UNDERCOUNTER REFRIGERATOR/FREEZER

INSTRUCTION MANUAL

RTE-96SC-*
RTE-126SC-*
RTE-156SC-*
RTE-186SC-*
RTE-98SC-*
RTE-128SC-*
RTE-158SC-*
RTE-188SC-*
FTE-96SC-*
FTE-126SC-*
FTE-156SC-*
FTE-186SC-*
FTE-98SC-*
FTE-128SC-*
FTE-158SC-*
FTE-188SC-*

***: S, P**

- 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.

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L1T400102 (103025)

ENGLISH

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WARNING

Keep Dry

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 is a commercial refrigerator/freezer 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. Children should be supervised to ensure that they do not play with the appliance.

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

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

5. Do not damage the refrigerating circuit.

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

7. Before proceeding with cleaning and maintenance operations, make sure the power line of the unit is disconnected.

8. Do not connect or disconnect the electric plug when your hands are wet.

9. Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

10. Do not store or use gasoline or any other flammable vapors and liquids.

11. If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.

12. Any repairs and work on the appliance should only be carried out by the customer service department/qualified technician.

13. This instruction manual can be downloaded in following website: https://www.hoshizaki-sea.com/

14. Maximum loading of each shelf is 60 kg.

15. Noise level is far below from legal limit of 70 dB.

16. The climatic class 5 indicates the dry bulb temperature of 40°C and relative humidity of 40 percent.

I. INSTALLATION INSTRUCTIONS

1. CONSTRUCTION

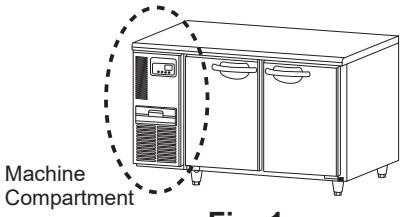

Fig. 1

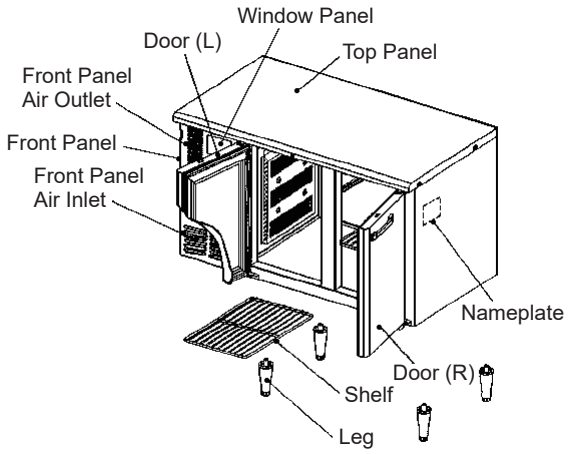

Fig. 2

Note: 1. Attach the four legs provided to the mounting holes located at the bottom of the unit.

2. For RTE/FTE-96,98SC, attach the five legs provided to the mounting holes located at the bottom of the unit.

2. ACCESSORIES

Width	900mm	1200/1500mm	1800mm
a) Shelf:	2	4	6
b) Shelf clip:	8	16	24
c) Leg:	5	4	4
d) Power Cord:	1	1	1

Note: Customized products may have different numbers and specifications of accessories.

3. LOCATION

WARNING

Risk of Fire / Flammable Materials
Provide adequate ventilation to prevent refrigerant stagnation.
Do not use an open flame while this product is filled with refrigerant.

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 50 cm clearance between the front panel air inlet/outlet and the wall or other equipment for proper air circulation. The front of the unit should have enough space for smooth adjustment of the cabinet temperature. If the ambient temperature can exceed 38°C, allow at least 10 cm clearance from the wall at the side of the machine compartment to prevent overloading and damaging the refrigeration circuit.

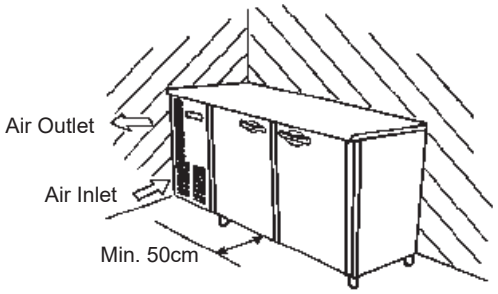

Fig. 3

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 other than the machine compartment. Do not hold the door handle, top panel, door, or front panel.

1) Cut the shipping band and remove the carton.

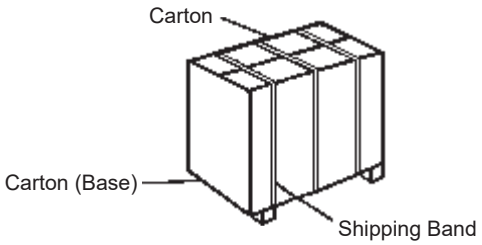

Fig. 4

2) Take out the accessory legs.

3) Tilt the unit backward to mount the front legs (work in pairs).

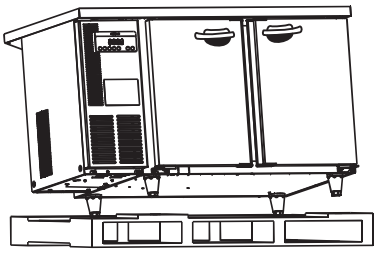

Fig. 5

4) Mount the rear legs in the same way.

5) Before operating the unit, remove all shipping carton, packing, tape(s) and protective plastic film on the exterior, interior and top panel. Be careful not to damage the exterior panels.

6) Position the unit in a selected site.

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 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.

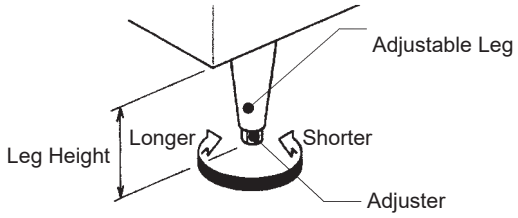

Fig. 6

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.

5. SHELF AND SHELF CLIP

* 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.

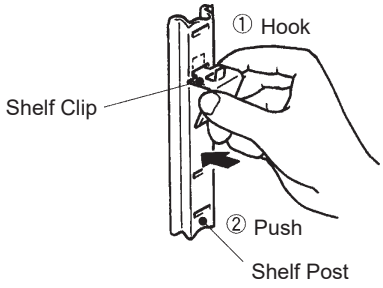

Fig. 7

CAUTION

Attach the shelf clips properly to make the shelf level.

6. ELECTRICAL CONNECTIONS

IMPORTANT

This refrigerator/freezer is provided with no power switch or earth leakage circuit breaker, but with overcurrent protection (fuse) only. Install a switch 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 ± 6 percent of the nameplate rating. See the nameplate.

IMPORTANT

To prevent loose connection, attach the power cord (accessory) properly as follows.

1) Check the power cord connector on the back of the unit.

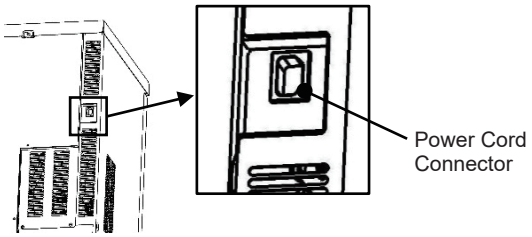

Fig. 8

2) Insert the power cord into the connector.

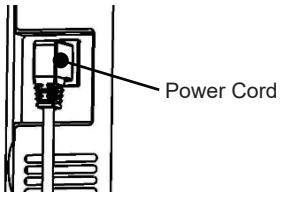

Fig. 9

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.
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.
19. If the refrigerator/freezer door frame is prone to condensation due to harsh environment, contact the after-sales staff to adjust the anti-condensation mode.

1. START UP

1) Plug in the unit.

2) The compressor and condenser fan motor will start in 5 minutes.

2. 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 3°C for the refrigerator and -18°C for the freezer. If necessary, readjust the temperature as follows.

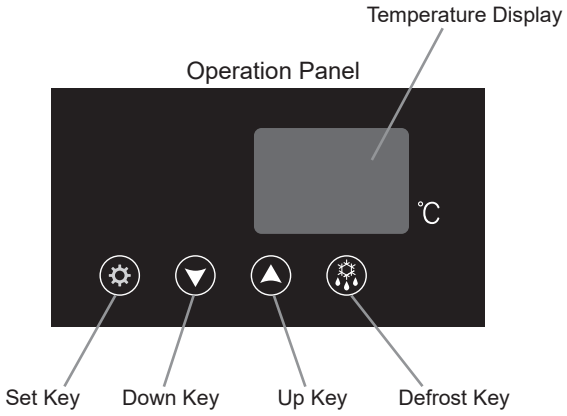

Fig. 10

1) Press the set key on the operation panel. The current set temperature will flash on the temperature display window.

Note: To restore the cabinet temperature display, wait for 10 seconds or press the set key.

2) While the set temperature is flashing on the display, press the up/down key to set the desired temperature.

3) Press the set key.

Note: If the set key is not pressed in 10 seconds, the setting will not change and the display will show the cabinet temperature again.

IMPORTANT

1. The temperature setting must be between -3 and 12°C for the refrigerator and between -25 and -7°C for the freezer to prevent possible failure.

2. The actual temperature inside the cabinet may be different from the set temperature depending on the ambient temperature, etc.

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.

3. DEFROST

Automatic defrost cycle

The refrigerator/freezer automatically defrosts the evaporator 6 hours after the refrigeration starts. The temperature display window shows “dF” during defrost cycle.

Manual defrost cycle

To start the manual defrost cycle, press the defrost key for 3 seconds. The temperature display window shows “dF” during defrost cycle.

IMPORTANT

1. In case of power outage, defrosting starts about 6 hours after power is restored.

2. If defrosting is forced, the next defrosting will start about 6 hours later.

3. When defrosting is not required (such as when the door is not opened or closed), defrosting is automatically canceled.

4. USER SETTING MODE

The control settings of the front frame heater and internal fan motor can be changed according to the customer’s installation environment and setting requirements.

Front frame heater control

1) Press and hold the set key for 3 seconds to enter the user setting mode.

2) Press the up/down key to show “U1” on the temperature display window.

3) Press the set key again to enter the edit mode and the current setting value will flash on the temperature display.

4) Use the up/down key to change the power-on level within the range of levels 0 to 3.

5) Press the set key again to confirm the setting and return to “U1” on the temperature display window.

6) Press the up/down key to display “UE”. Press the set key again to exit the user setting mode and return to the cabinet temperature on the temperature display window.

Note: If the set key is not pressed in 10 seconds, the setting will not change and the display will show the cabinet temperature again.

Front frame heater (outer frame)

	ON time	OFF time	Power on rate [%]
Level 0 (standard) factory setting	90	90	50
Level 1	117	63	65
Level 2	144	36	80
Level 3	Always power on	--	100

Front frame heater (center frame)

	ON time	OFF time	Power on rate [%]
Level 0 (standard) factory setting	72	108	40
Level 1	99	81	55
Level 2	126	54	70
Level 3	Always power on	--	100

Switching between energy-saving and rapid-cooling operations

1) Press and hold the set key for 3 seconds to enter the user setting mode.

2) Press the up/down key to show “U2” on the temperature display window.

3) Press the set key again to enter the edit mode and the current setting value will flash on the temperature display.
(Factory setting: energy-saving operation “0”)

4) While the current setting value is flashing, use the up/down key to switch between the energy-saving operation “0” and the rapid-cooling operation “1”.

5) Press the set key again to confirm the setting and return to “U2” on the temperature display window.

6) Press the up/down key to display “UE”. Press the set key again to exit the user setting mode and return to the cabinet temperature on the temperature display window.

Note: If the set key is not pressed in 10 seconds, the setting will not change and the display will show the cabinet temperature again.

5. DOOR SWITCH

IMPORTANT

Some models are equipped with a door switch inside the top panel of the door. Do not forcefully open or close the door. The impact may cause damage to or malfunction of the door switch.

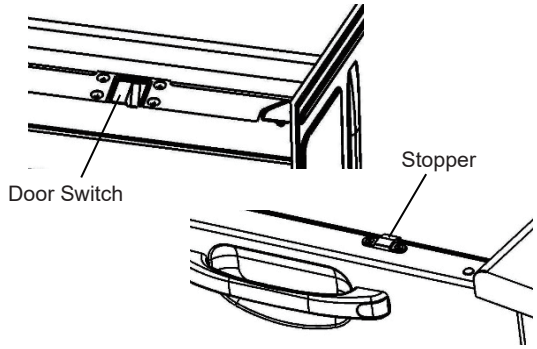

Fig. 11

If the door switch is provided, the interior fan motor will stop when the door is opened. When the door is closed, the interior fan motor will start again 10 seconds later.

6. LED LIGHT

IMPORTANT

Some models are equipped with an LED light on the ceiling inside the cabinet. Be careful not to hit the LED light with stored items to prevent damage or malfunction.

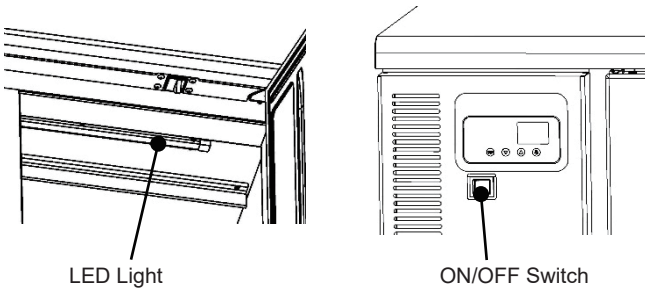

Fig. 12

If the LED light is provided, use the ON/OFF switch on the front panel to turn on the LED light when necessary.

7. 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.

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. CLEANING

[a] 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.

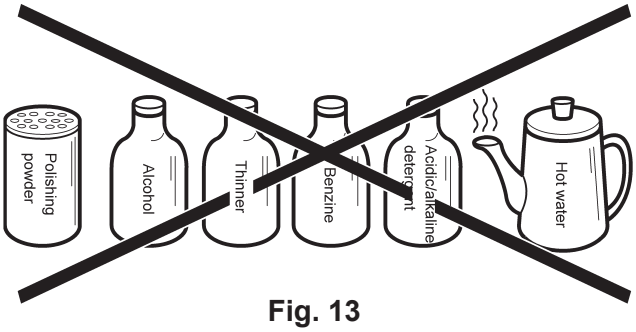

Fig. 13

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.

[b] AIR FILTER, LOUVER

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

1) Pull out the air filter upward diagonally.

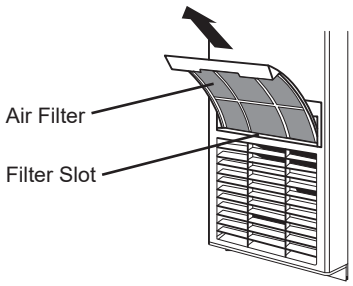

Fig. 14

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.

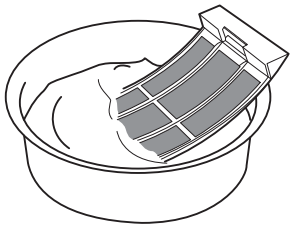

Fig. 15

Note: Do not wash the air filter with water above 40°C to prevent deformation. Do not forcibly deform the air filter to prevent damage.

3) Use a brush or vacuum cleaner to remove dirt and dust from the louver.

4) Install the air filter.

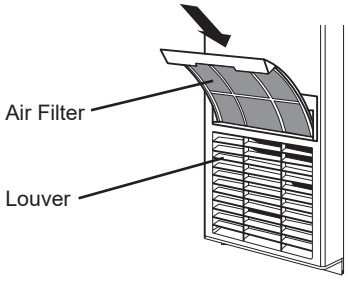

Fig. 16

2. BEFORE CALLING A SERVICE AGENT

IMPORTANT

1. If the temperature display window 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

When the temperature display window on the operation panel flashes alternately between an error code and the cabinet temperature, check the error code and follow the instructions below.

1) If one of the following error codes is displayed, immediately contact an authorized Hoshizaki service company.

Code	Problem
E3	Defrost time too long.
E8, E9	Thermistor defective.
EA, ED	Controller board defective.

2) If one of the following error codes is displayed, check and correct the condition of the unit according to the following instructions:

Code	Problem and Remedy
E1	Cabinet temperature too high. (1) Door(s) left open. Close. (2) Warm or hot foods inside. Take them out. (3) Ambient temperature too high. Avoid installation near high heat producing equipment or exposure to direct sunlight.
E2	Cabinet temperature too low. (1) Ambient temperature too low. Use in the range from 5°C to 43°C. (2) Frozen foods being defrosted. Error code will disappear when defrosting is completed.
E4, E7	Condenser clogged or ambient temperature too high. (1) Air filter clogged. Clean. (2) Ambient temperature too high. Avoid installation near high heat producing equipment or exposure to direct sunlight.

E1, E2: Automatically resets when a proper cabinet temperature is resumed.
E4, E7: After the above checks and corrections, turn the power supply off and back on again.

If the error code still appears on the temperature display window even after the above checks and corrections, immediately contact an authorized Hoshizaki service company.

[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 or air inlet/outlet blocked.
   (5) Air filter not clean.
   (6) Door(s) left open.
   (7) Warm or hot foods inside.
   (8) Unit in defrost process. The cabinet temperature may rise temporarily during defrost cycle but will not affect the foods inside.

3) Condensation around door(s):
   (1) Ambient humidity too high.
   (2) Door(s) not closed tightly.

4) Noise:
   (1) Normal operating sounds from compressor, condenser fan motor or interior fan motor.
   (2) Installed on an unsteady floor. Contact an authorized Hoshizaki service company.
   (3) Not leveled in the left-to-right or front-to-rear directions. Contact an authorized Hoshizaki service company.

5) Frosting inside compartment:
   (1) Ambient humidity too high.
   (2) Door(s) opened too often.

3. 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.

The refrigeration circuit is filled with flammable gas as refrigerant and must be handled with care. Illegal dumping is also punishable and can cause environmental damage.

4. 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.

IV. DESCRIPTION OF CLIMATE CLASS

Tropical class (code T or 5): the suitable ambient temperature is 18°C to 43°C.
Subtropical class (code ST or 4): the suitable ambient temperature is 18°C to 38°C.
Normal class (code N or 3): the suitable ambient temperature is 16°C to 32°C.
Subnormal class (code SN or 2): the suitable ambient temperature is 10°C to 32°C.

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HOSHIZAKI