heater pipe / Drier
F- Drier / Drier and solenoid valve pipe tube
G- Drier and solenoid valve pipe tube/ Solenoid valve
H- Solenoid valve / Upper zone capillary
I- Solenoid valve / Middle zone capillary
J- Solenoid valve / Lower zone evaporator
K- Upper zone capillary / Upper zone evaporator
L- Middle zone capillary / Middle zone evaporator
M- Lower zone evaporator / Lower zone evaporator
N- Upper zone evaporator / Connecting pipe of Service pipe
O- Middle zone evaporator / Connecting pipe of Service pipe
P- Lower zone evaporator / Connecting pipe of Service pipe
Q- Connecting pipe of Service pipe / Compressor

Electrical Components & Specifications

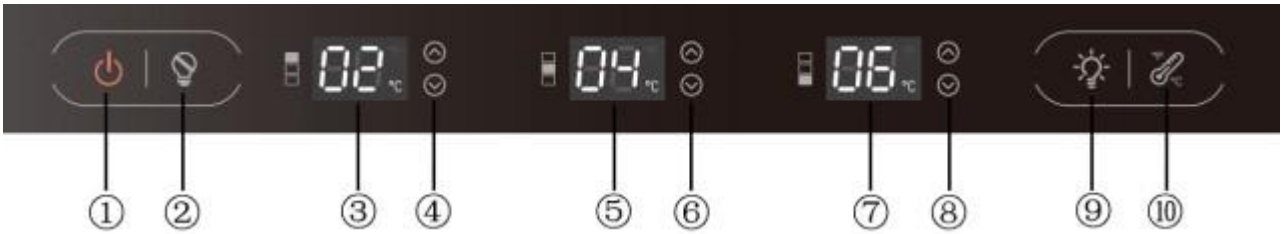
Quantity	Component	Stock Number	Specifications
1	Compressor	1.10.12090E-6XX	VEKB90 110V/60Hz R600a
2	Recirculating Fan	1.33.DTQ331-367	CHA9212RL-25C DC 12V 0.1A【WE1-55BI】
3	Condenser Fan	1.33.ATQ130-368	12V φ150【N30IB160I】
4	LED Board	1.30.5D3305-484	White, Blue and Orange【WE3-266BI】
5	Fridge Defrost Heater	1.31.A6210X-376	100-115V/60Hz 50W【WE2-146BU】
6	Display Board	1.27.03D1XX-484	12V【WE3-266BI】
7	Control Board	1.27.01A102-477	UL 110V【WE3-266BI】
8	Reed Switch	1.11.02341TQ-01	【TRF-32BINFA】

*Note: For the exact stock number information, look at the BOM List .

Display Panel SetUp Instructions

If the unit is unplugged, power lost, or turned off, you must wait 3 to 5 minutes before restarting the unit

If you attempt to restart before this time delay, the appliance may not start and will not keep the last set temperature.



① Power On/Off

② Sabbath Mode

③ Upper Zone Temp

④ Above Zone Temp. Control

⑤ Middle Zone Temp

⑥ Middle Zone Temp. Control

⑦ Lower Zone Temp

⑧ below Zone Temp. Control

⑨ Light Switch

⑩ Temp. Display Change ℃←→℉

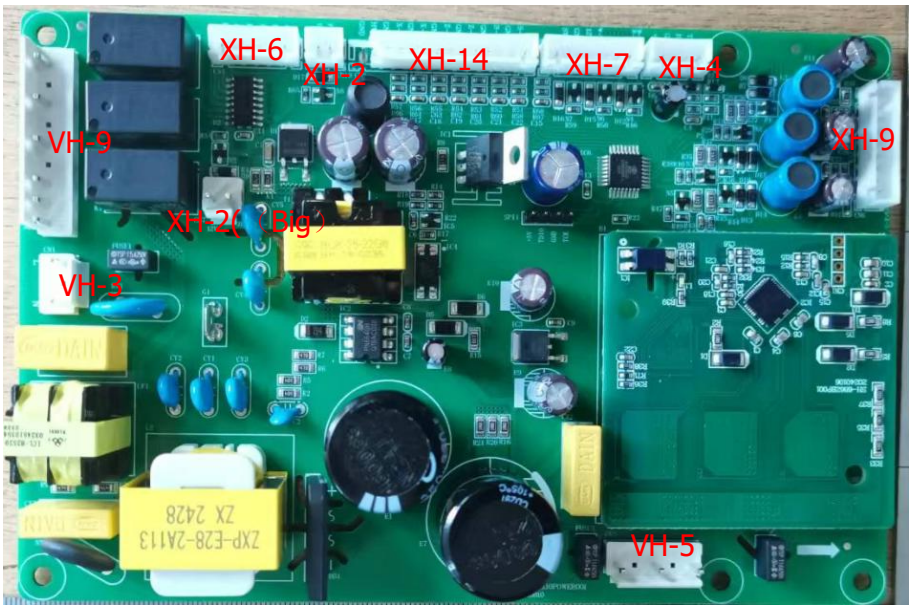
NOTE

- When you change the temperature on the panel, the panel displays the current temperature and the temperature on the display will gradually change according to the internal temperature until it reaches the desired temperature. Note that it will take time for the wine cellar to reach the new temperature. This is normal. You do not need to set the desired temperature just because the display does not show your desired temperature.
- If the control panel has moisture or liquid on its surface, it may fail. Wipe the moisture or liquid using a dry cloth, and then try again.
- Power failure memory function
  (after power-on, the Settings remain in the state beforepower failure)
- Above Zone: 5℃~20℃, initial value 12℃.
- Middle Zone: 5℃~20℃, initial value 12℃.
- Below Zone: 5℃~20℃, initial value 12℃.
- Temperature accuracy: ±1℃

Error Codes

Explanation	Open Circuit Code	Short Circuit Code
Above Zone In-cabinet probes	E1	E2
Above Zone Defrosting probe	E3	E4
Middle Zone In-cabinet probe	E5	E6
Middle Zone Defrosting probe	E7	E8
Below Zone In-cabinet probes	E9	E10
Below Zone Defrosting probe	E11	E12

Knowing the connection numbers on the control board will be necessary for the following error code explanations.



Control Board Connection Numbers	
XH-2	Condenser Fan
XH-2 Big	Door Heater
XH-4	Display
XH-9	Recirculating Fan
XH-7	LED&Door switch
XH-14	Probe
XH-6	Solenoids
VH-9	Room Heater
VH-3	Plug
VH-5	Compressor

Maintenance guide for refrigeration failure

1. Fridge is not cold enough.
   - Error code on display.First,open and close the Fridge door to see if the Fridge light is alway son. If so, check the Fridge drawer brackets.
   - No error code on display.Check if the plugs on the main control board is connected properly.
   - Evacuate the gas and re-gas the system.
2. Fridge does not work
   - If the compressor works, check if the capillary is blocked.
3. Fridge does not work
   - If there is an error code ,check the fan in fridge. If it is still not working after replacing the fan, check the wiring connection.
   - Check if the reed switch is working properly.
   - Check if the appliancesis on a holiday mode.
4. Fridge are not working
   - Check whether the power cord plug of the main control board is off or not connected.
   - Method 2 Check whether the plugs on the main control board are fully connected or correctly connected.

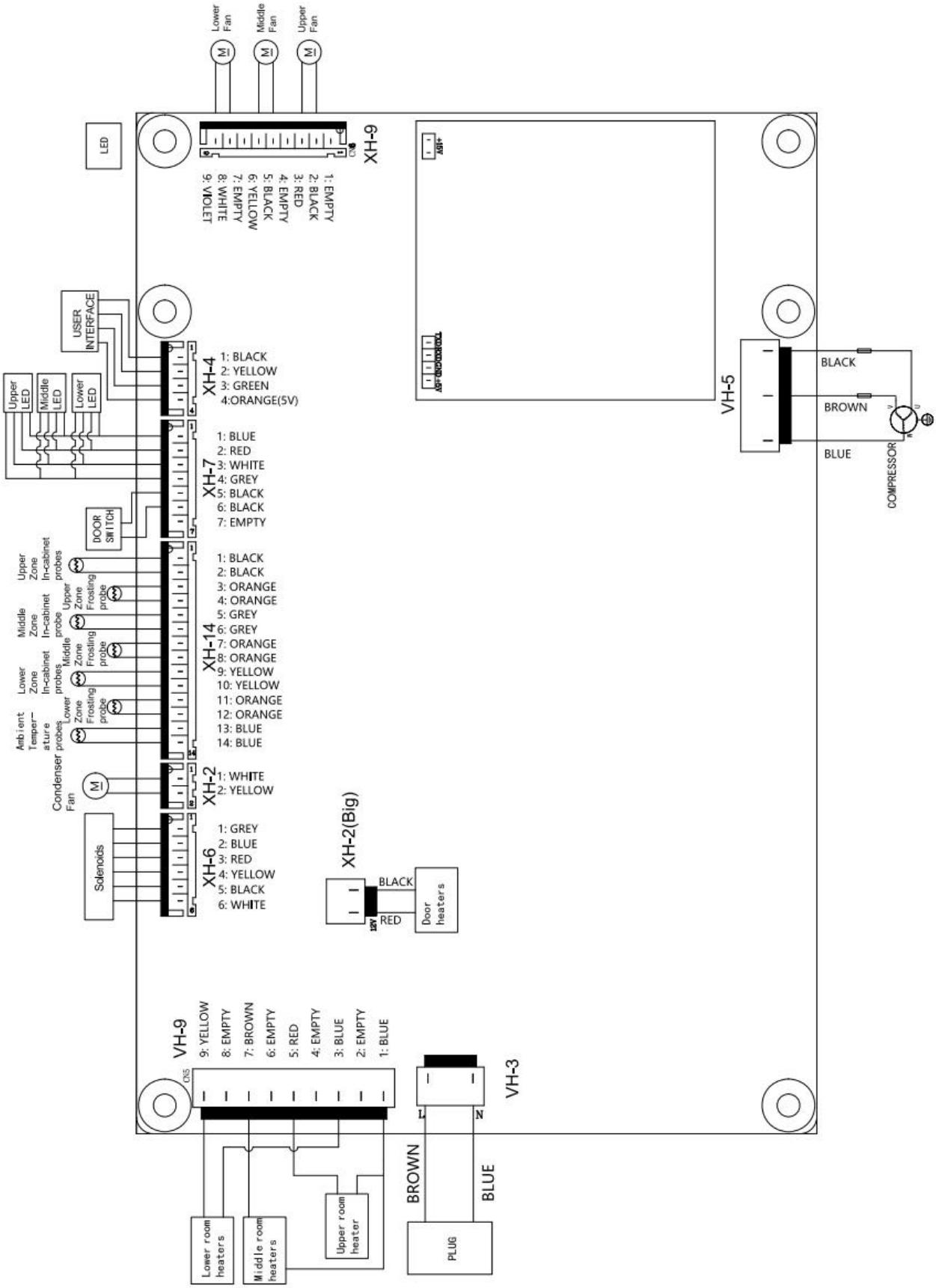
If the over-temperature alarm continues after rebooting the appliance, it is necessary to check whether the refrigeration system is blocked, and whether the compressor and fan are working properly.

Temperature to Resistance Chart

Low Range			
Temp	Resistance	Temp	Resistance
-40ºF/-40ºC	64.06KΩ	-15ºF/-26ºC	27.07KΩ
-38ºF/-39ºC	60.10KΩ	-13ºF/-25ºC	25.52KΩ
-36ºF/-38ºC	56.41KΩ	-11ºF/-24ºC	24.06KΩ
-35ºF/-37ºC	52.96KΩ	-9ºF/-23ºC	22.70KΩ
-33ºF/-36ºC	49.74KΩ	-8ºF/-22ºC	21.42KΩ
-31ºF/-35ºC	46.73KΩ	-6ºF/-21ºC	20.22KΩ
-29ºF/-34ºC	43.92KΩ	-4ºF/-20ºC	19.10KΩ
-27ºF/-33ºC	41.29KΩ	-2ºF/-19ºC	18.04KΩ
-26ºF/-32ºC	38.83KΩ	-.3ºF/-18ºC	17.05KΩ
-24ºF/-31ºC	36.53KΩ	1ºF/-17ºC	16.11KΩ
-22ºF/-30ºC	34.38KΩ	3ºF/-16ºC	15.24KΩ
-20ºF/-29ºC	32.37KΩ	5ºF/-15ºC	14.41KΩ
-18ºF/-28ºC	30.49KΩ	7ºF/-14ºC	13.64KΩ
-17ºF/-27ºC	28.72KΩ	9ºF/-13ºC	12.91KΩ

Normal Operator Range			
Temp	Resistance	Temp	Resistance
10ºF/-12ºC	12.22KΩ	59ºF/15ºC	3.13KΩ
12ºF/-11ºC	11.57KΩ	61ºF/16ºC	2.99KΩ
14ºF/-10ºC	10.96KΩ	63ºF/17ºC	2.85KΩ
16ºF/-09ºC	10.39KΩ	64ºF/18ºC	2.73KΩ
18ºF/-08ºC	9.85KΩ	66ºF/19ºC	2.60KΩ
19ºF/-07ºC	9.34KΩ	68ºF/20ºC	2.49KΩ
21ºF/-06ºC	8.86KΩ	70ºF/21ºC	2.38KΩ
23ºF/-05ºC	8.41KΩ	72ºF/22ºC	2.28KΩ
25ºF/-04ºC	7.98KΩ	73ºF/23ºC	2.18KΩ
27ºF/-03ºC	7.57KΩ	75ºF/24ºC	2.08KΩ
28ºF/-02ºC	7.19KΩ	77ºF/25ºC	1.99KΩ
30ºF/-01ºC	6.83KΩ	79ºF/26ºC	1.91KΩ
32ºF/00ºC	6.49KΩ	81ºF/27ºC	1.83KΩ
34ºF/01ºC	6.17KΩ	82ºF/28ºC	1.75KΩ
36ºF/02ºC	5.87KΩ	84ºF/29ºC	1.68KΩ
37ºF/03ºC	5.58KΩ	86ºF/30ºC	1.61KΩ
39ºF/04ºC	5.31KΩ	88ºF/31ºC	1.54KΩ
41ºF/05ºC	5.06KΩ	90ºF/32ºC	1.48KΩ
43ºF/06ºC	4.81KΩ	91ºF/33ºC	1.41KΩ
45ºF/07ºC	4.58KΩ	93ºF/34ºC	1.36KΩ
46ºF/08ºC	4.37KΩ	95ºF/35ºC	1.30KΩ
48ºF/09ºC	4.16KΩ	97ºF/36ºC	1.25KΩ
50ºF/10ºC	3.96KΩ	99ºF/37ºC	1.20KΩ
52ºF/11ºC	3.78KΩ	100ºF/38ºC	1.15KΩ
54ºF/12ºC	3.60KΩ	102ºF/39ºC	1.11KΩ
55ºF/13ºC	3.44KΩ	104ºF/40ºC	1.06KΩ
57ºF/14ºC	3.28KΩ		

Wiring Diagram



Control Board Test Points (See the picture on page 17 for the control board)

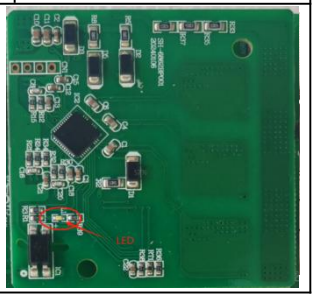
XH-14	Temp Sensors	Contacts	Values
	Above Zone In-cabinet probes	1&2	
	Above Zone Frosting probe	3&4	
	Middle Zone In-cabinet probe	5&6	
	Middle Zone Frosting probe	7&8	
	Lower Zone In-cabinet probes	9&10	
	Lower Zone Frosting probe	11&12	
	Ambient Temperature probes	13&14	
XH-7	LED&Door switch	Contacts	Values
	Upper LED	1-4	12VDC
	Middle LED	1-4	
	Lower LED	1-4	
	Door Switch	1-4	
XH-9	Fans	Contacts	Values
	Upper FAN	2&3	12VDC
	Middle FAN	5&6	12VDC
	Lower FAN	8&9	12VDC
XH-2	Condenser Fan	1&2	12VDC
XH-2 Big	Door Heater	1&2	12VDC
XH-4	Display	Contacts	Values
	Display	1-4	12VDC
XH-6	Solenoids	Contacts	Values
	Solenoids	1-6	12VDC
VH-9	Ac Components	Contacts	Values
	Upper room heater	1&5	110VAC
	Middle room heater	1&7	110VAC
	Lower room heater	3&9	110VAC
VH-3	Plug	1&3	110VAC
VH-5	Compressor	W&V&U	110VAC

Main control board led flashing fault

Compressor does not start - list of fault codes prompted by main control panel indicator				
Serial number	Flashing times of main contro panel LED	Main control board fault	Cause analysis of compressor failure	terms of settlement
1	LED flashes once	Overvoltage	1. The input voltage is too high, and the input voltage of 110V model is higher than 110V (this situation will cause the control board to burn out, the machine will not work, and there is no response) 2. Abnormal control board	1. Check whether the power supply voltage is normal 2. Disconnect the power and restart the machine 3. Replace the control board
2	LED flashes twice	Undervoltage	1. The input voltage is low, and the input voltage of 220V model is lower than 110V 2. Abnormal control board	1. Check whether the power supply voltage is normal 2. Disconnect the power and restart the machine 3. Replace the control board
3	LED flashes 3 times	communication	1. Abnormal data transmission between main board and frequency conversion board	1. Disconnect the power and restart the machine 2. Replace the control board
4	LED flashes 4 times	Phase deficiency	1. The compressor harness is not connected properly 2. The fuse on the compressor line is burnt out 3. The compressor is broken	1. Check the compressor line sequence 2. Check whether the fuse is burnt 3. Replace the compressor if there is no problem above
5	LED flashes 7 times	Software overcurrent	1. The actual current reaches the current threshold set by the software (the protection threshold setting is too small) 2. The software has a bug and does not meet the protection status required by special requirements	1. Disconnect the power and restart the machine 2. Replace the control board
6	LED flashes 10 times	Start failure, small board current detection circuit failure	1. The control board is broken 2. The solenoid valve is broken, resulting in excessive system pressure 3. The compressor is broken and the cylinder is jammed	1. Disconnect the power and restart the machine 2. Replace the control board 3. Replace the solenoid valve 4. Replace the compressor
7	LED flashes 12 times	Hardware overcurrent	1. The current detection is too large due to hardware components 2. Special abnormality causes damage to the components of the frequency conversion board, resulting in abnormality of the frequency conversion board	1. Replace the control board
8	LED flashes 14 times	Stall	1. Compressor internal jamming 2. The compressor is unstable 3. Wrong line sequence	1. Check whether the wire sequence UVW is connected properly 2. Check whether the compressor is aligned 3. Replace the compressor

Note: If the number 5, 6, 7 and 8 are abnormal, the theoretical priority is 6;
No. 6 Normally, No. 8 appears first, followed by No. 5, and finally No. 7
The above phenomena are detected by current, Therefore,
there are many factors that cause the current change:

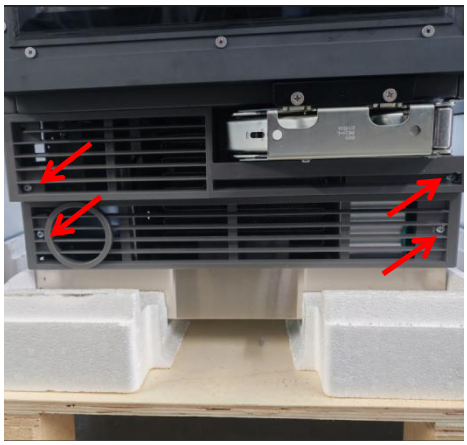
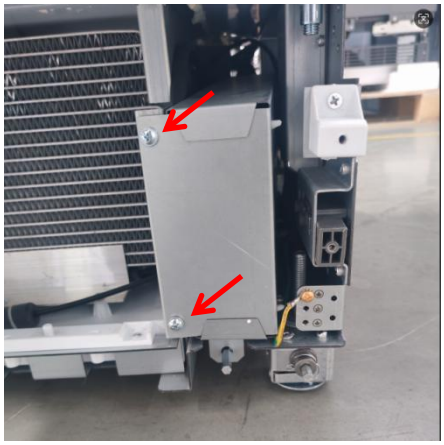
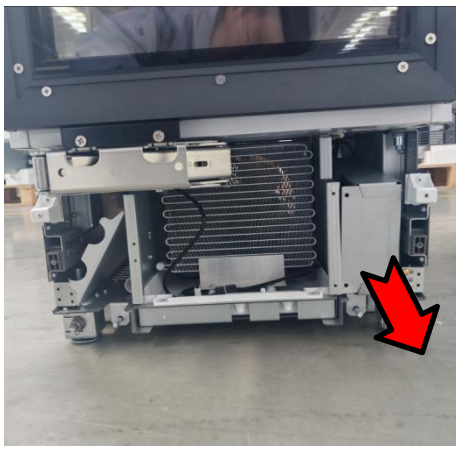
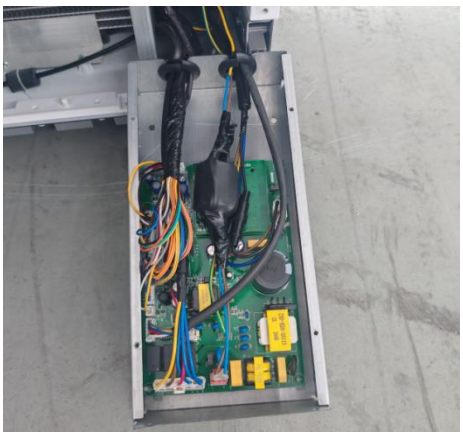
1.The system pressure is abnormal
2.The solenoid valve is not conductive
3.The control board hardware is abnormal.
4.Ice jam.
5.The threshold set by the software is not large enough



Component Access and Removal

Disassembly should only be done with the product unplugged and by an authorized technician.

Control Board


1、Remove the fixing screws and take out the lower fixing cover.

2、Remove the retaining screws and take out the main control board mounting box.

3、Unplug the cable connection terminals and remove the main control board.

Display





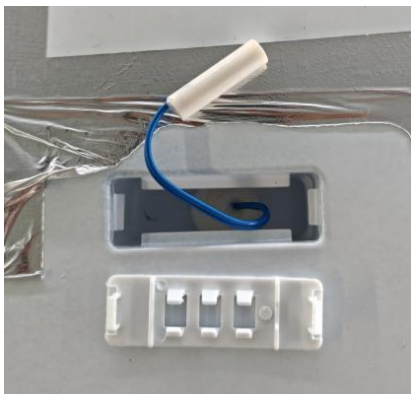
1、Remove the display board assembly retaining screws and pull the display board assembly forward.

2、Unplug the connection cable connector and remove the display board.

Temperature inside the box Sensor

1、 Remove the sensor cover from the interior sidewall of the wine cooler to view the temperature sensor.

Ambient Temperature sensor



1、Remove the sensor cover from the top of the wine cooler to see the ambient temperature sensor.

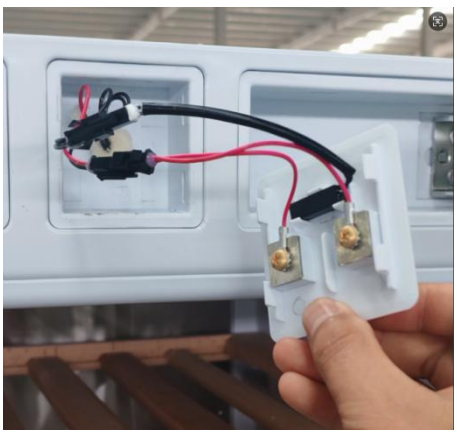
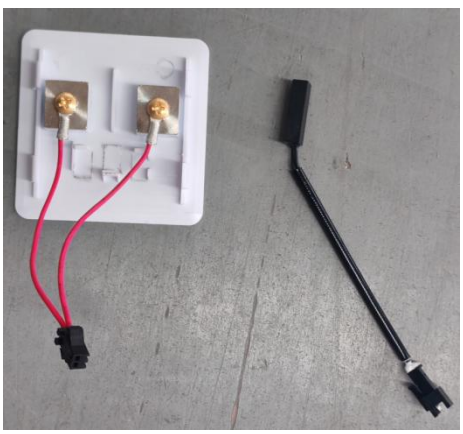
Refrigerator interior light




1、Use the card to pry open the lampshade.

2、Unplug the connecting cable connector and remove the light board.

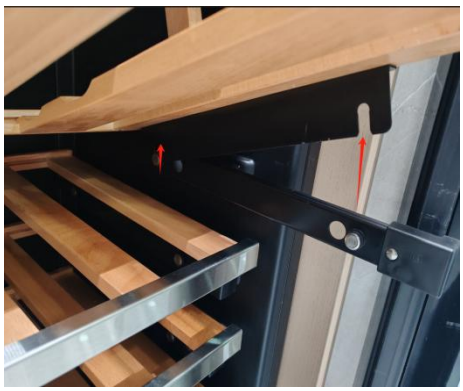
Refrigerator magnetic light switch

1、Pry the door switch mounting cover with a card.

2、Unplug the connecting cable terminals and remove the reed switch.

Wine cooler rail removal

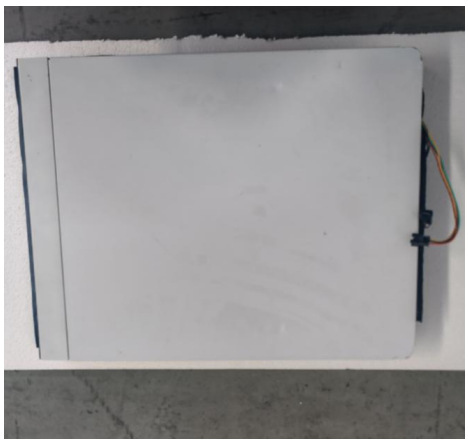


1、Pull out the rails and remove the wine rack

2、Remove the fixing rail screws and remove the rail

Center partition



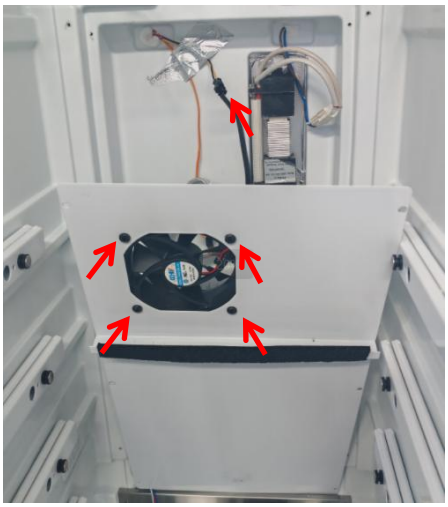



1、Remove the left and right side fixing screws of the center partition.

2、Unplug the connecting cable connector and pull out the center divider.

Defrost Element & Thermal Fuse+






1、Remove the air duct cover plate retaining screws and remove the air duct cover plate.

2、Remove the fan mounting plate fixing screws and unplug the connection cable connector.

3、Remove the fan retaining screws and remove the fan.

4、Unplug the PTC heater cable connector. Remove PTC heater retaining screws and remove heater.

5、Remove the defrost sensor from the evaporator.

Troubleshooting

Possible Problem	Possible Cause	Solutions
The appliance does not operate.	Not plugged in.	Ensure the appliance is plugged in and the power outlet has power.
	The appliance is turned off.	Turn on the appliance.
	The circuit breaker tripped or has a blown fuse.	Replace the broken fuse or reset the breaker.
The appliance is not cold enough.	Temperature control setting is too high.	Adjust the set temperature.
	External environment may require a higher setting.	Keep the appliance away from sunshine or other heat sources.
	The door is opened too frequently or for long periods of time.	Close the door tightly and do not open the door too frequently or for a long period of time.
	The door gasket is not sealed properly.	Ensure the door gasket is not loose.
	Demonstration mode may be enabled.	See the Operating Your Appliance section and verify if Demonstration mode is disabled.
	The cooler does not have sufficient ventilation.	Read and follow the "Installation Clearance Requirements" in the Installation Instructions section.
	The cooler has restricted air flow due to too much storage.	Open space in the cabinet to allow air flow.
The appliance turns on and off frequently.	The room temperature is hotter than normal.	Run the Wine cooler at the appropriate ambient temperature.
	The door gasket is not sealed properly.	Ensure the door gasket is not loose.
	The door is opened too frequently or for long periods of time.	Close the door tightly and do not open the door too frequently or for a long period of time.
	The cooler does not have sufficient ventilation.	Read and follow the "Installation Clearance Requirements" in the Installation Instructions section.
	The door is not closed completely	Make sure the door is completely closed.
The body of the appliance is electrified.	The unit is not properly grounded.	Contact your local electrician to test your electrical grounding system.

Troubleshooting

Possible Problem	Possible Cause	Solutions
Frost is forming in the appliance.	The environment is too humid.	The unit uses an 'auto-defrost' system, under certain conditions, manual defrosting may be required. If frost builds up, you can try running the Wine cooler on a warmer temperature setting, minimizing the number of times you open the door or unplugging the unit to allow the frost to melt.
	The ambient temperature is too low.	
	The door is being opened too frequently.	
The appliance makes too much noise.	The rattling noise may come from the flow of the refrigerant, which is normal. As each cycle ends, you may hear gurgling sounds caused by the flow of refrigerant in the appliance.	It is normal that as each cooling cycle ends, you may hearing ratting or gurgling sounds caused by the flow of refrigerant in the appliance. The high efficiency compressor may make a pulsating or high pitched sound.
	Contraction and expansion of the inside walls may cause popping and cracking noises.	Some popping or cracking noises are normal. They are caused by expansion and contraction of the inside walls due to temperature changes.
	The unit is not level or is touching another appliance.	Check to make sure the cooler is level and that it is non in contact with another appliance or furniture.
The door will not close properly.	The appliance is not level.	Make sure the appliance is on a level surface.
	The door gasket is not installed correctly.	Make sure the door gasket is properly installed.
	The gasket is dirty.	Clean the door gasket.
	The shelves are out of position.	Install the shelves correctly.