PROTECT THE ENVIORNMENT FROM E-WASTE (GUIDELINES)

Meaning of E-waste under E-waste (Management) Rules, 2022 (E-waste rules) - Waste, electrical and electronic equipment, whole or in part of reject from their manufacturing and repair process, which are intended to be discarded.

Our product is RoHS compliant.

Don’t dump, electrical and electronic products in garbage bins.

DO'S & DONT'S

DO'S	
Run and maintain the air-conditioner as per the instructions given in the operation/instruction manual	✓
Ensure that an authorised person repairs your air-conditioner	✓
Call our local authorised dealer or our toll-free number to dispose your air-conditioner	✓
Contact an authorised dealer in case or installation or de-installation	✓
Consult our local authorised dealer or our toll free number on the lifespan of the air-conditioner	✓

DONT'S	
Do not try to repair your air conditioner on your own	×
Do not sell or dispose your air-conditioner or parts to an unauthorised Kabaadi Wala/Scrap dealer/Rigpickers.	×
Do not dismantle your air-conditioner on your own.	×
Do not get your air conditioner or any parts repaired by an unauthorised person.	×
Do not dispose off the E-waste in landfills.	×
Do not use the air-conditioner as furniture after its use	×

Customer contact number: 011–4031 9300/1860–180–3900

For further information, visit us at www.daikinindia.com

DAIKIN

OPERATION MANUAL

VRV IV System air conditioner

RXMQ4BRV16
RXMQ5BRV16
RXRQ4BRV16
RXRQ5BRV16
RXRQ6BRV16
RXYMQ4BRV16
RXYMQ5BRV16
RXYRQ4BRV16
RXYRQ5BRV16
RXYRQ6BRV16
RXMQ4BRV1
RXMQ5BRV1

Thank you for purchasing this Daikin air conditioner.

Carefully read this operation manual before using the air conditioner.
It will tell you how to use the unit properly and help you if any trouble occurs.
Use it along with the operation manual for the indoor unit. After reading the manual,
le it away for future reference.

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Safety precaution

To gain full advantage of the air conditioner's functions and to avoid malfunction due to mishandling, we recommend that you read this instruction manual carefully before use.
Read the precautions thoroughly to avoid misuse of the equipment.
This air conditioner is classified under "appliances not accessible to the general public".

- **The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.**

There are two kinds of safety precaution and tips listed in the following.

⚠ WARNING	⚠ CAUTION
Failure to follow these instructions properly may result in personal injury or loss of life.	Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

- **After reading, keep this manual in a convenient place so that you can refer to it whenever necessary. If the equipment is transferred to a new user, be sure also to hand over the manual.**

⚠ WARNING

- **Be aware that prolonged, direct exposure to cool or warm air from the air conditioner, or to air that is too cool or too warm can be harmful to your physical condition and health.**
- **When the air conditioner is malfunctioning (giving off a burning odour, etc.) turn off power to the unit and contact your local dealer.**
  Continued operation under such circumstances may result in a failure, electric shocks or fire hazards.
- **Consult your local dealer about installation work.**
  Doing the work yourself may result in water leakage, electric shocks or fire hazards.
- **Consult your local dealer regarding modi cation, repair and maintenance of the air conditioner.**
  Improper workmanship may result in water leakage, electric shocks or fire hazards.
- **Do not place objects, including rods, your ngers, etc., in the air inlet or outlet.**
  Injury may result due to contact with the air conditioner's high speed fan blades.
- **Never touch the air outlet or the horizontal blades while the swing flap is in operation.**
  Fingers may become caught or the unit may break down.
- **Beware of fire in case of refrigerant leakage.**
  If the air conditioner is not operating correctly, i.e. not generating cool or warm air, refrigerant leakage could be the cause.
  Consult your dealer for assistance.
  The refrigerant within the air conditioner is safe and normally does not leak.
  However, in the event of a leakage, contact with a naked burner, heater or cooker may result in generation of noxious gas.
  Do not longer use the air conditioner until a qualified service person confirms that the leakage has been repaired.
- **Consult your local dealer regarding what to do in case of refrigerant leakage.**
  When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage. Otherwise, this may lead to an accident due to oxygen depletion.
- **Contact professional personnel about attachment of accessories and be sure to use only accessories specified by the manufacturer.**
  If a defect results from your own workmanship, it may result in water leaks, electric shock or fire.
- **Consult your local dealer regarding relocation and reinstallation of the air conditioner.**
  Improper installation work may result in leakage, electric shocks or re hazards.

⚠ WARNING

- **Be sure to use fuses with the correct ampere reading.**
  Do not use improper fuses, copper or other wires as a substitute, as this may result in electric shock, fire, injury or damage to the unit.
- **Be sure to earth the unit.**
  Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shocks or fire.
  A high surge current from lightning or other sources may cause damage to the air conditioner.
- **Be sure to install an earth leakage breaker.**
  Failure to install an earth leakage breaker may result in electric shocks or fire.
- **Consult the dealer if the air conditioner submerges owing to a natural disaster, such as a flood or typhoon.**
  Do not operate the air conditioner in that case, or otherwise a malfunction, electric shock, or fire may result.
- **Do not start or stop operating the air conditioner with the power supply breaker turned ON or OFF.**
  Otherwise, fire or water leakage may result.
  Furthermore, the fan will rotate abruptly if power failure compensation is enabled, which may result in injury.
- **Do not use the product in the atmosphere contaminated with oil vapor, such as cooking oil or machine oil vapor.**
  Oil vapor may cause crack damage, electric shocks, or fire.
- **Do not use the product in places with excessive oily smoke, such as cooking rooms, or in places with ammable gas, corrosive gas, or metal dust.**
  Using the product in such places may cause fire or product failures.
- **Do not place burners or heaters in places exposed to the airflow from the unit as this may impair combustion of the burner or heather.**
- **Do not use flammable materials (e.g., hairspray or insecticide) near the product.**
  Do not clean the product with organic solvents such as paint thinner.
  The use of organic solvents may cause crack damage to the product, electric shocks, or fire.
- **Be sure to use a dedicated power supply for the air conditioner.**
  The use of any other power supply may cause heat generation, fire, or product failures.
- **Consult your dealer regarding cleaning the inside of the air conditioner.**
  Improper cleaning may cause breakage of plastic parts, water leakage and other damage as well as electric shocks.

⚠ CAUTION

- **Do not use the air conditioner for purposes other than those for which it is intended.**
  Do not use the air conditioner for cooling precision instruments, food, plants, animals or works of art as this may adversely affect the performance, quality and/or longevity of the object concerned.
- **Do not remove the indoor/outdoor unit's fan guard.**
  The guard protects against the unit's high speed fan, which may cause injury.
- **Do not place objects that are susceptible to moisture directly beneath the indoor or outdoor units.**
  Under certain conditions, condensation on the main unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping, resulting in fouling or failure of the object concerned.
- **To avoid oxygen depletion, ensure that the room is adequately ventilated if equipment such as a burner is used together with the air conditioner.**
- **After prolonged use, check the unit stand and its mounts for damage.**
  If left in a damaged condition, the unit may fall and cause injury.
- **Do not place flammable sprays or operate spray containers near the unit as this may result in fire.**
- **Before cleaning, be sure to stop unit operation, turn the breaker off or remove the power cord.**
  Otherwise, an electric shock and injury may result.
- **To avoid electric shocks, do not operate with wet hands.**
- **Do not place appliances that produce naked flames in places exposed to the airflow from the unit as this may impair combustion of the burner.**
- **Do not place heaters directly below the unit, as resulting heat can cause deformation.**

Safety precaution

⚠ CAUTION

- **Do not allow a child to mount on the outdoor unit or avoid placing any object on it.**
  Falling or tumbling may result in injury.
- **Do not sit or place objects on the outdoor unit.**
  Falling yourself or falling objects could cause injury.
- **Do not block air inlets or outlets.**
  Impaired airflow may result in insuffcient performance or trouble.
- **Be sure that children, plants or animals are not exposed directly to airflow from the unit, as adverse effects may ensue.**
- **Do not wash the air conditioner or the remote controller with water, as this may result in electric shocks or fire.**
- **Do not install the air conditioner at any place where there is a danger of flammable gas leakage.**
  In the event of a gas leakage, build-up of gas near the air conditioner may result in re hazards.
- **Do not place flammable sprays near the unit as this can cause explosions.**
- **Arrange the drain hose to ensure smooth drainage.**
  Imperfect drainage may cause wetting of the building, furniture etc.
- **Arrange the drain to ensure complete drainage.**
  If proper drainage from the outdoor drain pipe does not occur during air conditioner operation, there could be a blockage due to dirt and debris build-up in the pipe. This may result in a water leakage from the indoor unit. Under these circumstances, stop air conditioner operation and consult your dealer for assistance.
- **The appliance is not intended for use by unattended young children or infirm persons.**
  Impairment of bodily functions and harm to health may result.
- **Children should be supervised to ensure that they do not play with the unit or its remote controller.**
  Accidental operation by a child may result in impairment of bodily functions and harm health.
- **Do not let children play on or around the outdoor unit.**
  If they touch the unit carelessly, injury may be caused.
- **Do not place water containers (ower vases, etc.) on the unit, as this may result in electric shocks or fire.**
- **To avoid injury, do not touch the air inlet or aluminium fins of the unit.**
- **Never press the button of the remote controller with a hard, pointed object.**
  The remote controller may be damaged.
- **Do not operate the air conditioner when using a room fumigation type insecticide.**
  Fumigation chemicals deposited in the unit could endanger the health of those who are hypersensitive to such chemicals.
- **Do not place objects in direct proximity of the outdoor unit and do not let leaves and other debris accumulate around the unit.**
  Leaves are a hotbed for small animals which can enter the unit. Once in the unit, such animals can cause malfunctions, smoke or fire when making contact with electrical parts.
- **Never touch the internal parts of the controller.**
  Do not remove the front panel. Touching certain internal parts will cause electric shocks and damage to the unit. Please consult your dealer about checking and adjustment of internal parts.
- **Do not leave the remote controller wherever there is a risk of wetting.**
  If water gets into the remote controller there is a risk of electrical leakage and damage to electronic components.
- **Turn off the main power switch when the air conditioner is not to be used for prolonged periods.**
  When the main power switch is left on, some electric power (watts) is still consumed even if the air conditioner is not operating. Therefore, switch off the main power switch to save energy. When resuming operation, to ensure smooth running, turn on the main power switch 6 hours before operating the air conditioner again.
- **Watch your steps at the time of air filter cleaning or inspection.**
  High-place work is required, to which utmost attention must be paid.
  If the scaffold is unstable, you may fall or topple down, thus causing injury.
- **Ensure that the remote controller is not exposed to direct sunlight.**
  This will cause discoloration of the LCD display with resulting loss of readability.
- **Do not wipe the controller panel with benzene or other organic solvent.**
  This will cause discoloration and/or peeling. If the panel needs cleaning, use a damp cloth with some water-diluted neutral detergent. Wipe with a dry cloth afterwards.
- **Do not pull or twist the remote controller cord.**
  This may cause malfunctioning.
- **Take care of scaffolding and exercise caution when working high above ground level.**
- **Do not operate with the control panel lid open.**
  If water gets inside the panel, it may result in equipment failure or electric shock.
- **Arrange the drain hose to ensure smooth drainage.**
  Imperfect drainage may cause wetting.

Names of parts

Installation site

- **Install the air conditioner in a well-ventilated place that is free of obstructions**
- **Do not use the air conditioner in the following kinds of places:**
  a. Where there is considerable use of mineral oil such as cutting oil
  b. Where there is much salt such as a beach area
  c. Where there is sulphur gas such as in a hot-spring resort
  d. Where there are considerable voltage fluctuations such as a factory
  e. Where there are motor vehicles or marine vessels
  f. Where there is considerable atmospheric oil such as in cooking areas
  g. Where there are machines generating electromagnetic radiation
  h. Where the air contains acidic or alkaline steam or a vapour
- **Protection against snow**
  For details, consult your dealer.

Regarding wiring

- **All wiring must be performed by an authorized electrician.**
  Always consult your dealer about wiring. Never do it by yourself.
- **Only use the dedicated power supply circuit provided for this air conditioner.**

Also pay attention to operating noise.

- **Select the following kinds of location:**
  a. A place that can sufficiently withstand the weight of the air conditioner with less running noises and vibrations.
  b. A place where warm airflow from the air outlet of the outdoor unit and operating noise do not cause a nuisance to neighbours.
- **Be sure there are no obstructions near the air outlet of the outdoor unit.**
- **Obstructions may result in poor performance and increased operating noise.**
  If abnormal noise occur, ask your dealer for advice.

System relocation

- Consult your Daikin dealer about remodelling and relocation.

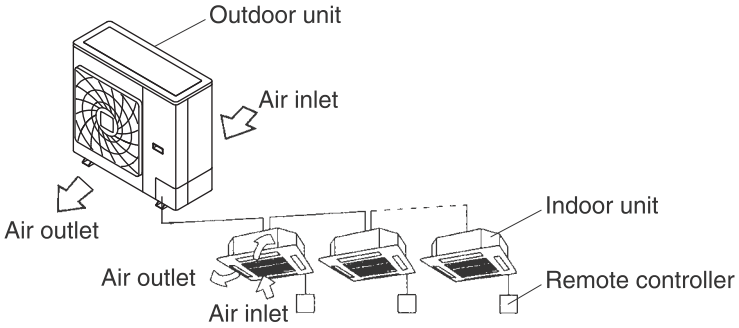
This operation manual is for the following systems with standard control. If your installation has a customized control system, ask your Daikin dealer for the operation that corresponds your system.
BEFORE INSTALLATION, CONTACT YOUR DAIKIN DEALER TO CONFIRM YOUR SYSTEM TYPE.
Picture depicted in this manual are for representation only.
The system provides 4 operation modes,

Operation modes
(Cooling), (Heating), (Dry) and (Fan).

ATTENTION:

- To protect the unit, turn on the main power switch 6 hours before operation.

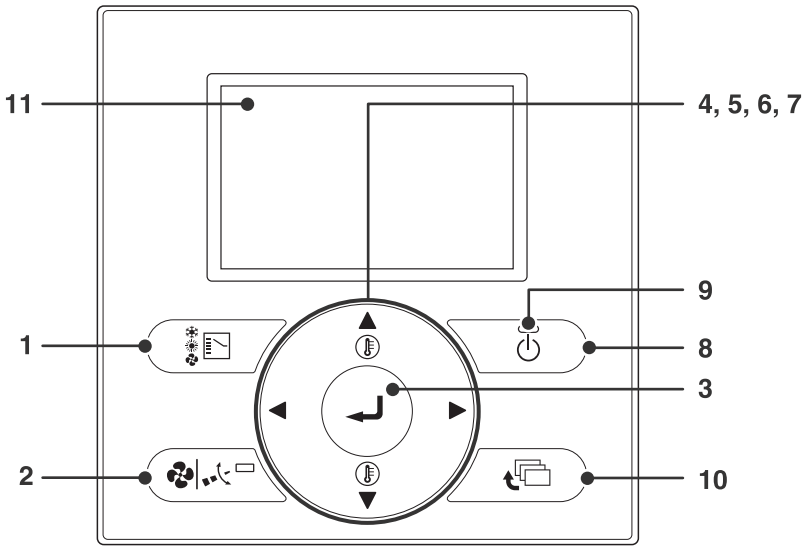
■ **System**



- For the models having heating functions.

Names of parts

■ **Remote Controller**



BRC1E62

NOTE :
This manual describe only for BRC1E62.
For other remote controllers, please see the operation manuals attached to them.

1	**Mode Selector button** Use to select the operation mode of your preference. **(Refer to page 7 - 9.)** * Available modes vary with the connecting model.	6	**Right button " ▶ "** • Used to highlight the next items on the right-hand side. • Display contents are changed to next screen per page. * Be sure to press the part with the symbol " ▶ "
2	**Airflow Setting button** Used to indicate the Airflow Rate (Airflow level/Fan Speed)/ Airflow Direction screen. **(Refer to page 10.)** * Available fan speed and airflow direction vary with the connecting model.	7	**Left button " ◀ "** • Used to highlight the next items on the left-hand side. • Display contents are changed to previous screen per page. * Be sure to press the part with the symbol " ◀ "
3	**Menu/Enter button** • Used to indicate the Main Menu. • Used to enter the setting item selected.	8	**ON/OFF button** • Press this button and system will start. • Press this button again and system will stop.
4	**Up button " ▲ "** • Used to raise the set temperature. • Use to highlight the item above the current selection. (The highlighted items will be scrolled continuously when the button is kept pressed.) • Used to change the item selected. * Be sure to press the part with the symbol " ▲ "	9	**Operation lamp (Green)** • This lamp lights up during operation. • This lamp blinks if a malfunction occurs.
		10	**Cancel button** Used to return to the previous screen.
5	**Down button " ▼ "** • Used to lower the set temperature. • Use to highlight the item below the current selection. (The highlighted items will be scrolled continuously when the button is kept pressed.) • Used to change the item selected. * Be sure to press the part with the symbol " ▼ "	11	**LCD (with backlight)** • The backlight will be lit for approximately 30 seconds by pressing any operation button. Press the button while the backlight is lit. (Excluding the ON/OFF button) • If 2 remote controllers are used to control a single indoor unit, the backlight of the remote controller accessed first will be lit.

Preparation Before Operation

■ **Tips for saving energy**

- Be careful not to cool (heat) the room too much.
  Keeping the temperature setting at a moderate level helps save energy.
- Cover windows with a blind or a curtain.
  Blocking sunlight and air from outdoors increases the cooling (heating) effect.

Recommended temperature setting	
For cooling	26 to 28 °C
For heating	20 to 24 °C

■ **Operation range**

If the temperature or the humidity is beyond the following conditions, safety devices may work and the air conditioner may not operate, or sometimes, water may drop from the indoor unit.

Cooling

INDOOR			OUTDOOR TEMPERATURE	
TEMPERATURE		HUMIDITY		
DB	21 to 32 °C	80% or below (Long time operation in a humidity over 80% may cause condensation on the unit and dripping.)	DB	–5 to 46 °C
WB	14 to 25 °C			

DB: Dry bulb temperature WB: Wet bulb temperature

The setting temperature range of the remote controller is 16°C to 32°C.

For the models having heating functions

Heating

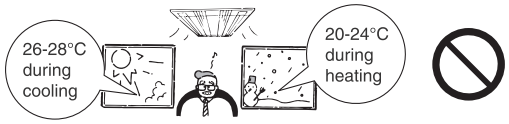
INDOOR TEMPERATURE		OUTDOOR TEMPERATURE	
DB	15 to 27 °C	DB	–20 to 21 °C**
		WB	–20 to 15.5 °C**

**–20~–15°CWB: Range for operation
–15~15.5°CWB: Range for continuous operation

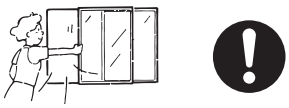
Useful Information

Observe the following precautions to ensure the system operates properly.

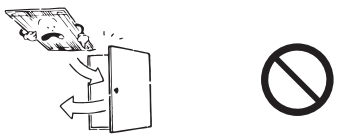
- **Set the room temperature appropriately.**
  Take care not to cool or heat the room excessively.
  Adjust the temperature so that everyone in the room is comfortable.



- **Ventilate the room from time to time.**
  Be sure to ventilate the room after using the air conditioner for a long time.



- **Do not leave the door or window open.**
  The air will be released, and the effect of cooling/heating will be reduced.

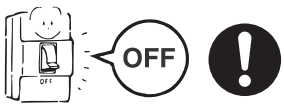


- **Do not allow direct sunshine to enter the room during the cooling operation.**
  Hang a curtain or blind to the window to prevent direct sunshine.

- **Keep televisions, radios or stereo equipment at least 1 meter from the indoor unit or remote controller.**
  Otherwise, picture disturbance or noise may result.

- **Use flow direction adjustment skillfully.**
  Cold air collects toward the oor and hot air collects toward the ceiling. Therefore, for cooling, set the air ow horizontally, and for heating, set the air ow downward. Also, set the airflow so that it does not blow directly on your body.

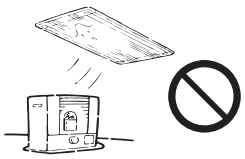
- **Turn off the power when the air conditioner is not used for a long time.**
  With the power on, the air conditioner will consume several to several tends of watts of power (*1)



NOTE

*1 The power consumption while the equipment is stopped varies with the type of outdoor unit, etc. Consult your dealer for further details on power consumption.

- **Do not use and room heater under the indoor unit.**
  Heat may deform the indoor unit of suction grille.



- **Do not place things near the air outlet or air inlet.**
  Such obstacles may lower the performance of the air conditioner or make it stop.

- **When the display shows “ ” (TIME TO CLEAN AIR FILTER), refer to the instruction manual of the indoor unit, and clean the air lter.**

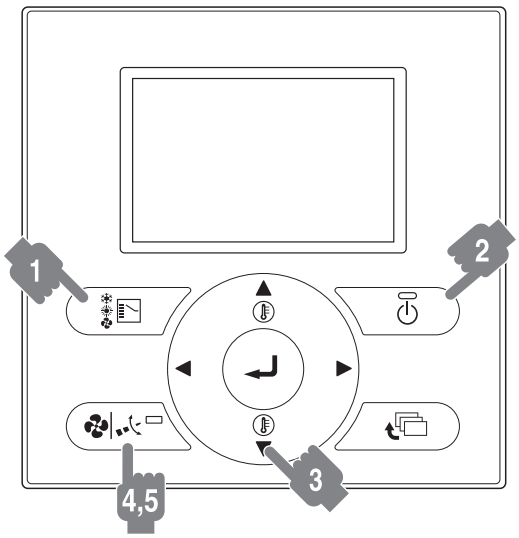
- **Use timer operation effectively.**
  It takes time for the room temperature to reach the set temperature. Therefore, use timer operation to start the air conditioner ahead of time.

Cooling · Heating · Fan Operation

This operation manual describes the explanation for a case in which the wired remote controller is used.
When using the wireless remote controller, refer to the attached operation manual.

- Changeover cannot be made with a remote controller whose display shows " " (changeover under master control).
- When the display " " (changeover under master control) ashes, refer to page 12.
- For protecting the mechanism, supply the power for 6 hours at first , then operate the air conditioner.

BRC1E62



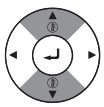
1. Press mode selector button several times and select the operation mode of your choice as follows.

Cooling Operation....." ☀ " Heating Operation....." ☀ " Fan Operation....." "

2. Press ON/OFF button.
Operation lamp lights up and the system starts operation.

ADJUSTMENT

3. Press temperature setting button and program the setting temperature.

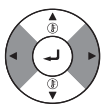


Each time this button is pressed,
the temperature setting rises or lowers 1°C.

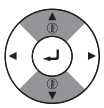
NOTE:

- Set the temperature within the operation range shown in the table on page 6.
- The temperature cannot be set in the fan operation.

4, 5. Press airflow setting button.



To select air level or direction setting,
press " ◀ ▶ " buttons.



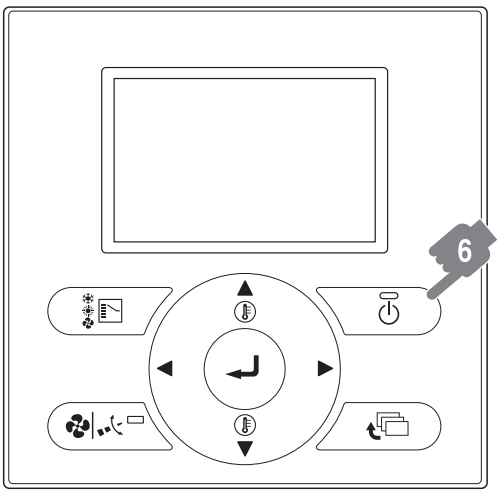
- With air level selected, use " ▼▲ " buttons.
- With direction selected, use " ▼▲ " buttons.

NOTE:

- In the heating operation, the fan stops during defrosting or at start up. It does not indicate any abnormality.
- Refer to page 10 for airflow direction adjust (only for FXCQ, FXFQ, FXHQ, FXAQ).
- For the models having heating functions.

Cooling · Heating · Fan Operation

BRC1E62



STOPPING THE SYSTEM

6. Press ON/OFF button once again.

- Operation lamp goes off, and the system stops operation.
- The fan may keep on running for about 1 minute after the heating operation stops. (To start the next operation smoothly.)

ATTENTION:

- Do not turn off power immediately after the unit stops. Then, wait no less than 5 minutes. Water is leaking or there is something else wrong with the unit.
- When the operation is started again immediately after being stopped, when the operation mode is changed over, or when the temperature setting button is pressed then returned soon, the air conditioner will start the operation automatically about 5 minutes later (because the air conditioner is controlled so that excessive load is not applied).
- For the models having heating functions.

Characteristics of the heating operation

(1) Defrost operation

- As the frost on the coil of an outdoor unit increase, heating effect decreases and the system goes into defrost operation.
- The indoor unit fan stops and the remote controller displays shows " " (Defrost/Hot start).
- After 6 to 8 minutes (maximum 10 minutes) of defrost operation, the system returns to heating operation.

(2) Hot start

- In order to prevent cold air from blowing out of an indoor unit at the start of heating operation, the indoor fan is automatically stopped. The display of the remote controller shows " " (Defrost/Hot start).

(3) Operation start

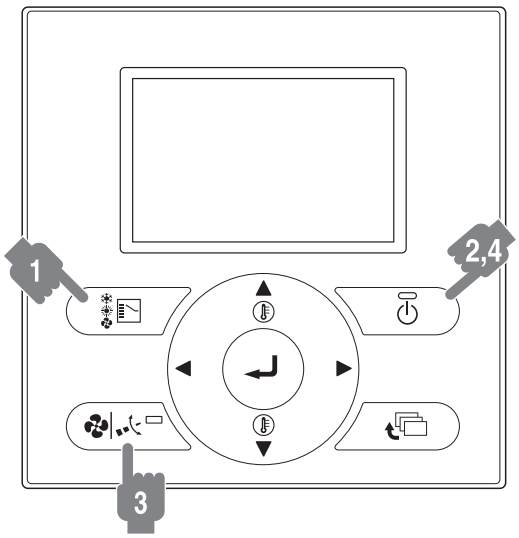
- For ordinary heating, it will take longer for the room temperature to reach the set temperature than with cooling. We therefore recommend starting the unit ahead of time using the timer operation.

Program Dry Operation

Program dry is a function that alternates between weak cooling and stopping the unit to remove humidity from the air, in order to prevent the room temperature from dropping and becoming too cold.

- The microcomputer automatically controls the temperature and fan strength, so these cannot be set using the remote controller.
- This function is not available if the room temperature is 16°C or lower.

BRC1E62



1. **Press mode selector button several times and select " " (Program Dry Operation).**
2. **Press ON/OFF button.**
   Operation lamp lights up and system starts operation.

ADJUSTMENT

3. **Press airflow setting button.** (only for FXCQ, FXFQ, FXHQ, FXAQ)
   Refer to page 10 for details.

STOPPING THE SYSTEM

4. **Press ON/OFF button again.**
   Operation lamp goes off, and the system stops operation.

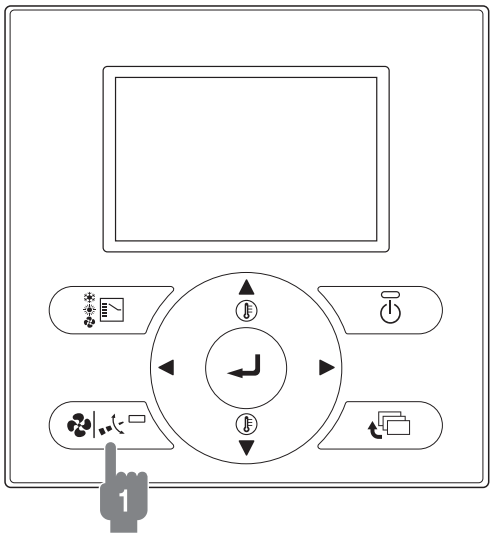
ATTENTION:

- Do not turn off power immediately after the unit stops. Then, wait on no less than 5 minutes. Water is leaking or there is something else wrong with the unit.

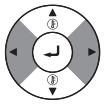
Adjusting the Airflow Direction

- Press the airflow setting button to adjust the airflow angle. (only for FXCQ, FXFQ, FXHQ, FXAQ)

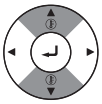
BRC1E62



1. Press airflow setting button



To select air level or direction setting, press " ◀ ▶ " buttons.



With direction selected, use " ▼ ▲ " buttons.

Movement of the airflow flap

For the following conditions, microcomputer controls the airflow direction so it may be different from the display.

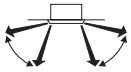
Operation mode	Cooling	Heating
Operation conditions	• When room temperature is lower than the set temperature • When continuous operation with downward airflow is performed at the time of cooling with a ceiling-suspended or a wall-mounted unit, the microcomputer may control the flow direction, and then the user interface indication will also change.	• When room temperature is higher than the set temperature • At defrost operation
	• When operating continuously at horizontal airflow direction	

The airflow direction can be adjusted in either of the following ways.

- Automatic
  The airflow flap adjusts its position itself.
- Fixed airflow direction
  The airflow direction can be fixed by the user.

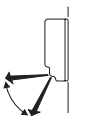
<Automatic>

FXCQ, FXFQ



FXHQ

FXAQ



<Fixed airflow direction>

FXCQ, FXFQ

FXHQ

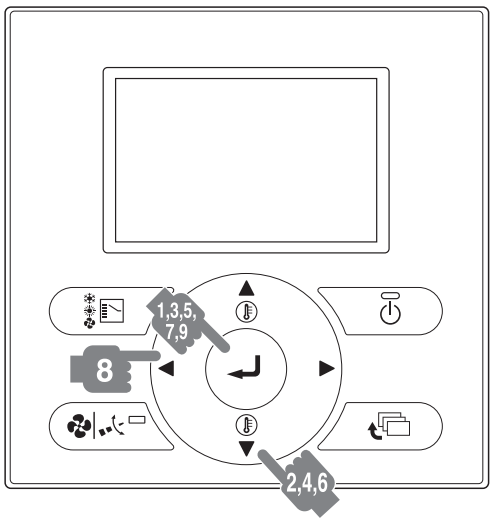
FXAQ

ATTENTION:

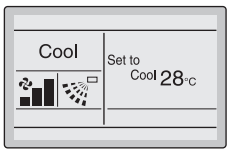
- The movable limit of the flap is changeable. Contact your Daikin dealer for details. (Only for FXCQ, FXFQ, FXHQ and FXAQ.)
- Avoid operating in the horizontal direction " ▪▪▪▭ " which may cause dew or dust to settle on ceiling.

OFF TIMER Operation

BRC1E62

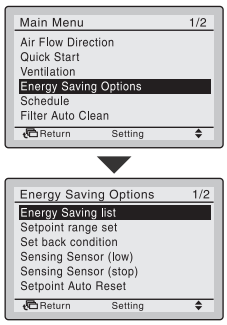


1. **Press Menu/Enter button.**

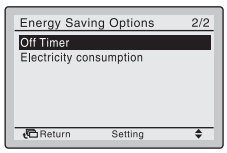


Basic screen

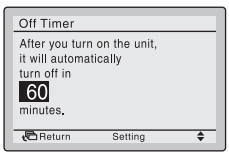
2. **Press " ▼▲ " buttons to select Energy Saving Options.**
3. **Press Menu/Enter button to display the Energy Saving Options screen.**



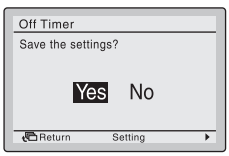
4. **Press " ▼▲ " buttons to select the Off Timer.**
5. **Press Menu/Enter button to display the Off Timer screen.**



6. **Press " ▼▲ " buttons to set the time from operation start until the unit automatically stops. Selections can be made in increments of 10 minutes from 30 to 180 minutes. Holding down the button causes the number to change continuously.**



7. **Select the desired time and press Menu/Enter button. The confirmation screen appear.**
8. **Press " ◀▶ " button to select Yes.**

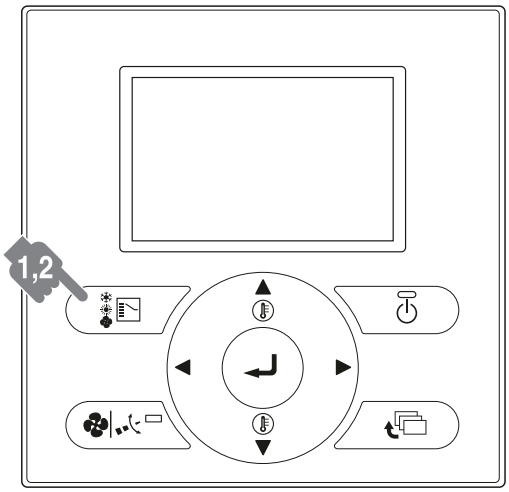


9. **Press Menu/Enter button to confirm the Off Timer settings and return to the Basic screen.**

How to set Master Remote Controller

- When the right to select the cooling/heating operation mode is set in the master remote controller, " [ ] " is displayed in slave remote controllers.
  The right to select the cooling/heating operation mode cannot be set in slave remote controllers.

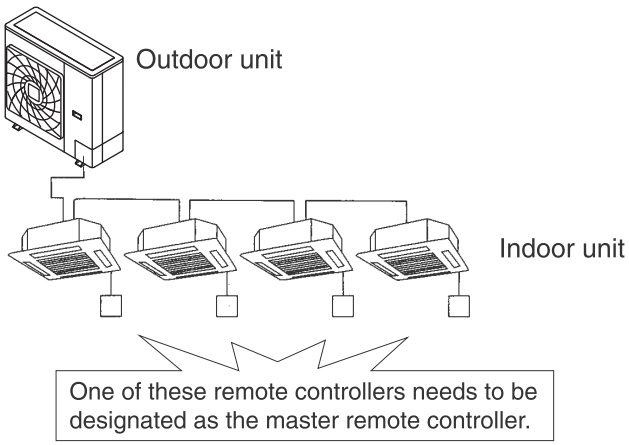
BRC1E62



Setting the master remote controller

- When the system is installed as shown below, it is necessary to designate the master remote controller.
- Only the remote controller having the right to select the cooling/heating operation mode (master remote controller) can select the cooling/heating operation mode.

When one outdoor unit is connected with several indoor units.



- The displays of slave remote controllers show " [ ] " (changeover under master control) and they automatically follow the operation mode directed by the master remote controller. (This symbol is not displayed in wireless remote controllers.)

However, it is possible to changeover to program dry with slave remote controller only if the system is in cooling operation set by the master remote controller.

How to designate the master remote controller

1. Press the mode selector button of the current master user interface for 4 seconds. In case this procedure was not yet performed, the procedure can be executed on the first user interface operated. The display showing " [ ] " (changeover under master control) of all slave user interfaces connected to the same outdoor unit ashes.
2. Press the mode selector button of the controller that you wish to designate as the master user interface. Then designation is completed.
   This user interface is designated as the master user interface and the display showing " [ ] " (changeover under master control) vanishes. The displays of other user interfaces show " [ ] " (changeover under master control).

In the case of wireless remote controllers

1. **Continuously press the mode selector button of the current master indoor unit for 4 seconds.**
   The timer lamp ashes in all indoor units connected to the same outdoor unit.
2. **Press the mode selector button of the indoor unit that you wish to designate as the master indoor unit.**
   A "beep" sound is issued, and the timer lamp turns off. This indoor unit is designated as the master unit.
3. **Press the mode selector button of the master indoor unit several times, and select the operation mode that you wish.**
   Every time the mode selector button is pressed, the indication is changed over in the sequence "fan" → "dry" → "cooling" → "heating".
   The indication in other slave indoor unit is changed over while following up the indication in the master indoor unit.

Contents and functions of operation

1. When master remote controller (in which " [ ] " is not displayed) is set to "cooling" or "heating"

↓

Other slave remote controllers (in which " [ ] " is displayed)

- The operation mode is changed over to the mode selected in the master remote controller.

Display in slave remote controllers

1. The set temperature selected in the same mode at the previous time is displayed.
2. The initial setting is displayed.
   (When the mode is set for the first time.)

Cooling: 28°C	Heating: 22°C

- However, changeover to the fan operation and changeover from "cooling" to "dry" are available.

In the case of wireless remote controllers

When an operation mode different from the currently selected operation mode is selected in a slave remote controller, a long "beep" sound is issued to notify that the mode is in conflict.

2. When master remote controller (in which " [ ] " is not displayed) is set to "fan".

↓

Other slave remote controllers (in which " [ ] " is displayed)

- Only "fan" is available.

PRECAUTIONS FOR GROUP CONTROL SYSTEM OR TWO REMOTE CONTROLLER CONTROL SYSTEM

This system provides two other control systems beside individual control (one remote controller controls one indoor unit) system. Confirm the following if your unit is of the following control system type.

- **Group control system**
  One remote controller controls up to 16 indoor units. All indoor units are equally set.
- **Two remote controller control system**
  Two remote controllers control one indoor unit (in case of group control system, one group of indoor units). The unit is individually operated.

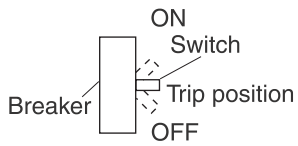
NOTE:

- Contact your Daikin dealer in case of changing the combination or setting of group control and two remote controller control systems.

Trouble Shooting

These cases are not troubles.

The following cases are not air conditioner troubles but have some reasons. You may just continue using it.

Case	Explanation
Does not operate at all.	• Check if the fuse has blown. Set power switch to off. • Check if breaker has worked. Turn the power on with the breaker switch in the off position. Do not turn the power on with the breaker switch in the trip position. (Contact your dealer.) • When the power is interrupted. Wait until the power is recovered, then operate the air conditioner again. The air conditioner automatically resumes operation in about 3 minutes. You should just wait for a while. 
Operation does not start soon. • When ON/OFF button was pressed soon after operation was stopped. • When the mode was reselected.	• This is to protect the air conditioner. You should wait for about 5 minutes. (The microcomputer is preparing for operation. Wait for about 10 minutes.)
Hot air does not flow out soon after the power supply is turned on.	• The air conditioner is warming up. You should wait for about 1 minute. (The system is designed to start discharging air only after it has reached a certain temperature.)
The heating operation stops suddenly and a flowing sound is heard.	• The system is taking away the frost on the outdoor unit. You should wait for about 3 to 8 minutes. (Max. 10 minutes). • This sound indicates that the valve for the refrigerant bypass is in operation.
A "Zeen" sound is heard immediately after the power supply is turned on.	• The electronic expansion* valve inside an indoor unit starts working and makes the noise. Its volume will reduce in about one minute. * Electronic expansion valve … Controls the flow rate of the gas (refrigerant) owing inside the indoor unit.
A continuous low "Shah" sound is heard when the system is in cooling operation or at a stop.	• When the drain pump (optional accessories) is in operation, this noise is heard.
A "Pishi-pishi" squeaking sound is heard when the system stops after heating operation.	• Expansion and contraction of plastic parts caused by temperature change makes this noise.
A low "Sah", "Choro-choro" sound is heard while an indoor unit has stopped.	• When the other indoor unit is in operation, this noise is heard. In order to prevent oil and refrigerant from remaining in the system, a small amount of refrigerant is kept flowing.
A continuous low "Shuh" sound is heard when the systems is in cooling or defrost operation.	• This is the sound of refrigerant gas flowing through both indoor and outdoor units.
A "Shuh" sound which is heard at the start or immediately after the stop of operation or which is heard at the start or immediately after the stop of defrost operation.	• This is the noise of refrigerant caused by flow stop and flow change.
When the tone of operating noise changes.	• This noise caused by the change of frequency.
A continuous "shuh" sound generated during operation or immediately after the operation is started or stopped.	• This sound indicates that the valve for the refrigerant bypass is in operation.
The outdoor unit emits water or steam.	■ In heating mode • The frost on the outdoor unit melts into water or steam when the air conditioner is in defrost operation. ■ In cooling or dry mode • Moisture in the air condenses into water on the cool surface of outdoor unit piping and drips.
Mists come out of the indoor unit.	• This happens when the air in the room is cooled into mist by the cold airflow during cooling operation. • If the inside of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the inside of the indoor unit. Ask your Daikin dealer for details on cleaning the indoor unit. This operation requires a quali ed service person.

Case	Explanation
The indoor unit gives out odour.	■ This happens when smells of the room, furniture, or cigarettes are absorbed into the unit and discharged with the airflow. (If this happens, we recommend you to have the indoor unit washed by a technician. Consult the service shop where you bought the air conditioner.)
The outdoor fan rotates while the air conditioner is not in operation.	■ After operation is stopped: • The outdoor fan continues rotating for another 60 seconds for system protection. ■ While the air conditioner is not in operation: • When the outdoor temperature is very high, the outdoor fan starts rotating for system protection.
The operation stopped suddenly. (operation lamp is on)	■ For system protection, the air conditioner may stop operating on a sudden large voltage fluctuation. It automatically resumes operation in about 3 minutes.
" [ ] " is displayed on the remote controller, and the displayed contents ash for several seconds when an operation button is pressed. When three short "beep" sounds are issued in the case of wireless remote controller.	• The air conditioner is controlled by the central equipment. Flashing of the displayed contents indicates that the remote controller is invalid for control.
COOL cannot be changed over. **• When the display shows " [ ] " (changeover under master control), it shows that this is a slave remote controller.** **When a long "beep" sound is issued in the case of wireless remote controller.**	• Refer to page 12.
The liquid crystal of the remote controller shows "88" immediately after the power supply is turned on.	• This shows that the remote controller is in normal condition. This continues for one minute.
The compressor in the outdoor unit does not stop after a short heating operation.	• This is to prevent oil and refrigerant from remaining in the compressor. The unit will stop after 5 to 10 minutes.
The inside of an outdoor unit is warm when the unit has stopped.	• This is because the crankcase heater is warming the compressor even while the outdoor unit is stopped so that the compressor can start smoothly.
When the air conditioner has not been used (the power has been off) for a long time.	• For protecting the mechanism, supply the power for 6 hours at first, then operate the air conditioner.
Warm air exits the unit even though it is off. You can feel hot air coming out of the unit.	• Multiple units are operating on the same system, so if a unit in another room is operating, some refrigerant will ow through the stopped units, too.

Call the service shop immediately.

⚠ WARNING

■ When an abnormality (such as a burning smell) occurs, stop operation and turn the breaker OFF. Continued operation in an abnormal condition may result in troubles, electric shocks or fire. Consult the service shop where you bought the air conditioner.

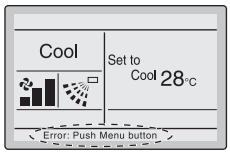
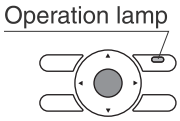
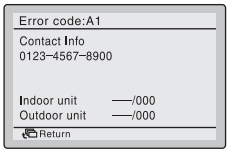
■ Do not attempt to repair or modify the air conditioner by yourself. Incorrect work may result in electric shocks or fire. Consult the service shop where you bought the air conditioner.

If one of the following symptoms takes place, call the service shop immediately.

■ The power cord is abnormally hot or damaged. **■ An abnormal sound is heard during operation.** **■ The safety breaker, a fuse, or the earth leakage breaker cuts off the operation frequently.** **■ A switch or a button often fails to work properly.** **■ There is a burning smell.** **■ Water leaks from the indoor unit.**	▶ Turn the breaker OFF and call the service shop.

■ After a power failure The air conditioner automatically resumes operation in about 3 minutes. You should just wait for a while.	■ Lightning If lightning may strike the neighbouring area, stop operation and turn the breaker OFF for system protection.

Check the following before requesting service

Symptom	Action and contact
Safety equipment such as fuses, circuit breakers, leakage breaker, etc. are set off occasionally.	Do not set power switch to on.
Operating switch function is not secure.	Set power switch to off.
Water leaks from the air conditioner.	Stop operation.
• If a malfunction occurs, either one of the following messages will appear on the Basic screen during operation. "Error: Push Menu button." * The Operation lamp will blink. "Warning: Push Menu button." * The Operation lamp will not blink.  	• Press Menu/Enter button. • The Error code blinks and the contact address and model name will appear. • Notify your local dealer of the Error code and Model name. 

Symptom	Cause	Remedy
The machine does not work at all.	Blown fuse or open breaker	Replace the fuse or close the breaker.
	Power outage	If the main power supply is turned off during operation, operation will restart automatically after power turns back again.
The machine runs but stops soon.	Blocked air inlet or air outlet of the indoor or outdoor unit	Remove the obstacle.
The machine does not work properly.	Blocked air inlet or air outlet of indoor or outdoor unit	Remove the obstacle.
	Improper temperature setting	See page 7.
	Low fan speed setting	See page 7.
	Improper airflow direction	See page 10.
	Window or door open	Close.
	Direct sunshine	Put up a curtain or blind over the window.
	Too many people in the room	–
	Too many heat sources in the room	
	If the air filter clogged.	Refer to the instruction manual of the indoor unit, and clean the air filter.

NOTE :

- Check the above items, and if the problem still cannot be fixed ,contact your dealer for repair, stating the symptom(s) and the model name.

After-Sales Service

⚠ CAUTION

- **Do not disassemble, modify or repair the air conditioner by yourself.**
  Improper disassembly, modification or repair may cause water leakage, electric shock or fire.
  Ask your dealer for such servicing.

- **Do not move and install the air conditioner by yourself.**
  Improper reinstallation may cause water leakage, electric shock or fire.
  Ask your dealer for reinstallation.

- **Objects which can start fire are strictly prohibited if the refrigerant leaks.**
  The refrigerant used in the air conditioner is safe, and does not leak usually.
  If the refrigerant leaks into the room and becomes contact with burning appliances such as fan heater, stove and cooker, however, harmful gases may be generated.
  Turn off burning appliances, ventilate the room, and contact your dealer.
  After asking for repair of refrigerant leakage, confirm to the service personnel that the leaking positions are repaired securely, then start the operation.

We recommend periodical maintenance

In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a specialist aside from regular cleaning by the user.
For specialist maintenance, contact the service shop where you bought the air conditioner.
The maintenance cost must be borne by the user.

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The two-dimensional bar code is a manufacturing code.

3P718365-1B

DAIKIN

2P718314-1D

INSTALLATION MANUAL (2)

Be sure to read this manual before installation and follow the instructions contained in it.

The two-dimensional bar code is a manufacturing code.

Installation location

[Precautions for side-by-side installation]

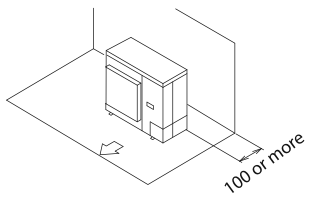
- In the figure below, the connection piping is led out from the front, the bottom, or the side. An interspace of over 100mm should be kept when installing side-by-side. To lead out the piping from the back, an interspace of over 250mm should be kept on the right side of the outdoor unit. (Unit : mm)

(A) Where there is an obstacle on the suction side:

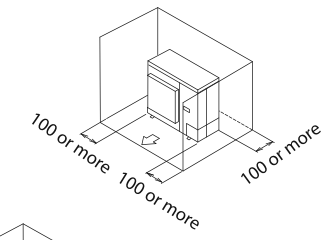
- No obstacle above

① Stand-alone installation

- Obstacle on the suction side only

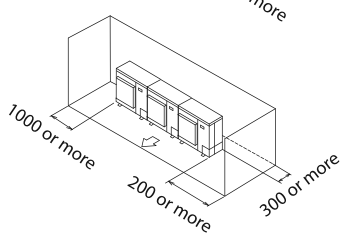


- Obstacle on both sides



② Series installation (2 or more)

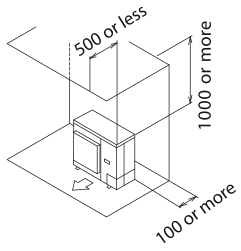
- Obstacle on both sides



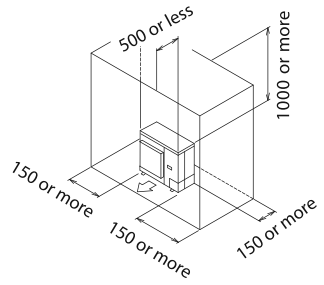
- Obstacle above, too

① Stand-alone installation

- Obstacle on the suction side, too

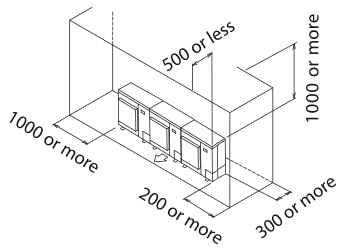


- Obstacle on the suction side and both sides



② Series installation (2 or more)

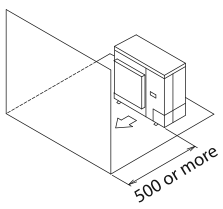
- Obstacle on the suction side and both sides



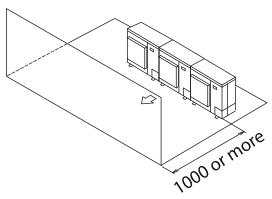
(B) Where there is an obstacle on the discharge side:

- No obstacle above

① Stand-alone installation

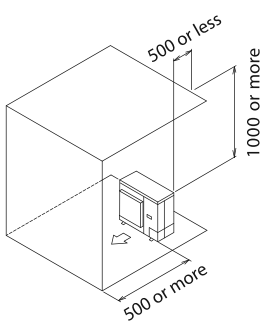


② Series installation (2 or more)

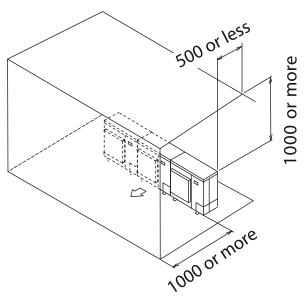


- Obstacle above, too

① Stand-alone installation



② Series installation (2 or more)

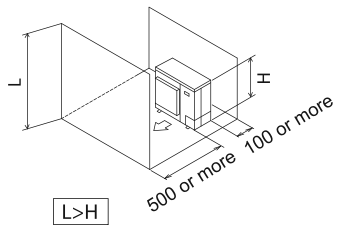


(C) Where there are obstacles on both suction and discharge sides:

Pattern 1 — Where the obstacles on the discharge side is higher than the unit: (There is no height limit for obstructions on the intake side.)

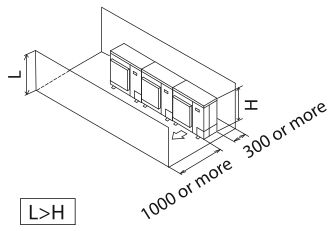
- No obstacle above

① Stand-alone installation



L>H

② Series installation (2 or more)



L>H

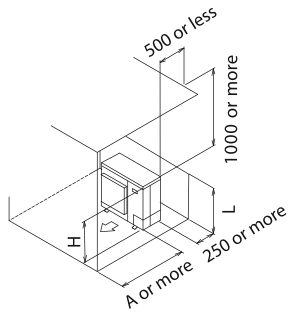
- Obstacle above, too

① Stand-alone installation

The relations between H, A and L are as follows:

	L	A
L≤H	0<L≤1/2H	750
	1/2H<L≤H	1000
H<L	Set the stand as: L≤H.	

(Note) Close the bottom of the installation frame to prevent the discharged air from being bypassed.

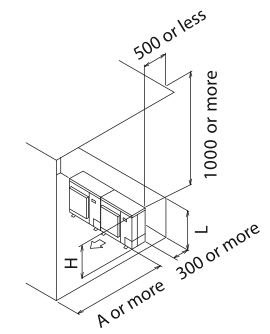


② Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
L≤H	0<L≤1/2H	1000
	1/2H<L≤H	1250
H<L	Set the stand as: L≤H.	

(Note 1) Close the bottom of the installation frame to prevent the discharged air from being bypassed.
(Note 2) Only two units can be installed for this series.

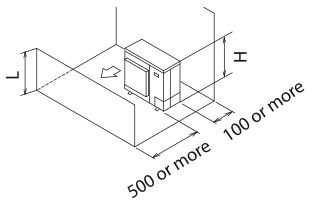


Pattern 2 — Where the obstacles on the discharge side is lower than the unit: (There is no height limit for obstructions on the intake side.)

- No obstacle above

① Stand-alone installation

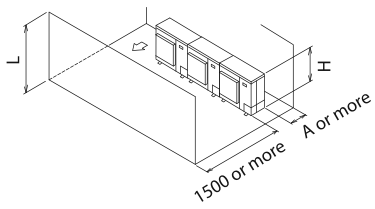
L≤H



② Series installation (2 or more)

The relations between H, A and L are as follows:

L	A
0<L≤1/2H	250
1/2H<L≤H	300



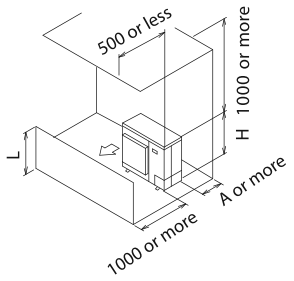
- Obstacle above, too

① Stand-alone installation

The relations between H, A and L are as follows:

	L	A
L≤ H	0<L≤1/2H	100
	1/2H<L≤H	200
H<L	Set the stand as: L≤H.	

(Note) Close the bottom of the installation frame to prevent the discharged air from being bypassed.

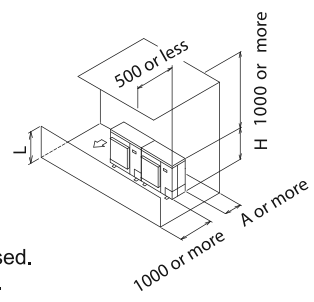


② Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
L≤ H	0<L≤1/2H	250
	1/2H<L≤H	300
H<L	Set the stand as: L≤H.	

(Note 1) Close the bottom of the installation frame to prevent the discharged air from being bypassed.
(Note 2) Only two units can be installed for this series.



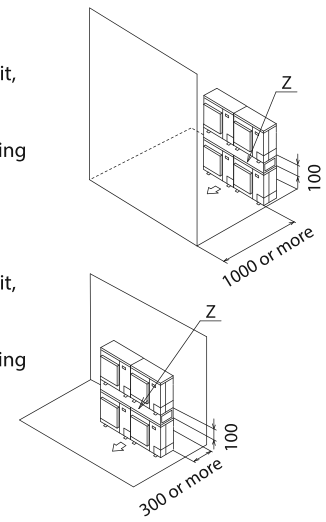
(D) Double-decker installation

① Obstacle on the discharge side

(Note 1) Up to 2 layers can be overlapped.
(Note 2) For the drain pipe installation of the upper outdoor unit, the interspace of 100mm around is needed.
(Note 3) Seal Z part (interspace between the upper and lower outdoor units) to prevent the exhaust bypass from being formed.

② Obstacle on the suction side

(Note 1) Up to 2 layers can be overlapped.
(Note 2) For the drain pipe installation of the upper outdoor unit, the interspace of 100mm around is needed.
(Note 3) Seal Z part (interspace between the upper and lower outdoor units) to prevent the exhaust bypass from being formed.



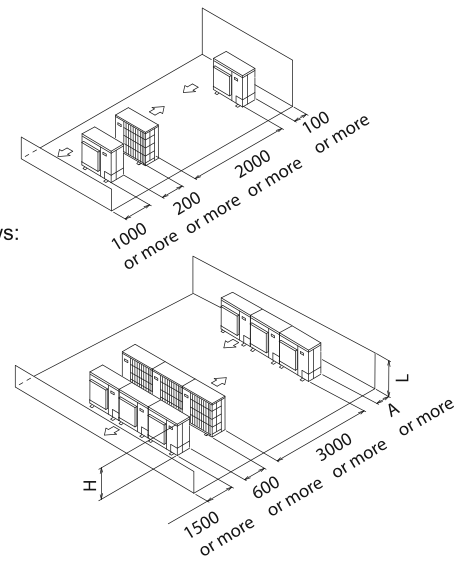
(E) Multiple rows of series installation (on the rooftop, etc.)

① One row of stand-alone installation

② Rows of series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
L≤ H	0<L≤1/2H	250
	1/2H<L≤H	300
H<L	Cannot be installed.	



2P718314-1D

DAIKIN

Installation Manual (1)

1P743980-1A

RXRQ4BRV16,RXYRQ4BRV16

Be sure to read this manual before installation and follow the instructions contained in it.

1. This series air conditioner uses R410A (new) refrigerant. Strictly observe the precautions under the ③ Refrigerant piping connection as there are strict requirements for how to prevent entry of impurities (mineral oils such as specialized lubricating oil and moisture) for R410A.
   - **Clean and dry**
     Strict measures must be taken to keep impurities (including SUNISO oil and other mineral oils as well as moisture) out of the system.
   - **Tightly sealed**
     R410A contains no chlorine, does not destroy the ozone layer and so does not reduce the earth's protection against harmful ultraviolet radiation. R410A will contribute only slightly to the greenhouse effect if released into the atmosphere.
2. Since the design pressure is 4.0MPa, refer to the ③ Refrigerant piping connection for selection of pipe thickness.
3. Since R410A is a mixed refrigerant, it must be charged in liquid phase. (If the refrigerant is charged in gaseous phase, its composition can change and the system may not work properly.)
4. Be sure to connect a special indoor unit for R410A. Refer to the product catalog for the model names of the indoor units which can be connected with this unit. (If connected with other indoor units, the air conditioning system will not operate normally.)
5. Power voltage of this series product is single-phase 220-240V, 50Hz.

Please read the these " SAFETY CONSIDERATIONS" carefully before installing air conditioning unit and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation.

- Please instruct the customer on how to operate the unit and keep it maintained
- The precautions described herein are classified as Warning and Caution, following which is the important safety information, it is strongly recommended to observe.
- This air conditioner comes under the term "appliances not accessible to the general public".
- Meaning of WARNING and CAUTION notices.

⚠ Warning	Improper handling may result in major accidents such as death and serious injury.
⚠ Caution	Improper handling may result in injury or property damage, or even serious consequence under some circumstances.

- After completing installation, perform a test run to check for normal operation and explain to the customer how to operation and maintain the air conditioner.
  In addition, ask the customer to keep this installation manual together with the operation manual for future reference.

⚠ Warning

Ask the dealer or specialized personnel to carry out the installation work.
Do not install the machine by yourself. Otherwise, it may result in water leakage, electric shocks or fire hazards.

Perform installation work following the instructions contained in this manual.
Improper installation may result in water leakage, electric shocks or fire hazards.

When installing the units in a small room, take proper measures to ensure the amount of any leaked refrigerant under the concentration limit in the event of refrigerant leakage. Contact your dealer for appropriate measures.
Excessive refrigerant concentration in a closed ambient space may result in oxygen deficiency.

Be sure to use the specified accessories and parts for installation.
Failure to use the specified parts may result in water leakage, electric shocks, fire hazards or the unit failing to operate normally.

Install the unit on a solid foundation which can withstand the weight of the unit.
A foundation of insufficient strength may result in the unit falling and causing injuries.

Install the unit at designated places by taking into consideration strong winds such as typhoons and earthquakes.
Improper installation may result in the unit falling and causing accidents.

Make sure that all electrical work is carried out by the specialized personnel in accordance with local laws and regulations and this manual, and a special power supply circuit is provided for the unit.
An insufficient power supply circuit capacity or improper electrical operation may lead to electric shocks or fire hazards.

Use the specified wires and attach them securely, with no external forces acting on the terminal connections or wires.
Improper wiring or installation may cause fire hazards.

When connecting the indoor and outdoor units and the power supply wiring, to avoid the service lid being protruded and deformed, lay the wires in a smooth and regular way to attach the shell plate properly.
Otherwise, the terminals will give out heat and may result in electric shocks and fire hazards.

If refrigerant leakage occurs during installation, immediately open the windows and doors for ventilation.
Gaseous refrigerant will produce toxic gas if it comes into contact with fire.

After installation is completely finished, check for refrigerant leakage.
If the refrigerant leaks inside the room, it may generate noxious gas if in contact with the fire of an air heater, burner or cooker, etc.

Do not touch the electrical parts when the unit is powered on.

After completing installation, make sure that no residual voltage exists on the live parts (such as the terminals of earth leakage circuit breakers and terminal blocks) before operating the breakers such as changing.

Consult your local dealer regarding what to do in case of refrigerant leakage.
When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage.
Otherwise, this may lead to an accident due to oxygen depletion.

Do not directly touch refrigerant that has leaked from refrigerant pipes or other areas, as there is a danger of frostbite.

Do not allow children to climb on the outdoor unit and avoid placing objects on the unit.
Injury may result if the unit becomes loose and falls.

⚠ Caution

Be sure to earth the unit.
Do not connect the earth wire to gas pipes, water pipes, lightning rods or telephone earth wires.
- Gas pipes -- gas leaks can cause explosion or fire.
- Water pipes -- cannot be grounded if hard vinyl pipes are used.
- Lighting rods or telephone earth wires -- the ground potential when struck by lightning gets extremely high.

Be sure to install a branch circuit breaker, overcurrent circuit breaker (fuse) and earth leakage circuit breaker.
Failure to do so may result in electric shocks and fire hazards.

Install the drain piping according to the installation manual to ensure proper drainage, then insulate the piping to prevent condensation from accumulating.
Improper drain piping installation may result in water leakage and household items wet.

Keep the indoor unit, outdoor unit, power wiring and transmission wiring at least 1m away from televisions and radios to prevent image or noise interference. (A distance of 1m or more may not be sufficient to eliminate the noise in the case of strong radio wave.)

Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types). Install the indoor unit as far away from fluorescent lamps as possible.

Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals.
Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.

Don't install the air conditioner in the following locations:
(a) Where mineral oil mist, oil spray or vapour is produced, for example, in a kitchen.
Plastic parts may be aged and damaged, and result in water leakage.
(b) Where corrosive gas, such as sulfurous acid gas, is produced.
Corroding copper pipes or soldered parts may result in refrigerant leakage.
(c) Near machinery emitting electromagnetic waves.
Electromagnetic waves may disturb the operation of the control system and cause the unit malfunction.
(d) Where flammable gas may leak, where there is air borne carbon fiber or ignitable dust, or where volatile flammables such as gasoline or thinner are placed. Operating the unit in such conditions may result in fire hazards.
(e) Don't install the outdoor unit at the place where there is a shelter of the small animals.
Once in the unit, leaves and small animals making contact with the electrical parts can cause malfunction, smoke or fire. Ask the customer to maintain a clean and tidy environment around the outdoor unit.

Do not climb up the outdoor unit or place objects on it. Falling or tumbling may result in injury.

Do not wash the outdoor or indoor units with water. Otherwise, it may cause electric shocks and fire hazards.

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Install in a machine room that is free of moisture.
The unit is designed for indoor use.

Disposal requirements
Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.

Note

- **For how to install the indoor unit and the remote controller, refer to the installation manual of the indoor unit.**

1 Preface

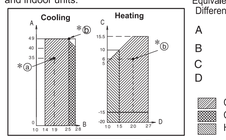
Combination The indoor units can be connected in the following range.

- **Be sure to install the dedicated indoor units.**
  Refer to the product catalog for the model names of the indoor units which can be connected with this unit.
- Total capacity and number of the indoor units

Outdoor unit	Combination ratio%	Total number
RXRQ4BRV16	50~140	6
RXYRQ4BRV16	50~140	6

Standard operation range

The values below are the supposed working environment for the outdoor and indoor units:



Equivalent piping length…7.5m
Difference in height……0m

A	Outdoor temperature	(°CDB)
B	Indoor temperature	(°CWB)
C	Outdoor temperature	(°CDB)
D	Indoor temperature	(°CDB)

Continual operation range
Cooling operation range
Heating operation range

Technical specifications

For operation conditions *ⓐ *ⓑ in the table below, refer to the operation range (above figure).

Model		RXRQ4BRV16	RXYRQ4BRV16	Remark
Refrigerant		R410A	R410A	
Power supply		~ 220-240V, 50/60Hz	~ 220-240V, 50/60Hz	
Cooling capacity Heating capacity	(kW)	11.2 /-	11.2 11.2	*ⓐ *ⓑ
Cooling power Heating power	(kW)	3.25 /-	3.25 2.60	*ⓐ *ⓑ
Dimensions (H × L × W)	(mm)	990×940×320	990×940×320	
Mass	(kg)	76	78	
Gas side	(inch)	5/8	5/8	
	(mm)	Ø15.9	Ø15.9	
Liquid side	(inch)	3/8	3/8	
	(mm)	Φ9.5	Φ9.5	

Electrical specifications

For operation conditions *ⓐ in the table below, refer to the operation range (above figure).

Model			RXRQ4BRV16	RXYRQ4BRV16	Remark
Power supply	Phase		~	~	
	Frequency	(Hz)	50/60	50/60	
	Voltage	(V)	220-240	220-240	
	Allowable voltage fluctuation	(%)	±10	±10	
	Fuse rated current	(A)	30	30	
Outdoor unit maximum running current		(A)	27.0	27.0	*ⓑ

Accessories for 4HP

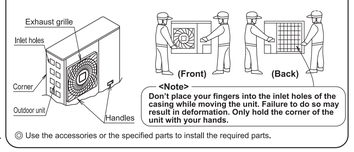
Check if the following accessories are supplied with the unit.
(Remove the front plate and they are in the accessory bag)

Operation manual	Clamps	Others
(1)	(2)	• Installation manual(2) • Screw(1)

2 Before installation

<About carrying>

Hold the 2 handles at both sides as shown in the figure below and move it slowly.
(Pay attention not to touch the fins at the back.)



<Note>
Don't place your fingers into the inlet holes of the casing while moving the unit. Failure to do so may result in deformation. Only hold the corner of the unit with your hands.

ⓒ Use the accessories or the specified parts to install the required parts.

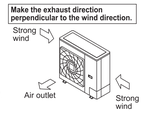
3 Selecting installation location

①**Select a location for installation that meets the following conditions and get the customer's approval.**
- Good ventilation.
- Not disturbing the neighbors.
- No shelters of the small animals.
- Solid enough to support the weight and vibration of the unit which can be placed horizontally.
- Able to avoid raining as much as possible.
- Adequate space kept around the unit for installation.
- Outdoor piping and wiring within the allowable length range.
- No risk of flammable gas leaks.

②**When installing in locations where there is a possibility of strong wind, take the following measures.**
- If the strong wind with speed over 5m/s blowing to the exhaust side of the outdoor unit, the decreased air flow rate and re-absorbed exhausted gas (short circuit) etc. by the outdoor unit will lead to:
  - Decreased capability
  - Operation stopped as high pressure increases
- Excessive strong wind continually blowing to the front exhaust side of the outdoor unit will result in the fan reversing at a high speed and being damaged. Refer to the figure below for installation.

Install the outdoor unit with the air outlet facing the building wall, closure or wind shutter.

Make the exhaust direction perpendicular to the wind direction.



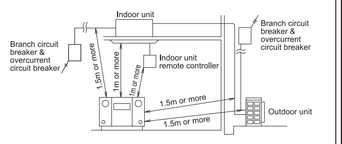
(Keep adequate space and installation)

③ **If there is a risk of short circuit for the outdoor unit in the ambient environment, use air flow direction adjustment plate (field supply).**

④ **The refrigerant gas (R410A) is nontoxic, nonflammable and safe. It is necessary to take measures against to keep refrigerant concentration from exceeding allowable safety limits in a small room in the event of refrigerant leakage.**

⑤ **An inverter air conditioner may cause home appliances produce noise.**
When selecting the location for installation, keep the air conditioner and wiring a proper distance away from radios, computers and stereo equipment as shown in the following figure.

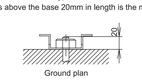
Particularly for location with weak wave reception, be sure to keep a distance of at least 3m between the indoor unit and the remote controllers and place the power supply wiring and transmission wiring in conduits, and connect the conduits to the ground.
In addition, use the shielded wires for all electric wires between units.



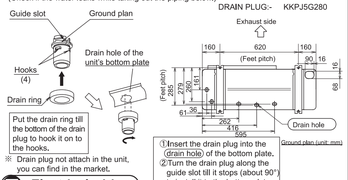
⑥ **For the installation locations, refer to the installation manual (2).**

4 Precautions during installation

- To prevent vibration and noise, check the foundation is solid and level before installation.
- As shown in the following figure, firmly secure the unit to a stable base using anchor bolts, (Use four sets of commercially-available W12-type anchor bolts, nuts and washers.)
- The section of the anchor bolts above the base 20mm in length is the most appropriate. (Refer to the right figure)



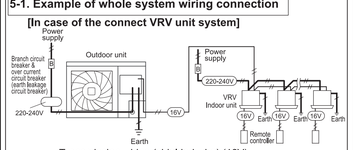
<About drainage handling>
- Perform drain pipe installation work using the optional drain plug if the drainage from the outdoor unit may lead to problems (such as water drained from the outdoor unit dripping down to the pedestrians),
- It is necessary to keep an interspace over 100mm under the air conditioner in order to handle the drainage,
- Make sure the proper drainage of the piping while handling the drainage (Check if the water leaks while taking out the piping below.)



5 Electrical wiring

5-1. Example of whole system wiring connection

[In case of the connect VRV unit system]



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6 Refrigerant piping connection

6-1. Installation tools

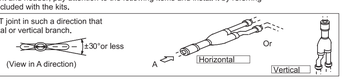
To withstand the pressure and prevent entry of any impurities into the air conditioning system, always use the special installation tools for R410A.

Multi-purpose gauge hose	● **To withstand the pressure and prevent entry of any impurities (mineral oils such as specialized lubricating oil and moisture), be sure to use the special installation tools for R410A. (Screw specifications for R410A and R407C are different.)**
Vacuum pump	● **Make sure that the engine oil in the pump will not flow backward into the air conditioning system when the pump stops.** ● **Use the vacuum pump able to lower the pressure to -100.7Pa (5Torr,-755mmHg).**

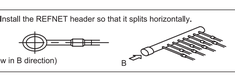
6-2. Selecting piping material

- Don't use the pipes covered with sulfur, iron oxide, dust, cutting oil, moisture or other contamination inside. (Better not to exceed 30mg/10m for the oil inside the pipes).
- Select a thickness for the refrigerant piping in accordance with the local laws and regulations.For R410A, the design pressure is 4.0 MPa.
- Use the refrigerant piping with its thickness complying with Japan's High-Pressure Gas Control Law (January 2003) .
- Thickness and size: determine them based on the precautions for piping size selection on the back.
- Be sure to use REFNET joint and header for the piping branches.
- While performing the piping work, make sure that the piping is within the maximum allowable ranges for length, height in difference and branch piping length.
- When using REFNET joint and header, pay attention to the following items and install it by referring the installation manual included with the kits.

- Install the REFNET joint in such a direction that can ensure horizontal or vertical branch.



- Install the REFNET header so that it splits horizontally.



6-3. Piping protection

- Maintain and protect the piping to prevent moisture from getting into and the entry of the impurities and dust, etc.
- Pay special caution when penetrating the copper pipes through the walls till outside.

Location	Installation schedule	Protection measure
Outdoor	More than a month	Pinch
	Less than a month	Pinch or seal with tape
Indoor	Random	

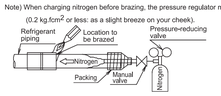
6-4. Pipe connection

- **For how to use the stop valves, refer to the Stop valve operation procedure under 6-7. Air tight test and vacuum drying .**
- **Use the accessory flaring nuts only.**
  Adopting other flaring nuts may result in the refrigerant leakage.
- **Be sure to charge nitrogen into the pipe when brazing.**

Be sure to perform nitrogen purge or nitrogen charge when brazing. Failure to do this will create large quantities of oxide film on the inside surface of the pipes, which would adversely affect the valves and compressors in the refrigerating system and prevent the normal operation.

Note) When charging nitrogen before brazing, the pressure regulator must be set to 0.02 MPa

(0.2 kg.f/cm^2 or less: as a slight breeze on your cheek).



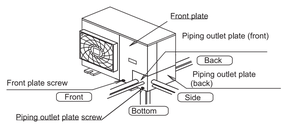
ⓒ Do not charge other refrigerant other than the specified one for the refrigerating system.
ⓒ Do not charge the air for the refrigerating system.

<Note>
Do not use flux when brazing the refrigerant piping.
Use the phosphor copper electrode which does not require flux (BCu93P-710/795:ISO 3677).

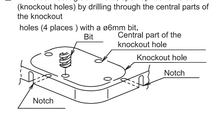
Flux has extremely harmful influence on refrigerant piping system. If the chlorine based flux is used, it will cause pipe corrosion or in particular if the flux contains fluorine, it will damage the refrigerant oil and adversely affect the refrigerant piping system.

6-5. Precautions to refrigerant piping connection

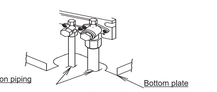
ⓒ The field piping can be connected in 4 directions.



ⓒ While connecting downward, open up round holes (knockout holes) by drilling through the central parts of the knockout holes (4 places) with a ø6mm bit.

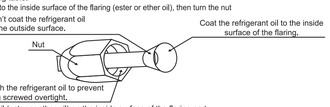


ⓒ After drilling through the knockout holes, it is recommended to coat the notches at the edge and the area around them with anti-corrosion paint to prevent rusting.

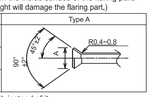


※ After cutting out the 2 notches, perform installation as shown in the above figure. (Adopt a metal cut saw to cut out the notches.)

Precautions to piping connection
- For machining the flaring part, refer to the following table.
- To install the flaring nut, only coat the refrigerant oil to the inside surface of the flaring (ester or ether oil), then turn the nut 3~4 circles with your hands.



- To prevent the gas leakage, coat the refrigerant oil (ester or ether oil) on the inside surface of the flaring part.
- Refer to the following table for the tightening torque. (Being screwed overtight will damage the flaring part.)

Piping size	Tightening torque	Machining size	Type A
ø9.5	32.7~39.9N.m	12.8~13.2mm	
ø15.9	61.8~75.4N.m	19.3~19.7mm	
ø19.1	97.2~118.8N.m	23.6~24.0mm	

- If there is no torque wrench, tighten the flaring nut with a normal wrench instead of it.
- When tightening the nut, there is a possibility that the tightening torque is suddenly increased. In this case, tighten it again based on the angles in the table below from this position.

Piping size	Tightening angle (reference)	Recommended tool arm length
ø9.5	60°~90°	200mm around
ø15.9	30°~60°	300mm around
ø19.1	20°~35°	450mm around

- After piping connection is finished, perform gas leak inspection with nitrogen for the piping connection parts.

⚠ **Caution** **To those doing electrical work**

- **Don't operate the unit before completing refrigerant piping connection. (Failure to do so will result in compressor malfunction.)**
- **Install the earth leakage circuit breaker. (Since this unit is equipped with an inverter, to prevent malfunction of the earth leakage circuit breaker itself, select the breaker that be capable of handling high harmonics.)**

5-2. Precautions to lead out power wiring and transmission wiring

Lead out the power wiring (including the earth wire) from the power wiring outlets at the sides, front or back of the units,
Lead out the electric wires between units from the wiring outlet, piping outlet or knockout holes in the front of the units.

<Precautions when punching through the knockout holes>
- Punch through the knockout holes with a hammer.
- After punching through the holes, it is recommended to coat the holes at the edge and the area around them with anti-corrosion paint to prevent rusting.
- Before leading the electric wires through the knockout holes, scrape the burrs around the holes and wrap the wires with the protective tape.

If small animals might enter the unit, block off the knockout holes with sealing material (field supply)

5-3. Precautions to power wiring connection

NOTICE
When using residual current operated circuit breakers, make sure to use a high-speed type 100 mA rated residual operating current.

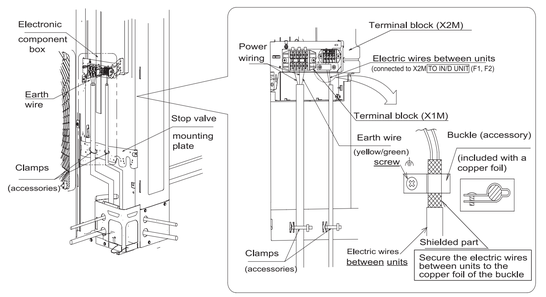
Model	Phase & frequency	Voltage	Fuse rated current	Outdoor unit maximum running current
RXRQ4BRV16	~ 50/60Hz	220-240V	30A	27.0A
RXYRQ4BRV16	~ 50/60Hz	220-240V	30A	27.0A

<Note>
- Select the power wiring in accordance with the local and national regulations in your area by referring to the above table.
- Specifications of the field power wiring should be in compliance with IEC60245.
- Use wire type H05VV when the protective conduits are used for the power wiring.
- Use wire type H07RNF when the protective conduits are not used.
- Only proceed with wiring work after turning off all the power.
- Always earth the unit in accordance with the local and national regulations in your area.

- Do not connect the earth wire to the gas pipes, liquid pipes, lightning rods or telephone earth wires.
  - Gas pipes -- gas leaks can cause explosion or fire.
  - Liquid pipes -- cannot be grounded if hard vinyl pipes are used.
  - Telephone earth wires or lighting rods -- the ground potential when struck by lightning may get extremely high.

- Only use the copper wires.
- Be sure to turn off the power supply before performing the electrical wiring work, Don't switch on the breakers until all wiring work being completed.

Wiring Connection



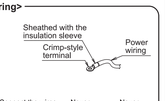
<Note>
After electrical work is completed, check to make sure there are no loose connections for the connectors of each electrical component in the electrical component box and the terminals.

- The electrical wiring must be installed by the trained electricians.
- Perform wiring connection in accordance with "Electrical Wiring Diagram Label". Only conduct the wiring connection after turning off the branch circuit breaker and the over current circuit breaker.
- The grounding impedance must be 4Ω or less.
- Set the earth leakage circuit breaker.
- Earth the indoor and outdoor units.

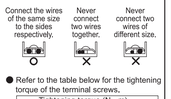
- Don't tie the remaining wires in a bunch and tuck into the unit.
- Place the electric wires in the conduits or plastic sleeves to prevent them from being scratched by the edge of the knockout hole.
- Secure the electric wires with the accessory buckles to prevent it from touching the piping and stop valves (Refer to **5-3. Precautions to power wiring connection**)

<Note>
- **Use the sheathed wires for the power wiring.**
- **Don't route the weak electric wiring (remote controller wire and wiring between units) together with the strong one outside the air conditioner, keeping them at least 50mm apart. Otherwise, being affected by the electrical noise (external noise) may result in malfunction or breakdown.**
- **Be sure to connect the power wiring to the power supply terminal blocks and hold it in place in accordance with 5-3. Precautions to power wiring connection .**
- **Hold the wiring between air conditioner units in place in accordance with 5-4. Precautions to wiring connection between units .**
- **Secure the electric wires using the accessory clamps to prevent it from touching the piping, etc.**
- **After connecting the electric wires, lay the wires in a smooth and regular way to avoid the electronic component box cover being protruded, then close the cover tightly.**

<Precautions for routing power wiring>
- Never connect two electric wires of different sizes to one power supply terminal. (Phenomenons such as loose electric wire connection may cause abnormal heating.)
- For the electric wires connected to the power supply terminal, use the crimp-style terminal with insulation sleeve. Otherwise, connect the wires of the same size to the sides respectively as shown in the figure.



Phenomenons such as loose electric wire connection may cause abnormal heating. Strictly follow the instructions below.

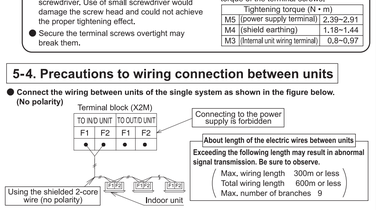


- Use the specified electric wires and secure them firmly without applying external stress to the terminal block.
- Tighten the terminal screws with a suitable screwdriver. Use of small screwdriver would damage the screw head and could not achieve the proper tightening effect.
- Secure the terminal screws overtight may break them.
- Refer to the table below for the tightening torque of the terminal screws.

Tightening torque (N・m)		
M5	(power supply terminal)	2.39~2.91
M4	(shield earthing)	1.18~1.44
M3	(Internal unit wiring terminal)	0.8~0.97

5-4. Precautions to wiring connection between units

- **Connect the wiring between units of the single system as shown in the figure below. (No polarity)**



Precautions to wiring connection between units
- Don't connect the power supply to the single-phase wiring terminals. Otherwise, the whole system will be damaged.
- The wiring from the indoor unit must be connected to the PC board terminal F1/F2 (TO IN/D UNIT) of the outdoor unit.
- For the electric wires between units, after being secured within the unit, wrap them together with the refrigerant piping connected locally using the protective tape as shown in the figure below.

Precautions when branching the wiring between units
- **The electric wires between units can hold up to 9 branches. The wires after being branched can't be branched again.**

※Use 0.75~1.25mm^2 shielded 2-core wire for the above wiring.
(For how to earth the shielded part, refer to the figure on the left.)
※All electric wires between units are supplied locally.

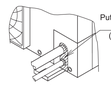
6 Refrigerant piping connection

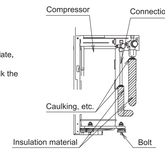
Precautions to piping connection

- Make sure the connection pipe does not come into contact with the terminal cover of the compressor. Adjust the height as shown in the right figure to prevent the insulation material on the liquid side piping from contacting with the cover.
  In addition, make sure the connection pipe does not come into contact with the compressor's bolts and shell plate.
- If there is a possibility that the condensed water on the stop valve might flow into the indoor unit through gaps between the insulation material and piping because the outdoor unit is located higher than the indoor unit, caulk the gaps at the connection.

[How to prevent entry of small animals]

- Caulk the piping through holes with putty or insulation material (field supply) as shown in the right figure to prevent gaps.
  (For the outdoor unit, entry by insects could cause short circuit of the electrical component box.)





6-6. Piping insulation

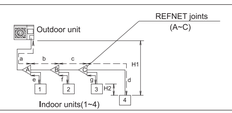
- If temperature within the ceiling exceeds 30˚C and the humidity over RH80%, thicken the insulation material of the refrigerant piping. (Thickness at least 20mm)
  (Condensation might form on the surface of the insulation material.)
- The connection piping (liquid side, gas side) and the refrigerant branch kit must be insulated.
  (Otherwise, it may cause water dripping.)

(Be sure to use the insulation material with high-heat-resistance performance as the gas side piping can reach temperature of about 120˚C)

⚠ **For piping connected locally, wrap the insulation material till the root segment of the stop valve. The naked piping may result in condensation and burns.**

Example of connection

(Connecting 4 indoor units)

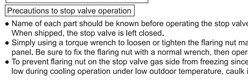


Max. allowable length	Between outdoor unit and indoor unit	Actual piping length	Piping length between outdoor unit and indoor unit ≤ 40m Take connection of 4 indoor units as example: a + b + c + d ≤ 40m
		Equivalent length	Equivalent piping length between outdoor unit and indoor unit ≤65. (Assume equivalent piping length of REFNET joint to be 0.5m that of REFNET header to be 1m)
		Total piping length	Total piping length from outdoor unit to all indoor units ≥10m, ≤ 100m
Allowable height difference	Between outdoor unit and indoor unit	Difference in height	Difference in height between outdoor unit and indoor unit (H1) ≤30m
	Between indoor units	Difference in height	Difference in height between indoor units (H2) ≤10m
Allowable length after the branch		Actual piping length	Piping length from the first refrigerant branch kit (REFNET joint or header) to indoor unit ≤40m (Example) 4 : b + c + d ≤ 40m

Selecting the piping size

<Precautions to select connection piping>

- Depending on the distance of the refrigerant piping, size of the main pipe also can be increased if capability decreased
  [Gas side]
  Φ15.9→Φ19.1



Note)
To increase the size of the piping joint, connect it using joints of different apertures (field supply). Connection part is beside the outdoor unit (behind the 1st bending outside the unit).

Piping between outdoor unit and refrigerant branch kit

- Should correspond to the size of the connection piping of outdoor unit.

Size of the piping connected to outdoor unit (Unit: mm)

Piping size (outer diameter × minimum thickness)	
Gas side piping	Liquid side piping
Φ15,9×0,99	Φ9,5×0,80
Φ19,1×0,80	

Piping between refrigerant branch kits

- Select piping size based on the following table.

(Unit: mm)

Piping size (outer diameter × minimum thickness)	
Gas side piping	Liquid side piping
Φ15,9×0,99	Φ9,5×0,80

Piping between refrigerant branch kit and indoor unit

- Should correspond to the size of the connection piping of indoor unit.

Size of the piping connected to indoor unit (Unit: mm)

Indoor unit capacity type	Piping size (outer diameter × minimum thickness)	
	Gas side piping	Liquid side piping
≤50	Φ12,7×0,80	Φ6,4×0,80
≥63	Φ15,9×0,99	Φ9,5×0,80

How to calculate the additional refrigerant to be charged

Additional refrigerant to be charged: R(kg)
(R should be rounded off in units of 0,1 kg.)

R= (Total length of liquid side piping size at Φ9,5) ×0,054 + (Total length of liquid side piping size at Φ6,4) ×0,022

For refrigerant branch piping with REFNET joint

Example: R = 25×0,054 + 15×0,022 + 1,68
a+b+c+f d+e+g 1,7

a : Φ9,5×10m	d : Φ6,4×5m	g : Φ6,4×5m
b : Φ9,5×5m	e : Φ6,4×5m	
c : Φ9,5×5m	f : Φ9,5×5m	

Pipe size selection
In case of RA indoor units, Use the capacity index of the table below

Capacity Index	Capacity [kW]
20	2.0
25	2.5
35	3.5
40	4.0
41	4.1
50	5.0
60	6.0
70	7.0
71	7.1

Symbol			Piping size (Outer diameter x minimum thickness)	
			Gas pipe	Liquid pipe
Between outdoor and first refrigerant branch kit	a	RXRQ4BRV16	Ø 15.9x0.99	Ø9.5x0.80
		RXYRQ4BRV16	Ø 15.9x0.99	
Piping between refrigerant branch kits - Choose from the following table in accordance with the total capacity index of all units connected below this. - Do not let the connection piping exceed the refrigerant piping size chosen by general system model name.	b,c	**Total capacity index of connected indoor units**	**Gas pipe**	**Liquid pipe**
		<150	Ø15.9x0.99	Ø9.5x0.80
		150 ≤X<200	Ø19.1x0.80	
		X ≥200	Ø22.2x0.80	

(a) The refrigerant sound from the outdoor unit can be transmitted.
(b) A liquid/gas size up is required for all the piping between the branch kit and VRV unit. If the piping diameter of the sized up piping exceeds the diameter of the piping before the first refrigerant branch kit, then the latter also requires a liquid/gas size up.
(c) In some indoor units, the piping size is difference. Choose from the size of each indoor units.

6-7. Air tight test and vacuum drying

Check the following after piping connection is finished.

● **Air tight test** - Always use nitrogen. (Refer to **Stop valve operation procedure** for service port's position.)

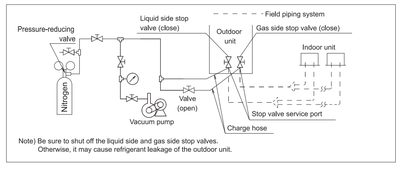
【**Procedure**】Pressurize the liquid side piping and the gas side piping to 4.0MPa (do not exceed 4.0 MPa). If the pressure does not drop within 24 hours, the system passes the test. If there is a pressure drop, check for leaks. (Discharge the nitrogen after confirming there is no leakage.)

● **Vacuum drying** - Use a vacuum pump able to evacuate the system to -100.7 kPa (5Torr, -755mmHg) or less.

【**Procedure**】Evacuate the system from the liquid side piping and gas side piping using a vacuum pump for more than 2 hours to -100.7 kPa or less. Keep the system under this condition for more than 1 hour, check if the vacuum gauge indication rises or not. (If it rises, the system may either contain moisture inside or have gas leak.)

If moisture might enter the piping (e.g. if doing work during the rainy season, if the actual work takes long enough that condensation may form on the inside of the pipes, if rain might enter the pipes during work, etc.)

After performing the vacuum drying for 2 hours, pressurize to 0.05 MPa (vacuum breakdown) with nitrogen gas, then depressurize down to -100.7 kPa or less and hold for an hour using the vacuum pump (vacuum drying).
(If the pressure does not reach -100,7 kPa even after depressurizing for at least 2 hours, repeat the vacuum breakdown-vacuum drying process.) After vacuum drying, maintain the vacuum for an hour and make sure the pressure does not rise by monitoring with a vacuum gauge.



Note) Be sure to shut off the liquid side and gas side stop valves.
Otherwise, it may cause refrigerant leakage of the outdoor unit.

Stop valve operation procedure

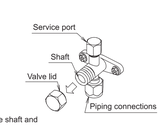
Precautions to stop valve operation

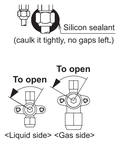
- Name of each part should be known before operating the stop valve (as shown in the right figure). When shipped, the stop valve is left closed.
- Simply using a torque wrench to loosen or tighten the flaring nut may cause deformation of the side panel. Be sure to fix the flaring nut with a normal wrench, then operate it with the torque wrench.
- To prevent flaring nut on the stop valve gas side from freezing since the operation pressure becomes low during cooling operation under low outdoor temperature, caulk it completely with silicon sealant.

[Shut off valve operation procedure]
Prepare two inner hexagon wrenches .

To open
1.Put the inner hexagon wrench to the valve shaft and turn it counterclockwise.
2.Turn it until the shaft stops. The valve is opened.

To close
1.Put the inner hexagon wrench to the valve shaft and turn it clockwise.
2.Turn it until the shaft stops. The valve is closed.



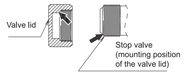


About valve lid

- Position indicated by the arrow has been caulked. Pay attention not to damage it.
- Be sure to tighten the valve lid after valve operation is completed.

About service port

- Operate with the charge hose with a pushing stick.
- Be sure to tighten the valve lid after operating. Tightening torque……11.5~13.9 N·m



Liquid side tightening torque	Gas side tightening torque
13.5~16.5 N·m	22.5~27.5 N·m

7 Charging refrigerant

⚠ **Warning**

- **Be sure to inform other installers or attach the front panel well before you leaving with the power supply turned on for the outdoor unit.**
  (Raise the front panel as high as possible during installation to clamp it with the top panel.)

7-1. Before charging refrigerant

- Check the following works are completed in accordance with the installation manual.
  ・Piping work ・ Electrical work ・ Air tight test and vacuum drying

7-2. About refrigerant tank

- Check whether the tank has a siphon pipe before charging and place the tank properly so that the refrigerant is charged in the liquid phase (see the figure in 7-3 Charging refrigerant).

Charge refrigerant using tank with siphon pipe
Stand the tank upright and charge.
(Due to the siphon pipe within the tank, there's no need to turn over the tank to charge).

Charge refrigerant using other tanks
Stand the tank upside-down and charge.

7-3. Charging refrigerant

① Calculate the refrigerant charge according to " How to calculate the refrigerant to be charged " in " 6 Refrigerant piping connection ".
② After completing vacuum drying, discharge the air in the charge hose, then open the valve and charge the refrigerant of the calculated amount in the liquid phase from the liquid side stop valve service port.
③ Close the valve after completing refrigerant charging.

Note)
If it is impossible to charge the amount calculated according to above procedure, charge the refrigerant again using procedure on the right.

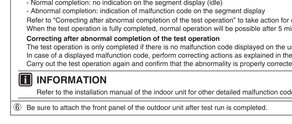
If the refrigerant of the calculated amount is not charged fully

Perform refrigerant charging operation according to the following procedure to charge refrigerant. For settings of refrigerant charging operation, refer to the "Service Precautions" label attached under the front panel of the electronic component box.

【Procedure】

① Turn on the power supply of all indoor and outdoor units of the system.
② Open the gas side and liquid side stop valves and perform refrigerant charging operation. (Open the valve immediately after compressor starts up.)
③ After charging a specified amount of refrigerant, press the RETURN button (BS3) on outdoor unit's PC board (A2P) to stop refrigerant charging operation.
④ Close the valve after completing charging operation.

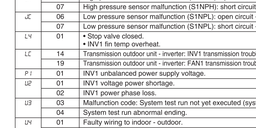
State of the stop valves and valve A



- For operation instructions of the stop valves, refer to **Stop valve operation procedure** in 6 Refrigerant piping connection .

【ON/OFF state of the valve A and stop valves】	Valve A	Liquid side stop valve	Gas side stop valve
Before starting charging	OFF	OFF	OFF
During charging operation	ON	OFF	OFF

State of the stop valves and valve A



- For operation instructions of the stop valves, refer to **Stop valve operation procedure** in 6 Refrigerant piping connection .
- The service port (for refrigerant charging) is within the outdoor unit.
- Since the unit is filled with refrigerant when shipped out of the factory, take care while installing the charge hose.
- Be sure to close the service port cover (for refrigerant charging) after completing refrigerant charging. Tightening torque of the service port cover is 11.5 ~ 13.9 N·m.

【ON/OFF state of valve A and stop valves】	Valve A	Liquid side stop valve	Gas side stop valve
Before starting charging	OFF	ON	ON
During charging operation	ON	ON	ON

8 After installation completed

Be sure to check the following after installation

① Connection of the drainage piping → Refer to **4 Precautions during installation** .
② Incorrect power wiring connection and loose screws → Refer to 5-3. Precautions to power wiring connection .
③ Incorrect transmission wiring connection and loose screws between units → Refer to 5-4. Precautions to wiring connection between units .
④ Incorrect refrigerant piping → Refer to **6 Refrigerant piping connection** .
⑤ Piping size and insulation → Refer to 6-2. Selecting piping material , 6-6. Piping insulation .
⑥ Stop valves → Check if the liquid side and gas side stop valves are opened
⑦ Record refrigerant charge → Keep a record in the "Refrigerant charge" in the "Service Precautions" label .
⑧ Insulation test on main power circuit → • Use 500V insulation tester.
• Do not use it in low voltage circuit. (Connection wiring between units, etc.)

⚠ **Caution** **To those doing piping work** • **Be sure to open the stop valves after completing wiring connection. (Operation with the stop valve closed will result in compressor malfunction.)**

9 About test run

To start smoothly, a crankcase heater is equipped to the unit. To power up the crankcase heater in advance, be sure to turn on the power supply 6 hours before operation.

⚠ **Warning**

Be sure to inform other installers or attach the front panel well before leaving with the power supply turned on for the outdoor unit.

Before powering on

- **Protect the electronic components with insulating tape in accordance with the "Service Precautions" label attached to the front panel.**
- **All indoor units connected with the outdoor unit will operate automatically after powering on.**
  To ensure safety, check the indoor unit installation has been completed.

9-1. Powering on ~ test run

- Make sure to perform a test run first after installation. (If the unit is operated with the indoor unit's remote controller but without performing test run, the malfunction code "U3" will be indicated on the display of the remote controller and the unit will not operate normally.)
- After turning on the power supply, do not touch any switches excluding push button switches and DIP switches when setting the outdoor unit's PC board (A1P). (For positions of the button switches (BS1~3) and DIP switches (DS1, 2) on PC board, refer to the "Service Precautions" label.)
- Check the state of the outdoor units and fault wiring with his operation.

① • Attach the front panel of the outdoor unit
• Turn on the power supply of the outdoor and indoor units

② Make sure all field settings you want are set.

③ Turn ON the power to the outdoor unit and the connected indoor units.

④ Make sure the default (idle) situation is existing. Push BS2 for 5 seconds or more. The unit will start test operation.
- The test operation is automatically carried out, the outdoor unit display will indicate "t.0 1" and the indication "Test operation" and "Under centralized control" will display on the user interface of indoor units.
  Steps during the automatic system test run procedure:
  - t.01" : control before start up (pressure equalization)
  - t.02" : cooling start up control
  - t.03" : cooling stable condition
  - t.04" : communication check
  - t.05" : stop valve check
  - t.06" : pipe length check
  - t.07" : refrigerant amount check
  - t.08" : in case [2-88]=0, detailed refrigerant situation check
  - t.09" : pump down operation
  - t. U" : unit stop

INFORMATION
- During test operation, it is not possible to stop operation of the unit from a user interface. To abort operation, press BS3. The unit will stop after ≤30 seconds.

⑤ Check the test operation results on the outdoor unit segment display.
- Normal completion: no indication on the segment display (idle)
- Abnormal completion: indication of malfunction code on the segment display
  Refer to "Correcting after abnormal completion of the test operation" to take action for correcting the abnormality.
  When the test operation is fully completed, normal operation will be possible after 5 minutes.

Correcting after abnormal completion of the test operation
The test operation is only completed if there is no malfunction code displayed on the user interface or outdoor unit segment display.
In case of a displayed malfunction code, perform correcting actions as explained in the malfunction code table.
Carry out the test operation again and confirm that the abnormality is properly corrected.

INFORMATION
Refer to the installation manual of the indoor unit for other detailed malfunction codes related to indoor units.

⑥ Be sure to attach the front panel of the outdoor unit after test run is completed.

[About test run]

- In order to ensure uniform refrigerant distribution, it may take up to around 10 minutes for the compressor to start up after the power supply on. This is not malfunction.
- Meaning of operation check is not to check individual indoor unit. After completing operation check, operate the system normally with the remote controller.
- Test run can't be performed when the unit is in other mode such as refrigerant recycling mode.
- Never perform test run with discharge pipe thermistor (R21T , suction pipe thermistor (R3T) and pressure sensor (S1NPH, S1NPL) removed. Failure to do so will result in compressor damaged.

9-2. For normal operation

[Set the master unit (the indoor unit with cooling and heating option rights).]

For wired remote controller
- After test run is completed, symbol " " flashes on all remote controllers connected here.
- Set the master unit as customer's request. (It is recommended to set the indoor unit with highest frequency of use as the master unit.)
- Press the operation mode changeover button on the remote controller of the master unit.
- Conduct cool/heat changeover with this remote controller an the symbol " " lights up.
- For other remote controllers excluding the above, symbol " " lights up.

For wireless remote controller
- After test run is completed, timer lamps flash on all indoor units connected here.
- Set the master unit as customer's request. (It is recommended to set the indoor unit with highest frequency of use as the master unit.)
- Press the operation mode changeover button on the remote controller of the master unit. Then a sound of beeps can be heard and the timer lamps on all indoor units go out.
- The indoor unit has the option rights to change over to cooing/heating operation.

For details, refer to the installation manual included with the indoor unit.

- After test run is completed, operate the unit normally
  1) Check the indoor and outdoor units are in normal operation.
  (If a knocking sound can be heard produced by liquid compression of the compressor, stop the unit immediately.)
  2) Operate each indoor unit one by one and check the corresponding outdoor unit is also in operation.
  3) Check to see if cold (or hot) air is coming out from the indoor unit.
  4) Press the fan direction and strength buttons of the indoor unit to see if they operate properly.

[About normal operation check]

- The compressor will not restart in about 5 minutes even if he ON/OFF button of the remote controller is pressed.
- When the system operation is stopped by the remote controller , the outdoor unit may continue operating for further 1 minute at maximum.
- If any check operation was not performed through test run a first installation, the malfunction code "U3" will be displayed. In this case, perform check operation in accordance with **9-1. Powering on ~ test run** .

Malfunction codes displayed on the remote controller (check the remote controller connected with the indoor unit)

Malfunction code		Contents	Solution
Main code	Sub code Master		
E3	01	High pressure switch was activated (S1PH) - A1P(X2A).	Check stop valve situation or abnormalities in (field) piping or airflow over air cooled coil
	02	• Refrigerant overcharge. • Stop valve closed.	• Check refrigerant amount+recharge unit. • Open stop valve.
	13	Stop valve closed (liquid).	Open liquid stop valve.
E4	01	Low pressure malfunction: • Stop valve closed. • Refrigerant shortage. • Indoor unit malfunction.	• Open stop valve. • Check refrigerant amount+recharge unit. • Check the user interface's display or Transmission wiring between the outdoor unit and the indoor unit.
E9	01	Electronic expansion valve malfunction (main) (Y1E) - A1P(X21A).	Check connection on PCB or actuator.
	03	Electronic expansion valve malfunction (injection) (Y2E) - A1P(X22A).	Check connection on PCB or actuator.
	04	Electronic expansion valve malfunction (Inverter cooling) (Y3E) - A1P(X23A).	Check connection on PCB or actuator.
F3	01	Discharge temperature too high (R21T) : • Stop valve closed. • Refrigerant shortage.	• Open stop valve. • Check refrigerant amount+recharge unit.
F6	02	• Refrigerant overcharge. • Stop valve closed.	• Check refrigerant amount+recharge unit. • Open stop valve.
H9	01	Ambient temperature sensor malfunction (R1T) - A1P(X18A).	Check connection on PCB or actuator.
J3	16	Discharge temperature sensor malfunction (R21T): open circuit - A1P (X19A).	Check connection on PCB or actuator.
	17	Discharge temperature sensor malfunction (R21T): short circuit - A1P (X19A).	Check connection on PCB or actuator.
J5	01	Suction temperature sensor malfunction (R3T) - A1P (X30A).	Check connection on PCB or actuator.
J6	01	De-icing temperature sensor malfunction (R7T) - A1P (X30A).	Check connection on PCB or actuator.
J7	06	Liquid temperature sensor (liquid stop valve) malfunction (R5T) - A1P (X30A).	Check connection on PCB or actuator.
J8	01	Liquid temperature sensor (coil) malfunction (R4T) - A1P (X30A).	Check connection on PCB or actuator.
JA	06	High pressure sensor malfunction (S1NPH): open circuit - A1P (X32A).	Check connection on PCB or actuator.
	07	High pressure sensor malfunction (S1NPH): short circuit - A1P (X32A).	Check connection on PCB or actuator.
JE	06	Low pressure sensor malfunction (S1NPL): open circuit - A1P (X31A).	Check connection on PCB or actuator.
	07	Low pressure sensor malfunction (S1NPL): short circuit - A1P (X31A).	Check connection on PCB or actuator.
L4	01	• Stop valve closed. • INV1 fin temp overheat.	• Open stop valve. • Check connection on PCB.
LC	14	Transmission outdoor unit - inverter: INV1 transmission trouble - A1P	Check connection
	19	Transmission outdoor unit - inverter: FAN1 transmission trouble - A1P	Check connection
P1	01	INV1 unbalanced power supply voltage.	Check if power supply is within range.
U2	01	INV1 voltage power shortage.	Check if power supply is within range.
	02	INV1 power phase loss.	Check if power supply is within range.
U3	03	Malfunction code: System test run not yet executed (system operation not possible).	Execute system test run.
	04	System test run abnormal ending.	Execute test run again.
U4	01	Faulty wiring to indoor - outdoor.	Check (F1/F2) wiring.
	03	Faulty indoor system.	Check indoor system transmissions wire.
U5	11	• Too many indoor units are connected to F1/F2 line. • Bad wiring between outdoor and indoor units.	Check indoor unit amount and total capacity connected.
U9	01	• System mismatch. Wrong type of indoor units combined (R410A, R407C, RA). • Indoor unit malfunction.	Check if other indoor units have malfunction and confirm indoor unit mix is allowed.
UR	03	Connection malfunction over indoor units or type mismatch (R410A, R407C, RA).	Check if other indoor units have malfunction and confirm indoor unit mix is allowed.
	18	Refrigerant type mismatch (Field setting error).	Check if other indoor units have malfunction and confirm indoor unit mix is allowed.
UF	01	Auto address malfunction (inconsistency).	Check if transmission wired unit amount matches with powered unit amount (by monitor mode) or wait till initialization is finished.
	05	Stop valve closed or wrong (during system test run).	Open stop valves.
UH	01	Auto address malfunction (inconsistency).	Check if transmission wired unit amount matches with powered unit amount (by monitor mode) or wait till initialization is finished.

For the case with centralized controller used, refer to the installation manual included with it under service manual.

No display on the remote controller

- Connection and communication error occurred between the indoor unit and the remote controller. Check wiring connection for the broken and loose.

⚠ **CAUTION**

To those doing piping work
To those doing electrical work

- **After test run is completed, check whether the casing of the units has been attached and whether the screws have been tightened before transferring the air conditioner to your customer.**

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