



COMMERCIAL UPRIGHT REFRIGERATOR / FREEZER


INSTRUCTION MANUAL



HRV-78A
HRV-128A
HRV-148A
HFV-78A
HFV-128A
HFV-148A

L1KR01103 (031726)

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I. Installation Instruction

1. Safety Instruction



WARNING: Risk of fire flammable material.

Never store any flammable, explosive and corrosive liquid or gas product in appliance.

WARNING: These appliances contain small quantity of flammable refrigerant. All machines are to be serviced only by trained technicians for handling of hydrocarbon refrigerant. All electric components in this cooler are spark free. While replacing please ensure these are replaced with genuine authenticated components.



CAUTION: Hazards or unsafe practices that may result in severe personal injury and/or property damage.

These **WARNING** signs are here to prevent injury to you and others. Please follow them carefully. After reading this section, keep it in a safe place for future reference.

2. Severe WARNING signs for transportation and site



WARNING: Risk of Fire/ Flammable material

- Keep clear of obstruction and ventilation openings in the appliance enclosure or in the structure for building in.
- Risk of fire flammable material. Never store any flammable, explosive and corrosive liquid or gas product in the appliance.
- Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

WARNING

- Do not wet the product or use it in potentially wet conditions. This may cause electrical leakage, resulting in electric shock or fire.
- The refrigerated unit contains R-290 and polyester lubricant. These components have a high moisture absorbing characteristics. Exposure to ambient condition should be avoided. Only approved polyester lubricants to be used. Failure to do so will void all parts and compressor warranty.
- Keep the cabinet surrounding open in order to get proper ventilation.
- Do not damage the refrigeration circuit.
- In case of damage to wiring/power cord, do not replace/repair yourself. Call your authorised service person.
- Do not use electrical appliances inside storage compartment.
- Do not move the unit while in use.
- Hot lines pass behind the cabinet front fascia to prevent condensation. This surface may feel warm during operation.

IMPORTANT

- This booklet is an integral and essential part of the product and should be kept and preserved by the user. Please read carefully the guidelines and warnings contained herein as they are intended to provide the installer/ user with essential information for the proper installation and the continued safe use and maintenance of the product. Please preserve this booklet for any further consultation that may be necessary.
- This is a commercial upright refrigerator/freezer, and should be destined only to be used for the purpose for which it has been expressly designed. Any other use should be considered improper and therefore dangerous. The manufacturer will not be held liable or responsible for any damage caused by improper, incorrect and unreasonable use.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision. Children should be supervised to ensure that they do not play with the appliance.

3. Construction

A. HRV/HFV-78A

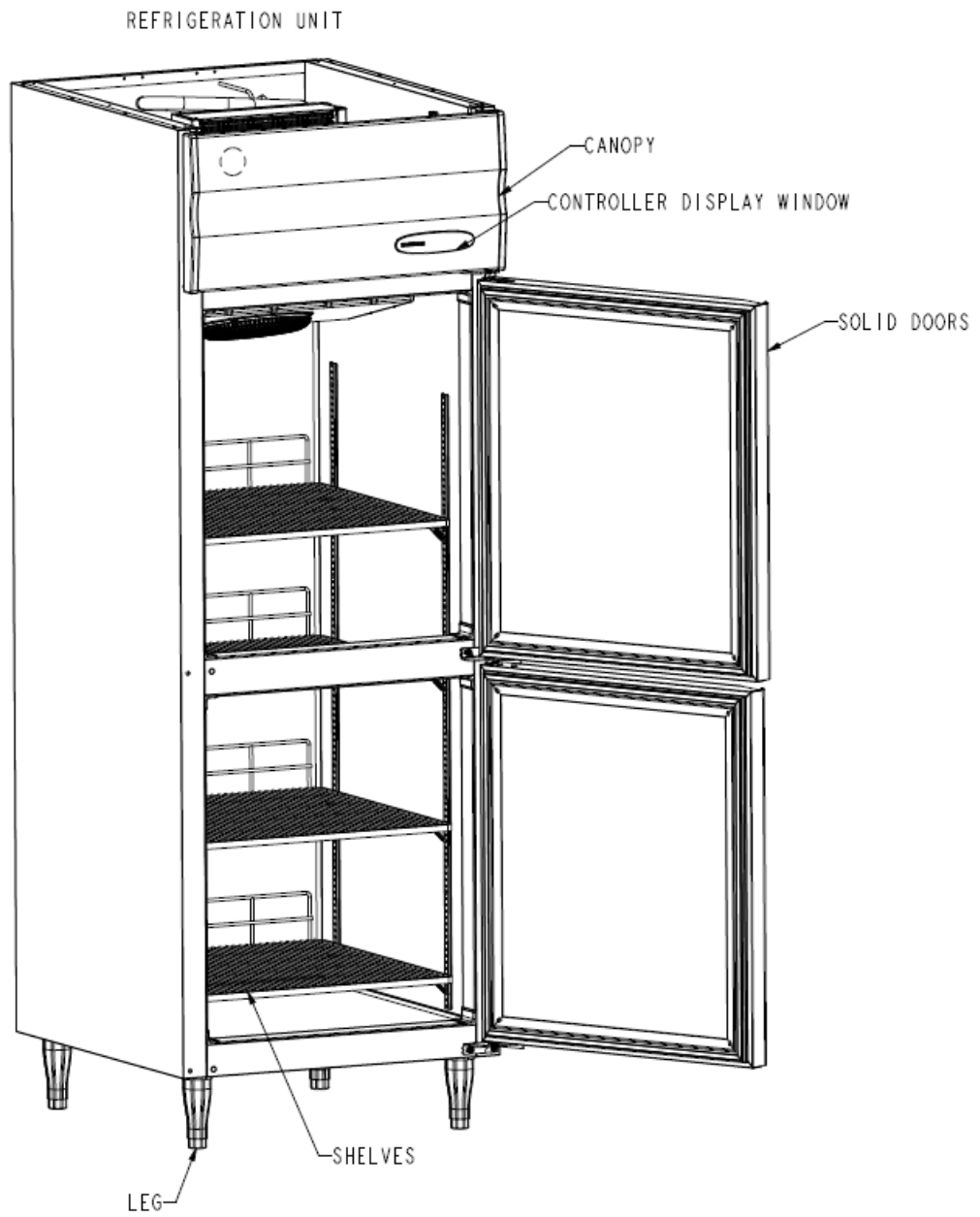


Fig. 1

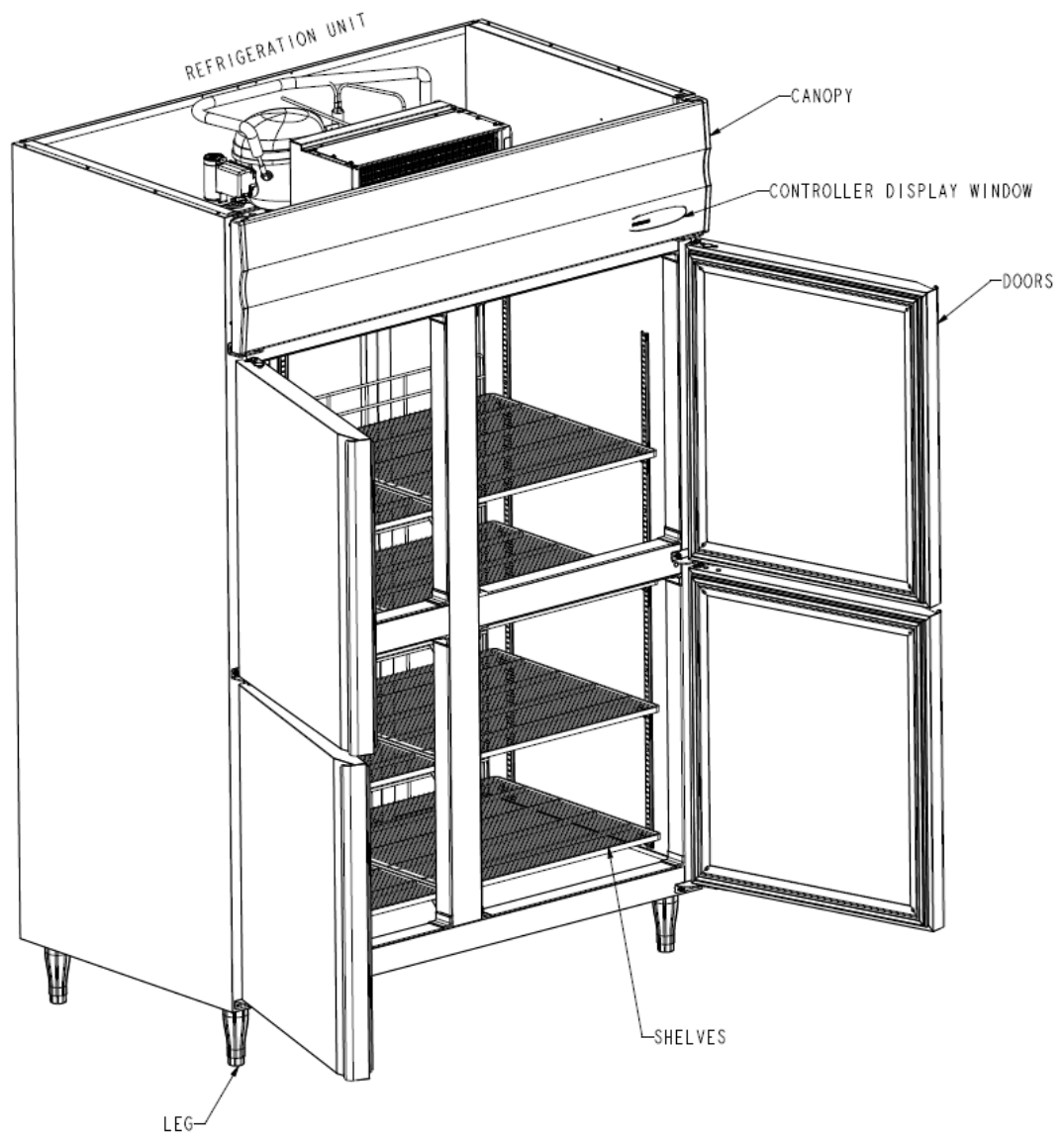


Fig. 2

4. Specification

Model	HRV-78A	HFV-78A	HRV-128A	HFV-128A	HRV-148A	HFV-148A
Power supply	Single phase, 220 - 240V AC, 50Hz					
Current (Amp)	2.2 Amp	3.1 Amp	3.8 Amp	5.5 Amp	3.8 Amp	5.5 Amp
Rated Power	460 Watt	670 Watt	760 Watt	1210 Watt	760 Watt	1210 Watt
Power cord	16 Amp/3 meter					
Net Volume	572 Liter		1024 Liter		1272 Liter	
External dimensions (W X D X H)	700 (W) x 818 (D) x 2050 (Height with 150 mm LEG)		1200 (W) x 818 (D) x 2050 (Height with 150 mm LEG)		1400 (W) x 818 (D) x 2050 (Height with 150 mm LEG)	
Internal dimensions (W X D X H)	596(W) X 700(D) X 1505(H)		1076(W) X 690(D) X 1495(H)		1296(W) X 700(D) X 1505(H)	
Insulation foam blowing agent	Cyclopentane					
Refrigerant	R-290					
Temperature controller	Electronic Controller					
Electric Circuit protection	Non resettable fuse (Glass Fuse)					
Operating condition	Ambient temperature: 5-43°C Voltage range rated voltage +/- 6%					
No of Shelves	4			8		

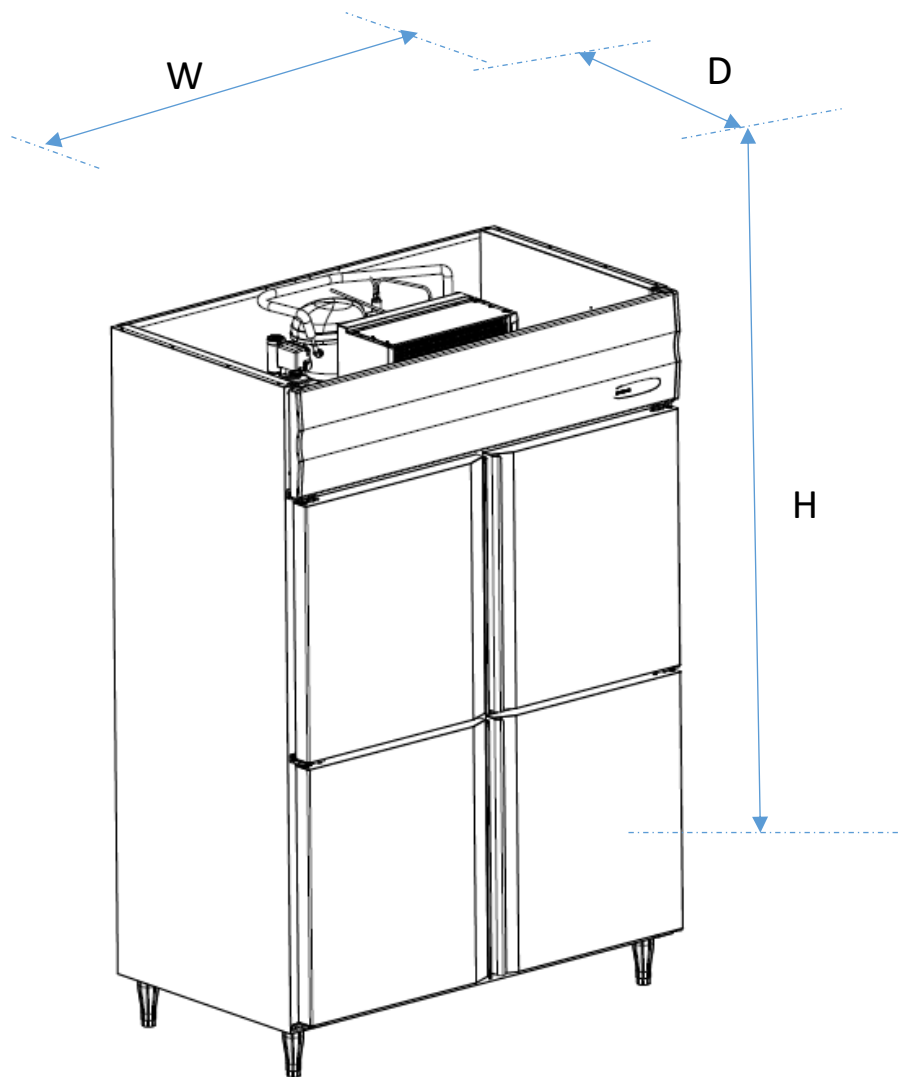


Fig. 3

5. Accessories

Component	78 Series	128 Series	148 Series
Shelf	4 pcs	8 pcs	8 pcs
Shelf Clip	16 pcs	32 pcs	32 pcs
Instruction Manual	1 pc	1 pc	1 pc
Leg	4 pcs	4 pcs	4 pcs
Drain Pan Set	1 pc	1 pc	1 pc

Note: Customized products may have different numbers of accessories.

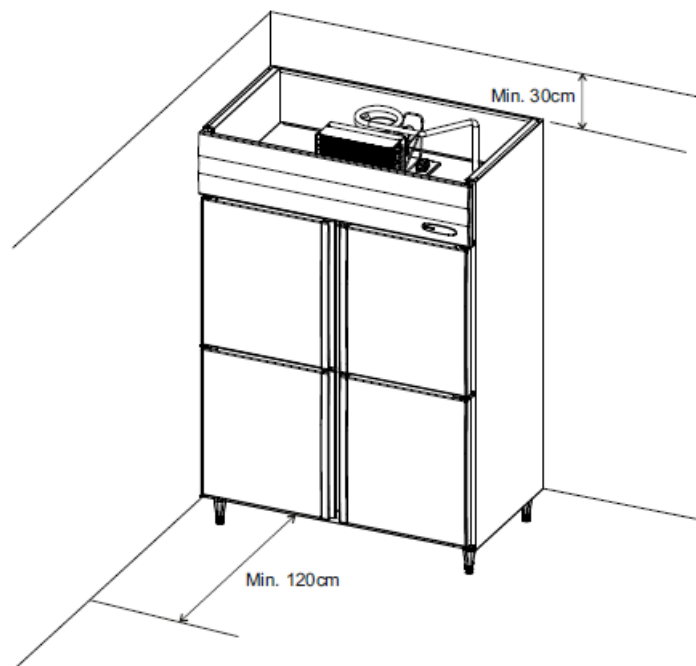
6. Location

IMPORTANT

This appliance is suitable for use only in climatic class 5 i.e. At 40°C and 40% RH.

For best operation result

- The refrigerator/freezer should not be located next to ovens, grills or other high heat producing equipment.
- The location should provide a firm foundation for the equipment.
- Avoid a site where dripping is not allowed. Especially, a side-by-side or back-to-back installation (possibly with other manufacturer's unit) may cause condensation between the two units, resulting in dripping onto the floor.
- Do not expose the unit to direct sunlight or higher temperatures.
- Allow at least 120 cm clearance at the front of the unit for smooth door operation. Also allow at least 30 cm clearance from the ceiling to the top of the unit for proper air circulation.



7. Set Up

IMPORTANT

1. Do not tilt the unit more than 45° when mounting the legs.
2. Carry the unit by holding bottom.

1. Take out the accessory shelves, shelf clips and legs. Attach the four shelf clips horizontally to the shelf posts. Place the shelf on the shelf clips.
2. Remove the bolts from the bottom of the unit.
3. Turn the unit 90 degrees on the pallet, tilt the unit sideways, and screw in the two adjustable legs.
4. Tilt the unit in the opposite direction, and screw in the other two legs.
5. Slide out the pallet from under the unit.
6. Install the accessory drain pan according to its installation instructions provided (Part No. 1602643).
7. Clean the interior with a soft cloth soaked in cold or warm water containing the proper amount of neutral cleaner and wrung dry.
8. Level the unit in both the left-to-right and the front-to-rear directions. To adjust the height of the unit, turn the adjusters of the adjustable legs.

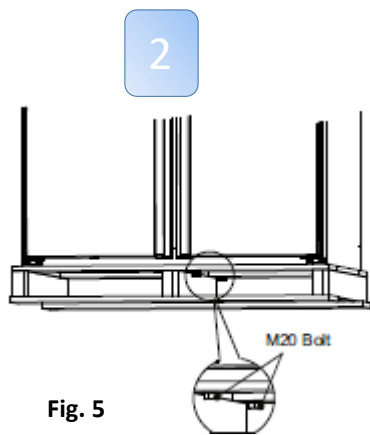


Fig. 5

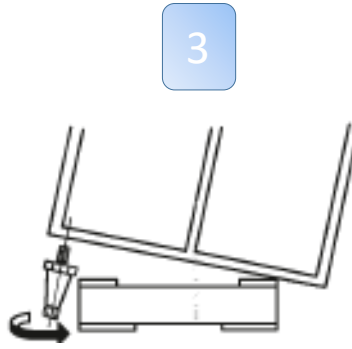


Fig. 6

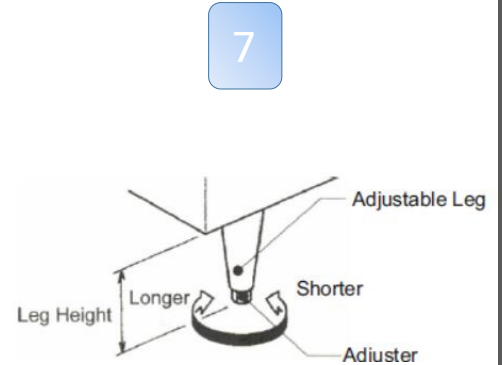


Fig. 7

⚠ CAUTION

The height of the adjustable legs must be within 15-17cm. If extended too much, the leg may become weak or the adjusters can come off, causing unexpected injuries.

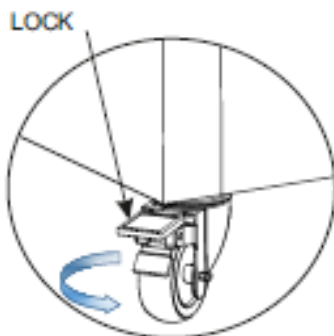


Fig. 8

Follow the same procedure mentioned for legs to fix caster wheels. Front & Rear casters are with lock. Height cannot be adjusted with caster wheels.

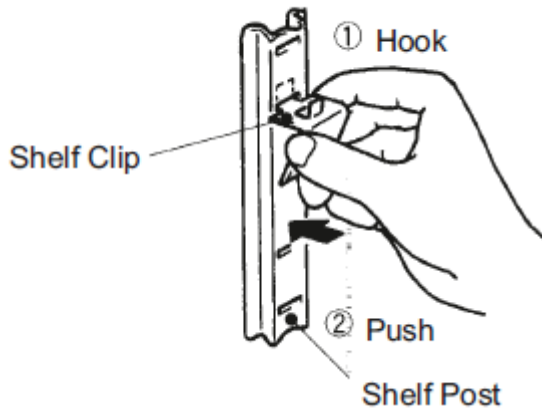
⚠ CAUTION

- Do not move the unit in fully loaded condition. It may cause human fatigue.
- Front caster must be locked while unit is in use. And can be unlocked while moving.

- Remove the protective plastic film from the doors and front canopy panel.

8. Shelf and Shelf Clip

- The shelf is adjustable in 1.27 cm increments. Adjust the shelf clips according to the height of stored items.
- To attach the shelf clip, insert the upper tab into an adjust hole in the shelf post to hook the shelf clip, and push the lower tab into another adjust hole until it locks in place. To detach the shelf clip, reverse the above procedure.



CAUTION

Attach the shelf clips properly to make the shelf level.

9. Electrical Connections

IMPORTANT

This appliance has no power switch, earth leakage circuit breaker or overcurrent protection. Install an earth leakage circuit breaker with overload protection rated at least 10A on the main power supply.

- This Appliance must be plugged into the separated power receptacle which is readily accessible and has enough capacity. The maximum allowable voltage variation should not exceed ± 6 percent of the nameplate rating. See the nameplate.
- If the supply cord and the plug should need to be replaced, it should only be done by a qualified service engineer to avoid any danger.
- Ensure proper earthing provided.



II. Operating Instruction

1. Use the appliance only at the specified voltage. (As specified in the name plate).
2. Use standard socket. Do not use multisocket.
3. Be careful not to wet the machine compartment. This might cause failure or electric shock hazard.
4. To prevent electric shock, do not touch the attachment plug with wet hands.
5. Do not store any explosive substances such as Aerosol with a flammable propellant, in this appliance.
6. This appliance is designed only for temporary storage of foods. Use for any other purposes (e.g., storage of chemicals or medical supplies such as vaccine and serum) could cause deterioration of stored items.
7. Do not throw anything onto the shelves or load more than 20 kg on each of them. They may fall off and cause injury.
8. Do not store bottles or cans near the air outlet. They may freeze up and break, causing a risk of injury.
9. Do not use combustible spray or place volatile and flammable substances near the unit. They could catch fire from a spark of a switch or the like.
10. Do not put anything into the machine compartment or the air inlet/outlet. The fan rotating rapidly inside may cause injury or heat.
11. Energize the appliance for 1 hour and check for proper temperature before putting foods in the cabinet.
12. Do not block the air inlet/outlet with foods.
13. Do not pack the cabinet with foods. Allow some space between them to ensure a good air flow.
14. Do not put in warm or hot foods. Let them cool first, or they will raise the cabinet temperature and could deteriorate other foods in the cabinet or overload the refrigerator/freezer.
15. Make sure all items are snug on each shelf.
16. Moist or fresh foods and those with a strong smell like seafood should be wrapped up in a plastic film or packed in a container. Otherwise, the foods may dry up or give their smells to other foods.
17. Foods containing acetic acid or yeast should be wrapped up in a plastic film. Otherwise, they may accelerate corrosion of the evaporator and copper tubes, resulting in failure.
18. Foods intended for direct human consumption should be stored on the shelf in a proper container and protected from direct contact with the cabinet walls.
19. Do not use the freezer to freeze foods. It is designed only to store frozen foods.
20. To use freezer for ice cream, set temperature must be below -20°C.
21. The doors may become difficult to open just after closed because of the negative pressure created inside the cabinet. Wait for about 30 seconds.
22. If machines are used and then kept unused for long duration, then faults may arise in the machine i.e., oxidation, gas leak, motor jam etc. which are not in the scope of warranty as this is due to the improper storage and wrong usage.
23. Machines installed in coastal belt, around sea front area require regular preventive maintenance, otherwise oxidation related faults may arise due to extremely high salt & humidity in the environment in such areas, which are also not in the scope of warranty coverage.
24. Hot lines pass behind the cabinet front fascia to prevent condensation. This surface may feel warm during operation.

1. Start Up

- Plug in the unit.
- The compressor and condenser fan motor will start in 3 minutes.

2. Front Panel

- To open and close the front canopy panel:
Pull each side of the front panel toward you to release it from the grip on each side of the bottom, and swing up the front panel as shown.
- To close the front panel, fit both sides of the bottom securely in the grips.

To remove the front canopy panel:

- Release both sides of the bottom from the grips, and lift it off vertically.

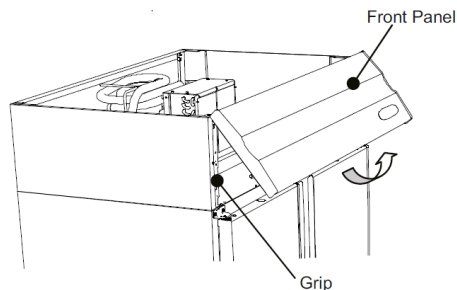


Fig. 11

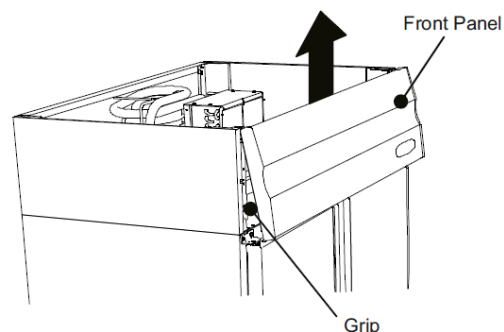


Fig. 12

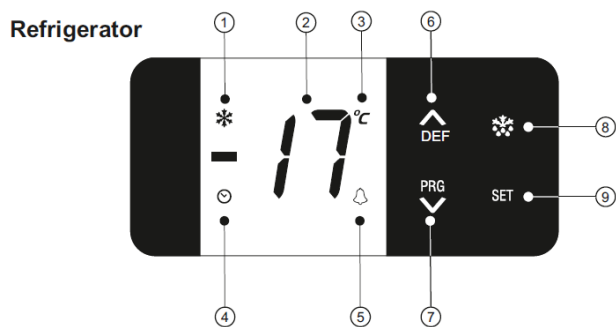
3. Cabinet Temperature Setting

IMPORTANT

The temperature range given below is only the adjustable range. The actual cabinet temperature depends on the ambient temperature and other conditions.

The cabinet temperature is factory-adjusted to 2°C for the refrigerator and -20°C for the freezer & combi. If necessary, readjust the temperature as follows.

Refrigerator:



1. Compressor Indicator
2. Screen
3. Temperature Unit Indicator
4. Time Delay Indicator
5. Alarm Indicator
6. Up Key
7. Down Key
8. Defrost Key
9. Set Key

1) Open the front panel.

2) Temperature setting:

Touch & hold SET key for 2 Sec to enter into set mode.

Display will show set value. The set point value can now be modified by using the UP/DOWN key. After selecting the desired value, touch the set key and user can see "- -" which confirms that the set point has been stored in memory.

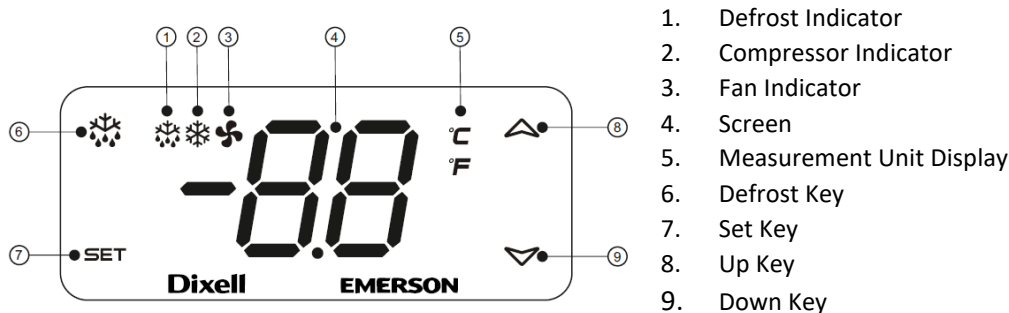
If no operation for 60 seconds, then temperature will not be saved, and system will exit from the temperature setting mode.

Function	Set range	Default	Unit
Temperature Setting (Refrigerator)	-2 To +12	+2	°C

IMPORTANT

The displayed cabinet temperature is adjusted to be almost equal to the temperature at the center of the cabinet without foods. But it can be different from the actual temperature depending on arrangement of stored foods, frequency of door opening or measuring points.

Freezer:



1) Push the SET key for more than 2 seconds to change the Set point value.

2) The value of the set point will be displayed and the "°C" LED starts blinking.

3) To change the Set value, push the up or down arrows within 10s.

4) To memorize the new set point value, push the SET key again or wait 10s.

Function	Set range	Default	Unit
Temperature Setting (Freezer)	-7 To -25	-20	°C

Refrigerator/Freezer (Common):

The compressor stops when the cabinet temperature reaches down to the set temperature or minimum compressor ON time whichever comes later, and starts when the cabinet temperature rises to the set temperature + differential or minimum compressor OFF time whichever comes later. The average cabinet temperature will be around the set temperature. Refer to temperature controller setting sheet of respective model for actual differential value.

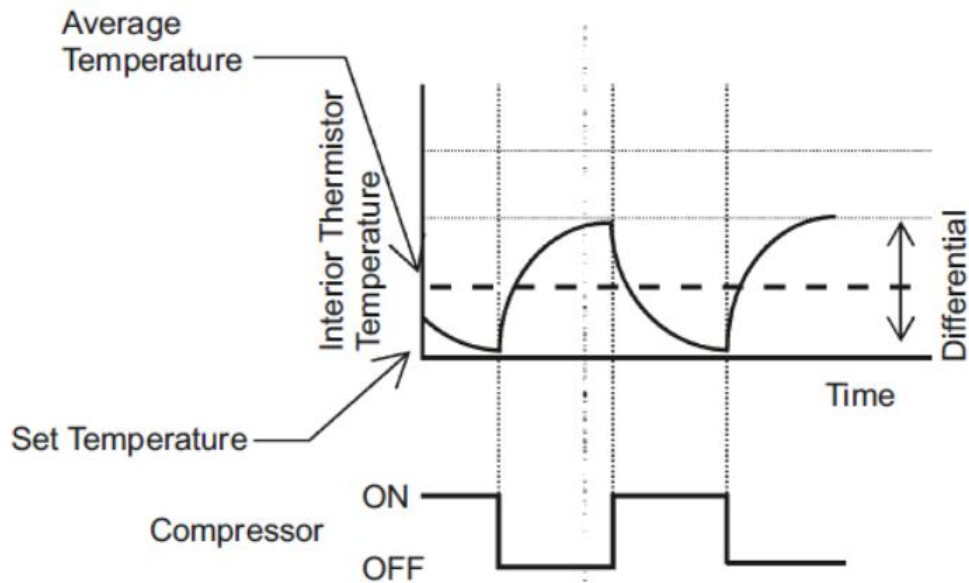


Fig. 13

4. [Defrost](#)

Automatic defrost cycle

Freezer:

The freezer automatically defrosts the evaporator after 5 hours from previous defrost or from refrigeration start or based on auto defrost start temperature. The defrost indication will turn on and display the message "dF".

Refrigerator:




The refrigerator automatically defrosts the evaporator after 4 hours from previous defrost or from refrigeration start. The defrost indication will turn on and display the message "dF" alternating with the temperature measured by control probe.

Manual defrost cycle





Push the defrost key for more than 2 seconds and a manual defrost will start. The defrost indicator will turn on and display the message "dF".

5. [Indicator Lights](#)

Refrigerator:

Indicator	Symbol	Status	Function
Compressor		On	Compressor running
		Off	Compressor off
		Flashing	Compressor start delay
Time delay		On	Evaporator is ON and in time delay for switching OFF
		Flashing	Compressor is in time delay and about to start
Alarm		On	Defrosting
		Off	Alarm indication on

Freezer:

Indicator	Symbol	Status	Function
Compressor		On	Compressor running
		Off	Compressor off
		Flashing	Compressor start delay
Evaporator fan		On	Evaporator fan running
		OFF	Evaporator fan off
		Flashing	Evaporator fan start delay
Defrost		On	Defrosting
		Off	Defrost stopped
Temperature		On	Measurement Unit
		Flashing	Programming mode

6. Shut Down

1. Before shutting down the unit, move the stored foods into another storage refrigerator/freezer.
2. Unplug the unit or disconnect the main power supply.
3. When preparing the unit for long storage, clean the cabinet interior and door gaskets, dry them thoroughly and store the unit in a dry place.

III. Service of Appliance

1. Disconnect the Appliance from power source during servicing & when replacing parts.
2. For good performance of cabinet, clean the condenser once in a month.
3. Clean the dust from condenser by means of soft wire brush, blower or vacuum cleaner (Do not use water for cleaning condenser).
4. Do not touch or wet the machine compartment parts. This could result in failure or breakdown.
5. To prevent possible damage, do not clean the plastic parts with water above 40°C.

1. Interior, Exterior, Shelf

- Disconnect the appliance from power source before cleaning.
- Clean the interior and exterior at least once a week for sanitation.
- Clean off the interior and exterior with a soft cloth soaked in cold or warm water containing the proper amount of neutral cleaner and wrung dry. Do not use a water jet to clean the machine compartment.
- Chemical agents other than neutral cleaner might cause damage to the interior and exterior surfaces.
- Any remaining detergent will damage metal or plastic surfaces. Use a soft cloth dampened with warm water to wipe it off.
- The door gasket and its contact surface get soiled easily. Clean every surface of these parts thoroughly. Remnants of food will accelerate aging.
- Use a cloth to wipe off any water staying inside the cabinet.

- Do not use the following items. They could damage painted or plastic surfaces:
Polishing powder, alcohol, thinner, benzine, acidic or alkaline detergent, hot water, petroleum, soap powder, metal scourer or brush, etc. Especially detergent to clean grease on ventilator or microwave.



Fig. 14

Note: Some solutions other than the above may also damage painted or plastic surfaces. Immediately stop using such solutions if they cause any problems.

2. Before calling a service agent ✂

IMPORTANT

1. If the screen on the operation panel indicates an error code or something seems wrong with the unit, check for possible causes according to the following instructions. If the problem still exists, immediately contact an authorized HOSHIZAKI service company.
2. When contacting a service company, let them know the model's name, serial number, date of installation (see warranty card) and state of the trouble.
3. Do not attempt to repair the unit yourself.

3. Troubles with error code indication

Refrigerator:

Code	Possible Cause	Operation and Remedy
AL/AH	Cabinet sensor error	Compressor will follow cycle of 30min on and 15min off. Press any key to stop beep. When troubleshooting is over, system recalculates compressor delay time. Immediately contact an authorized HOSHIZAKI service company.
DL/DH	Defrost sensor error	Defrost termination temperature is invalid. Press any key to stop beep. Immediately contact an authorized HOSHIZAKI service company.

Freezer:

Code	Possible Cause	Operation and Remedy
P1	Cabinet sensor error	Compressor will follow cycle of 20min on and 10min off. Press any key to stop beep. When troubleshooting is over, system recalculates compressor delay time. Immediately contact an authorized HOSHIZAKI service company.
P2	Defrost sensor error	Defrost termination temperature is invalid. Press any key to stop beep. Immediately contact an authorized HOSHIZAKI service company.

* The code "dF" is not an error code but indicates the unit is in defrost cycle.

4. Troubles without error code indication

- i) Unit fails to operate:
 - (1) Unplugged.
 - (2) Power failure.
 - (3) Main power supply disconnected.
 - (4) Switched off from controller.

- ii) Poor cooling performance:
 - (1) Ambient temperature too high (above 43°C).
 - (2) Door(s) opened too often.
 - (3) Cabinet temperature setting too high.
 - (4) Too packed with foods.
 - (5) Air circulation path blocked.
 - (6) Door(s) left open.

- iii) Condensation around door(s):
 - (1) Ambient humidity too high.
 - (2) Door(s) not closed properly.

- iv) Noise:
 - (1) Normal operating sounds of compressor or condenser fan.

- v) Frosting inside compartment:
 - (1) Ambient humidity too high.
 - (2) Door(s) opened too often.
 - (3) Door(s) not closed properly.
 - (4) Too packed with foods beyond load line.

5. Disposal

To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

IMPORTANT



The insulation foaming agent used for the unit body contains flammable gas cyclopentane. With this in mind, dispose of the refrigerator/freezer properly.

6. Warranty

HOSHIZAKI warrants to the original owner/user that all HOSHIZAKI branded products shall be free of defects in material and/or workmanship for the duration of the “warranty period”. The warranty shall be effective for one year from the date of installation. HOSHIZAKI’s liability under the terms of the warranty are limited and shall exclude routine servicing, cleaning, essential maintenance and/or repairs occasioned by misuse and installations not in accordance with HOSHIZAKI guidelines. Warranty repairs should be completed by an approved HOSHIZAKI dealer or service agency using genuine HOSHIZAKI components.

To obtain full details of your warranty and approved service agency, please contact your dealer/supplier.

MANUFACTURER:

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