



Operating Instructions

Pharmaceutical Refrigerator

MPR-215F Series



Please read the operating instructions carefully before using this product, and keep the operating instructions for future use.

See page 43 for all model numbers.

CONTENTS

INTRODUCTION	2
PRECAUTIONS FOR SAFE OPERATION	3
ENVIRONMENTAL CONDITIONS	7
REFRIGERATOR COMPONENTS	
Refrigerator unit	8
Control panel components	10
INSTALLATION SITE	11
INSTALLATION	12
START-UP OF UNIT	13
SETTING OF CHAMBER TEMPERATURE	14
LOCK OF TEMPERATURE SETTING	15
STOP OF FREEZER OPERATION	16
DEFROSTING	
Defrosting of refrigerator	17
Defrosting of freezer	17
SETTING OF ALARM (REFRIGERATOR)	
Setting of high temperature alarm	18
Setting of low temperature alarm	19
SETTING OF ALARM (FREEZER)	
Setting of high temperature alarm	20
Setting of low temperature alarm	21
SETTING OF ALARM BUZZER RECOVERY	22
OPERATION CHECK AFTER RECOVERY	23
ALARM FUNCTIONS	24
SAFETY FUNCTIONS	24
SELF DIAGNOSTIC FUNCTIONS	25
ROUTINE MAINTENANCE	
Cleaning of exterior, interior, and accessories	26
Replacement of lamp	27
TROUBLESHOOTING	28
DISPOSAL OF UNIT	29
Decontamination of unit	29
OPTIONAL COMPONENT	
Temperature recorder	34
Installation of MTR-0621LH (1)	35
Installation of MTR-0621LH (2)	36
Installation of MTR-4015LH	38
Installation of MTR-G3504A or MTR-G3504C	40
SPECIFICATIONS	42
PERFORMANCE	43
SAFETY CHECK SHEET	44

INTRODUCTION

- Read the operating instructions carefully before using the appliance and follow the instructions for safety operation.
- PHC Corporation never guarantees any safety if the appliance is used for any objects other than intended use or used by any procedures other than those mentioned in the operating instructions.
- Keep the operating instructions in an adequate place to refer to it as necessary.
- The contents of the operating instructions will be subjected to change without notice due to the improvement of performance or functions.
- Contact our sales representative or agent if any page of the operating instructions is lost or page order is incorrect.
- Contact our sales representative or agent if any point in the operating instructions is unclear or if there are any inaccuracies.
- No part of the operating instructions may be reproduced in any form without the expressed written permission of PHC Corporation.

IMPORTANT NOTICE

PHC Corporation guarantees this product under certain warranty conditions. However, please note that PHC Corporation shall not be responsible for any loss or damage to the contents of the product.

<Intended Use>

This equipment is designed for storage of pharmaceuticals, samples and reagents.

PRECAUTIONS FOR SAFE OPERATION

It is imperative that the user complies with the operating instructions as it contains important safety advice.

Items and procedures are described so that you can use this unit correctly and safely. If the precautions advised are followed, this will prevent possible injury to the user and any other person.

Precautions are illustrated in the following way:

WARNING

Failure to observe WARNING signs could result in a hazard to personnel possibly resulting in serious injury or death.

CAUTION

Failure to observe CAUTION signs could result in injury to personnel and damage to the unit and associated property.

Symbol shows;

-  This symbol means caution.
-  This symbol means an action is prohibited.
-  This symbol means an instruction must be followed.

Be sure to keep the operating instructions in a place accessible to users of this unit.

< Labels on the unit >



This mark is labeled on the cover in which the electrical components of high voltage are enclosed to prevent the electric shock.
The cover should be removed by a qualified engineer or service personnel only.



This symbol indicates a hot surface.



This symbol indicates that caution is required. Refer to product documentation for details.

PRECAUTIONS FOR SAFE OPERATION



WARNING

-  **Do not use the unit outdoors.** Current leakage or electric shock may result if the unit is exposed to rain water.
-  **Only qualified engineers or service personnel should install the unit.** The installation by unqualified personnel may cause electric shock or fire.
-  **Install the unit on a sturdy floor and take an adequate precaution to prevent the unit from turning over.** If the floor is not strong enough or the installation site is not adequate, this may result in injury from the unit falling or tipping over.
-  **Never install the unit in a humid place or a place where it is likely to be splashed by water.** Deterioration of the insulation may result which could cause current leakage or electric shock.
-  **Never install the unit in a flammable or volatile location.** This may cause explosion or fire.
-  **Never install the unit where acid or corrosive gases are present** as current leakage or electric shock may result due to corrosion.
-  **Always ground (earth) the unit to prevent electric shock.** If the power supply outlet is not grounded, it will be necessary to install a ground by qualified engineers.
-  **Never ground the unit through a gas pipe, water main, telephone line or lightning rod.** Such grounding may cause electric shock in the case of an incomplete circuit.
-  **Connect the unit to a power source as indicated on the rating label attached to the unit.** Use of any other voltage or frequency other than that on the rating label may cause fire or electric shock.
-  **Never store volatile or flammable substances** in this unit if the container cannot be sealed. These may cause explosion or fire.
-  **Do not insert metal objects such as a pin or a wire into any vent, gap or any outlet on the unit.** This may cause electric shock or injury by accidental contact with moving parts.
-  **Use this unit in safe area when treating the poison, harmful or radiate articles.** Improper use may cause bad effect on your health or environment.
-  **Turn off the power switch (if provided) and disconnect the power supply to the unit prior to any repair or maintenance** of the unit in order to prevent electric shock or injury.
-  **Do not touch any electrical parts (such as power supply plug) or operate switches with a wet hand.** This may cause electric shock.

PRECAUTIONS FOR SAFE OPERATION



WARNING

-  **Ensure you do not inhale or consume medication or aerosols** from around the unit at the time of maintenance. These may be harmful to your health.
-  **Never splash water directly onto the unit** as this may cause electric shock or short circuit.
-  **Never put containers with liquid on the unit** as this may cause electric shock or short circuit when the liquid is spilled.
-  **Never bind, process, or step on the power supply cord, or never damage or break the power supply plug.** A broken power supply cord or plug may cause fire or electric shock.
-  **Do not use the power supply cord if its plug is loose.** Such power supply cord may cause fire or electric shock.
-  **Never disassemble, repair, or modify the unit yourself.** Any such work carried out by an unauthorized person may result in fire, or electric shock or injury due to a malfunction.
-  **Disconnect the power supply plug if there is something wrong with the unit.** Continued abnormal operation may cause electric shock or fire.
-  **When removing the power supply plug from the power supply outlet, grip the power supply plug,** not the cord. Pulling the power supply cord may result in electric shock or fire by short circuit.
-  **Disconnect the power supply plug** before moving the unit. Take care not to damage the power supply cord. A damaged power supply cord may cause electric shock or fire.
-  **Disconnect the power supply plug when the unit is not used for long periods.** Keeping the connection may cause electric shock, current leakage, or fire due to the deterioration of insulation.
-  If the unit is to be stored unused in an unsupervised area for an extended period, **ensure that children do not have access and that doors are locked completely with a key.**
-  **The disposal of the unit should be accomplished by appropriate personnel.** Remove doors to prevent accidents such as suffocation.
-  **Do not put the packing plastic bag within reach of children** as suffocation may result.
-  **Do not position this unit and the other unit so that it is difficult to operate the disconnection of the power supply plug.** Failure to disconnect the power supply plug may cause fire if there is something wrong with the unit.

PRECAUTIONS FOR SAFE OPERATION

CAUTION

-  **This unit must be plugged into a dedicated circuit** protected by branch circuit breaker.
-  **Use a dedicated power source as indicated on the rating label attached to the unit.** A multiple-tap may cause fire resulting from abnormal heating.
-  **Connect the power supply plug to the power source firmly after removing the dust on the plug.** A dusty power supply plug or improper insertion may cause a heat or ignition.
-  **Never store corrosive substances such as acids or alkalis in the unit except in a sealed container.** These may be detrimental to health and may cause corrosion of internal components, cooling circuit or electrical components.
-  **Check the setting when starting up of operation after power failure or turning off of power switch.** The stored items may be damaged due to the change of setting.
-  **Be careful not to tip over the unit** during movement to prevent damage or injury.
-  **Prepare a safety check sheet (copy the last page)** when you request any repair or maintenance for the safety of service personnel.

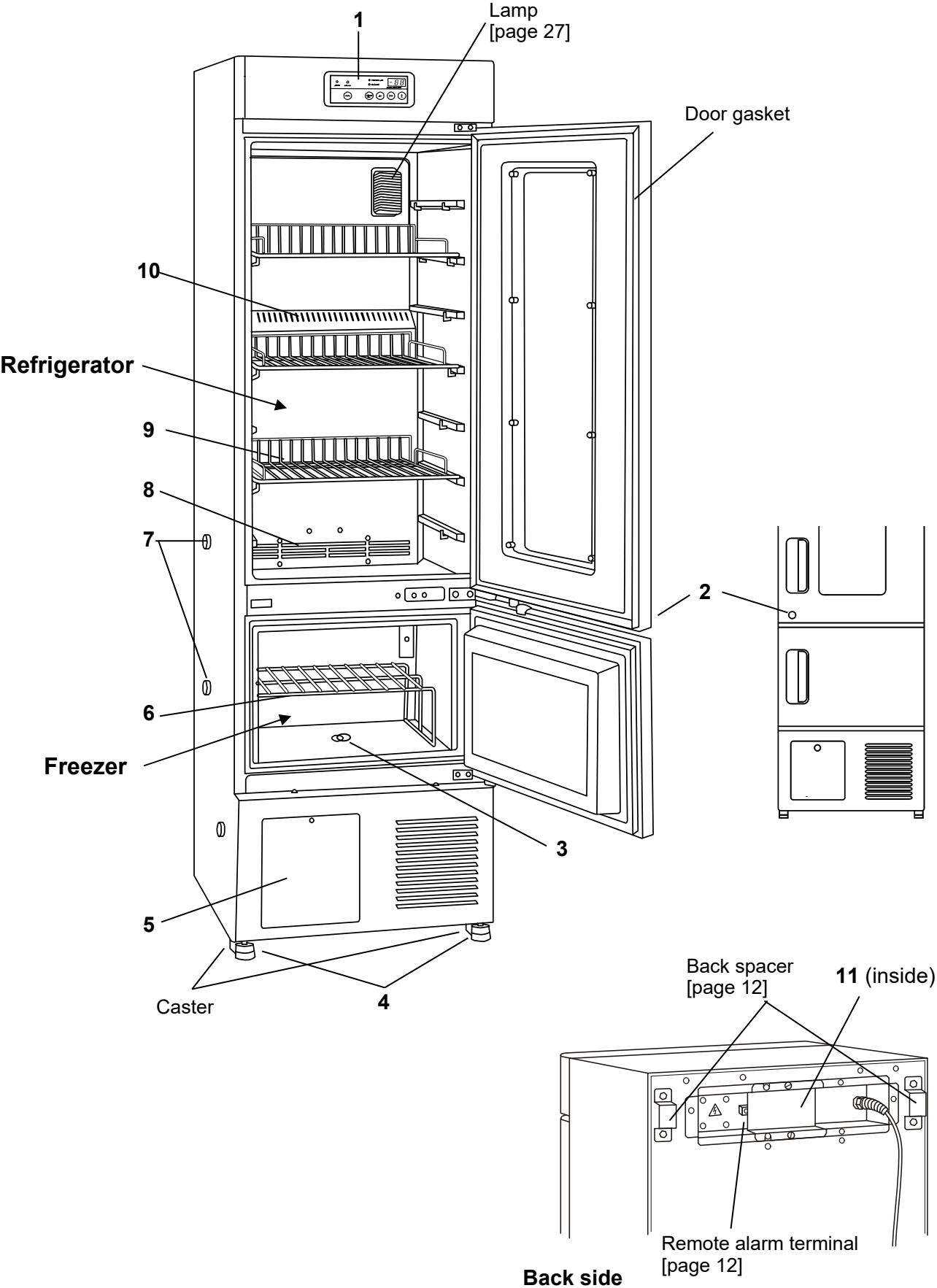
ENVIRONMENTAL CONDITIONS

This equipment is designed to be safe at least under the following conditions (based on the IEC 61010-1):

- Indoor use;
- Altitude up to 2000 m;
- Temperature 5 °C to 40 °C
- Maximum relative humidity 80 % for temperature up to 31 °C decreasing linearly to 50 % relative humidity at 40 °C;
- Mains supply voltage fluctuations up to ± 10 % of the nominal voltage;
- Transient overvoltages up to the levels of OVERVOLTAGE CATEGORY II;
- Temporary OVERVOLTAGES occurring on the mains supply;
- Applicable pollution degree of the intended environment (POLLUTION DEGREE 2 in most cases);

REFRIGERATOR COMPONENTS

Refrigerator unit



REFRIGERATOR COMPONENTS

1. Control panel: With the key on the control panel, temperature display can be changed and the alarm buzzer can be canceled. Also, the running status can be checked on the temperature display and the indicators. [page 10]

2. Keyhole: The door of refrigerator and freezer can be locked with the enclosed key.

3. Drain port (bottom of freezer): Remove the cap when the water resulting from defrosting is drained. The drained water is evaporated in the evaporating tray under the freezer.
✧ Replace the cap after drainage.

4. Leveling foot (front, 2 locations): These are screw bolts used to install and fix the unit. Adjust the height of the leveling feet by turning the screw bolts until 2 front casters are away from the floor. [page 12]

5. Space for a temperature recorder: An optional temperature recorder is installed here [page 34]. For the installation of temperature recorder, contact our sales representative or agent.

6. Shelf (for freezer): Use to store the materials in the freezer. It is recommended to store the items on the shelf. The maximum load is 10 kg.
✧ Never touch the storage items with wet hands. Touching with the wet hands may cause frostbite.

7. Access port (left side): This port allows a sensor or cable of measuring equipment to enter the chamber from outside. Also, the capillary tube of temperature recorder is passed through the port.
✧ Replace the insulations and the rubber caps when the access port is not used. Improper replacement may cause rise of chamber temperature or condensation around the access port.

8. Air intake vent (lower back): An intake vent for circulating the air in the refrigerator chamber. Do not block this vent. Blocking this vent may cause unstable chamber temperature. Do not insert fingers or similar articles into the vent.

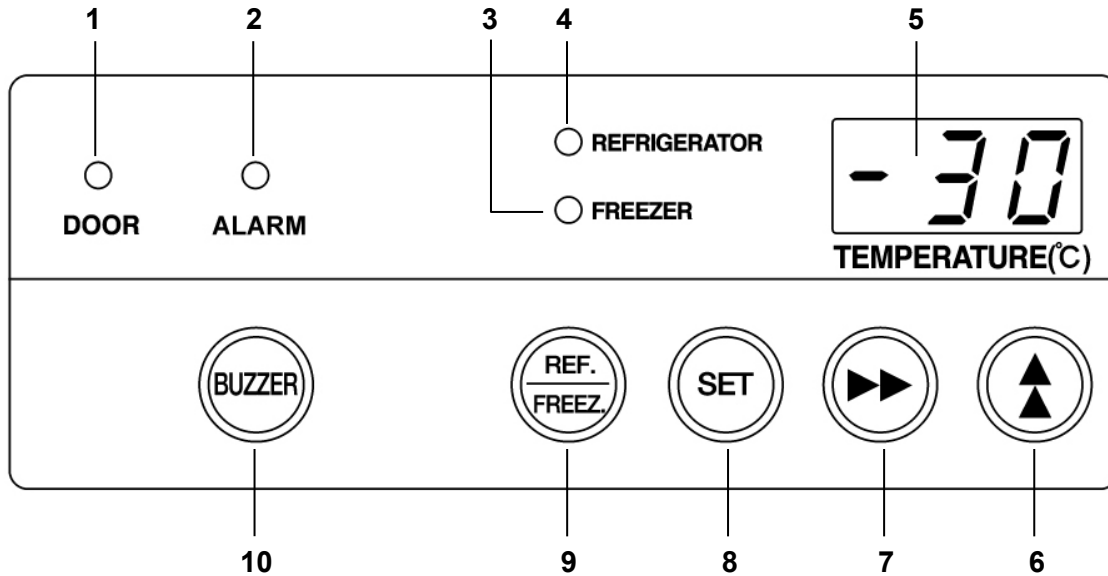
9. Shelf (for refrigerator): Use to store the items in the refrigerator. It is recommended to store the items on the shelf. The maximum load is 20 kg per shelf.

10. Air exhaust vent (center back): An exhaust vent for circulating the air in the refrigerator chamber. Do not block this vent. Blocking this vent may cause unstable chamber temperature. Arrange the storage items not to subject to the cold air from this vent to avoid freezing.

11. Power switch (also served as a circuit breaker): Remove 2 screws fixing the cover and the power switch that is also served as a circuit breaker is accessible. The round button on the left of the power switch is a check button for circuit breaker. The operation of the circuit breaker is checked by pressing this button.
✧ Please be advised that the power to the unit is disconnected when the check button is pressed.

REFRIGERATOR COMPONENTS

Control panel components



1. Door check indicator (DOOR): The red LED lamp is lit when the refrigerator door or freezer door is opened.

✧ 2 minutes after the door check indicator is lit, the alarm buzzer is activated to notice the door opening. [page 24]

2. Alarm indicator (ALARM): The red LED lamp blinks during an alarm status. [page 24]

3. Temperature display indicator for freezer (FREEZER): The green LED lamp is lit when the freezer temperature is displayed on the temperature display.

4. Temperature display indicator for refrigerator (REFRIGERATOR): The green LED lamp is lit when the refrigerator temperature is displayed on the temperature display.

5. Temperature display: Normally this shows the refrigerator or freezer temperature and during an alarm status, this shows a blinking refrigerator or freezer temperature [page 24]. And an error code and a refrigerator or freezer temperature is displayed alternately when the self diagnostic function detects any abnormality. [page 25]

6. Up arrow key (▲): Pressing this key for 5 seconds at temperature display mode causes the setting mode. Pressing this key at setting mode makes the figure on the temperature display to change.

7. Scroll key (▶▶): Pressing this key at setting mode makes the digit to be inputted on the temperature display to change. Pressing this key for 5 seconds at temperature display mode causes the setting mode for key lock.

8. Set key (SET): Pressing this key at temperature display mode enables the temperature setting [page 14]. Pressing this is at the end of setting mode memorizes the setting.

9. Temperature display changeover key (REF./FREEZ.): By pressing this key, the displayed temperature is changed alternately; current refrigerator temperature and current freezer temperature.

10. Alarm buzzer stop key (BUZZER): Pressing this key silences the alarm buzzer when the alarm buzzer sounds. But the remote alarm is not canceled.

✧ Temperature display mode: The status that the temperature display shows the refrigerator or freezer temperature.

✧ Setting mode: The status that the input on the temperature display is effective.

INSTALLATION SITE

To operate this unit properly and to obtain maximum performance, install the unit in a location with the following conditions:

✧ A location not compliance with the following conditions may cause poor performance, failure or accident.

■ A location not subjected to direct sunlight

Do not install the unit under direct sunlight. Installation in a location subjected to direct sunlight may degrade the performance.

■ A location with adequate ventilation

Leave at least 10 cm around the unit for ventilation. Poor ventilation will result in a reduction of the performance and consequently the failure.

■ A location away from heat generating sources

Avoid installing the unit near heat-emitting appliances such as a heater or a boiler etc. Heat can decrease the intended performance of the unit.

■ A location with little temperature change

Install the unit under stable ambient temperature. Installing the unit under unstable ambient temperature may result in unstable performance.

■ A location with a sturdy and level floor

Always install the unit on a sturdy and level floor withstanding the total weight of the unit. The uneven floor or tilted installation may cause failure or injury. Unstable condition may cause vibration or noise.

■ A location not prone to high humidity

Install the unit in the ambient of 80 % R.H. or less humidity. Installation under high humidity may cause current leakage or electric shock.

CAUTION

The unit may collect excessive frost on the evaporator if it is installed in high temperature and high humidity location. This will cause frequent defrosting.

■ A location without flammable or corrosive gas

Never install the unit in a flammable or corrosive location. This may cause explosion or fire or may result in the current leakage or electric shock by the corrosion of the electrical components.

CAUTION

Never install the unit in a location where the corrosive material such as sulfur compound is likely to be generated (near a drainage facilities, etc). Corrosion of the copper pipe may result in deterioration of cooling unit and consequently the failure.

■ A location without the possibility of anything fall

Avoid installing the unit in the location where anything can fall down onto the unit. This may cause the breakdown or failure of the unit.

INSTALLATION

1. After unpackaging

Remove all transportation packaging materials and tapes. Open the doors (refrigerator and freezer) and ventilate the unit. If the outside panels are dirty, clean them with a diluted neutral dishwashing detergent.

✧ Undiluted detergent can damage the plastic components. For the dilution, refer to the instruction of the detergent.

✧ After the cleaning with the diluted detergent, always wipe it off with a wet cloth. Then wipe off the panels with a dry cloth.

Note:

Remove the cable tie banding the power supply cord. Prolonged banding may cause the corrosion of the cord coating.

2. Installing the unit

Extend the leveling feet by rotating them counterclockwise until 2 front casters separate from the floor by 5 mm to 10 mm. [Fig. 1]

And adjust the leveling foot to level the unit.

✧ The unit is installed firmly by separating the front casters from the floor. The unit may be moved at the time of opening/closing the door if the front casters contact with floor.

3. Fixing the unit

Fix the unit to the wall by using 2 back spacers and a rope or chain. [Fig. 2]

4. Ground (earth) the unit

The ground (earth) is for preventing the electric shock in the case of the electrical insulation is somehow degraded. Always ground the unit at the time of installation.

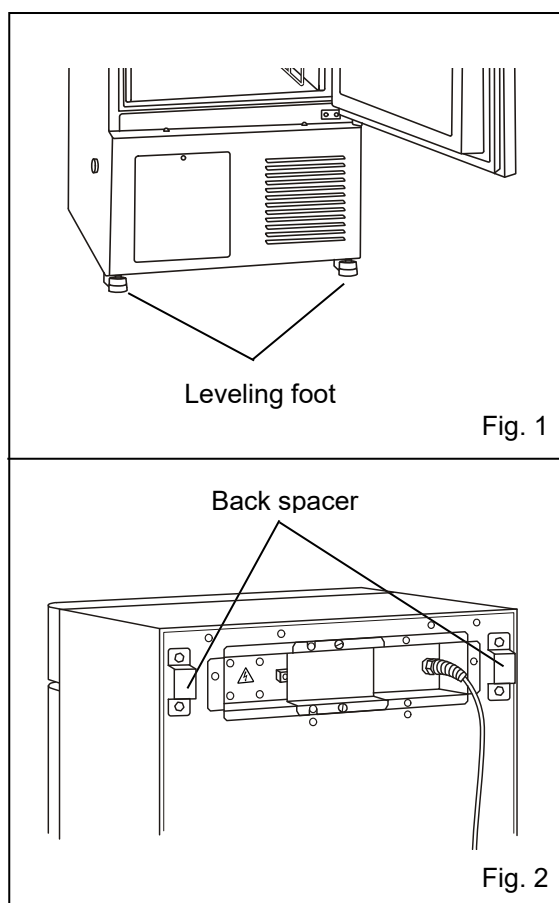
✧ For a 3-prong plug with grounding pole, there is no need for electric work for grounding.

✧ If the power supply outlet is not grounded, it will be necessary to install a ground by qualified engineers.

5. Connection of remote alarm equipment

The alarm status is noticed to a remote location when a remote alarm equipment (commercial item) is connected to the remote alarm terminal. It is recommended to install a remote alarm equipment (commercial item) when the refrigerator is installed in a desolate location so that an alarm status is noticed to an operator.

✧ Contact our sales representative or agent for the installation of a remote alarm equipment (commercial item).



START-UP OF UNIT

Follow the procedures below when starting-up (initial and after stop due to the cleaning, maintenance or moving) of the unit.

✧ At the recovery from power failure, the operation is start-up automatically with the setting before power failure.

1. With the refrigerator and freezer empty, connect the power supply cord to the dedicated outlet having an appropriate rating, and turn on the power switch.

▶ The blinking refrigerator temperature is displayed on the temperature display and the alarm indicator blinks. (This is caused by high temperature alarm function and not a malfunction.)

<Important>

5 minutes is needed to re-start the compressor. Keep 5 minutes before turning on the power switch when the power switch is turned off.

2. The refrigerator temperature is set to 5 °C and the freezer temperature is set to -30 °C at the factory. Set the temperature of refrigerator or freezer when other temperature setting is desired. [page 14]

✧ The storage items may be frozen practically when the refrigerator temperature is set to 3 °C or lower.

3. On the temperature display check the refrigerator temperature reaches 5 °C and the freezer temperature reaches -30 °C, or reaches the desired temperature

4. Check the lamp in the refrigerator is on by opening the refrigerator door.

5. Begin slowly placing items into the refrigerator and freezer to minimize the temperature rise.

<Important>

Do not block the air intake vent or air exhaust vent in the refrigerator. Arrange the storage items with adequate space to keep the air circulation. Too much storage items in the refrigerator makes the temperature around the air exhaust vent at -2 °C when the refrigerator temperature is set to 2 °C. It is recommended to set the refrigerator temperature to 4 °C or 5 °C when the items that should not be frozen are stored.

<Attention>

The refrigerator door has a condensation on the glass during operation. Wipe off the condensation with a dry soft cloth.

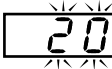
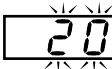
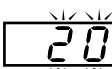
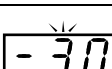
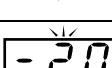
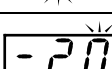
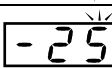
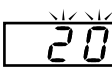
SETTING OF CHAMBER TEMPERATURE

Set the temperature of refrigerator or freezer according to the usage condition. This unit keeps the storage items for long period with adequate chamber temperature.

	Refrigerator	Freezer
Setting range	between 2 °C and 14 °C	between -35 °C and -15 °C
Initial setting (at factory)	5 °C	-30 °C

Example: Changing the refrigerator temperature to 4 °C from 5 °C and freezer temperature to -25 °C from -30 °C.

• Following shows an example. Change the setting as necessary.

	Operation	Key operated	Display after operation
1	Connect the power supply cord to the outlet and turn on the power switch. (only when start-up)	----	The temperature display indicator for refrigerator is lit and the current refrigerator temperature is displayed with blink. 
2	Press the set key.	SET	The current setting of refrigerator (005) is displayed and the second figure 0 blinks. 
3	Press the scroll key.	▶▶	The first figure 5 blinks. 
	Change 5 to 4 by pressing the up arrow key.	▲	The display changes to 004 from 005. 
4	Press the set key.	SET	The setting is memorized and the current refrigerator temperature is displayed with blink. 
5	Press the temperature display changeover key to display the freezer temperature.	REF. FREEZ.	The temperature display indicator for freezer is lit and the current freezer temperature is displayed with blink. 
6	Press the set key.	SET	The current setting of freeze (-30) is displayed and the second figure 3 blinks. 
7	Change 3 to 2 by pressing the up arrow key.	▲	The display changes to -20 from -30. 
	Press the scroll key.	▶▶	The first figure 0 blinks. 
	Change 0 to 5 by pressing the up arrow key.	▲	The display changes to -25 from -20. 
8	Press the set key.	SET	The setting is memorized and the current freezer temperature is displayed with blink. 

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.



CAUTION

It is recommended to install a temperature recorder (optional component) when items that need severe temperature control is stored. The maximum and minimum chamber temperature can be checked.

LOCK OF TEMPERATURE SETTING

The temperature setting of chamber can be locked to avoid accidental change. When the lock is ON, the change of refrigerator temperature and freezer temperature is unable even if the key on the control panel is operated.

■ Initial setting (at factory): Lock is OFF

Display	Lock status	Setting of chamber temperature
L 0	Lock is OFF	Enable to change the setting
L 1	Lock is ON	Unable to change the setting

Example: Changing the lock status to ON from OFF (initial setting).

	Operation	Key operated	Display after operation
1	(when during operation)	-----	The current refrigerator or freezer temperature is displayed.
2	Press the scroll key for 5 seconds.		The L0 is displayed and the first figure 0 blinks.
3	Press the up arrow key once.		The display changes to L1.
4	Press the set key	SET	The lock is ON and the current refrigerator or freezer temperature is displayed.

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.

STOP OF FREEZER OPERATION

The freezer operation can be stopped when removing the frost in the freezer chamber or no use of freezer.

The current freezer temperature and OFF is displayed alternately when the temperature display indicator for freezer is lit. (Only the current refrigerator temperature is displayed when the temperature display indicator for refrigerator is lit. OFF is not displayed.)

Following shows the procedure to stop the freezer operation.

	Operation	Key operated	Display after operation
1	Press the temperature display change over key to display the freezer temperature.	REF. FREEZ.	The temperature display indicator for freezer is lit and the current freezer temperature is displayed.
2	Press the set key.	SET	The current setting of freezer (-25) is displayed and the second figure 2 blinks.
3	Change 2 to 0 by pressing the up arrow key.		The display changes to -05 from -25.
	Press the scroll key.		The first figure 5 blinks.
	Change 5 to 0 by pressing the up arrow key.		The display changes to -00 from -05.
4	Press the set key.	SET	The current freezer temperature and OFF is displayed alternately. (Stop of freezer operation.)

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.

<To resume the freezer operation>

Following shows the procedure to resume the freezer operation. The operation is resumed by setting the freezer temperature.

Example: Setting the freezer temperature to -25 °C.

• Following shows an example. Change the setting as necessary.

	Operation	Key operated	Display after operation
1	Press the temperature display change over key to display the freezer temperature.	REF. FREEZ.	The current freezer temperature and OFF is displayed alternately. (No freezer operation.)
2	Press the set key.	SET	The setting before stop of operation (-00) is displayed and the second figure 0 blinks.
3	Change 0 to 2 by pressing the up arrow key.		The display changes to -20 from -00.
	Press the scroll key.		The first figure 0 blinks.
	Change 0 to 5 by pressing the up arrow key.		The display changes to -25 from -20.
4	Press the set key.	SET	The setting is memorized and the current freezer temperature is displayed with blink. (Start of freezer operation.)

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.

DEFROSTING

Defrosting of refrigerator

The following 2 types of defrosting methods is provided for the refrigerator. Both of them are controlled automatically.

■ Cycle defrosting

The refrigerator temperature is kept stable by ON/OFF operation of the compressor. When the compressor is OFF (stopped), the frost on the evaporator is melted by the heater. This defrosting never influences to the refrigerator temperature.

■ Defrosting by defrost sensor

The cycle defrosting may not be sufficient to remove the frost on the evaporator when the ambient temperature is high, the door is opened frequently, or heavy moist items are stored in the refrigerator. In this case, the defrosting operation is started automatically when the defrost sensor detects the frost.

During the defrosting, the current refrigerator temperature and dF are displayed alternately when the temperature display indicator for refrigerator is lit.

After completion of defrosting, dF display is disappeared and the refrigerator returns to the normal operation.

<Important>

During the defrosting, the refrigerator temperature reaches around 10 °C temporary.



CAUTION

Too much frost is accumulated on the evaporator when the refrigerator is running under high temperature and humidity condition. For example, the defrosting operation is started once a week when the refrigerator is running with 2 °C setting at 30 °C, 80 % R.H.

Defrosting of freezer

The freezer has no automatic defrosting system. Stop the freezer operation and remove the frost when the frost is accumulated in the freezer.

Following shows the procedure for defrosting.

1. Move all storage items in the freezer to other freezer.
2. Stop the freezer operation according to the procedure on page16.
 - ✧ The current freezer temperature and OFF are displayed alternately when the temperature display indicator for freezer is lit. (Only the current refrigerator temperature is displayed when the temperature display indicator for refrigerator is lit. OFF is not displayed.)
3. When the frost is disappeared, drain the defrost water through the drain port at the bottom of the freezer. (The drained water is evaporated on the evaporating tray under the freezer.) Then, wipe off the freezer with a dry soft cloth.
 - ✧ Replace the cap on the drain port after drainage.
4. Start the freezer operation according to the procedure on page 16.
5. Check that the freezer temperature reaches the set temperature and replace the storage items.

SETTING OF ALARM (REFRIGERATOR)

Setting of high temperature alarm

The abnormal temperature rise is notified by the blink of alarm indicator and display of refrigerator temperature, and the alarm buzzer (15 minutes after blink) when the high temperature alarm is set. Always set the high temperature alarm to avoid the damage of storage items due to the temperature rise.

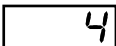
■ Settable range of high temperature alarm:

Between the set temperature of refrigerator plus 2 °C and
the set temperature of refrigerator plus 14 °C

■ Initial setting (at factory): the set temperature of refrigerator plus 5 °C

Example: Changing the high temperature alarm to 3 °C from 5 °C plus the set temperature of refrigerator.

• Following shows an example. Change the setting as necessary.

	Operation	Key operated	Display after operation
1	Press the temperature display change over key to display the refrigerator temperature.	REF. FREEZ.	The temperature display indicator for refrigerator is lit and the current refrigerator temperature is displayed. 
2	Press the up arrow key for 5 seconds.		F00 is displayed and the first figure 0 blinks. 
3	Change 0 to 1 by pressing the up arrow key.		The display changes to F01 from F00. 
4	Press the set key.	SET	The current setting of alarm (005) is displayed and the first figure 5 blinks. 
5	Change 5 to 3 by pressing the up arrow key.		The display changes to 003 from 005. 
6	Press the set key.	SET	The setting is memorized and the current refrigerator temperature is displayed. 

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.

<Important>

The alarm may be activated after defrosting or when too much items are stored in the refrigerator, depending on the setting of high temperature alarm. This is not a malfunction. The alarm is cancelled automatically when the refrigerator temperature reaches the set temperature.

SETTING OF ALARM (REFRIGERATOR)

Setting of low temperature alarm

The abnormal temperature descent is notified by the blink of alarm indicator and display of refrigerator temperature, and the alarm buzzer (15 minutes after blink) when the low temperature alarm is set. Always set the low temperature alarm to avoid the damage of storage items due to the temperature descent.

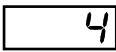
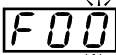
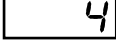
■ Settable range of low temperature alarm:

Between the set temperature of refrigerator minus 2 °C and
the set temperature of refrigerator minus 14 °C

■ Initial setting (at factory): the set temperature of refrigerator minus 5 °C

Example: Changing the low temperature alarm to 3 °C from 5 °C minus the set temperature of refrigerator.

• Following shows an example. Change the setting as necessary.

	Operation	Key operated	Display after operation
1	Press the temperature display change over key to display the refrigerator temperature.	REF. FREEZ.	The temperature display indicator for refrigerator is lit and the current refrigerator temperature is displayed. 
2	Press the up arrow key for 5 seconds.		F00 is displayed and the first figure 0 blinks. 
3	Change 0 to 2 by pressing the up arrow key.		The display changes to F02 from F00. 
4	Press the set key.	SET	The current setting of alarm (-05) is displayed and the first figure 5 blinks. 
5	Change 5 to 3 by pressing the up arrow key.		The display changes to -03 from -05. 
6	Press the set key.	SET	The setting is memorized and the current refrigerator temperature is displayed. 

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.

<Important>

The abnormal temperature descent is notified by the blink of alarm indicator and display of refrigerator temperature, and the alarm buzzer (15 minutes after blink) when the refrigerator temperature is 0 °C or lower with regardless the setting of low temperature alarm. In this case, the remote alarm terminal is changed to alarm status. This is a precaution against the freezing of storage items.

SETTING OF ALARM (FREEZER)

Setting of high temperature alarm

The abnormal temperature rise is notified by the blink of alarm indicator and display of freezer temperature, and the alarm buzzer (15 minutes after blink) when the high temperature alarm is set. Always set the high temperature alarm to avoid the damage of storage items due to the temperature rise.

■ Settable range of high temperature alarm:

Between the set temperature of freezer plus 5 °C and
the set temperature of freezer plus 15 °C

■ Initial setting (at factory): the set temperature of freezer plus 10 °C

Example: Changing the high temperature alarm to 5 °C from 10 °C plus the set temperature of freezer.

• Following shows an example. Change the setting as necessary.

	Operation	Key operated	Display after operation
1	Press the temperature display change over key to display the freezer temperature.	REF. FREEZ.	The temperature display indicator for freezer is lit and the current freezer temperature is displayed.
2	Press the up arrow key for 5 seconds.		F00 is displayed and the first figure 0 blinks.
3	Change 0 to 3 by pressing the up arrow key.		The display changes to F03 from F00.
4	Press the set key.	SET	The current setting of alarm (010) is displayed and the first figure 0 blinks.
5	Change 0 to 5 by pressing the up arrow key.		The display changes to 015 from 010.
	Press the scroll key.		The second figure 1 blinks.
	Change 1 to 0 by pressing the up arrow key.		The display changes to 005 from 015.
6	Press the set key.	SET	The setting is memorized and the current freezer temperature is displayed.

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.

SETTING OF ALARM (FREEZER)

Setting of low temperature alarm

The abnormal temperature descent is notified by the blink of alarm indicator and display of freezer temperature, and the alarm buzzer (15 minutes after blink) when the low temperature alarm is set. Always set the low temperature alarm to avoid the damage of storage items due to the temperature descent.

■ Settable range of low temperature alarm:

Between the set temperature of freezer minus 5 °C and
the set temperature of freezer minus 15 °C

■ Initial setting (at factory): the set temperature of freezer minus 10 °C

Example: Changing the low temperature alarm to 5 °C from 10 °C minus the set temperature of freezer.

• Following shows an example. Change the setting as necessary.

	Operation	Key operated	Display after operation
1	Press the temperature display change over key to display the freezer temperature.	REF. FREEZ.	The temperature display indicator for freezer is lit and the current freezer temperature is displayed.
2	Press the up arrow key for 5 seconds.		F00 is displayed and the first figure 0 blinks.
3	Change 0 to 4 by pressing the up arrow key.		The display changes to F04 from F00.
4	Press the set key.	SET	The current setting of alarm (-10) is displayed and the first figure 0 blinks.
5	Change 0 to 5 by pressing the up arrow key.		The display changes to -15 from -10.
	Press the scroll key.		The second figure 1 blinks.
	Change 1 to 0 by pressing the up arrow key.		The display changes to -05 from -15.
6	Press the set key.	SET	The setting is memorized and the current freezer temperature is displayed.

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.

SETTING OF ALARM BUZZER RECOVERY

The alarm buzzer recovers and notifies the abnormality again after preset period (alarm buzzer recovery time) if the same alarm status is continued after the alarm buzzer is stopped by pressing the alarm buzzer stop key (BUZZER). Always set the alarm buzzer recovery time to avoid the false recognition of alarm status.

■ Settable range of alarm buzzer recovery time:

10 minutes interval between 10 and 60 minutes (setting; between 010 and 060) or

No recovery (setting; 000)

■ Initial setting (at factory): 30 minutes

The alarm buzzer never recovers once the alarm buzzer is silenced by pressing the alarm buzzer stop key (BUZZER) if the alarm buzzer recovery time is set to 000 (no recovery). Nevertheless, the alarm buzzer sounds when other alarm status is detected.

Example: Changing the alarm buzzer recovery time to 20 minutes from 30 minutes.

• Following shows an example. Change the setting as necessary.

	Operation	Key operated	Display after operation
1			The current refrigerator or freezer temperature is displayed.
2	Press the up arrow key for 5 seconds.		F00 is displayed and the first figure 0 blinks.
3	Change 0 to 5 by pressing the up arrow key.		The display changes to F05 from F00.
4	Press the scroll key.		The second figure 0 blinks.
5	Change 0 to 2 by pressing the up arrow key.		The display changes to F25 from F05.
6	Press the set key.	SET	The current setting of recovery (030) is displayed and the second figure 3 blinks.
7	Change 3 to 2 by pressing the up arrow key.		The display changes to 020 from 030.
8	Press the set key.	SET	The setting is memorized and the current refrigerator or freezer temperature is displayed.

◇ The setting mode returns to the temperature display mode automatically when 90 seconds has passed without any key operation (auto-return function). In this case, the setting is not accepted.

◇ Do not set the alarm buzzer recovery time during the alarm status.

OPERATION CHECK AFTER RECOVERY

After recovery from a power failure, the unit will resume operation automatically with the setting (refrigerator temperature, freezer temperature, lock of temperature setting, alarm temperature, alarm buzzer recovery time) before power failure. Accordingly, there is no need for re-set however, always check the running status after recovery.

✧ The setting is memorized by nonvolatile memory during power failure.

CAUTION

After recovery from a power failure, always check the unit starts the operation normally with the setting before power failure.

ALARM FUNCTIONS

This unit has the alarm functions shown below.

Contact our sales representative or agent after moving the storage items to other refrigerator or freezer if the alarm status continues because there is a possibility of any failure.

Alarms	Situation	Indication	Alarm buzzer	Remote alarm terminal
High temperature alarm	<Refrigerator> The refrigerator temperature reaches the setting of high temperature alarm.	Alarm indicator blinks. Displayed temp. blinks. (when the refrigerator temperature is displayed.)	Intermittent tone with 15 minutes delay	Alarm status with 15 minutes delay
	<Freezer> The freezer temperature reaches the setting of high temperature alarm.	Alarm indicator blinks. Displayed temp. blinks. (when the freezer temperature is displayed.)		
Low temperature alarm	<Refrigerator> The refrigerator temperature reaches the setting of low temperature alarm.	Alarm indicator blinks. Displayed temp. blinks. (when the refrigerator temperature is displayed.)	Intermittent tone with 15 minutes delay	Alarm status with 15 minutes delay
	<Freezer> The freezer temperature reaches the setting of low temperature alarm.	Alarm indicator blinks. Displayed temp. blinks. (when the freezer temperature is displayed.)		
0 °C alarm (refrigerator only)	The refrigerator temperature reaches 0 °C.	Alarm indicator blinks. Displayed temp. blinks. (when the refrigerator temperature is displayed.)	Intermittent tone	Alarm status.
Power failure alarm	Power failure. The power supply cord is disconnected. The power switch is off.	-----	-----	Alarm status.
Door alarm	The refrigerator or freezer door is open.	Door check indicator lights.	Intermittent tone with 2 minutes delay.	-----

◇ The remote alarm terminal is in alarm status in conjunction with the alarm buzzer. However, the alarm status of the remote alarm terminal is not cancelled by pressing the alarm buzzer stop key (BUZZER).

SAFETY FUNCTIONS

This unit has the safety functions shown below.

Safety	Situation	Indication and alarm buzzer	Safety operation
Over-heat Protection (refrigerator only)	The refrigerator temperature is higher than about 28 °C.	-----	The defrost heater is off to avoid the temperature rise.
Over-cool protection (refrigerator only)	The refrigerator temperature is lower than about 0 °C.	-----	Compressor is off to avoid the temperature descent.
Auto-return	There is no key pressing for 90 seconds in the setting mode.	-----	The setting mode is returned to the temperature display mode.
Key lock	The key lock is ON (L1).	-----	Change of temperature setting is disable.

SELF DIAGNOSTIC FUNCTIONS

This unit has the self diagnostic functions shown below.

Contact our sales representative or agent if an error code (ex. E01) is displayed resulting from the self diagnostic.

Self diagnostic	Situation	Indication	Alarm buzzer	Remote alarm terminal
Sensor abnormality	The thermal sensor for refrigerator is disconnected.	Alarm indicator blinks. E01 and -50 or freezer temp. are displayed alternately.	Intermittent tone	Alarm status
	The thermal sensor for refrigerator is short-circuited.	Alarm indicator blinks. E02 and 50 or freezer temp. are displayed alternately.		
	The thermal sensor for freezer is disconnected.	Alarm indicator blinks. E03 and -50 or refrigerator temp. are displayed alternately.		
	The thermal sensor for freezer is short-circuited.	Alarm indicator blinks. E04 and 50 or refrigerator temp. are displayed alternately.		
	The defrost sensor is disconnected.	Alarm indicator blinks. E05 and refrigerator or freezer temp. are displayed alternately.		
	The defrost sensor is short-circuited.	Alarm indicator blinks. E06 and refrigerator or freezer temp. are displayed alternately.		
	The alarm sensor is disconnected.	Alarm indicator blinks. E07 and refrigerator or freezer temp. are displayed alternately.		
	The alarm sensor is short-circuited.	Alarm indicator blinks. E08 and refrigerator or freezer temp. are displayed alternately.		
	The protective sensor for compressor is disconnected.	Alarm indicator blinks. E11 and refrigerator or freezer temp. are displayed alternately.		
	The protective sensor for compressor is short-circuited.	Alarm indicator blinks. E12 and refrigerator or freezer temp. are displayed alternately.		
Fan motor check	About 6 years have passed with the power switch on. (time to replace the fan motor)	F2 and refrigerator or freezer temp. are displayed alternately.	-----	-----
Temperature abnormality in the cooling circuit	In the event of failure of fan motor for cooling the compressor. When the ambient temperature exceeds the usable environmental condition, etc.	Alarm indicator blinks. E10 and refrigerator or freezer temp. are displayed alternately.	Intermittent tone	Alarm status

✧ The remote alarm terminal is in alarm status in conjunction with the alarm buzzer. However, the alarm status of the remote alarm terminal is not cancelled by pressing the alarm buzzer stop key (BUZZER).

✧ Contact our sales representative or agent for the replacement of the fan motor if the error code F2 is displayed.

ROUTINE MAINTENANCE



WARNING

Always disconnect the power supply to the unit prior to any repair or maintenance of the unit in order to prevent electric shock or injury.

Ensure you do not inhale or consume medication or aerosols from around the unit at the time of maintenance. These may be harmful to your health.

Cleaning of exterior, interior, and accessories

Use a dry cloth to wipe off small amounts of dirt on the outside and inside of the unit and all accessories.

If the outside panels are dirty, clean them with a diluted neutral dishwashing detergent.

Wipe off the condensation on the glass or exterior of the cabinet with a dry soft cloth.

✧ Undiluted detergent can damage the plastic components. For the dilution, refer to the instruction of the detergent.

✧ After the cleaning with the diluted detergent, always wipe it off with a wet cloth. Then wipe off the cabinet or accessories with a dry cloth.

<Important> Never pour water onto or into the unit. This may cause electric shock or failure.



CAUTION

Do not use a brush, an acid, a thinner, laundry soap, a powder detergent, boiling water for cleaning. These cause damage of painted surface or failure of plastic and rubber components. Also, do not wipe the plastic and rubber components by a volatile material.

ROUTINE MAINTENANCE

Replacement of lamp

Replace the lamp (bulb) by following the procedure below when the lamp is blown. The lamp is located at the upper right corner of the refrigerator. [Fig. 1]

1. Turn off the power switch and then disconnect the power supply cord.

2. Move the storage items on the top shelf.

3. Hold the both sides of the lamp cover by hand and lift and pull toward you with the both sides pushed inward a little to remove the lamp cover. [Fig. 2]

4. Remove the bulb from the socket by turning it counterclockwise. [Fig. 3]

5. Install a new bulb to the socket and then replace the lamp cover.

✧ Pay attention to the upside and downside direction of the lamp cover.

<Bulb for replacement>

Incandescent lamp (T22 E17) 110 V or 125 V, 10 W

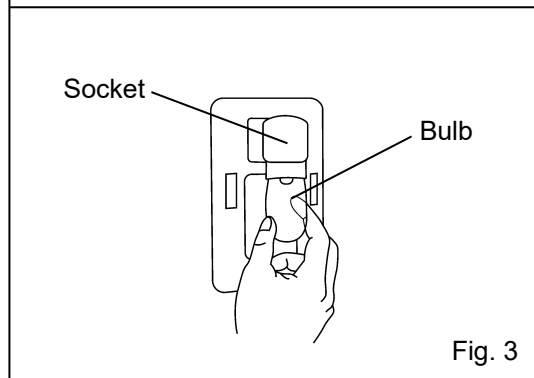
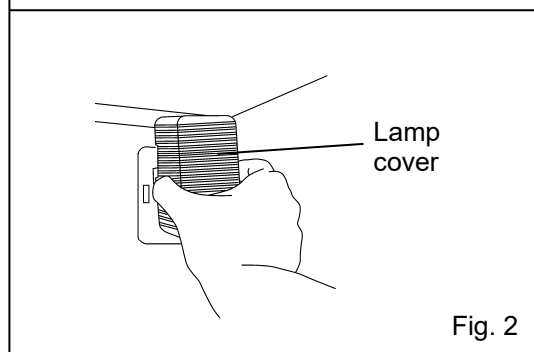
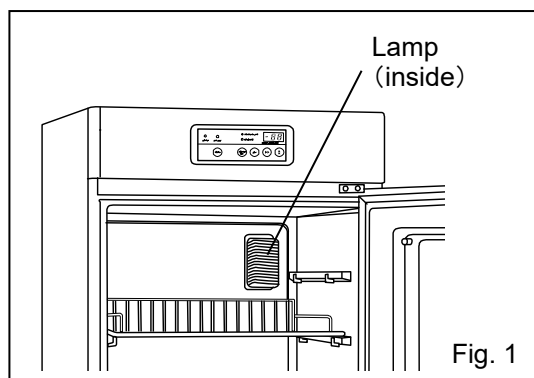
6. Replace the storage items to the top shelf.

7. Connect the power supply cord to the outlet and turn on the power switch.

<Important>

5 minutes is needed to re-start the compressor. Keep 5 minutes before turning on the power switch when the power switch is turned off.

8. Open the refrigerator door to check the lamp is on.



TROUBLESHOOTING

If the unit malfunctions, check out the following before calling for service.

<Attention>

If the malfunction is not eliminated after checking the following items or the malfunction is not shown in the table below, contact our sales representative or agent.

Malfunction	Check/Remedy
If nothing operates even when plugged in	☐ The unit is not connected to the power supply properly. ☐ The capacity and voltage of power supply is not sufficient. ☐ There is a power failure. ☐ The circuit breaker on the supply circuit is activated. → A breaker of 15 A or more is recommended.
The alarm is activated at start-up	✧ The alarm status is kept until the refrigerator temperature reaches the set temperature. ➤ The alarm buzzer recovers after 30 minutes even if the alarm buzzer is silenced by pressing the alarm buzzer stop key (BUZZER).
The alarm is activated during operation	☐ The door (refrigerator or freezer) was kept opened for a long time. ☐ The door (refrigerator or freezer) is opened. ☐ An error code is displayed on the temperature display. [page 25] → Contact our sales representative or agent.
Noisy	☐ The floor is not sturdy. ☐ The installation site is not level. ☐ The unit is tilted. ☐ The cabinet contacts the surrounding wall.
When the refrigerator or freezer does not get cold enough	☐ The door (refrigerator or freezer) is frequently opened. ☐ The unit is in direct sunlight. ☐ The ventilation around the unit is blocked. ☐ There is a nearby heat source. ☐ The ambient temperature is too high. → The allowable ambient temperature is between -5 °C and 30 °C. ☐ The storage items are too much. ☐ The air exhaust vent is blocked up with storage items. ☐ The access port is not covered. → The access port should be covered with the insulation and rubber caps when no use. ☐ The door gasket is damaged. → If it is damaged, contact our sales representative or agent for replacement. ☐ Any foreign substance is located between door gaskets.

DISPOSAL OF UNIT



WARNING

If the unit is to be stored unused in an unsupervised area for an extended period **ensure that children do not have access and doors that doors are locked completely with a key.**

The disposal of the unit should be accomplished by appropriate personnel. Always remove doors to prevent accidents such as suffocation.

Decontamination of unit

Before disposing the unit with biohazardous danger, decontaminate the unit to the extent possible by the user.

DISPOSAL OF UNIT

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)  This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product. Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation. For business users in the European Union If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information. Information on Disposal in other Countries outside the European Union This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.	Указания за изхвърляне на електрически и електронни отпадъци (за битови потребители)  Този символ върху изделия и-или в придружаваща документация означава, че електрически и електронни отпадъци не бива да се изхвърлят в общ контейнер. Моля, да предавате тези отпадъци в пунктовете за вторични суровини, където ги приемат безплатно, за понататъшна обработка и рециклиране. В някои страни те могат да бъдат върнати на търговците на дребно, от които са купени, срещу закупуване на нови подобни изделия. Правилното съхраняване и обработка на такива отпадъци спестява ценни ресурси и предпазва от негативно влияние върху здравето на хората и околната среда. За по-подробна информация относно пунктовете за вторични суровини се обърнете към местните органи. Националните законодателства на някои страни предвиждат глоби за неправилно изхвърляне на отпадъци. За промишлени потребители от Европейския съюз Повече информация за изхвърляне на електрически и електронни отпадъци можете да получите от съответния доставчик или дилър. За потребители от страните извън Европейския съюз Този символ е валиден само в Европейския съюз. За информация относно правилно изхвърляне на такива отпадъци потърсете местните органи на властта или дилъра си.
Benutzerinformationen zur Entsorgung von elektrischen und elektronischen Geräten (private Haushalte)  Dieses Symbol auf Produkten und/oder begleitenden Dokumenten bedeutet, dass verbrauchte elektrische und elektronische Produkte nicht mit gewöhnlichem Haushaltsabfall vermisch werden sollen. Bringen Sie zur ordnungsgemäßen Behandlung, Rückgewinnung und Recycling diese Produkte zu den entsprechenden Sammelstellen, wo sie ohne Gebühren entgegengenommen werden. In einigen Ländern kann es auch möglich sein, diese Produkte beim Kauf eines entsprechenden neuen Produkts bei Ihrem örtlichen Einzelhändler abzugeben. Die ordnungsgemäße Entsorgung dieses Produkts dient dem Umweltschutz und verhindert mögliche schädliche Auswirkungen auf Mensch und Umgebung, die aus einer unsachgemäßen Handhabung von Abfall entstehen können. Genauere Informationen zur nächstgelegenen Sammelstelle erhalten Sie bei Ihrer Gemeindeverwaltung. In Übereinstimmung mit der Landesgesetzgebung können für die unsachgemäße Entsorgung dieser Art von Abfall Strafgebühren erhoben werden. Für Geschäftskunden in der Europäischen Union Bitte treten Sie mit Ihrem Händler oder Lieferanten in Kontakt, wenn Sie elektrische und elektronische Geräte entsorgen möchten. Er hält weitere Informationen für sie bereit. Informationen zur Entsorgung in anderen Ländern außerhalb der Europäischen Union Dieses Symbol ist nur in der Europäischen Union gültig. Bitte treten Sie mit Ihrer Gemeindeverwaltung oder Ihrem Händler in Kontakt, wenn Sie dieses Produkt entsorgen möchten, und fragen Sie nach einer Entsorgungsmöglichkeit.	Πληροφορίες για την απόρριψη ηλεκτρικών και ηλεκτρονικών συσκευών (οικιακής χρήσης)  Αυτή η σήμανση στα προϊόντα και/ή στα συνοδευτικά τους έντυπα υποδηλώνει ότι τα εν λόγω ηλεκτρικά και ηλεκτρονικά προϊόντα δεν πρέπει να απορριφθούν μαζί με οικιακά απορρίμματα. Προκειμένου να πραγματοποιηθεί η κατάλληλη επεξεργασία και ανακύκλωση, αποστέλλετε αυτά τα προϊόντα σε ανάλογα σημεία περισυλλογής, όπου θα γίνουν δεκτά χωρίς χρέωση σας. Εναλλακτικά, σε ορισμένες χώρες, μπορείτε να επιστρέψετε τα προϊόντα σε τοπικά καταστήματα με σκοπό την αγορά ανάλογου νέου προϊόντος. Η ορθή απόρριψη αυτού του προϊόντος βοηθάει στην εξοικονόμηση πολύτιμων φυσικών πόρων και στην αποφυγή τυχόν αρνητικών επιπτώσεων για την ανθρώπινη υγεία και το περιβάλλον, οι οποίες μπορεί να προκληθούν από λανθασμένη διαχείριση του εν λόγω απορρίμματος. Επικοινωνήστε με τις τοπικές αρχές για περισσότερες πληροφορίες σχετικά με το πλησιέστερο ανάλογο σημείο περισυλλογής. Ενδέχεται να επιβληθούν κυρώσεις για λανθασμένη απόρριψη του εν λόγω προϊόντος, σύμφωνα με τη νομοθεσία της χώρας σας. Προϊόντα επαγγελματικής χρήσης, Ευρωπαϊκή Ένωση Αν επιθυμείτε να απορρίψετε ηλεκτρικό και ηλεκτρονικό εξοπλισμό, επικοινωνήστε με τον πωλητή ή τον προμηθευτή για περισσότερες πληροφορίες. Πληροφορίες για την απόρριψη ηλεκτρικών και ηλεκτρονικών συσκευών σε χώρες εκτός της Ευρωπαϊκής Ένωσης Αυτή η σήμανση ισχύει μόνο στην Ευρωπαϊκή Ένωση. Αν επιθυμείτε να απορρίψετε αυτό το προϊόν, επικοινωνήστε με τις τοπικές αρχές ή καταστήματα πώλησης για να πληροφορηθείτε σχετικά με την ορθή διαδικασία απόρριψης.
Tájékoztató az elektromos és elektronikus berendezések hulladékainak ártalmatlanításáról (háztartások)  Ha ez a szimbólum szerepel a termékeken és/vagy a mellékelt dokumentumokon, az elhasznált elektromos és elektronikus termékeket nem szabad keverni az általános háztartási szeméttel. A megfelelő kezelés, visszanyerés és újrahasznosítás érdekében kérjük, szállítsák az ilyen termékeket a kijelölt gyűjtőhelyekre, ahol térítésmentesen átveszik azokat. Más lehetőségként bizonyos országokban a termékeket a helyi kiskereskedője is visszaveheti, amennyiben hasonló, új terméket vásárol. A termék megfelelő ártalmatlanításával segít megőrizni az értékes erőforrásokat és megelőzheti a környezetre és az egészségre esetleg ártalmas hatásokat, amelyeket a hulladékok helytelen kezelése egyébként okozhat. Kérjük, lépjen kapcsolatba a helyi hatósággal további információért a legközelebbi kijelölt begyűjtő hely fellelhetőségét illetően. A nemzeti törvények értelmében az ilyen hulladék helytelen ártalmatlanítása esetén büntetést szabhatnak ki. Amennyiben a használt termék elemet vagy akkumulátort tartalmaz, kérjük, a helyi környezetvédelmi előírások betartásával, külön ártalmatlanítsa ezeket. Üzleti felhasználók az Európai Unióban Amennyiben elektromos vagy elektronikus berendezést kíván ártalmatlanítani, kérjük, lépjen kapcsolatba kereskedőjével vagy szállítójával további információkért. Tájékoztató az ártalmatlanítással kapcsolatban az Európai Unión kívüli országok esetében Ez a szimbólum csak az Európai Unióban érvényes. Amennyiben ezt a terméket kívánja ártalmatlanítani, kérjük, lépjen kapcsolatba a helyi hatósággal, illetve kereskedőjével, és érdeklődjön az ártalmatlanítás megfelelő módjáról.	Informations relatives à l'évacuation des déchets, destinées aux utilisateurs d'appareils électriques et électroniques (appareils ménagers domestiques)  Lorsque ce symbole figure sur les produits et/ou les documents qui les accompagnent, cela signifie que les appareils électriques et électroniques ne doivent pas être jetés avec les ordures ménagères. Pour que ces produits subissent un traitement, une récupération et un recyclage appropriés, envoyez-les dans les points de collecte désignés, où ils peuvent être déposés gratuitement. Dans certains pays, il est possible de renvoyer les produits au revendeur local en cas d'achat d'un produit équivalent. En éliminant correctement ce produit, vous contribuerez à la conservation des ressources vitales et à la prévention des éventuels effets négatifs sur l'environnement et la santé humaine qui pourraient survenir dans le cas contraire. Afin de connaître le point de collecte le plus proche, veuillez contacter vos autorités locales. Des sanctions peuvent être appliquées en cas d'élimination incorrecte de ces déchets, conformément à la législation nationale. Utilisateurs professionnels de l'Union européenne Pour en savoir plus sur l'élimination des appareils électriques et électroniques, contactez votre revendeur ou fournisseur. Informations sur l'évacuation des déchets dans les pays ne faisant pas partie de l'Union européenne Ce symbole n'est reconnu que dans l'Union européenne. Pour vous débarrasser de ce produit, veuillez contacter les autorités locales ou votre revendeur afin de connaître la procédure d'élimination à suivre.

DISPOSAL OF UNIT

Oplysninger til brugerne om afhændelse af elektriske apparater og elektronisk udstyr (private husholdninger)



Når produkter og/eller medfølgende dokumenter indeholder dette symbol, betyder det, at elektriske apparater og elektronisk udstyr ikke må smides ud sammen med det almindelige husholdningsaffald.

For at sikre en korrekt behandling, indsamling og genbrug, skal du aflevere disse produkter på dertil indrettede indsamlingssteder, hvor de vil blive modtaget uden ekstra omkostninger. I nogle lande er der også mulighed for, at du kan indlevere dine produkter hos den lokale forhandler, hvis du køber et nyt og tilsvarende produkt.

Hvis du afhænder dette produkt på korrekt vis, vil det være med at spare på de værdifulde naturlige råstoffer og forhindre eventuelle negative påvirkninger på folkesundheden og miljøet, hvilket ellers kunne blive følgerne af en forkert håndtering af affaldet. Kontakt de lokale myndigheder for at få yderligere oplysninger om, hvor du kan finde det nærmeste indsamlingssted.

I visse lande vil en forkert afhændelse af affaldet medføre en bødestraf i henhold til de gældende bestemmelser på området.

Professionelle brugere i EU

Hvis du ønsker at smide elektriske apparater eller elektronisk udstyr ud, skal du kontakte din forhandler eller leverandør for at få yderligere oplysninger.

Oplysninger om afhændelse i lande uden for EU

Dette symbol er kun gyldigt i EU.

Hvis du ønsker at afhænde dette produkt, skal du rette henvendelse til de lokale myndigheder eller din forhandler. Her kan du få oplysninger om, hvordan du bedst kommer af med produktet.

Información sobre la eliminación para los usuarios de equipos eléctricos y electrónicos usados (particulares)



La aparición de este símbolo en un producto y/o en la documentación adjunta indica que los productos eléctricos y electrónicos usados no deben mezclarse con la basura doméstica general.

Para que estos productos se sometan a un proceso adecuado de tratamiento, recuperación y reciclaje, llévelos a los puntos de recogida designados, donde los admitirán sin coste alguno. En algunos países existe también la posibilidad de devolver los productos a su minorista local al comprar un producto nuevo equivalente.

Si desecha el producto correctamente, estará contribuyendo a preservar valiosos recursos y a evitar cualquier posible efecto negativo en la salud de las personas y en el medio ambiente que pudiera producirse debido al tratamiento inadecuado de desechos. Póngase en contacto con su autoridad local para que le informen detalladamente sobre el punto de recogida designado más cercano.

De acuerdo con la legislación nacional, podrían aplicarse multas por la eliminación incorrecta de estos desechos.

Para empresas de la Unión Europea

Si desea desechar equipos eléctricos y electrónicos, póngase en contacto con su distribuidor o proveedor para que le informe detalladamente.

Información sobre la eliminación en otros países no pertenecientes a la Unión Europea

Este símbolo sólo es válido en la Unión Europea.

Si desea desechar este producto, póngase en contacto con las autoridades locales o con su distribuidor para que le informen sobre el método correcto de eliminación.

Informácie pre užívateľov o likvidácii použitého elektrického a elektronického zariadenia (súkromné domácnosti)



Tento symbol na produktoch a/alebo na priložených dokumentoch znamená, že použité elektrické a elektronické zariadenia sa nesmú miešať so všeobecným domácim odpadom.

Pre správne zaobchádzanie, obnovu a recykláciu, odvezte prosím tieto produkty na určené zberné miesta, kde budú prijaté bez poplatku. V niektorých krajinách je možné tieto produkty vrátiť priamo miestnemu maloobchodu v prípade, ak si objednáte podobný nový výrobok.

Správna likvidácia týchto produktov pomôže ušetriť hodnotné zdroje a zabrániť možným negatívnym vplyvom na ľudské zdravie a prostredie, ktoré môžu vzniknúť z nesprávneho zaobchádzania s odpadom. Pre bližšie informácie o vašom najbližšom zbernom mieste kontaktujte, prosím, vaše miestne úrady.

V prípade nesprávnej likvidácie odpadu môžu byť uplatnené pokuty v súlade so štátnou legislatívou.

Pre právnické osoby v Európskej únii

Ak potrebujete zlikvidovať opotrebované elektrické a elektronické produkty, pre bližšie informácie kontaktujte, prosím, svojho miestneho predajcu alebo dodávateľa.

Informácie o likvidácii elektrického a elektronického odpadu v krajinách mimo Európskej únie

Tento symbol je platný iba v Európskej únii.

Ak si prajete zlikvidovať tento produkt, pre bližšie informácie kontaktujte, prosím, vaše miestne úrady alebo predajcu a informujte sa o správnej metóde likvidácie.

Informații pentru utilizatori, privind eliminarea echipamentelor electrice și electronice uzate (proprietate particulară)



Acest simbol, de pe produse și/sau documentele însoțitoare, are semnificația că produsele electrice și electronice uzate nu trebuie amestecate cu deșeurile menajere generale.

În scopul aplicării unui tratament corespunzător, recuperării și reciclării, vă rugăm să predați aceste produse la punctele de colectare desemnate, unde vor fi acceptate gratuit. Ca o alternativă, în unele țări, există posibilitatea să returnați produsele dumneavoastră uzate furnizorului cu amănuntul, în momentul achiziționării unui produs echivalent nou.

Eliminarea corectă a acestor produse uzate vă ajută la economisirea unor resurse valoroase și la prevenirea oricăror efecte potențial negative asupra sănătății umane și a mediului înconjurător, care, în caz contrar, ar putea fi cauzate prin manipularea necorespunzătoare a deșeurilor. Pentru mai multe detalii privind cele mai apropiate puncte de colectare, vă rugăm să contactați autoritățile locale.

Pentru eliminarea corectă a acestui tip de deșeuri se pot aplica amenzi, în conformitate cu legislația națională.

Pentru utilizatorii comerciali din Uniunea Europeană

Dacă doriți să vă debarașiți de echipamente electrice și electronice, vă rugăm să contactați distribuitorul sau furnizorul dumneavoastră, pentru mai multe informații.

Informații privind eliminarea deșeurilor în țările din afara Uniunii Europene

Acest simbol este valabil numai în Uniunea Europeană.

Dacă doriți să eliminați acest tip de produse uzate, vă rugăm să contactați autoritățile locale sau distribuitorul și să aflați metoda corectă de eliminare.

Informacja dla użytkowników o pozbywaniu się urządzeń elektrycznych i elektronicznych (dotyczy gospodarstw domowych)



Przedstawiony symbol umieszczony na produktach lub dołączonej do nich dokumentacji informuje, że niesprawnych urządzeń elektrycznych lub elektronicznych nie można wyrzucać razem z odpadami gospodarczymi.

Prawidłowe postępowanie w razie konieczności pozbycia się urządzeń elektrycznych lub elektronicznych, utylizacji, powtórnego użycia lub odzysku podzespół polega na przekazaniu urządzenia do wyspecjalizowanego punktu zbiórki, gdzie będzie przyjęte bezpłatnie. W niektórych krajach produkt można oddać lokalnemu dystrybutorowi podczas zakupu innego urządzenia.

Prawidłowa utylizacja urządzenia umożliwia zachowanie cennych zasobów i uniknięcie negatywnego wpływu na zdrowie i środowisko, które mogą być zagrożone przez nieodpowiednie postępowanie z odpadami. Szczegółowe informacje o najbliższym punkcie zbiórki można uzyskać u władz lokalnych.

Nieprawidłowa utylizacja odpadów zagrożona jest karami przewidzianymi w odpowiednich przepisach lokalnych.

Użytkownicy biznesowi w krajach Unii Europejskiej

W razie konieczności pozbycia się urządzeń elektrycznych lub elektronicznych, prosimy skontaktować się z najbliższym punktem sprzedaży lub z dostawcą, którzy udzielą dodatkowych informacji.

Pozbywanie się odpadów w krajach poza Unią Europejską

Taki symbol jest ważny tylko w Unii Europejskiej.

W razie potrzeby pozbycia się niniejszego produktu prosimy skontaktować się z lokalnymi władzami lub ze sprzedawcą celem uzyskania informacji o prawidłowym sposobie postępowania.

Informācija lietotājiem par elektrisko un elektronisko iekārtu atkritumiem (privāts mājsaimniecības)



Šis simbols uz produktiem un/vai pievienotajiem dokumentiem nozīmē, ka no atkritumiem paredzētajām elektriskajām un elektroniskajām iekārtām nedrīkst atbrīvoties kopā ar pārējiem mājsaimniecības atkritumiem.

Pienācīgai apstrādei, reģenerācijai un pārstrādei, lūdzu, nogādāiet šos produktus tiem paredzētajos savākšanas punktos, kur tie tiks pieņemti bez maksas. Tāpat dažās valstīs jūs iespējams varēsiet nogādāt produktus pie tuvākā mazumtirgotāja, pērkot jaunu līdzvērtīgu produktu.

Pareiza atbrīvošanās no šiem produktiem palīdzēs ietaupīt vērtīgus resursus un izvairīties no potenciāli negatīvas iedarbības uz cilvēka veselību un apkārtni visā, kas varētu notikt, ja atkritumi netiktu pienācīgi apstrādāti. Lūdzu, sazinieties ar vietējām varas iestādēm, lai saņemtu sīkāku informāciju par tuvāko šādiem atkritumiem paredzēto savākšanas punktu.

Var tikt piemēroti sodi par nepareizi šādu atkritumu apstrādi, atbilstoši valsts likumdošanai.

Komerclietotājiem Eiropas Savienībā

Ja vēlaties atbrīvoties no elektrisko un elektronisko iekārtu atkritumiem, lūdzu, sazinieties ar tuvāko dīleri vai piegādātāju, lai saņemtu sīkāku informāciju.

Informācija par atbrīvošanos no šādiem atkritumiem valstīs, kas atrodas ārpus Eiropas Savienības

Šis simbols ir derīgs tikai Eiropas Savienībā.

Ja vēlaties atbrīvoties no šī produkta, lūdzu, sazinieties ar vietējām varas iestādēm vai tuvāko dīleri un uzziniet pareizo veidu, kā atbrīvoties no šādiem atkritumiem.

DISPOSAL OF UNIT

Informace pro uživatele k likvidaci elektrických a elektronických zařízení (domácnosti)



Tento symbol na produktech anebo v průvodních dokumentech znamená, že použité elektrické a elektronické výrobky nesmí být přidány do běžného komunálního odpadu.

Ke správné likvidaci, obnově a recyklaci doručte tyto výrobky na určená sběrná místa, kde budou přijata zdarma. Alternativně v některých zemích můžete vrátit své výrobky místnímu prodejci při koupi ekvivalentního nového produktu.

Správnou likvidací tohoto produktu pomůžete zachovat cenné přírodní zdroje a napomáháte prevenci potenciálních negativních dopadů na životní prostředí a lidské zdraví, což by mohly být důsledky nesprávné likvidace odpadů. Další podrobnosti si vyžádejte od místního úřadu nebo nejbližšího sběrného místa.

Při nesprávné likvidaci tohoto druhu odpadu mohou být v souladu s národními předpisy uděleny pokuty.

Pro podnikové uživatele v zemích Evropské unie

Chcete-li likvidovat elektrická a elektronická zařízení, vyžádejte si potřebné informace od svého prodejce nebo dodavatele.

Informace k likvidaci v ostatních zemích mimo Evropskou unii

Tento symbol je platný jen v Evropské unii.

Chcete-li tento výrobek likvidovat, vyžádejte si potřebné informace o správném způsobu likvidace od místních úřadů nebo od svého prodejce.

Kullanılmayan Elektrikli ve Elektronik Aletlerin Elden Çıkarılmasına İlişkin Bilgi (bireysel kullanıcılar)



Ürünlerde ve/veya üründe birlikte gelen dokümanlarda yer alan bu simge, ömrü sona ermiş elektrikli ve elektronik ürünlerin genel ev çöpüne karıştırılmaması gerektiğini ifade eder.

Uygun biçimde toplanmaları, işlenmeleri ve geri dönüştürülmeleri için lütfen bu tür ürünleri, bunlar için öngörülen ve ücretsiz olarak kabul edilen toplama noktalarına götürün. Ayrıca bazı ülkelerde eski ürününüzü, yeni eşdeğer bir ürün satın aldığınız yerel satıcınıza teslim edebilirsiniz.

Ürünün doğru bir şekilde elden çıkarılması, değerli kaynakları korumaya yardımcı olacak ve yanlış biçimde atık gidermenin insan sağlığına ve çevreye verebileceği olası negatif etkileri önleyecektir. Çevrenizdeki en yakın toplama noktasına ilişkin daha ayrıntılı bilgi almak için lütfen yerel yetkililere başvurun.

Ürünlerin uygun biçimde elden çıkarılmaması durumunda, ilgili ülkenin yasal düzenlemelerine bağlı olarak cezalar uygulanabilir.

Avrupa Birliği dâhilindeki kurumsal kullanıcılar için

Elektrikli ve elektronik aletlerinizi elden çıkarmak istiyorsanız, ayrıntılı bilgi için lütfen satıcınıza veya tedarikçinize başvurun.

Avrupa Birliği dışındaki ülkelerde atık gidermeye ilişkin bilgi

Bu simge yalnızca Avrupa Birliği sınırları içerisinde geçerlidir.

Bu ürünü elden çıkarmak istiyorsanız, lütfen yerel yetkililere veya satıcınıza başvurun ve uygun atık giderme yöntemi konusunda bilgi alın.

Informações sobre a eliminação de resíduos para utilizadores de equipamentos eléctricos e electrónicos (utilizadores particulares)



Este símbolo nos produtos e/ou documentos anexos significa que os produtos eléctricos e electrónicos usados não devem ser misturados com os resíduos urbanos indiferenciados.

Para efectuar um tratamento, recuperação e reciclagem correctos, leve estes produtos para pontos de recolha próprios para o efeito, onde serão aceites gratuitamente. Em alternativa, em alguns países, poderá devolver os produtos ao seu revendedor local, aquando da compra de um produto novo equivalente.

A eliminação correcta deste produto ajudará a poupar recursos valiosos e evitar quaisquer potenciais efeitos negativos na saúde humana e no ambiente, que poderiam resultar de um tratamento incorrecto de resíduos. Contacte as autoridades locais para obter mais informações sobre o ponto de recolha mais perto de si.

Poderão ser aplicadas multas pela eliminação incorrecta deste resíduo, de acordo com as leis locais.

Para utilizadores não particulares na União Europeia

Se pretender eliminar equipamento eléctrico e electrónico, contacte o seu revendedor ou fornecedor para obter mais informações.

Informações sobre a eliminação noutros países fora da União Europeia

Este símbolo apenas é válido na União Europeia.

Se pretender eliminar este produto, contacte as suas autoridades locais ou revendedor e peça informações sobre o método de eliminação correcto.

Information om kassering för användare av elektrisk & elektronisk utrustning (privata konsumenter)



Om denna symbol finns på produkterna och/eller medföljande dokumentation, betyder det att förbrukade elektriska och elektroniska produkter inte ska blandas med vanliga hushållssopor.

För korrekt hantering, inhämtning och återvinning, ska dessa produkter lämnas på återvinningscentraler, där de tas emot utan kostnad. I vissa länder kan du som ett alternativ lämna in dina produkter hos återförsäljaren, när du köper en motsvarande, ny produkt.

Om denna produkt avyttras korrekt sparar värdefulla resurser och eventuellt negativa effekter på den mänskliga hälsan och miljön förhindras, vilket kan bli fallet vid felaktig avyttring. Kontakta din lokala myndighet för mer information om var din närmsta återvinningsstation finns.

Böter kan tillämpas vid felaktig avyttring av dessa sopor, i enlighet med lagstiftningen i landet.

För företagsanvändare inom den Europeiska gemenskapen

Om ni vill kassera elektrisk eller elektronisk utrustning, vänligen kontakta er återförsäljare eller leverantör för mer information.

Information om kassering i övriga länder utanför den Europeiska gemenskapen

Denna symbol gäller bara inom den Europeiska gemenskapen.

Om du vill kassera denna produkt ska du kontakta de lokala myndigheterna eller din återförsäljare, och fråga om korrekt avyttringsmetod.

Informacija naudotojams dėl nenaudojamos elektros ir elektroninės įrangos utilizacijos (naudojantiems ją buityje)



Šis simbolis, pažymėtas ant gaminių ir / arba lydimųjų dokumentų, reiškia, kad nenaudojamą elektros ir elektroninių gaminių negalima maišyti su įprastomis buitinėmis atliekomis.

Tam, kad gaminiai būtų tinkamai apdoroti, atnaujinti arba perdirbti, prašom nugabenti juos į paskirtuosius surinkimo punktus, kur juos priims nemokamai. Be to, kai kuriose šalyse jūs galite gražinti turimus gaminius vietiniam mažmeniniam prekybininkui, įsigiję analogišką naują gaminį.

Tinkama šio gaminio utilizacija padės sutaupyti vertingų išteklių ir užkirs kelią galimam neigiamam poveikiui žmonių sveikatai bei aplinkai, kuris gali kilti netinkamai tvarkant atliekas. Dėl informacijos apie artimiausią paskirtąjį surinkimo punktą prašom kreiptis į vietos valdžios įstaigas.

Pagal jūsų šalies įstatymus, dėl netinkamos šių atliekų utilizacijos jums gali būti skirta bauda.

Verslo naudotojams Europos Sąjungoje

Jei norite išmesti elektros ir elektroninę įrangą, dėl išsamesnės informacijos prašom kreiptis į jus aptarnaujančią prekybą atstovą arba tiekėją.

Informacija dėl utilizacijos šalys – ne Europos Sąjungos narėse

Šis simbolis galioja tik Europos Sąjungoje.

Jei norite išmesti šį gaminį, dėl tinkamo utilizacijos būdo teiraukitės vietos valdžios įstaigų arba prekybos atstovo.

Informatie over het weggooien van elektrische en elektronische apparatuur (particulieren)



Dit symbool betekent in Europa dat gebruikte elektrische en elektronische producten niet bij het normale huishoudelijke afval mogen.

Lever deze producten in bij de aangewezen inzamelingspunten, waar ze gratis worden geaccepteerd en op de juiste manier worden verwerkt, teruggewonnen en hergebruikt. In Nederland kunt u uw producten bij uw winkelier inleveren bij de aanschaf van een vergelijkbaar nieuw product.

Wanneer u dit product op de juiste manier als afval inlevert, spaart u waardevolle hulpbronnen en voorkomt u potentiële negatieve gevolgen voor de volksgezondheid en het milieu, die anders kunnen ontstaan door een onjuiste verwerking van afval. Neem contact op met uw gemeente voor meer informatie over het dichtstbijzijnde inzamelingspunt of raadpleeg www.nvmp.nl, www.ictoffice.nl of www.stibat.nl.

Voor zakelijke gebruikers in de Europese Unie

Neem voor het weggooien van elektrische en elektronische apparatuur contact op met uw leverancier voor verdere informatie.

Informatie over verwijdering van afval in landen buiten de Europese Unie

Dit symbool is alleen geldig in de Europese Unie.

Neem wanneer u dit product wilt weggooien, contact op met de lokale overheid of uw leverancier en vraag wat de juiste verwijderingsmethode is.

Informacije o odlaganju u otpad za korisnike otpadne električne i elektroničke opreme (privatna domaćinstva)



Ovaj simbol na proizvodima i/ili pripadajućim dokumentima znače da se upotrijebljeni električni i elektronički proizvodi ne smiju miješati s običnim otpadom iz domaćinstava.

Za pravilnu obradu, iskorištavanje i recikliranje odnesite ove proizvode u namjenske centre za zbrinjavanje otpada gdje će ih besplatno preuzeti. Osim toga, u nekom državama ćete moći svoje proizvode vratiti lokalnom trgovcu prilikom kupnje ekvivalentnog proizvoda.

Pravilnim odlaganjem ovog proizvoda sačuvat ćete vrijedne resurse i spriječiti moguće negativne učinke na ljudsko zdravlje i okoliš koji bi se inače pojavili zbog neodgovarajućeg rukovanja otpadom. Za dodatne pojedinosti o najbližem namjenskom centru za zbrinjavanje otpada obratite se lokalnoj upravi.

Mogu se primijeniti kazne za neodgovarajuće odlaganje ovog otpada u skladu s lokalnim zakonima.

Za poslovne korisnike u Europskoj uniji

Ako želite baciti električnu i elektroničku opremu, obratite se prodavatelju ili dobavljaču za dodatne informacije.

Informacije o odlaganju u drugim zemljama izvan Europske unije

Ovaj simbol je važeći samo u Europskoj uniji.

Ako želite odbaciti ovaj proizvod, molimo kontaktirati lokalne vlasti ili prodavatelja i pitati za ispravnu metodu odlaganja.

DISPOSAL OF UNIT

Informacije za uporabnike o odstranitvi odpadne električne in elektronske opreme (zasebna gospodinjstva)



Ta simbol, ki se nahaja na izdelkih in/ali priloženih dokumentih, pomeni, da se rabljeni električni in elektronski izdelki ne smejo mešati z navadnimi gospodinjstskimi odpadki. Za primerno ravnanje, predelavo in reciklažo vas prosimo, da odnesete te izdelke na ustrezne zbirne točke, kjer bodo sprejeti brezplačno. V nekaterih državah boste lahko vrnili vaše izdelke v vašo lokalno prodajalno, v zameno nakupa novega izdelka. Pravilno odstranjevanje teh izdelkov bo pomagalo obvarovati dragocene vire in preprečilo katerekoli negativne vplive na človeško zdravje in okolje, ki lahko nastanejo pri neprimernem ravnanju z odpadki. Prosimo vas, da za nadaljnje informacije o vaši najbližji zbirni točki kontaktirate vaše lokalne oblasti. V skladu z nacionalno zakonodajo se zaradi nepravilnega odstranjevanja odpadkov izrečejo primerne kazni.

Za poslovne uporabnike v Evropski Uniji

Če se želite znebiti električne in elektronske opreme vas prosimo, da za nadaljnje informacije kontaktirate vašega prodajalca ali dobavitelja.

Informacije o odstranitvi v drugih državah, ki so izven Evropske Unije

Simbol je veljaven samo v Evropski Uniji.

Če se želite znebiti tega izdelka vas prosimo, da kontaktirate vaše lokalne oblasti ali prodajalca in jih povprašate o ustrezni metodi odstranjevanja.

Informazioni per gli utenti sullo smaltimento di apparecchiature elettriche ed elettroniche obsolete (per i nuclei familiari privati)



Questo simbolo sui prodotti e/o sulla documentazione di accompagnamento significa che i prodotti elettrici ed elettronici usati non devono essere mescolati con i rifiuti domestici generici.

Per un corretto trattamento, recupero e riciclaggio, portare questi prodotti ai punti di raccolta designati, dove verranno accettati gratuitamente. In alternativa, in alcune nazioni potrebbe essere possibile restituire i prodotti al rivenditore locale, al momento dell'acquisto di un nuovo prodotto equivalente.

Uno smaltimento corretto di questo prodotto contribuirà a far risparmiare preziose risorse ed evitare potenziali effetti negativi sulla salute umana e sull'ambiente, che potrebbero derivare, altrimenti, da uno smaltimento inappropriato. Per ulteriori dettagli, contattare la propria autorità locale o il punto di raccolta designato più vicino.

In caso di smaltimento errato di questo materiale di scarto, potrebbero venire applicate delle penali, in base alle leggi nazionali.

Per gli utenti aziendali nell'Unione Europea

Qualora si desideri smaltire apparecchiature elettriche ed elettroniche, contattare il rivenditore o il fornitore per ulteriori informazioni.

Informazioni sullo smaltimento in nazioni al di fuori dell'Unione Europea

Questo simbolo è valido solo nell'Unione Europea.

Qualora si desideri smaltire questo prodotto, contattare le autorità locali o il rivenditore e chiedere informazioni sul metodo corretto di smaltimento.

Informazzjoni dwar ir-Rimi għall-Utilenti ta' Skart ta' Tagħmir Elettriku u Elettroniku (unitajiet domestiċi privati)



Dan is-simbolu fuq il-prodotti u/jew id-dokumenti ta' appoġġ ifisser li prodotti elettrici u elettronici ma għandhomx jiġihallu ma' skart domestiku ġenerali.

Għal trattament, irkupru jew rikiclaġġ xieraq, jekk jogħġbok hu dawn il-prodotti f'punti ta' għbir apposta, fejn jiġu aċċettati fuq bażi mingħajr ħlas. Inkella, f'xi pajjiżi tista' tirritorna l-prodotti tiegħek għand bejjiegh b-limnut lokali max-xiri ta' prodott għid ekwivalenti.

Billi tarmi dan il-prodott b'mod korrett tkun qed tgħin sabieħ tikkonserva riżorsi prezzjużi u tipprevieni kwalunkwe effetti negattivi fuq is-saħħa tal-bniedem u l-ambjent li inkella jista' jirriżulta minn trattament ta' skart mhux xieraq. Jekk jogħġbok ikkuntattja lill-awtorità lokali tiegħek għal aktar dettalji dwar l-eqreb punt tal-għbir deżinjat tiegħek.

F'każ ta' rimi mhux korrett ta' dan l-iskart jistgħu japplikaw penali, f'konformità mal-leġiżlazzjoni nazzjonali.

Għal utenti tan-negozju fl-Unjoni Ewropea

Jekk tixtieq tarmi tagħmir elettriku u elettroniku, jekk jogħġbok ikkuntattja lin-negozjant jew lill-fornitur tiegħek għal aktar informazzjoni.

Informazzjoni dwar ir-Rimi f'Pajjiżi oħra barra mill-Unjoni Ewropea

Dan is-simbolu huwa validu biss fl-Unjoni Ewropea.

Jekk tixtieq tarmi dan il-prodott, jekk jogħġbok ikkuntattja lill-awtoritajiet lokali jew lin-negozjant tiegħek u staqsihom għall-metodu ta' rimi korrett.

Информације за корисника о одлагању Отпадне електричне и електронске опреме (приватна домаћинства)



Овај симбол на производима и/или пратећој документацији значи да искоришћене електричне и електронске производе не треба мешати са обичним кућним смећем.

Да би ови производи били правилно третирани, поново искоришћени и рециклирани, однесите их на предвиђена сабирна места где ће бити бесплатно прихваћени. Друга могућност је да у неким земљама можете да вратите производе локалном продавцу када купите еквивалентни нови производ.

Одлагање овог производа на правилан начин штеди драгоцене ресурсе и спречава потенцијалне негативне ефекте на здравље људи и животну средину, који би иначе настали због неправилног руковања отпадом. Обратите се локалним властима за више детаља о најближем предвиђеном сабирном месту.

Неправилно одлагање овог отпада може бити кажњиво по националним законима.

За пословне кориснике у Европској унији

Ако желите да одложите електричну и електронску опрему, обратите се свом продавцу или добављачу за више информација.

Информације о одлагању у другим земљама изван Европске уније

Овај симбол се односи само на Европску унију.

Ако желите да одложите овај производ у отпад, обратите се локалним властима или продавцу и распитајте се о правилном начину одлагања.

Tietoja sähkö- ja elektroniikkalaitteiden hävittämisestä (kotitaloudet)



Tämä symboli tuotteissa ja/tai niiden käyttöohjeissa osoittaa, että käytettyjä sähkö- ja elektroniikkalaitteita ei saa hävittää tavallisen kotitalousjätteen mukana.

Jotta laitteet käsitellään asianmukaisesti, toimita ne kierrätyspisteisiin, jotka vastaanottavat tällaisia laitteita ilmaiseksi. Joissakin maissa kuluttajat voivat myös palauttaa käytetyt laitteet paikalliselle jälleenmyyjälle, jos he ostavat tilalle uuden vastaavanlaisen tuotteen.

Tämän tuotteen asianmukainen hävittäminen säästää luonnonvaroja ja estää mahdollisesti muutoin syntyviä ympäristö- ja terveysongelmia. Lähistöllä sijaitsevista kierrätyspisteistä saa lisätietoja paikallisilta viranomaisilta.

Jätealassa ja rikoslaissa on säädetty rangaistus roskaamisesta ja lainvastaisesta hävittämisestä.

Yrityskäyttäjät Euroopan unionissa

Jos haluat hävittää sähkö- ja elektroniikkalaitteita, kysy lisätietoja jälleenmyyjältä tai tavarantoimittajalta.

Tietoja jätteiden käsittelystä Euroopan unionin ulkopuolella

Tämä symboli on käytössä vain Euroopan unionissa.

Jos haluat hävittää tämän tuotteen, tiedustele oikeaa hävitystapaa paikallisilta viranomaisilta tai jälleenmyyjältä.

Informasjon for brukerne om kassering av elektrisk og elektronisk utstyr (private husholdninger)



Når et produkt og/eller medfølgende dokumenter er merket med dette symbolet, betyr det at det elektriske eller elektroniske utstyret ikke bør kasseres sammen med vanlig husholdningsavfall.

For at det kasserte utstyret skal bli behandlet, gjenvunnet og resirkulert på riktig måte, må du bringe det til nærmeste innsamlingspunkt eller gjenvinningsstasjon. I enkelte land kan du alternativt returnere produktene dine til den lokale forhandleren, eventuelt mot kjøp av et tilsvarende nytt produkt.

Hvis du kasserer dette produktet på riktig måte, bidrar til du til å bevare verdifulle ressurser og til å motvirke de negative virkningene på miljøet og den menneskelige helse som kan forårsakes av feilaktig avfallsbehandling. Ta kontakt med de lokale myndigheter hvis du ønsker ytterligere informasjon om ditt nærmeste innsamlingspunkt.

Feilaktig kassering av dette utstyret kan kanskje bøtelegges, avhengig av nasjonale lover og regler.

For bedriftskunder i den Europeiske Union

Hvis du ønsker å kassere elektrisk og elektronisk utstyr, må du kontakte forhandleren eller leverandøren din for å få mer informasjon.

Informasjon om kassering i land utenfor den Europeiske Union

Dette symbolet er kun gyldig i den Europeiske Union.

Hvis du ønsker å kassere dette produktet, må du ta kontakt med forhandleren eller de lokale myndigheter og spørre dem om hvordan det skal kasseres på riktig måte.

Kasutajate elektri- ja elektroonikaseadmete kõrvaldamist puudutav teave (eramajapidamised)



See toodetel ja/või kaasas olevates dokumentides märgitud sümbol tähendab, et kasutatud elektri- ja elektroonikaseadmeid ei tohi kõrvaldada koos olmejäätmetega.

Korrektses töötlemiseks, taaskasutuseks ja ringlussevõtuks viige need tooted kogumispunkti, kus need tasuta vastu võetakse. Samuti on mõnes riigis võimalik tooted kohalikule edasimüüjale tagastada juhul, kui ostetakse uus võrdväärne toode.

Selle toote korrektne kõrvaldamine aitab meil väärtuslikke ressursse säästa ning vältida inimeste tervisele ja keskkonnale võimalikke negatiivseid mõjusid, mis võivad tekkida sobimatu jäätmekäituse tagajärjel. Pöörduge oma kohaliku omavalitsuse poole, et saada lisateavet teile lähima kogumispunkti kohta.

Selle jäätme sobimatu kõrvaldamise eest võidakse kohaldada siseriiklikele õigusnormidele vastavaid karistusi.

Euroopa Liidu ärikasutajatele

Kui soovite elektri- ja elektroonikaseadmeid kõrvaldada, pöörduge lisa teabe saamiseks oma edasimüüja või tarnija poole.

Kõrvaldamist puudutav teave muudes riikides väljaspool Euroopa Liitu

See sümbol kehtib ainult Euroopa Liidus.

Kui soovite seda toodet kõrvaldada, pöörduge oma kohaliku omavalitsuse või edasimüüja poole ning küsige neilt korrektsete kõrvaldamismetmete kohta.

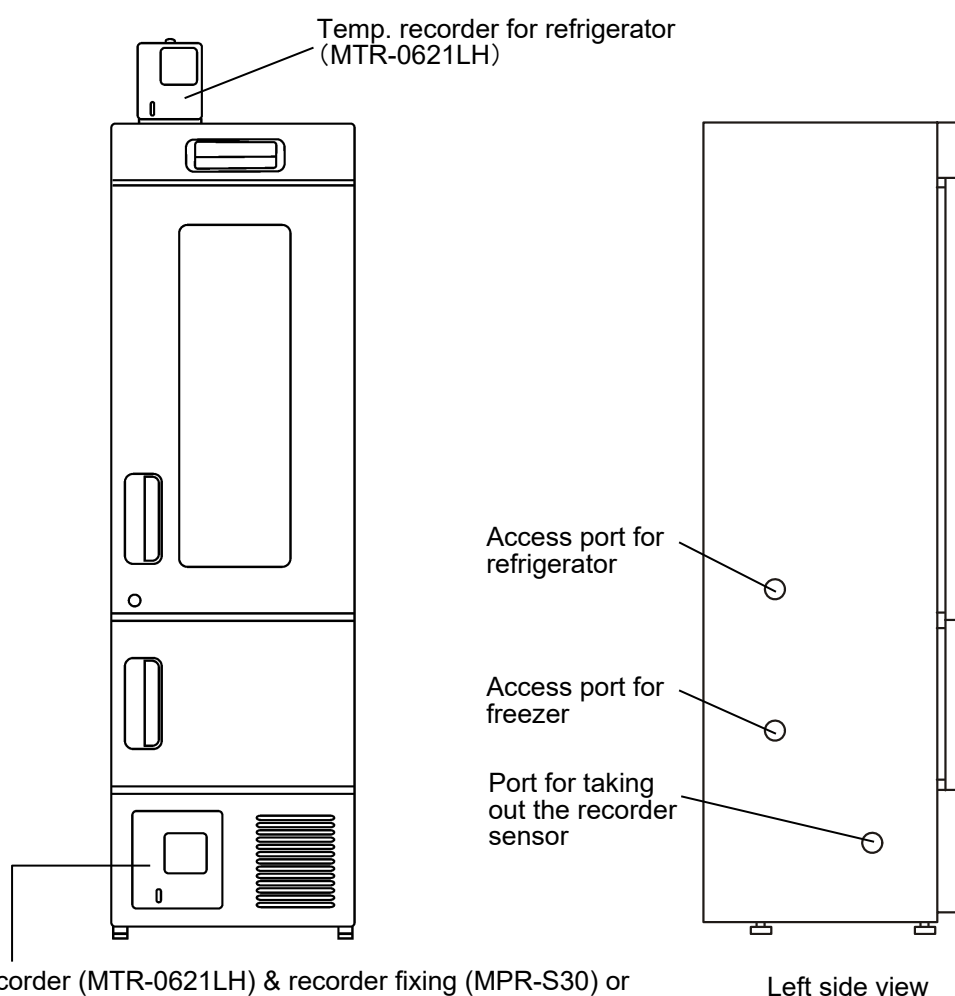
OPTIONAL COMPONENT

Temperature recorder

To record the chamber temperature, an optional temperature recorder (3 types) is available. Contact our sales representative or agent for the installation of temperature recorder.

The available temperature recorder and its location for installation are as follows:

Temp. recorder	Application	Location (see figure below)	Recorder fixing
MTR-0621LH	For refrigerator	Front left of top panel, or	Fixing enclosed with the temp. recorder
		Lower left of front panel (In the case of no use of MTR-4015LH)	MPR-S30
MTR-4015LH	For freezer	Lower left of front panel	MPR-S30
MTR-G3504A or MTR-G3504C	For both refrigerator and freezer	Lower left of front panel	MPR-S7



WARNING

Always disconnect the power supply to the unit before starting the installation of recorder to prevent electric shock or injury.

OPTIONAL COMPONENT

Installation of MTR-0621LH (1)

1. Attach the recorder fixing to the temperature recorder (MTR-0621LH) by referring to the instruction manual enclosed with the temperature recorder. [Fig. 1]

2. Remove 2 (outside) of 4 screws on the front left of the top panel. Fix the temperature recorder to the top panel by using the 2 removed screws. [Fig. 2]

3. Remove the caps (both outside and inside) covering the access port for refrigerator and take out the thermal insulation in the access port. Pass the recorder sensor to the refrigerator through the access port [Fig. 3]. Then replace the thermal insulation and caps (both outside and inside).

✧ Make a cut on the caps for access port to pass the capillary tube as shown in the Fig. 4.

4. Fix the recorder sensor to the attachment hole on the back side of the refrigerator by using the large clips provided as an accessory. [Fig. 5]

5. Arrange the capillary tube so that it cannot contact the shelf.

✧ Care should be taken for the following points to avoid the crush of the tube when bending the capillary tube.

- Do not bend the capillary tube for 30 mm from the edge of the recorder sensor.

- Do not bend and extend the capillary tube repeatedly at the same point.

- The bending should be R10~R15.

6. Operate the unit until the refrigerator temperature gets to the set temperature. Check the recorded temperature and refrigerator temperature displayed on the control panel. Adjust the zero adjustment volume on the temperature recorder so that the recorded temperature can corresponds with the displayed temperature if they are not compliance each other.

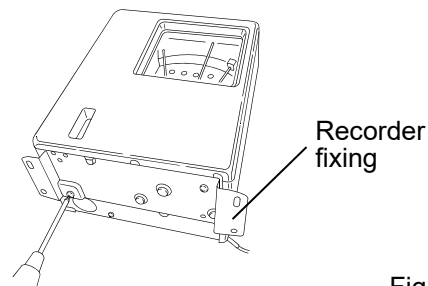


Fig. 1

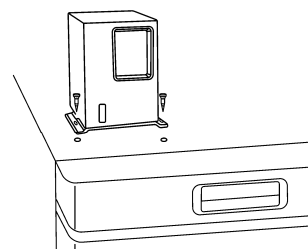


Fig. 2

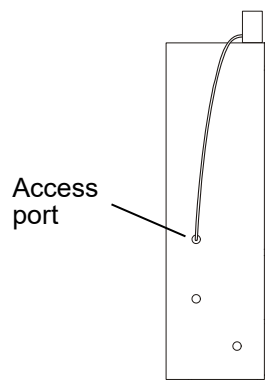


Fig. 3

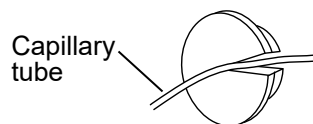


Fig. 4

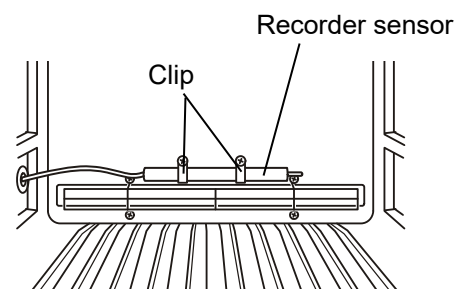
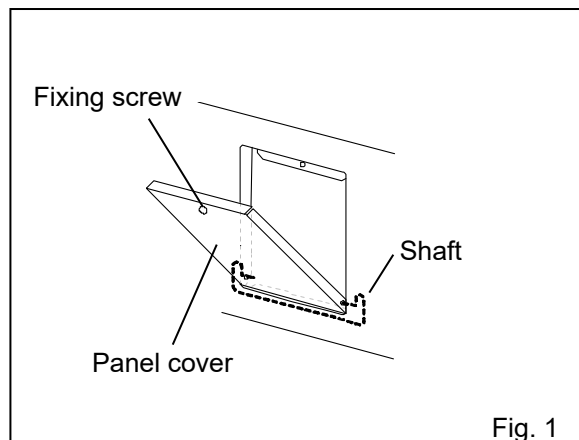


Fig. 5

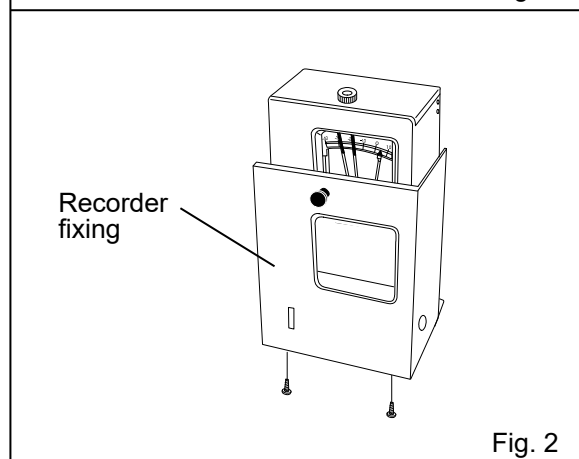
OPTIONAL COMPONENT

Installation of MTR-0621LH (2)

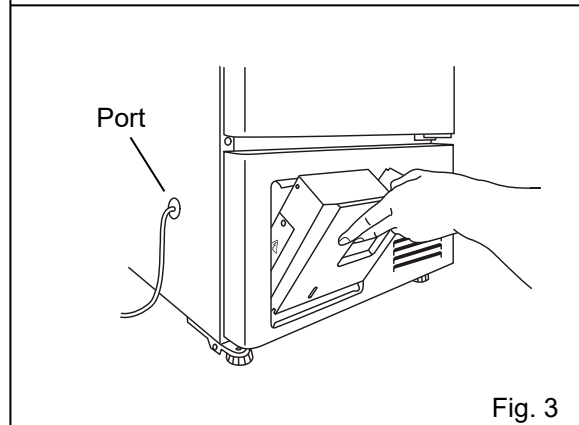
1. Remove a cap for the fixing screw on the panel cover for the space for a temperature recorder. Remove the fixing screw and open the panel cover. Remove the panel cover by pushing the shaft on both sides outward. [Fig. 1]



2. Attach the temperature recorder (MTR-0621LH) to the recorder fixing (MPR-S30) by referring to the instruction manual enclosed with the recorder fixing. [Fig. 2]



3. Remove the cap on the port for taking out the recorder sensor and take out the recorder sensor. Then set the temperature recorder with recorder fixing to the space for a temperature recorder. [Fig. 3]



OPTIONAL COMPONENT

4. Remove the caps (both outside and inside) covering the access port for refrigerator and take out the thermal insulation in the access port. Pass the recorder sensor to the refrigerator through the access port [Fig. 4]. Then replace the thermal insulation and caps (both outside and inside). Also, replace the cap on the port for taking out the recorder sensor.

✧ Make a cut on the caps to pass the capillary tube as shown in the Fig. 5.

5. Fix the recorder sensor to the attachment hole on the back side of the refrigerator by using the large clips enclosed with the recorder fixture (MPR-S30). [Fig. 6]

6. Arrange the capillary tube so that it cannot contact the shelf.

✧ Care should be taken for the following points to avoid the crush of the tube when bending the capillary tube.

- Do not bend the capillary tube for 30 mm from the edge of the sensor.
- Do not bend and extend the capillary tube repeatedly at the same point.
- The bending should be R10~R15.

7. Operate the unit until the refrigerator temperature gets to the set temperature. Check the recorded temperature and refrigerator temperature displayed on the control panel. Adjust the zero adjustment volume on the temperature recorder so that the recorded temperature can corresponds with the displayed temperature if they are not compliance each other.

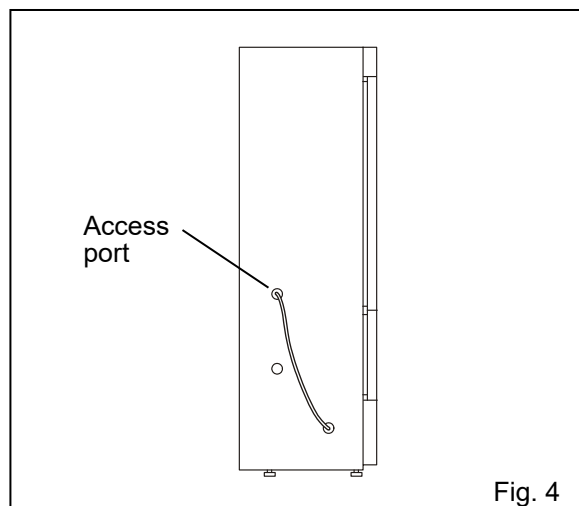


Fig. 4

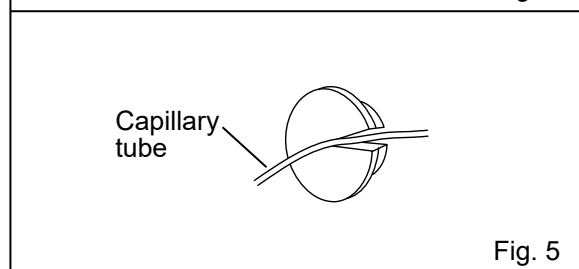


Fig. 5

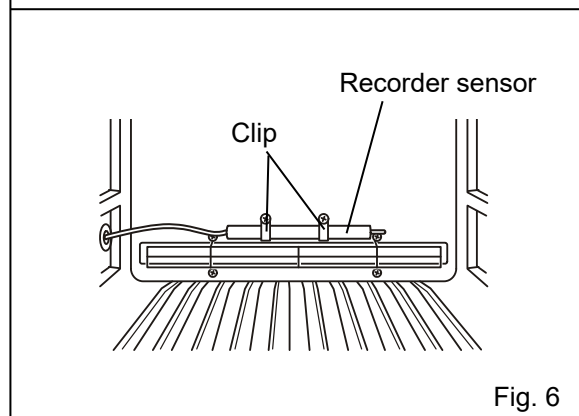
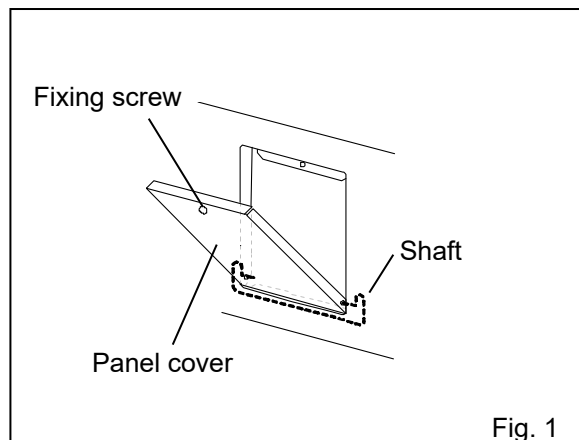


Fig. 6

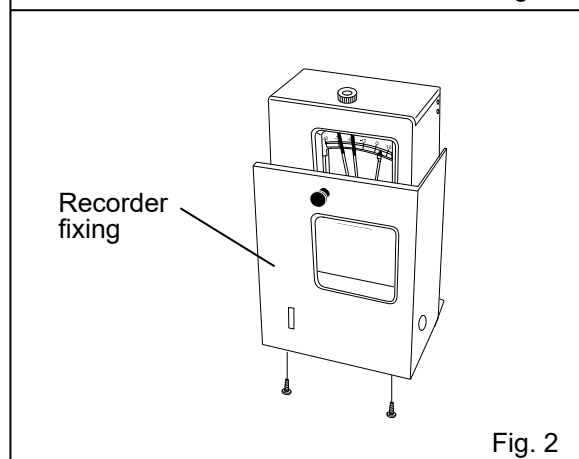
OPTIONAL COMPONENT

Installation of MTR-4015LH

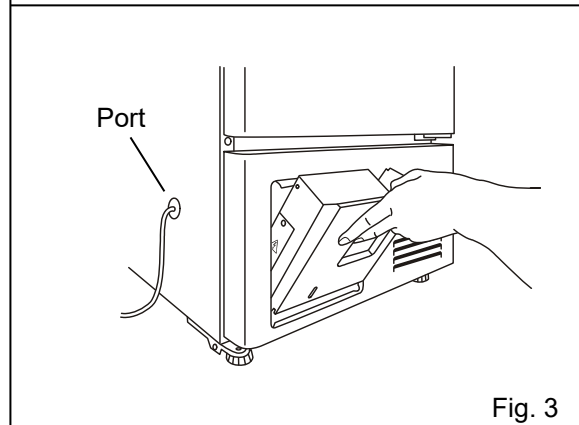
1. Remove a cap for the fixing screw on the panel cover for the space for a temperature recorder. Remove the fixing screw and open the panel cover. Remove the panel cover by pushing the shaft on both sides outward. [Fig. 1]



2. Attach the temperature recorder (MTR-4015LH) to the recorder fixing (MPR-S30) by referring to the instruction manual enclosed with the recorder fixing. [Fig. 2]



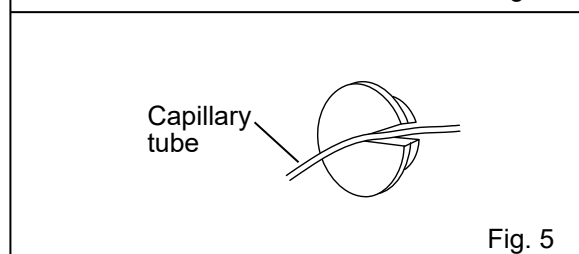
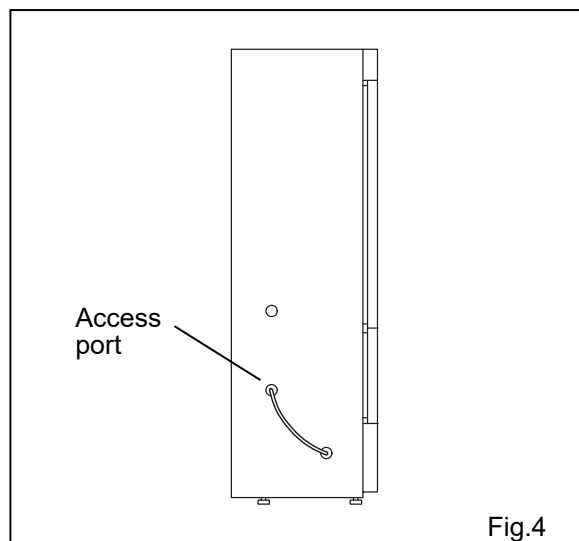
3. Remove the cap on the port for taking out the recorder sensor and take out the recorder sensor. Then set the temperature recorder with recorder fixing to the space for a temperature recorder. [Fig. 3]



OPTIONAL COMPONENT

4. Remove the caps (both outside and inside) covering the access port for freezer and take out the thermal insulation in the port. Pass the recorder sensor to the freezer through the access port [Fig. 4]. Then replace the thermal insulation and caps (both outside and inside). Also, replace the cap on the port for taking out the recorder sensor.

✧ Make a cut on the caps to pass the capillary tube as shown in the Fig. 5.

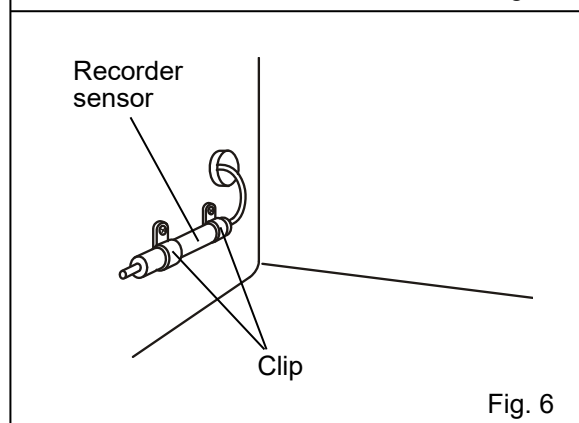


5. Fix the recorder sensor to the attachment hole on the left side of the freezer by using the middle size clips enclosed with the recorder fixture (MPR-S30) [Fig. 6].

6. Arrange the capillary tube so that it cannot contact the shelf.

✧ Care should be taken for the following points to avoid the crush of the tube when bending the capillary tube.

- Do not bend the capillary tube for 30 mm from the edge of the sensor.
- Do not bend and extend the capillary tube repeatedly at the same point.
- The bending should be R10~R15.



7. Operate the unit until the freezer temperature gets to the set temperature. Check the recorded temperature and freezer temperature displayed on the control panel. Adjust the zero adjustment volume on the temperature recorder so that the recorded temperature can corresponds with the displayed temperature if they are not compliance each other.

OPTIONAL COMPONENT

Installation of MTR-G3504A or MTR-G3504C

1. Remove a cap for the fixing screw on the panel cover for the space for a temperature recorder. Remove the fixing screw and open the panel cover. Remove the panel cover by pushing the shaft on both sides outward. [Fig. 1]

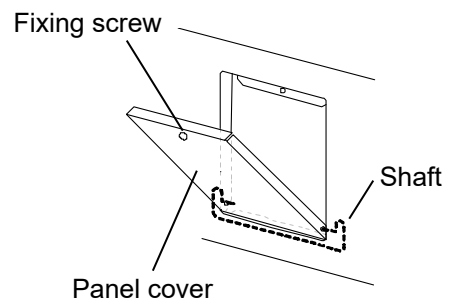


Fig. 1

2. Attach the temperature recorder (MTR-G3504A or MTR-G3504C) to the recorder fixing (MPR-S7) by referring to the instruction manual enclosed with the recorder fixture. [Fig. 2]

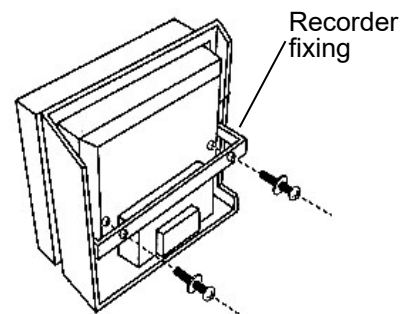


Fig. 2

3. Remove the connector cover on the unit by pushing the lock under the cover. Connect the power supply connector of the temperature recorder with the connector on the unit. [Fig.3]



WARNING

Always disconnect the power supply to the unit to prevent electric shock or injury since the connector on the unit is energized.

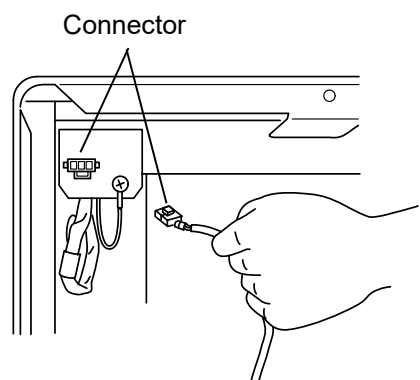


Fig. 3

4. Remove the cap on the port for taking out the recorder sensor and take out the recorder sensor. Then set the temperature recorder with the recorder fixing to the space for a temperature recorder. [Fig. 4]

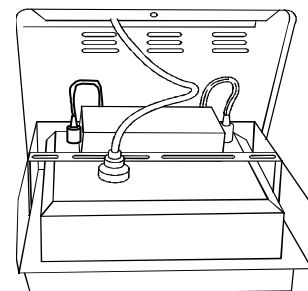


Fig. 4

OPTIONAL COMPONENT

5. Remove the caps (both outside and inside) covering the access port for refrigerator and freezer and take out the thermal insulation in the port. Pass the recorder sensor to the chamber through each port [Fig. 5]. Then replace the thermal insulation and caps (both outside and inside). Also, replace the cap on the port for taking out the recorder sensor.

✧ The identification label is adhered to the lead wire to distinguish between the sensor for refrigerator and for freezer.

✧ Make a cut on the caps for port to pass the lead wire as shown in the Fig. 6.

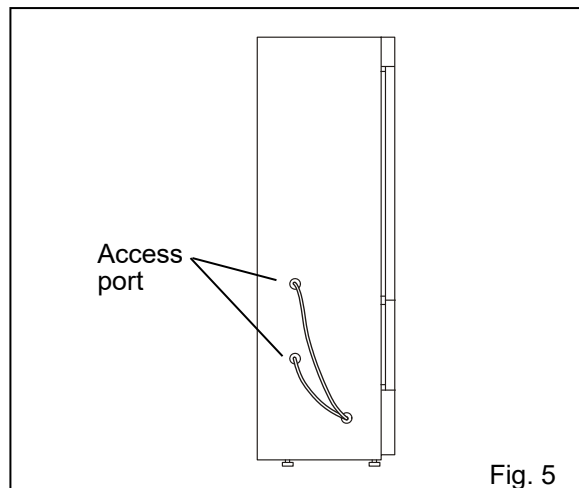


Fig. 5

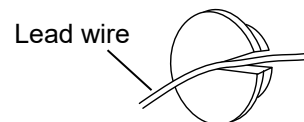


Fig. 6

6. Fix the recorder sensor for refrigerator to the attachment hole on the back side of the refrigerator by using the clips enclosed with the recorder fixture (MPR-S7) [Fig. 7].

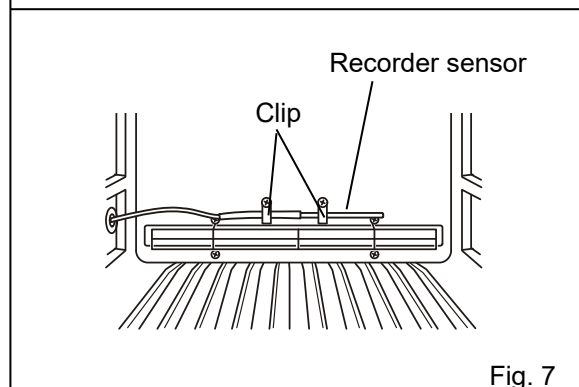


Fig. 7

7. Fix the recorder sensor for freeze to the attachment hole on the left side of the freezer by using the clips enclosed with the recorder fixture (MPR-S7) [Fig. 8].

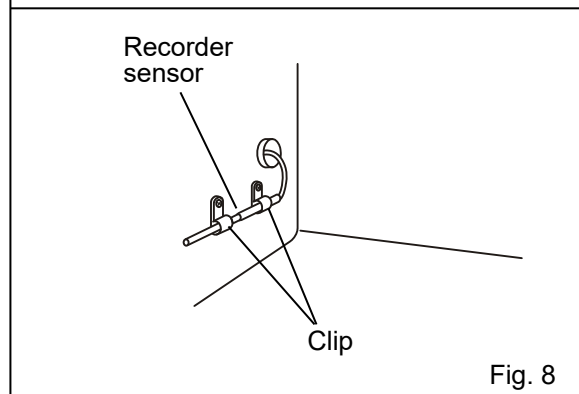


Fig. 8

8. Operate the unit until the chamber (refrigerator and freezer) temperature gets to the set temperature. Check the recorded temperature and chamber (refrigerator and freezer) temperature displayed on the control panel. Adjust the zero adjustment volume on the temperature recorder so that the recorded temperature can corresponds with the displayed temperature if they are not compliance each other.

SPECIFICATIONS

Product name		Pharmaceutical Refrigerator MPR-215F
External dimensions		W540 mm x D557 mm + (45)* mm x H1794 mm * projection
Internal dimensions		W455 mm x D466 mm x H917 mm <Refrigerator> W420 mm x D342 mm x H267 mm <Freezer>
Effective capacity		176 L (Refrigerator), 39 L (Freezer)
Exterior		Painted steel
Interior		Styrene resin (Refrigerator), Colored aluminum (Freezer)
Door		Painted steel, Provided with glass window (Refrigerator)
Insulation		Rigid polyurethane foamed-in place
Shelf	Refrigerator	Hard steel wire on polyethylene coating x 5, Allowable load; 20 kg/shelf Inner dimensions; W388 mm x D325 mm
	Freezer	Hard steel wire on polyethylene coating x 1, Allowable load; 10 kg/shelf Inner dimensions; W327 mm x D250 mm
Access port		Inner diameter; 30 mm, Left side (Refrigerator and Freezer)
Cooling method		Forced air circulation (Refrigerator), Direct cooling (Freezer)
Compressor		Hermetic reciprocating type, Output; 55 W x 2
Evaporator		Fin and tube type (Refrigerator), Tube on sheet type (Freezer)
Condenser		Wire and tube (Refrigerator), Frame pipe (Freezer)
Refrigerant		R-513A: MPR-215F-PA only, R-134a (HFC-134a): other model
Defrosting		Cycle defrost and forced defrost (Refrigerator) Natural defrost by stopping operation (Freezer)
Defrost heater		46.3 W (Refrigerator)
Temperature controller		Electronic control system
Temperature display		Digital display (in 1 °C increments)
Thermal sensor		Thermister sensor
Alarms		High temp. alarm, Low temp. alarm, 0 °C alarm (Refrigerator only), Door alarm, Power failure alarm (remote alarm only)
Safety functions		Over-heat protection (Refrigerator only), Over-cool protection (Refrigerator only), Key lock, Auto-return
Self diagnostic		Thermal sensor abnormality, Fan motor check
Memory backup		Nonvolatile memory
Lamp		Incandescent lamp (T22 E17) 110 V or 125 V, 10 W x 1 (Refrigerator)
Weight		86 kg
Accessories		1 set of key, 2 large clips (for temperature recorder)
Optional components		Temperature recorder for refrigerator (MTR-0621LH) Temperature recorder for freezer (MTR-4015LH) Recorder fixing for MTR-4015LH (MPR-S30) Temperature recorder for refrigerator & freezer (MTR-G3504A or MTR-G3504C) Recorder fixing for MTR-G3504 or MTR-G3504C(MPR-S7) Interface board (MTR-480, MTR-L03)*

✧ Design or specifications will be subject to change without notice.

✧ Refer to the updated catalog when ordering an optional component.

* For the data acquisition system MTR-5000 user only.

It is recommended to use cables with a maximum length of 30 meters.

PERFORMANCE

Product name	Pharmaceutical Refrigerator MPR-215F			
Model number	MPR-215F-PT	MPR-215F-PA	MPR-215F-PK MPR-215F-PR	MPR-215F-PE
Temperature control range	Refrigerator: between 2 °C and 14 °C (ambient temp.; -5 °C to 30 °C, no load) Freezer: between -20 °C and -30 °C (ambient temp.; -5 °C to 30 °C, no load)			
Noise level	35 dB/36 dB (A scale) (50 Hz/60 Hz)			
Maximum pressure	1900 kPa			
Rated voltage	AC 110 V	AC 115 V	AC 220 V	AC 220 V/230 V/240 V
Rated frequency	60 Hz	60 Hz	60 Hz	50 Hz
Power consumption	175 W	260 W	170 W	155 W
Usable condition	-5 °C to 30 °C, 80 % R.H. or less			

- ✧ The above data is measured based on our internal basis.
- ✧ Design or specifications will be subject to change without notice.
- ✧ The unit with CE mark complies with EU directives.

CAUTION

**Please fill in this form before servicing.
Hand over this form to the service engineer to keep for his and your safety.**

Safety check sheet

1. Unit contents:

Risk of infection: ☐Yes ☐No

Risk of toxicity: ☐Yes ☐No

Risk from radioactive sources: ☐Yes ☐No

(List all potentially hazardous materials that have been stored in this unit.)

Notes:

2. Contamination of the unit:

Unit interior:

No contamination: ☐Yes ☐No

Decontaminated: ☐Yes ☐No

Contaminated: ☐Yes ☐No

Others:

3. Instructions for safe repair/maintenance/disposal of the unit

a) The unit is safe to work on ☐Yes ☐No

b) There is some danger (see below) ☐Yes ☐No

Procedure to be adhered to in order to reduce safety risk indicated in b) below.

Date:

Signature:

Address, Division:

Telephone:

Product name:
Pharmaceutical
Refrigerator

Model:
MPR-

Serial number:

Date of Installation:

Please decontaminate the unit yourself before calling the service engineer.

PHC Corporation

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