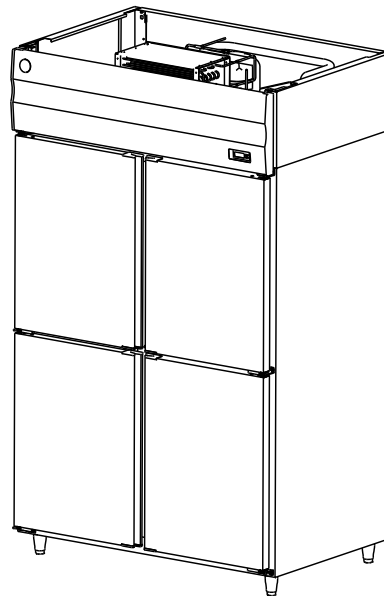




COMMERCIAL REFRIGERATOR/FREEZER

INSTRUCTION MANUAL



HR/HF-128MA

- 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.

HR-78MA
HR-128MA
HR-148MA
HR-188MA
HF-78MA
HF-128MA
HF-148MA
HF-188MA
HRF-78MA
HRF-128MA
HRF-148MA
HRF-188MA


Manufacturer: **HOSHIZAKI (SUZHOU) CO., LTD.**

L1R590104 (082019)

ENGLISH

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WARNING



Do not wet this product or use it in potentially wet conditions. This may cause electric leakage, resulting in electric shock or fire.

IMPORTANT

1. This appliance is intended to be used in household and similar applications such as
 - staff kitchen areas in shops, offices and other working environments;
 - farm houses and by clients in hotels, motels and other residential type environments;
 - bed and breakfast type environments;
 - catering and similar non-retail applications.
 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.
2. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Young children should be supervised to ensure that they do not play with the appliance.

2. ACCESSORIES

Width	700mm	1200/1400mm	1800mm
a) Shelf:	4 [4]	8 [8]	12 [12]
b) Shelf clip:	16 [16]	32 [32]	48 [48]
c) Shelf holder:	4 [0]	8 [0]	12 [0]

- Note: 1. Numbers in parentheses are for models without shelf holders.
 2. Customized products may have different numbers and specifications of accessories.

3. LOCATION

IMPORTANT

This refrigerator/freezer is not intended for outdoor use. Normal operating ambient temperature should be within 5°C to 43°C.

For best operating results:

- * 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 100 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.

I. INSTALLATION INSTRUCTIONS

1. CONSTRUCTION (HR-128MA)

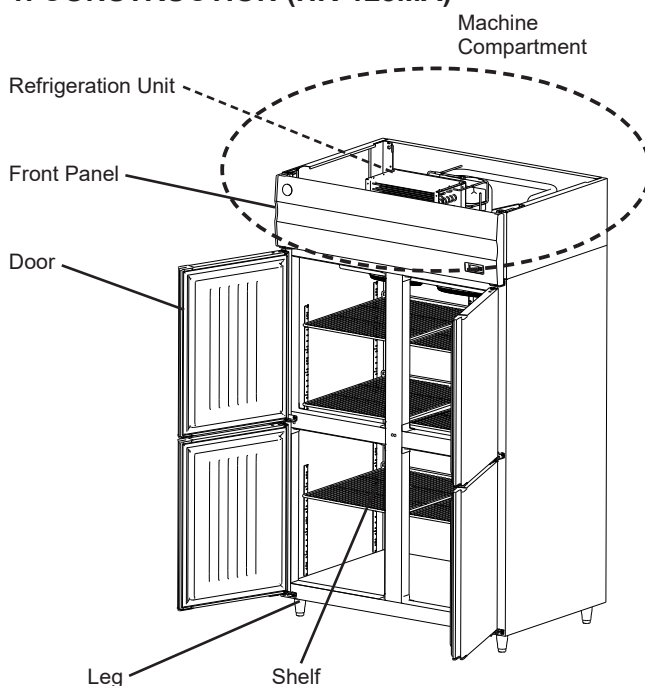


Fig. 1

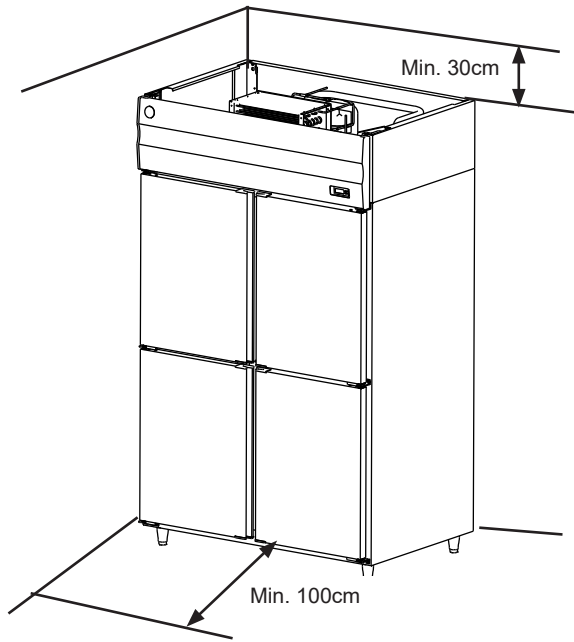
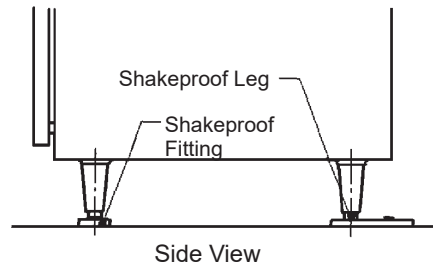
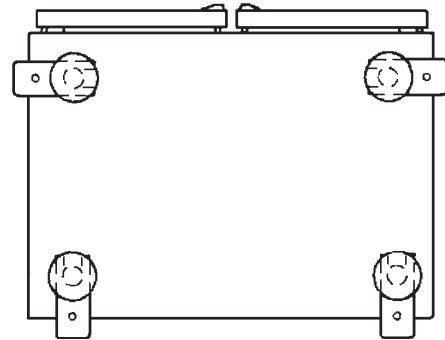


Fig. 2



Side View



Bottom View

Fig. 3

* Protect the unit from tipping over by fixing the four legs with the following tip-resistant kit (optional):

[Tip-resistant kit]

Adjustable leg (4Y2042-01, optional)	4
Shakeproof leg (454440-01, optional)	4
Shakeproof fitting (454441-01, optional)	4
Anchor bolt M10 (not provided)	4

[Installation example]

- 1) Replace the casters/adjustable legs with the optional adjustable legs.
- 2) Replace the adjustable ends of the legs with the shakeproof legs.
- 3) Fix the two rear shakeproof fittings to the floor.
- 4) Mount the refrigerator/freezer on the fixed shakeproof fittings.
- 5) Fix the front shakeproof fittings.

* Locate and orient the fittings to optimize the function of the anchor bolts.

* The shakeproof legs will raise the height by about 5 mm.

4. SET UP

IMPORTANT

1. Do not tilt the unit more than 45° when mounting the legs.
2. Carry the unit by holding its bottom.
3. Remove all stuff inside the cabinet before moving the unit.

- 1) Cut the vinyl shipping tape and remove the carton.
- 2) 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.
- 3) Remove the two bolts from the bottom of the unit.

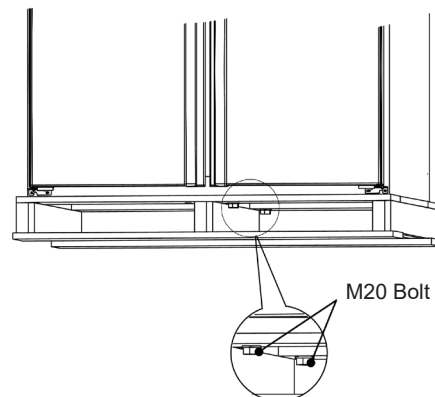


Fig. 4

- Turn the unit 90 degrees on the pallet, tilt the unit sideways, and screw in the two adjustable legs.

Note: Keep the adjusters 2 cm longer to make it easy to pull out the pallet.

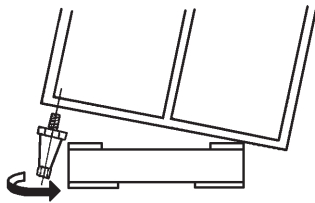


Fig. 5

- Tilt the unit in the opposite direction, and screw in the other two legs.
- Slide out the pallet from under the unit.
- For the 180 type (1800 mm wide) models only, turn the unit sideways again, and screw in the two legs at the center.
- Level the refrigerator/freezer 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.

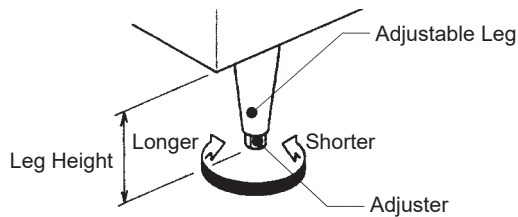


Fig. 6

CAUTION

The height of the adjustable legs must be within 9 - 12 cm (or 15 - 18 cm for some models). If extended too much, the legs may become weak or the adjusters can come off, causing unexpected injuries.

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

Note: Some customized models are provided with casters.

5. SHELF AND RAIL

[a] SHELF AND SHELF CLIP (standard)

* The shelf is adjustable in 2.5 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.

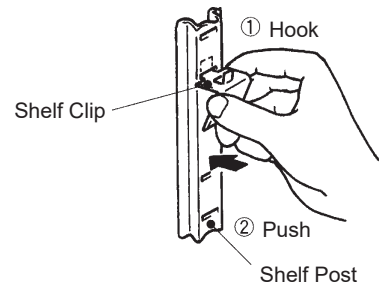


Fig. 7

CAUTION

Attach the shelf clips properly to make the shelf level.

* To lay the shelf at the bottom of the cabinet, attach two shelf holders each to the left and right frames as shown below.

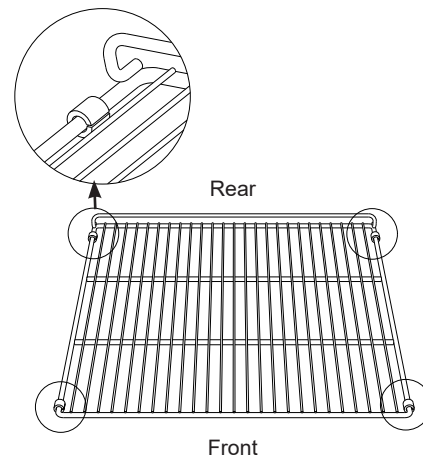


Fig. 8

IMPORTANT

Do not put anything at the bottom of the cabinet to prevent damage or deformation to the cabinet bottom, resulting in corrosion.

ENGLISH

[b] RAIL (customized)

* To attach the rail, (1) push the rail hook backwards to fit into the square hole in the rear shelf post, and (2) push the rail hook down to fit into the square hole in the front shelf post. To detach the rail, reverse the above procedure. See Fig. 9.

CAUTION

Attach the rail properly to make it level.

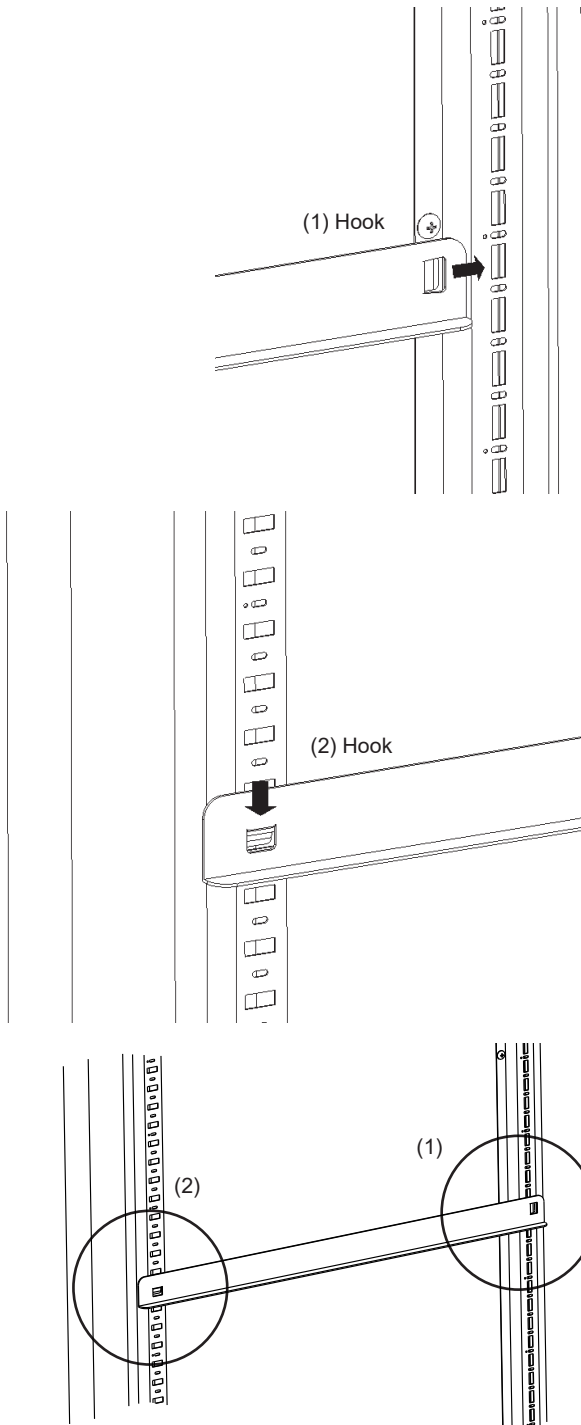


Fig. 9

[c] HANGER (customized)

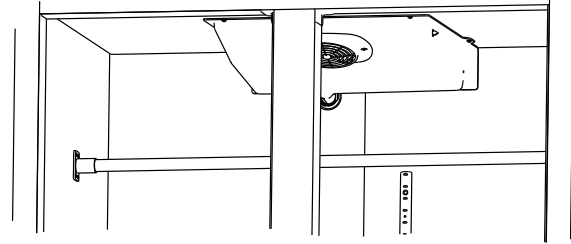


Fig. 10

6. ELECTRICAL CONNECTIONS

IMPORTANT

This refrigerator/freezer is provided with no power switch or earth leakage circuit breaker, but with overcurrent protection only. Install an earth leakage circuit breaker with overload protection rated at least 15A on the main power supply.

- * This refrigerator/freezer must be plugged into the separated power receptacle which is readily accessible and has enough capacity. The maximum allowable voltage variation should not exceed ± 10 percent of the nameplate rating. See the nameplate.
- * If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

7. DRAIN CONNECTIONS

CAUTION

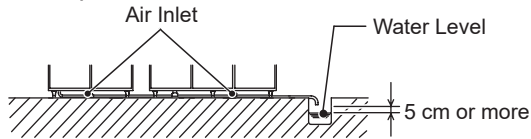
Be sure to connect the drain hose properly. Otherwise water leaks from the drain hose may damage the surroundings (property).

IMPORTANT

1. Drain line shall be as short and straight as possible. The drain hose shall have an adequate pitch and fall so that no part is higher than the drain outlet.
2. To prevent a backflow, do not connect the drain hose directly with the sewer system. An air gap of a minimum of 5 cm should be between the end of the drain hose and the water level of drainage.



3. When installing more than two units, do not interconnect their drain hoses. If the interconnection is necessary, provide an air inlet per unit.



* The drain outlet is at the bottom of the body. Use the accessory to connect the drain hose.

- 1) Insert the 18 mm diameter end of flexible hose into the defrost water drain outlet, and fix the flexible hose with the accessory drain hose band.
- 2) Attach the other end (26 mm outer diameter) of the flexible hose to the drainage.

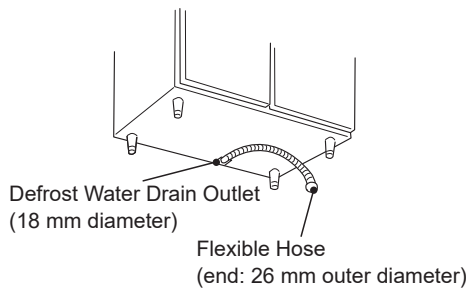


Fig. 11

- * The drain hose may not be provided for some models. If necessary, connect the optional drain hose assembly (471190A02) to the 18 mm outer diameter drain outlet located on the bottom rear of the unit.
- * The drain outlet is not provided for forced drain water evaporation model (customized). Drain water is evaporated inside the rear side of the body.

II. OPERATING INSTRUCTIONS

IMPORTANT

1. Be careful not to wet the machine compartment. This might cause failure or electric shock hazard.
2. To prevent electric shock, do not touch the attachment plug with wet hands.
3. Do not store any volatile or flammable substances such as benzine, ether, adhesives and LPG, or any explosive substances such as aerosol cans with a flammable propellant in the unit.
4. This refrigerator/freezer 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.
5. Do not throw anything onto the shelves or load more than 60 kg on each of them. They may fall off and cause injury.
6. Do not store bottles or cans near the air outlet. They may freeze up and break, causing a risk of injury.
7. 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.
8. Do not put anything into the machine compartment or the air inlet/outlet. The fan rotating rapidly inside may cause injury or heat.
9. Energise the refrigerator/freezer for 1 hour and check for proper temperature before putting foods in the cabinet.
10. Do not block the air inlet/outlet with foods.
11. Do not pack the cabinet with foods. Allow some space between them to ensure good air flow.
12. 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.
13. Make sure all items are snug on each shelf.

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14. 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.
15. 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.
16. 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.
17. Do not use the freezer to freeze foods. It is designed only to store frozen foods. High quality ice cream may melt during defrost cycle and should not be stored in the freezer.
18. The doors may become difficult to open just after closed because of the negative pressure created inside the cabinet. Wait for about 30 seconds.

1. START UP

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

2. FRONT PANEL

To open and close the front 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.

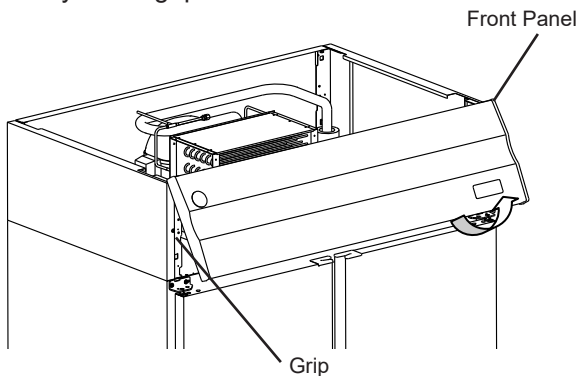


Fig. 12

To remove the front panel:

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

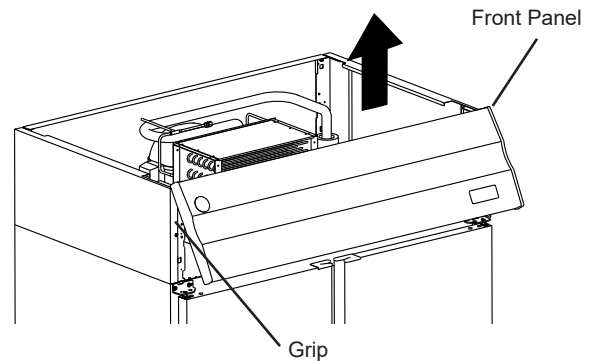


Fig. 13

3. CABINET TEMPERATURE SETTING

IMPORTANT

1. Pressing the down key will not speed up refrigeration, but will only lower the temperature setting.
2. 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 1°C for the refrigerator and -20°C for the freezer. If necessary, readjust the temperature as follows.



- [1] Refrigeration Indicator Light
- [2] Defrost Indicator Light
- [3] Fan Indicator Light
- [4] Defrost Dripping Indicator Light
- [5] Set Indicator Light
- [6] Defrost Key / Evaporator Sensor
Temperature Display Key / Reset Key
- [7] Down Key
- [8] Up Key
- [9] Set Key / Switch Between Menu and Parameter Key

Fig. 14

- 1) Open the front panel.
- 2) Under normal operating conditions, press the set key for 3 seconds to enter the user menu. When the screen displays "St", press the set key again. The screen displays the value of "St". It could be modified by pressing the up or down key (see IMPORTANT 2).
After choosing the "St" menu, press the set key to set parameter value. Press the up or down key to adjust parameter value, and then repress the set key to go back to the menu choosing status.
Under the setting status, press the defrost/reset key or perform no operation for 30 seconds. The system will save the parameters and exit from the parameter setting mode.

Code	Function	Set Range	Default	Unit
St	Temperature setting (refrigerator)	-6 to +12	1	°C
St	Temperature setting (freezer)	-7 to -23	-20	°C

※ Glass door model (HR series) Set temperature :-2°C to +12°C

IMPORTANT

1. The temperature setting must be between -6 and 12°C for the refrigerator and between -7 and -23°C for the freezer to prevent possible failure.
2. To avoid the risk of failure, do not make changes to other menus than "St".
3. 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.

The compressor stops when the cabinet temperature reaches down to the set temperature, and starts when the cabinet temperature rises to the set temperature + 4°C. Accordingly, the average cabinet temperature will be around the set temperature + 2°C.

Set temperature (compressor off temperature)
Off-cycle defrost (HR series): -6 to +12°C
Heater defrost (HF series): -7 to -23°C

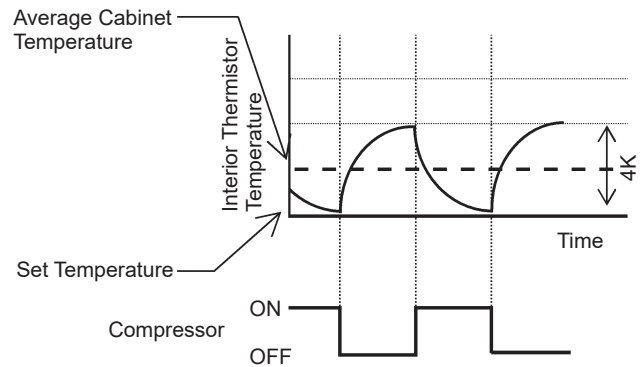


Fig. 15

4. DEFROST

Automatic defrost cycle

The refrigerator/freezer automatically defrosts the evaporator 6 hours after the refrigeration starts. The defrost indicator light on the operation panel comes on when the defrost cycle starts.

Manual defrost cycle

To start the manual defrost cycle, press the defrost/reset key for 3 seconds. The defrost indicator light on the operation panel comes on when the defrost cycle starts.

5. INDICATOR LIGHTS

Indicator Light	Symbol	Status	Meaning
Setting	set	On	Parameter setting
		Off	Measuring and controlling status
Refrigeration	❄️	On	Refrigerating
		Off	Refrigeration stopped
		Flash	Refrigeration delayed
Defrost	❄️💧	On	Defrosting
		Off	Defrost stopped
Fan	🌀	On	Fan running
		Off	Fan stopped
Defrost dripping	drip	On	Start defrost dripping
		Off	Stop defrost dripping

6. SHUT DOWN

- 1) Before shutting down the unit, move the stored foods into another refrigerator/freezer.
- 2) Unplug the unit or disconnect the main power supply.

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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. MAINTENANCE

IMPORTANT

1. Before carrying out any cleaning or maintenance operations, unplug the unit.
2. Do not touch or wet the machine compartment parts. This could result in failure or breakdown.
3. To prevent possible damage, do not clean the plastic parts with water above 40°C or in a dishwasher.

1. INTERIOR, EXTERIOR, SHELF

- * Clean the interior and exterior at least once a week for sanitary use.
- * 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.
- * 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.

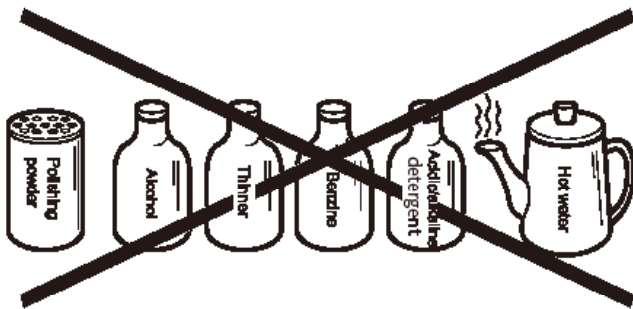


Fig. 16

Note: Some solutions other than the above may also damage painted or plastic surfaces.

Immediately stop using such solutions if they cause any problems

* 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.

2. WIRE CONDENSER

* Use a vacuum cleaner or a soft brush to remove dust and stains from the condenser.

Note: If users clean the condenser with hard brushes, such as dishwasher brushes, the coating of the condenser may peel off,

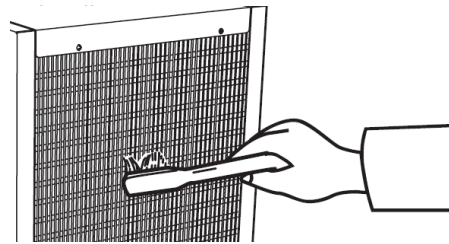


Fig. 17

3. AIR FILTER

IMPORTANT

To prevent deformation, do not wash the air filter with hot water above 40°C.

Plastic mesh air filters remove dirt or dust from the air, and keep the condenser from getting clogged. If the filters get clogged, the refrigerator/freezer's performance will be reduced.

Check the filters at least twice a month. When clogged or when the temperature controller shows "cH", use warm water and a neutral cleaner to wash the filters. Do not operate the unit with the air filters removed, or the condenser will get clogged, resulting in failure.

- 1) Open the front panel and remove the air filter. To prevent injury, do not touch the condenser fins directly.
- 2) Wash the air filter carefully with cold or warm water containing the proper amount of neutral cleaner. Rinse and dry the air filter thoroughly.
- 3) To refit the air filter, put the two tabs into the heat exchanger or fins in condenser, and tightly attach the air filter over the condenser.

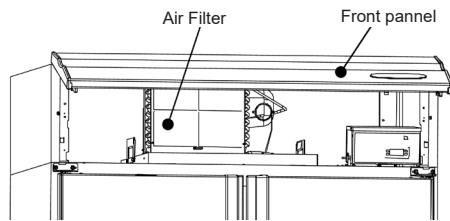


Fig. 18

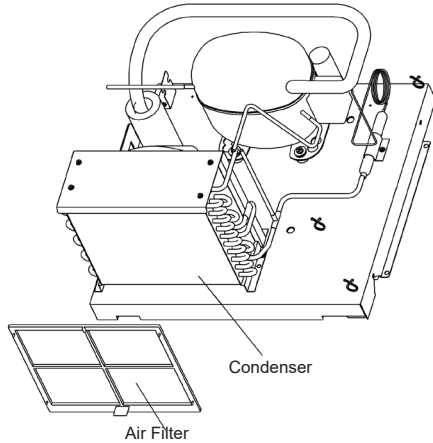


Fig. 19

4. 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 name, serial number, date of installation (see warranty card) and state of the trouble.
3. Do not attempt to repair the unit yourself.

[a] TROUBLES WITH ERROR CODE INDICATION

Code	Possible Cause	Remedy
E1	Cabinet sensor error	Immediately contact an authorized Hoshizaki service company.
E2	Evaporator sensor error	
E3	Condenser sensor error	

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

[b] TROUBLES WITHOUT ERROR CODE INDICATION

- 1) Unit fails to operate:
 - (1) Unplugged.
 - (2) Power failure.
 - (3) Main power supply disconnected.
- 2) 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) Door(s) left open.
- 3) Condensation around door(s):
 - (1) Ambient humidity too high.
 - (2) Door(s) not closed tightly.
- 4) Noise:
 - (1) Normal operating sounds of compressor or condenser fan.
- 5) Frosting inside compartment:
 - (1) Ambient humidity too high.
 - (2) Door(s) opened too often.
 - (3) Too packed with foods beyond load line.

5. DISPOSAL

When disposing of the refrigerator/freezer, contact an authorized Hoshizaki service company or a specialized waste disposal company.

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, or the nearest Hoshizaki Service office.

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Lancer

To register your product for warranty with Hoshizaki, visit
<http://www.hoshizaki.com.au/warranty-registration>
or scan the QR code.

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