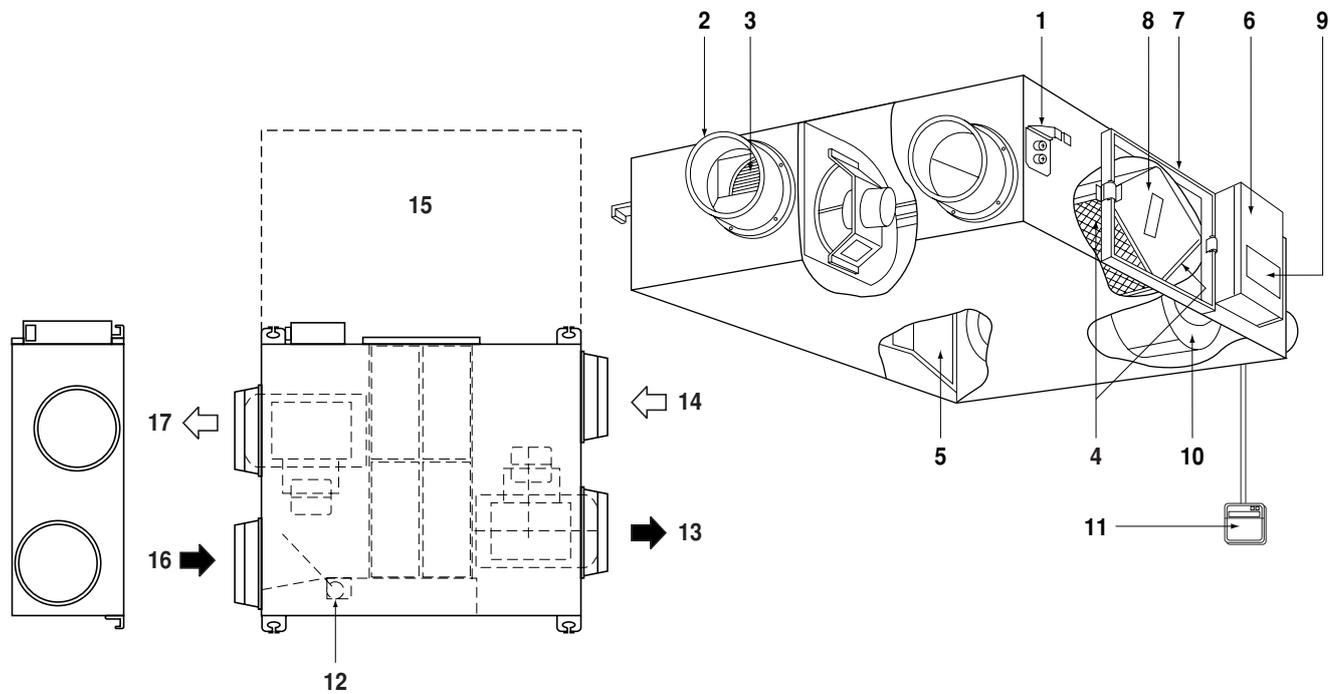




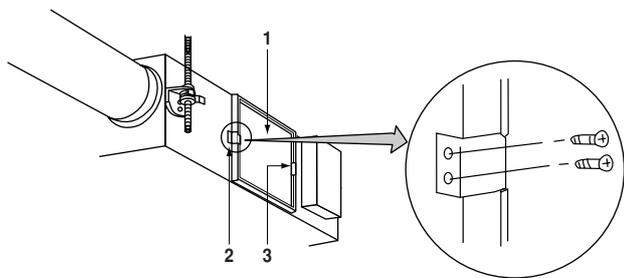
OPERATION MANUAL

Total Heat Exchanger HRV (Heat Reclaim Ventilation) (Ceiling mounted duct type)

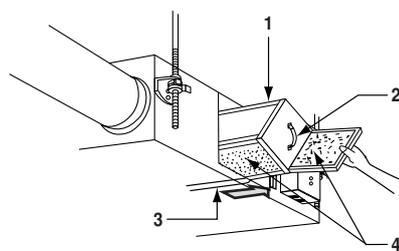
VAM150FC
VAM250FC



1



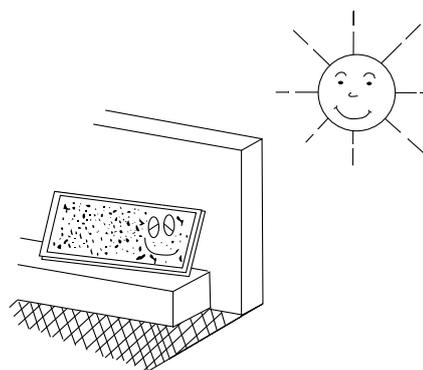
2



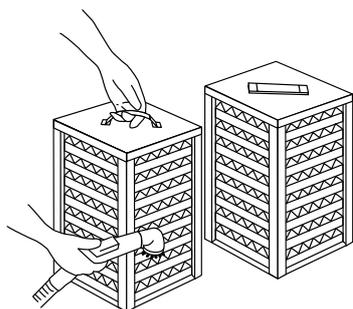
3



4



5



6

CONTENTS

	Page
Safety cautions	1
Names of parts	2
Operation	2
Maintenance	5
Trouble and countermeasure	7
Disposal requirements	7



HRV – Heat Reclaim Ventilation

Before using the DAIKIN HRV, be sure to read this operation manual thoroughly. If you have any problems or there is a malfunction, please refer to this operation manual. Please keep this manual for your future reference whenever you do not understand how to use it when something is wrong with the unit during the operation.

SAFETY CAUTIONS

Read the following cautions carefully and use your equipment properly.

There are safety cautions and tips listed here as follows:



WARNING

Failure to follow these instructions properly may result in personal injury or loss of life.



CAUTION

Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

NOTE



These instructions will ensure proper use of the equipment.

Be sure to follow these important safety cautions.

Keep these warning sheets handy so that you can refer to them if needed.

Also, if this equipment is transferred to a new user, make sure to hand over this user's manual to the new user.



WARNING + ELECTRIC SHOCK

- Before servicing the unit always shut off power, otherwise electric shock may occur.
- Never inspect or service the unit by yourself. Ask a qualified service person to perform this work.
- Always use the air filter. If the air filter is not used, heat exchange elements will be clogged, possibly causing poor performance and subsequent failure.
- Do not change operations suddenly. It can result not only in malfunction but also failure of switches or relays in the body.
- This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- Do not use an HRV or an air suction/discharge grille in the following places:
 - Places such as machinery plants and chemical plants where gas, which contains noxious gas or corrosive components of materials such as acid, alkali, organic solvent and paint, is generated.
 - Places where combustible gas leakage is likely. Such gas can cause fire.
 - Places such as bathrooms subjected to moisture. Electric leak or electric shock and other failure can be caused.
 - Places subjected to high temperature or direct flame. Avoid a place where the temperature near the HRV unit and the air suction/discharge air grille exceeds 50°C. If the unit is used at high temperature, deformed air filter and heat exchange element or burned motor result. Unit ambient temperature conditions should be between -15°C and 50°C (80% relative humidity or less)
 - Places subjected to much carbon black. Carbon black attaches to air filter and heat exchange element, disabling them.

NAMES OF PARTS

Refer to [figure 1](#)

- 1 Ceiling hook
- 2 Duct connection flange
- 3 Exhaust fan
- 4 Air filter (Long life filter)
- 5 Damper
- 6 Switch box
- 7 Maintenance cover
- 8 Heat exchange elements
- 9 Name plate
- 10 Air supply fan
- 11 Remote controller (Option parts)
- 12 Damper motor
- 13 EA (Exhaust air) (Exhaust air to outdoor)
- 14 OA (Outdoor air) (Fresh air from outdoor)
- 15 Maintenance space for the air filters, the heat exchange elements and Switch box
- 16 RA (Return air) (Exhaust air from room)
- 17 SA (Supply air) (Feed air to room)

OPERATION

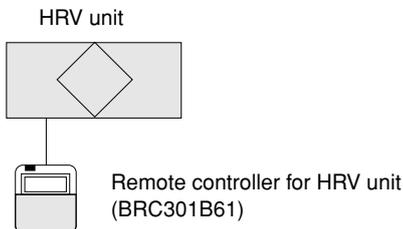
Explanation for systems

This product is operated differently depending on the system configuration.

For the operation of the remote controller for indoor unit and centralized controller, refer to the instruction manual provided with each unit.

Operation for each system

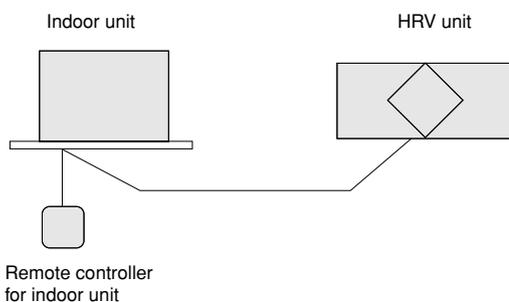
Independent system



Operation method

The remote controller turns on and off HRV unit. (Refer to the section ["About the controller" on page 3](#))

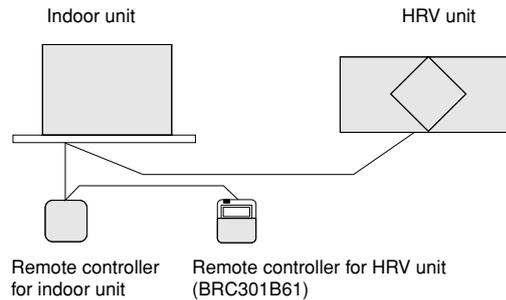
Combined operation system with VRV systems and Sky-air series



Operation method

The remote controller for VRV turns on and off the air conditioner and HRV unit.

If only the HRV unit is used without operating the air conditioner, set the unit in the "🏠" VENTILATION mode. (Refer to the section ["About the controller" on page 3](#))



Operation method

The ON/OFF and timer operation can be performed using the HRV remote controllers.

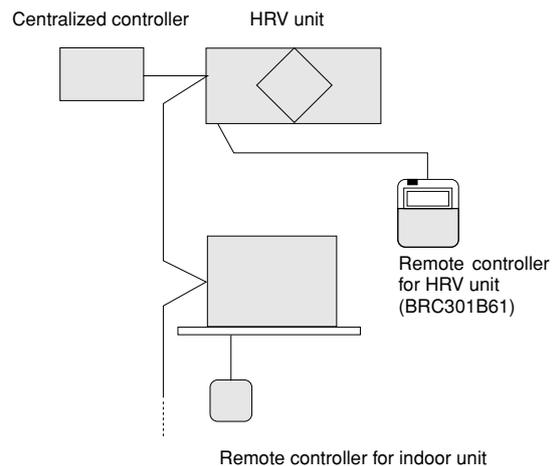
(The indication of centralized control "🏠" appears on the display.)

Other operations can be performed using the HRV remote controllers.

Starting and stopping operations of the indoor unit and the HRV unit can be performed using the indoor remote controllers.

(Refer to the section ["About the controller" on page 3](#))

Centralized system



Operation method

When the HRV remote controllers is not connected, the Centralized controller controls the operation of the HRV unit. (Refer to the section ["Independent operation of the HRV unit using the Centralized controller \(DCS302B61\)" on page 5](#))

When the HRV remote controllers is connected, operation can be started and stopped using the centralized controller or the indoor and the HRV remote controllers.

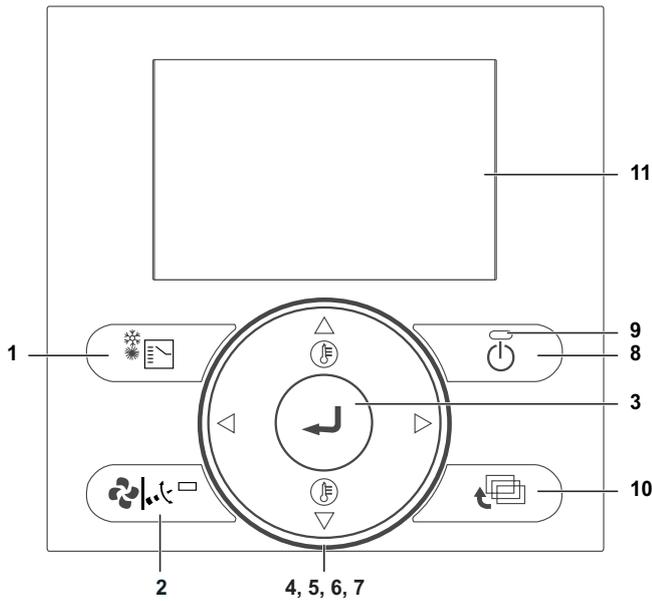
During the indication of centralized control "🏠" appears on the display, the ON/OFF and timer operation may not be possible with the HRV remote controllers.

Other operations can be performed using the HRV remote controllers. (Refer to the next sections)

About the controller

Controller for VRV system air conditioner

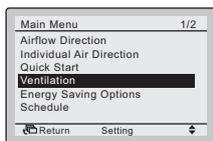
Please read the manual supplied with the controller (BRC1E53) for more detailed instructions.



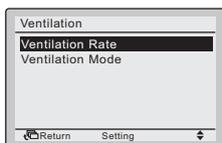
- 1 Operation Mode Selector button
- 2 Fan Speed/Airflow Direction button
- 3 Menu/Enter button
- 4 Up button
- 5 Down button
- 6 Right button
- 7 Left button
- 8 ON/OFF button
- 9 Operation lamp
- 10 Cancel button
- 11 LCD with backlight

To change the ventilation rate

- 1 Press the Menu/Enter button to display the main menu.
- 2 Press the Up/Down buttons to select Ventilation and press the Menu/Enter button.



- 3 Press the Up/Down buttons to select Ventilation Rate and press the Menu/Enter button.



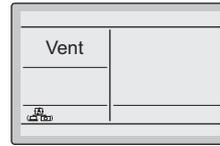
- 4 Press the Up/Down buttons to change the setting to Low or High and press the Menu/Enter button to confirm.



To select ventilation mode

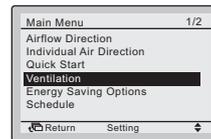
Ventilation mode is used when cooling or heating is not necessary, so only the heat reclaim ventilation units are operating.

- 1 Press the Operation Mode Selector button several times until the ventilation mode is selected.

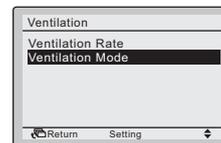


To change the ventilation mode

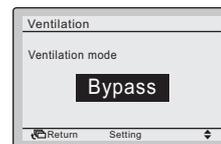
- 1 Press the Menu/Enter button to display the main menu.
- 2 Press the Up/Down buttons to select Ventilation and press the Menu/Enter button



- 3 Press the Up/Down buttons to select Ventilation Mode and press the Menu/Enter button



- 4 Press the Up/Down buttons to select the required ventilation mode.



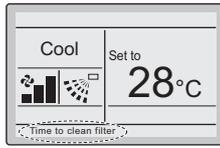
Ventilation modes

You can change the ventilation mode in the main menu.

Mode	Description
Auto mode	Using information from the air conditioner (cooling, heating, fan, and set temperature) and heat reclaim ventilation unit (indoor and outdoor temperatures), this mode automatically switches between heat reclaim ventilation mode and bypass mode.
Heat reclaim ventilation mode (energy reclaim ventilation)	Outdoor air is supplied to the room after passing through a heat exchange element, where heat is exchanged with the room air.
Bypass mode	The indoor air bypasses the heat exchange element. This means that outdoor air is supplied to the room without heat exchange with the room air.

Time to clean filter indication

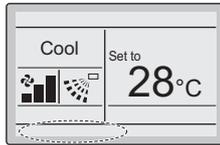
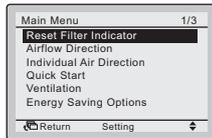
When the filter pressure drop becomes too large, the following message or icon is displayed at the bottom of the basic screen: Time to clean filter or . Clean the filters.



To remove the Time to clean filter indication

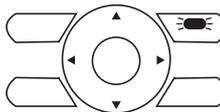
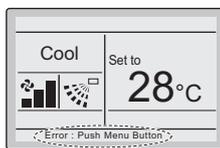
- 1 Press the Menu/Enter button.
- 2 Press the Up/Down buttons to select Reset Filter Indicator.
- 3 Press the Menu/Enter button.

Result: You return to the basic screen. The Time to clean filter indication is no longer displayed.

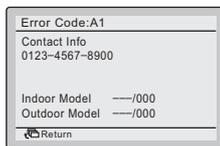


About error indications

If an error occurs, there is an error icon in the basic screen and the operation lamp blinks. If a warning occurs, ONLY the error icon blinks and the operation lamp does NOT. Press the Menu/Enter button to display the error code or warning and contact information.

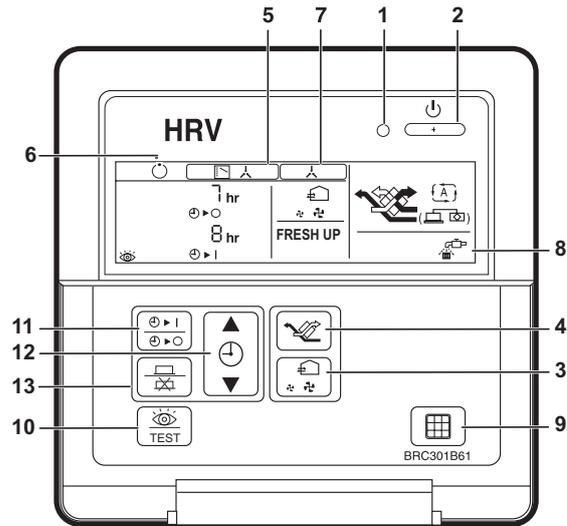


The error code blinks and the contact address and model name appear as shown below. In this case, notify your dealer about the error code.



Controller for heat reclaim ventilation units

For non-independent systems, starting, stopping and setting timer is NOT possible with this controller (BRC301B61). In such cases, use the air conditioner controller (BRC1E53) or the central controller.



1. Operation lamp
This red pilot lamp lights up while the unit is in operation.
2. Operation/Stop button
Press this button once and the unit starts to operate. Press this button again and the unit stops.
3. Air flow rate changeover button
Use this button to change the air flow to "  " Low, "  " High mode, "  " FRESH UP" Low Fresh-up, or "  " FRESH UP" High Fresh-up mode.
When this indication does NOT show, the volume of outdoor air supplied into the room and that of the room air exhausted outdoor is equal.
For "FRESH UP" operation
 - If the Fresh-up setting is set to "Fresh up air supply": The volume of outdoor air supplied into the room is larger than that of room air exhausted outdoors. This prevents odours and moisture from kitchens and toilets from flowing into the room. This is the factory setting.
 - If the Fresh-up setting is set to "Fresh up air exhaust": The volume of room air exhausted outdoors is larger than that of outdoor air supplied into the room. This prevents hospital odours and airborne micro-organisms from flowing out of the room into the corridors.
4. Ventilation mode changeover button
"  " Automatic mode
The unit's temperature sensor automatically changes the operation mode of the unit to Bypass mode or heat reclaim ventilation mode.
"  " Heat reclaim ventilation mode
In this mode, the outdoor air passes through the heat exchange element to effect heat reclaim ventilation.
"  " Bypass mode
In this mode, the outdoor air does not pass through the heat exchange element, but passes it to effect Bypass ventilation.
5. Indication of operation control method:  
When the operation of the heat reclaim ventilation units is linked to the air conditioners, this indication may be displayed. While this indication is displayed, the heat reclaim ventilation units CANNOT be turned on or off with the controller of the heat reclaim ventilation units.

6. Indication of operation standby: 

This icon indicates that the unit is precooling/preheating. The unit's start-up is delayed until precooling/preheating is finished. Precooling/preheating means that the heat reclaim ventilation units are NOT started while linked air conditioners are starting up, for example, before office hours. During this period, the cooling or heating load is reduced to bring the room temperature to the set temperature in a short time..
7. Indication of centralized control: 

When a remote controller for air conditioners or devices for centralized control are connected to the heat reclaim ventilation units, this indication may be displayed. While this indication is displayed, you may NOT be able to turn the heat reclaim ventilation units on or off, or use the timer function with the controller of the heat reclaim ventilation unit.
8. Indication of air filter cleaning

When the display shows "  ", clean the filter.
9. Filter signal reset button
10. Inspection button

Use this button only when servicing the unit.
11. Schedule timer button:  /  or  .

This button enables or disables the schedule timer.
12. Time adjust button:  .
13. Programming button:  /  .

To set the timer

- 1 Press the schedule timer button.
- 2 Press the time adjust button to set the time.
- 3 Press the programming button to save the setting.

Independent operation of the HRV unit using the Centralized controller (DCS302B61)

- After selecting the zone where the only the **HRV** unit operation is desired, press the operation mode selector and select "  " **VENTILATION**. The **HRV** unit can then be operated independently from the air conditioner.
- When the  "FILTER" indication appears on the display, clean the filter of the **HRV** unit. (Refer to the section "[Maintenance](#)" on [page 5](#))

MAINTENANCE

(FOR A QUALIFIED SERVICE PERSON ONLY)



CAUTION

Only a qualified service person is allowed to perform maintenance.

During operation, never check or clean the HRV. It may cause electrical shock and it is very dangerous to touch the rotating part.

Be sure to turn off the OPERATION switch and disconnect the power.

Maintenance for the air filter

Cleaning frequency

**At least once every two years (for general office use)
(clean the element more frequently if necessary.)**

- 1 Go into ceiling through the inspection hole, remove binding metal of maintenance cover and take it off. (Refer to [figure 2](#))
 - 1 Maintenance cover
 - 2 Binding metal
 - 3 Hanging metal
- 2 Take out the heat exchange elements from the unit body. (Refer to [figure 3](#))
 - 1 Heat exchange element
 - 2 Handle
 - 3 Rail
 - 4 Filter
- 3 To clean the air filter, lightly pat it with hand or remove dust with a vacuum cleaner. If excessively dirty, wash it in water. (Refer to [figure 4](#))
- 4 If the air filter is washed, remove water completely and allow to dry for 20 to 30 minutes in the shade. When dried completely, install the air filter back in place. (Refer to [figure 5](#))
- 5 Install the maintenance cover securely in place.



CAUTION

1. Do not wash the air filter in hot water.
 2. Do not dry the air filter over a fire.
 3. Do not subject the air filter to direct sunlight.
 4. Do not use organic solvent such as gasoline and thinner on the air filter.
 5. Be sure to install the air filter after servicing. (Missing air filter causes clogged heat exchange element.)
The air filter is an optional item and the replacement is available.
-

Cleaning frequency

**At least once every two years (for general office use)
(clean the element more frequently if necessary.)**

- 1 Use a vacuum cleaner to remove dust and foreign objects on the surface of the heat exchange element. (Refer to [figure 6](#))
 - Use the vacuum cleaner equipped with a brush on the tip of the suction nozzle.
 - Lightly contact the brush on the surface of the heat exchanging element when cleaning.
(Do not crush the heat exchange element while cleaning.)
- 2 Install the air filter securely in place.
- 3 Put the heat exchange element on the rail and insert it securely in place.
- 4 Install the maintenance cover securely in place.



CAUTION

Never wash the heat exchanger element with water.

TROUBLE AND COUNTERMEASURE

If your unit does not operate properly, check the following items

Conditions	Causes	Corrective actions
The unit does not operate at all.	Check if there is a power failure.	After power has been restored, start operation again.
	Check if the fuse has blown or breaker has worked.	Change the fuse or set the breaker.
	Check if the indication of operation control method on remote controller (BRC301B61) is shown.	This is normal. Operate the unit using the air conditioner remote control or centralized controller. (Refer to "Operation" on page 2)
	Check if the indication of operation stand by on remote controller (BRC301B61) is shown.	It indicates the precooling/preheating operation. This unit is at stop and will start operation after the precooling/preheating operation is over. (Refer to "Operation" on page 2)
Amount of discharged air is small and the discharging sound is high.	Check if the air filter and heat exchange element are clogged.	Refer to "Maintenance" on page 5.
Amount of discharged air is large and so is the sound.	Check if the air filter and heat exchange element are installed.	Refer to "Maintenance" on page 5.

If the following occurs, consult your dealer where the unit was purchased

List of malfunction codes of Remote controller of the HRV-system air conditioner

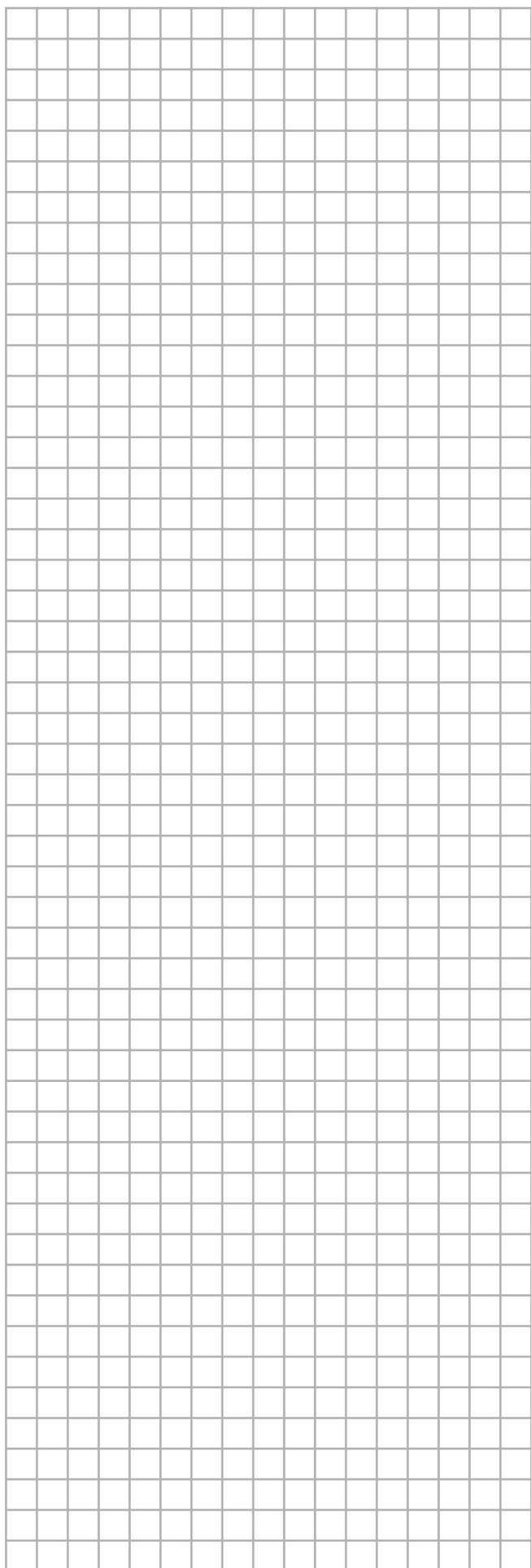
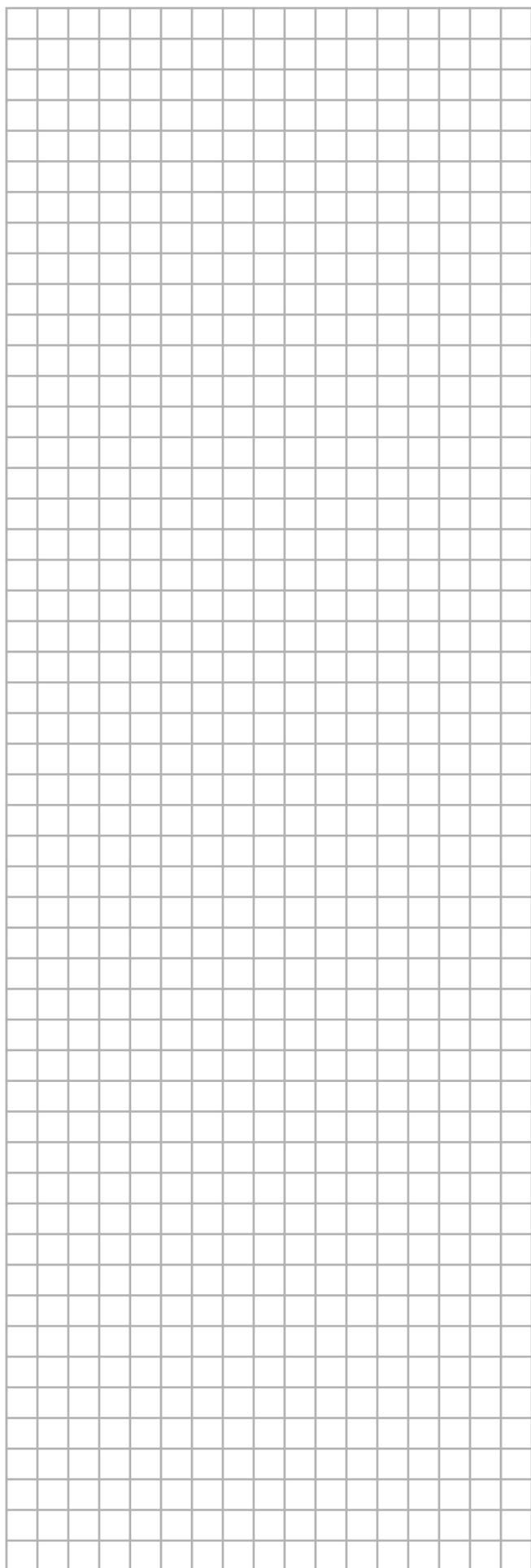
Operation lamp	Inspection indicator	Unit No.	Malfunction code	Description
On	Off	Blinking	64	Indoor air thermistor malfunction
On	Off	Blinking	65	Outdoor air thermistor malfunction
On	Off	Blinking	6A	Damper-related malfunction
Blinking	Blinking	Blinking	6A	Damper-related malfunction + thermistor
Blinking	Blinking	Blinking	U5	Remote control error
On	Off	Off	UC	Repeated central address
Blinking	Blinking	Blinking	UE	Transmission error between the unit and centralized controller

■ In case of the malfunction with the code in white letters on the black background in the unit still operates. However, be sure to have it inspected and repaired and as soon as possible.

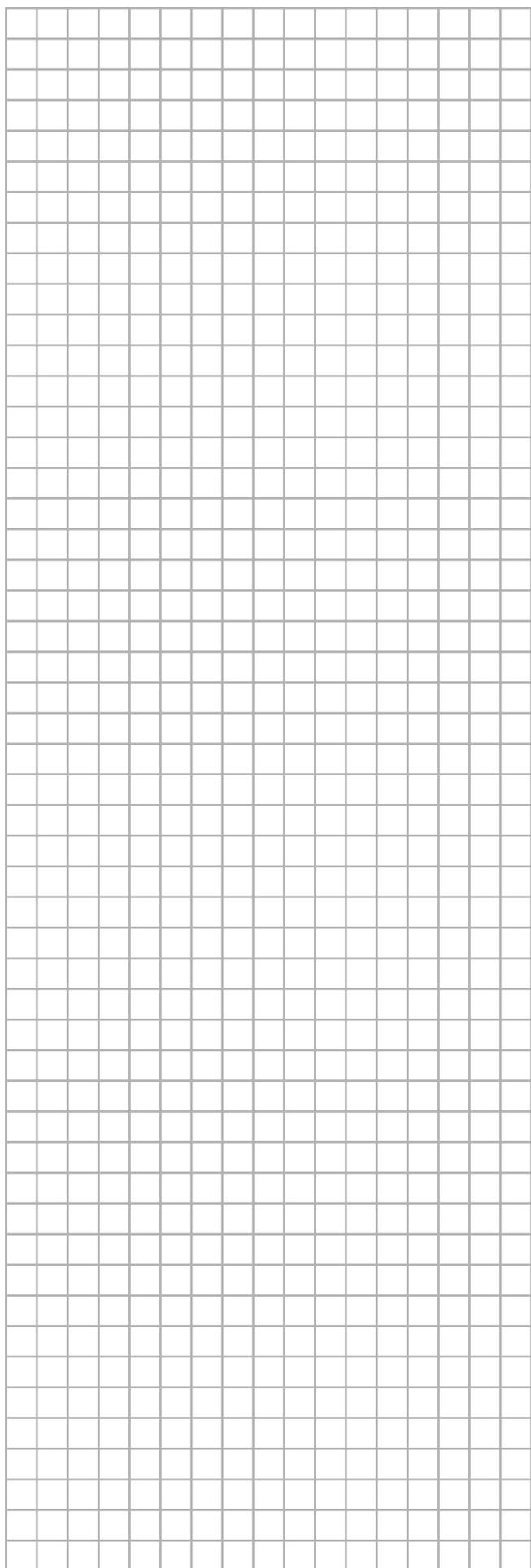
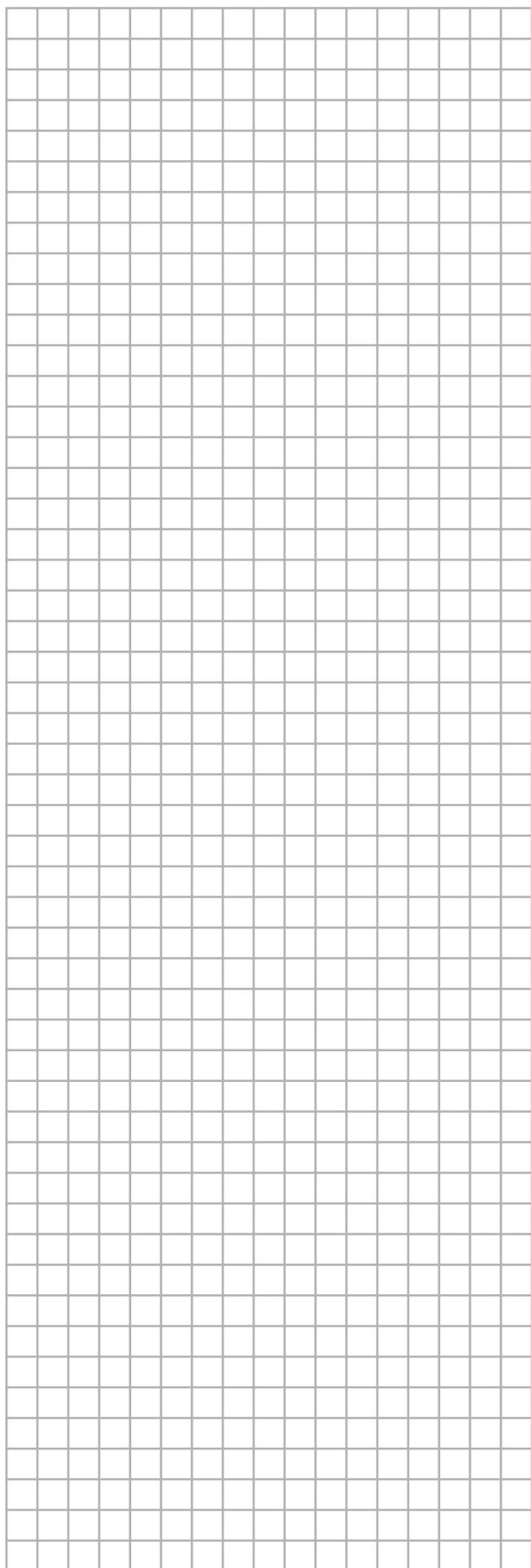
DISPOSAL REQUIREMENTS

Dismantling of the unit must be done in accordance with relevant local and national regulations.

NOTES



NOTES



ERC

Copyright 2019 Daikin

DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

4P586308-1 2019.06