TOSHIBA

HEAT RECOVERY VENTILATION UNIT

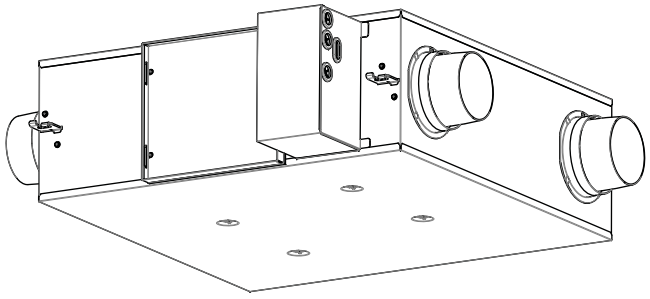
Owner's Manual

For commercial use

Concealed Microcomputer Control Type

Model name:

VN-U00151SY-E VN-U00251SY-E
VN-U00351SY-E VN-U00501SY-E
VN-U00651SY-E VN-U00801SY-E
VN-U01001SY-E



English

Original instruction

Thank you very much for purchasing TOSHIBA Heat recovery ventilation unit.
Please read this owner's manual carefully before using your Heat recovery ventilation unit.
• Obtain the "Owner's manual" and "Installation manual" from constructor (or dealer).
Request to constructor or dealer
• Please clearly explain the contents of the Owner's manual and hand over it.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Contents

Please read carefully through these instructions that contain important information which complies with the "Machinery Directive" (Directive 2006/42/EC), and understand them.

Generic Denomination: Heat recovery ventilation unit

Definition of Qualified Installer or Qualified Service Person

The Heat recovery ventilation unit must be installed, maintained, repaired and removed by a qualified installer or qualified service person. When any of these jobs is to be done, ask a qualified installer or qualified service person to do them.
A qualified installer or qualified service person is an agent who has the qualifications and knowledge described in the table below.

Agent	Qualifications and knowledge which the agent must have
Qualified installer (*1)	• The qualified installer is a person who installs, maintains, relocates and removes the Heat recovery ventilation units made by Carrier HVAC Equipment (Hangzhou) Co., Ltd. He or she has been trained to install, maintain, relocate and remove the Heat recovery ventilation units made by Carrier HVAC Equipment (Hangzhou) Co., Ltd. or, alternatively, he or she has been instructed in such operations by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to these operations. • The qualified installer who is allowed to do the electrical work involved in installation, relocation and removal has the qualifications pertaining to this electrical work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to electrical work on the Heat recovery ventilation units made by Carrier HVAC Equipment (Hangzhou) Co., Ltd. or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified installer who is allowed to work at heights has been trained in matters relating to working at heights with the Heat recovery ventilation units made by Carrier HVAC Equipment (Hangzhou) Co., Ltd. or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work.
Qualified service person (*1)	• The qualified service person is a person who installs, repairs, maintains, relocates and removes the Heat recovery ventilation units made by Carrier HVAC Equipment (Hangzhou) Co., Ltd. He or she has been trained to install, repair, maintain, relocate and remove the Heat recovery ventilation units made by Carrier HVAC Equipment (Hangzhou) Co., Ltd. or, alternatively, he or she has been instructed in such operations by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to these operations. • The qualified service person who is allowed to do the electrical work involved in installation, repair, relocation and removal has the qualifications pertaining to this electrical work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to electrical work on the Heat recovery ventilation units made by Carrier HVAC Equipment (Hangzhou) Co., Ltd. or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified service person who is allowed to work at heights has been trained in matters relating to working at heights with the Heat recovery ventilation units made by Carrier HVAC Equipment (Hangzhou) Co., Ltd. or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work.

These safety cautions describe important matters concerning safety to prevent injury to users or other people and damages to property. Please read through this manual after understanding the contents below (meanings of indications), and be sure to follow the description.

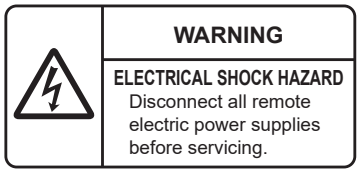
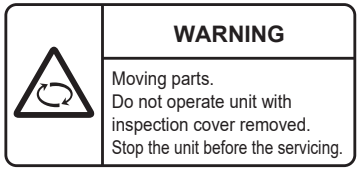
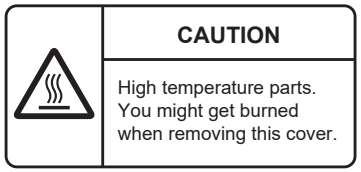
Indication	Meaning of Indication
⚠ WARNING	Text set off in this manner indicates that failure to adhere to the directions in the warning could result in serious bodily harm (1) or loss of life if the product is handled improperly.
⚠ CAUTION	Text set off in this manner indicates that failure to adhere to the directions in the caution could result in slight injury (2) or damage (3) to property if the product is handled improperly.

1: Serious bodily harm indicates loss of eyesight, injury, burns, electric shock, bone fracture, poisoning, and other injuries which leave aftereffect and require hospitalization or long-term treatment as an outpatient.
2: Slight injury indicates injury, burns, electric shock, and other injuries which do not require hospitalization or long-term treatment as an outpatient.
3: Damage to property indicates damage extending to buildings, household effects, domestic livestock, and pets.

MEANINGS OF SYMBOLS DISPLAYED ON THE UNIT

	Read the OWNER'S MANUAL carefully before operation.
	Service personnel are required to carefully read the OWNER'S MANUAL and INSTALLATION MANUAL before operation.
	Further information is available in the OWNER'S MANUAL, INSTALLATION MANUAL, and the like.

■Warning indications on the Heat recovery ventilation unit

Warning indication	Description
	**WARNING** **ELECTRICAL SHOCK HAZARD** Disconnect all remote electric power supplies before servicing.
	**WARNING** Moving parts. Do not operate unit with inspection cover removed. Stop the unit before the servicing.
	**CAUTION** High temperature parts. You might get burned when removing this cover.

1 Precautions for safety

The manufacturer shall not assume any liability for the damage caused by not observing the description of this manual.

⚠WARNING

General

- Carefully read Owner's Manual before starting the Heat recovery ventilation unit. There are many important things to keep in mind for daily operation.
- Ask for installation to be performed by the dealer or a professional. Only a qualified installer (*1) is able to install a Heat recovery ventilation unit. If a non-qualified person installs a Heat recovery ventilation unit, it may result in problems such as fire, electric shock, injury, water leakage, noise and vibration.

Transportation and storage

- When transporting the Heat recovery ventilation unit, wear shoes with protective toe caps, protective gloves, and other protective clothing.
- When transporting the Heat recovery ventilation unit, do not take hold of the bands around the packing carton. You may injure yourself if the bands should break.
- When stacking the packing cartons for storage or transportation, heed the precautions written on the packing cartons. Failure to heed the precautions may cause the stack to collapse.
- The Heat recovery ventilation unit should be transported in stable condition. If any part of the product broken, contact your dealer.
- Use a hand track or forklift to carry the unit. When carrying it by human power, have four persons or more otherwise, you may strain your back.

Installation

- Only a qualified installer (*1) or qualified service person (*1) is allowed to carry out the electrical work of the Heat recovery ventilation unit. Under no circumstances must this work be done by an unqualified individual since failure to carry out the work properly may result in electric shocks and/or electrical leaks.
- After the installation work has been completed, have the installer explain about the circuit breaker positions. In the event that trouble has occurred in the Heat recovery ventilation unit, set the circuit breaker to the OFF position, and contact a service person.

- Do not install the Heat recovery ventilation unit in a location that may be subject to a risk of exposure to a combustible gas. If a combustible gas leaks and becomes concentrated around the unit, a fire may occur.
- Use the company-specified products for the separately purchased parts. Use of non-specified products may result in fire, electric shock, water leakage or other trouble. Have the installation performed by a professional.
- Confirm that earthing is performed correctly.

Operation

- Before opening the electrical control cover or inspection cover of the Heat recovery ventilation unit, set the circuit breaker to the OFF position. Failure to set the circuit breaker to the OFF position may result in electric shocks through contact with the interior parts. Only a qualified installer (*1) or qualified service person (*1) is allowed to remove the electrical control cover or inspection cover of the Heat recovery ventilation unit and do the work required.
- Inside the Heat recovery ventilation unit are high-voltage areas and rotating parts. Due to the danger of electric shocks or of your fingers or physical objects becoming trapped in the rotating parts, do not remove the electrical control cover or inspection cover of the Heat recovery ventilation unit. When work involving the removal of these parts is required, contact a qualified installer or a qualified service person.
- Do not move or repair any unit by yourself. Since there is high voltage inside the unit, you may get electric shock when removing the cover and main unit.
- Use of a stand more than 50 cm high to clean the filter or heat exchange element of the Heat recovery ventilation unit or to carry out other such jobs constitutes working at heights. Due to the danger of falling off the stand and injuring yourself while working at heights, this kind of work should not be done by unqualified individuals. When this kind of work must be carried out, do not do it yourself but ask a qualified installer or a qualified service person to do it for you.
- Do not place any combustion appliance in a place where it is directly exposed to the wind of Heat recovery ventilation unit, otherwise it may cause imperfect combustion.
- Do not insert your finger or a stick into the air intake or discharge. Doing so may result injury as the fan is rotating at high speed inside the unit.

Repairs

- When you have noticed that some kind of trouble (such as when a check display has appeared, there is a smell of burning, abnormal sounds are heard, water is leaking) has occurred in the Heat recovery ventilation unit, do not touch the Heat recovery ventilation unit yourself but set the circuit breaker to the OFF position, and contact a qualified service person. Take steps to ensure that the power will not be turned on (by marking “out of service” near the circuit breaker, for instance) until qualified service person arrives. Continuing to use the Heat recovery ventilation unit in the trouble status may cause mechanical problems to escalate or result in electric shocks or other trouble.
- If there is a danger of the Heat recovery ventilation unit’s falling, do not approach the Heat recovery ventilation unit but set the circuit breaker to the OFF position, and contact a qualified installer or a qualified service person to refit the unit. Do not set the circuit breaker to the ON position until the unit has been refitted.
- Do not modify the products. Do not also disassemble or modify the parts. It may cause a fire, electric shock or injury.

Relocation

- When the Heat recovery ventilation unit is to be relocated, do not relocate it yourself but contact a qualified installer or a qualified service person. Failure to relocate the Heat recovery ventilation unit properly may result in electric shocks and/or a fire.

(*1) Refer to the “Definition of Qualified Installer or Qualified Service Person”.

⚠CAUTION

Cautions about installation (confirm the following cautions.)

- Connect the Heat recovery ventilation unit to an exclusive power supply of the rated voltage, otherwise the unit may break down or cause a fire.

Cautions about operation

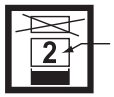
- Do not use this Heat recovery ventilation unit for special purpose such as preserving food, precision instruments, art objects, breeding animals, car, vessel, etc.
- Do not touch any switches with wet finger, otherwise you may get an electric shock.
- If the Heat recovery ventilation unit will not be used for a considerably long time, turn off the main switch or the circuit breaker, for safety.
- Prevent any liquid from falling into the remote controller. Do not spill juice, water or any kind of liquid.
- Do not pour or spray water or detergent on the electric parts. Doing so may cause electric leakage and result in a fire, electric shocks and/or injury.
- Do not install the unit and inside air intake in a place such as a machine factory, chemical plant, or research institute, where acids, alkaline, organic solvents, or coating materials are handled and toxic gases and/or corrosive gases may be produced. Otherwise, gas poisoning may occur and/or the inside of the unit may be eroded or deteriorated. The deterioration and erosion may result in a fire.
- Do not use “Bypass mode” when heating the room in winter. Water condensed on the unit may drip onto the ceiling board and may soil the ceiling.
- Do not use the unit in a place where it is hot (40°C or higher) or where much oily smoke is produced, and do not directly expose the unit to flame. Doing so may result in a fire.
- Do not expose animals or plants to the wind from the unit. Doing so may harm the animal or plant.
- Do not use a flammable spray near the unit or inside air intake. Doing so may result in a fire.

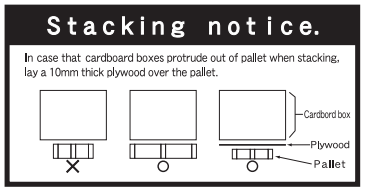
■ Disposal

Dispose of Heat recovery ventilation unit in accordance with the Directive 2012/19/EU WEEE (Waste Electrical and Electronic Equipment).

■ Information on the transportation, handling and storage of the carton

Examples of indication on the carton

Symbol	Description	Symbol	Description
	Keep dry		Do not drop
	Do not lay down	 2 cartons	Stacking height (3 cartons can be stacked in this case)
	This side up		Do not step
	Handle with care		Weight
	Do not roll		Do not clamp

Other cautions	Description
	**CAUTION** Injury possibility. Don't handle with packing band, or may get injured in case of broken band.
	**Stacking notice.** In case that cardboard boxes protrude out of pallet when stacking. Lay a 10 mm thick plywood over the pallet.

2 Features

■ Main features

◆Power saving ventilation

The cost of cooling and heating is reduced thanks to the unit efficiently retrieving thermal energy (outdoor air load) which has been lost during ordinary ventilation.

◆Space saving

Significant reduction of outdoor air load and the ability to retrieve thermal energy enable the production of smaller air conditioning devices.

◆Humidity control

When cooling, highly humid outdoor air is conditioned to near the humidity of the dehumidified (cooled) indoor air before being supplied.
When heating, moisture from the indoor air is transferred to the dry outdoor air before the outdoor air is supplied.

◆Comfortable ventilation

Ventilation without big changes in temperature is realized.
In addition, stable ventilation is possible even in an air tight room due to simultaneous air intake and expulsion.

◆Sound insulation

Air trunks and heat exchange elements provide sound insulation.
They reduce the incoming of outdoor noise and the outward flow of sounds indoor and help keep the office or shop, and their surroundings quiet.

◆Fan control

This unit has “Constant input power control” (or “Constant air flow control”).
This fan control is strong to the pressure loss. For example, when dust accumulates on the filter, it reduces the decrease in airflow.

■ About ventilation modes

The unit has three ventilation modes.

Heat exchange mode
Exchanging heat between the outdoor and indoor air and making the temperature and humidity of the outdoor air closer to those of the indoor air before supplying it.

Bypass mode
Outdoor air is taken into a room as it is. This mode is mainly used in spring and summer.

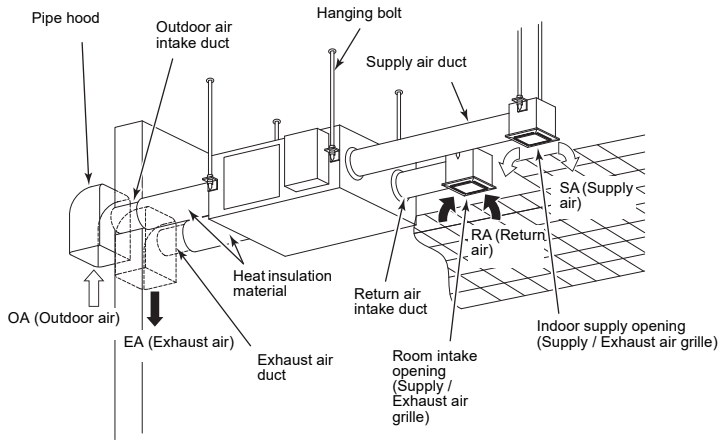
Automatic mode
1. For a Heat recovery ventilation unit system
   The heat exchange mode and the bypass mode are automatically switched between following the information from the indoor and outdoor temperature sensors in the unit.
2. For a Heat recovery ventilation unit system linked with Air conditioners
   The heat exchange mode and the bypass mode are automatically switched between depending on the operation status of the Air conditioner (cooling, heating, dry, fan, or temperature setting) and the information from the indoor and outdoor temperature sensors in the unit.

⚠ CAUTION

If the outdoor temperature becomes about to 15°C or less in [Automatic mode] or [Bypass mode], the system will automatically start to run in [Heat exchange mode] regardless of the mode setting to prevent condensation in the Heat recovery ventilation unit.
* The indication of the ventilation mode setting does not change.

3 Standard installation example

■ Concealed microcomputer control type



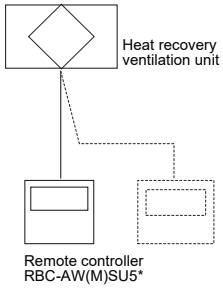
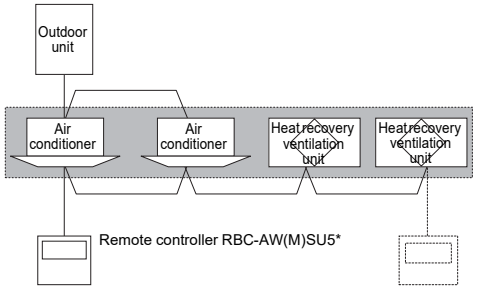
NOTE

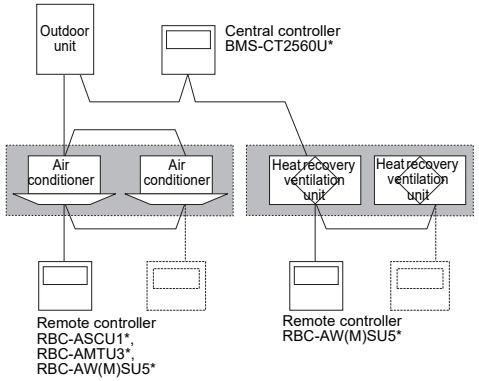
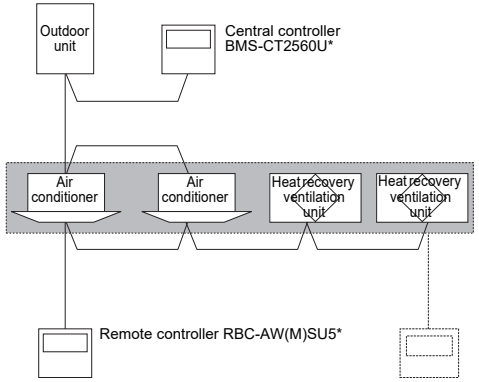
The printed indications on the unit become upside-down when the unit is installed upside-down.

4 System configuration

The control method of this product differs depending on the system configuration. Operate it following the methods explained in the system configuration examples below.

- For the actual system configuration, ask your dealer or the installer of the product for information.
- Refer also to the installation manuals and owner's manuals of the remote controllers.
- If you use the central remote controller, refer also to its installation manual and owner's Manual.

System example	Operation	Notes
A. Heat recovery ventilation unit system  	• The wired remote controller RBC-AW(M)SU5* can be used the start / stop of the Heat recovery ventilation unit and the ventilation fan speed and select ventilation mode. * Remote controllers other than RBC-AW(M)SU5* are not compatible with heat recovery ventilation systems. (Some functions cannot be available.) For how to use the remote controller, refer to “6. How to use”.	If two remote controllers are used, the latter operation overrides the former and their indications always reflect the result of the latter operation.
B. Heat recovery ventilation unit system linked with Air conditioners  	• The wired remote controller RBC-AW(M)SU5* can be used the start / stop of the Heat recovery ventilation unit and the ventilation fan speed and select ventilation mode. * Remote controllers other than RBC-AW(M)SU5* are not compatible with heat recovery ventilation systems. (Some functions cannot be available.) • In the case of Heat recovery ventilation unit system linked Air conditioner, the type of ventilation fan speed that you can select from the remote controllers are less than Heat recovery ventilation unit ONLY system. • About separate operation of Air conditioner and Heat recovery ventilation, it is possible from remote controllers RBC-AW(M)SU5*. * However, setting modifications are required for separate control. Contact your dealer for more information.	If two remote controllers are used, the latter operation overrides the former and their indications always reflect the result of the latter operation.

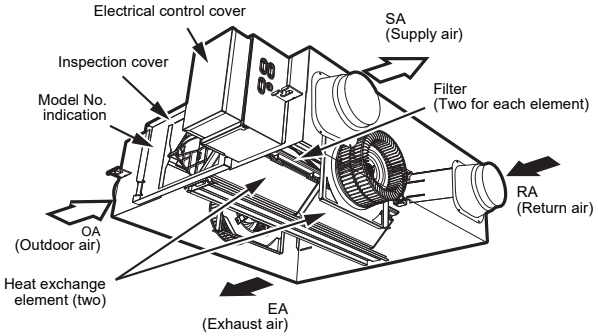
System example	Operation	Notes
C. Central control system (When controlling the Air conditioner group and the Heat recovery ventilation unit group separately)  	• The central controller can be used to start / stop the whole system and separately start / stop groups of Air conditioners and the Heat recovery ventilation units. (In this system, the Air conditioners and the Heat recovery ventilation units are not linked in operation.) • The functions that can control Heat recovery ventilation from central controller may differ depend on the of central controller. • The wired remote controller RBC-AW(M)SU5* can be used the start / stop of the Heat recovery ventilation unit and the ventilation fan speed and select ventilation mode. * Remote controllers other than RBC-AW(M)SU5* are not compatible with heat recovery ventilation systems. (Some functions cannot be available.)	If three control devices are used; • About the central controller and the remote controllers for Air conditioner or the central controller and the remote controllers for Heat recovery ventilation units, the latter operation overrides the former and their indications always reflect the result of the latter operation. • About the remote controllers for Air conditioner and Heat recovery ventilation units are not affected by each other's operations.
D. Central control system (When controlling the Air conditioners and the Heat recovery ventilation units together)  	• The central controller can be used to start / stop the whole system. About separate operation of Air conditioner and Heat recovery ventilation, it is impossible from central controller, but possible from remote controllers RBC-AW(M)SU5*. * However, setting modifications are required for separate control. Contact your dealer for more information. • The central controller cannot be used to control the Ventilation fan speed or ventilation mode of the Heat recovery ventilation unit. * Central controller cannot recognize Heat recovery ventilation. (Heat recovery ventilation does not appear in central controller.) • The wired remote controller RBC-AW(M)SU5* can be used the start / stop of the Heat recovery ventilation unit and the ventilation fan speed and select ventilation mode. * Remote controllers other than RBC-AW(M)SU5* are not compatible with heat recovery ventilation systems. (Some functions cannot be available.)	If three control devices are used; • About the central controller and the remote controllers for the Heat recovery ventilation unit and the Air conditioner, the latter operation overrides the former regardless of which device is used.

NOTE

The heat exchange element may smell during the initial period of use. However, this is not a malfunction and the smell is harmless.

5 Part names and functions

■ Concealed microcomputer control type (main unit)



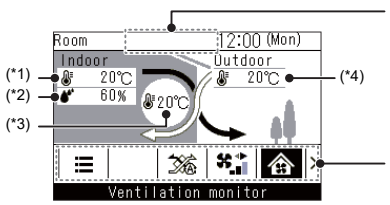
5-1. Remote controller RBC-AWSU5*, RBC-AMSU5*

For RBC-AW(M)SU5* remote controller operation, refer also to the Owner's Manual of RBC-AW(M)SU5*.

◆Detailed display mode

Main screen

This screen is for monitoring the state of the air and for setting the ventilation fan speed and ventilation mode.
You can check the current state according to the setting items on the bottom of the screen.
You can switch the setting items by pushing [ ] and [ ], and change them by pushing [ ] and [ ].



"Preparing to operate ventilation"
Displayed while the Heat recovery ventilation is on standby.
While this is being displayed, the Heat recovery ventilation remains stopped.

Setting items
- The currently selected item is highlighted in black.
- You can switch the items by pushing [ ] and [ ].

(*1) Indoor temperature
(*2) Indoor humidity
(*3) Supply air temperature
(*4) Outdoor temperature

NOTE

- The "Ventilation monitor" screen is the main screen.
- Functions and items that cannot be set are not shown, according to the model.
- While changing settings, if you push [Return] or if there are no button operations for about 60 seconds, the main screen returns.
- The displayed value (*1, *2, *3, *4) is the value detected by the Heat recovery ventilation unit. Actual values may differ. It cannot be used as a measuring instrument.

▼Icon list

	Displayed when “Energy saving operation” is “ON”.		Displayed when “Timer” is “ON”.
	Displayed when remote controller sensor is set. (*1)		Displayed when “Louver lock” is set.
	Displayed when “Night operation” is “ON”.		Displayed when it is time for filter maintenance.
	Displayed when operations are locked by central control. (*1)		Displayed when “Soft Cooling” operation is “ON”.
	Displayed when “Saving operation” is “ON”.		Displayed for about 3 seconds when the operation mode is changed in the “Mode” screen when the operation mode is restricted.
	Displayed when the Bluetooth® function is “ON”. Refer to the Owner’s Manual of the Bluetooth® function regarding Bluetooth® functions.		Displayed when “Air purifier” function is “ON”.
	Displayed when a check code occurs. (*1)		Displayed when a notice code occurs. (*1) For details, contact your dealer.
	It reaches the set temperature, and displayed while the room temperature is maintained.		It is displayed when a commercially available ventilation unit connected to the air conditioner is in operation.

*1: Refer to the Installation Manual of the Wired remote controller.

▼Heat recovery ventilation unit

- Displayed only when Heat recovery ventilation units are connected.

	Automatic		24-hour ventilation
	Bypass		Nighttime heat purge
	Heat exchange		

◆Operation button section

Preparation

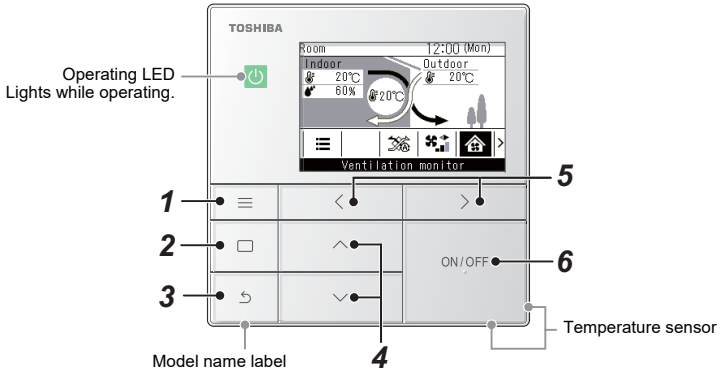
Turn on the circuit breaker

When the power is turned on, “⧖” appears on the remote controller display.

* The remote controller will not work for about 3 minute after turning on the power. This is not a malfunction.

REQUIREMENT

- Keep the circuit breaker turned on during use.
- When you resume using the Heat recovery ventilation unit after a long period of disuse, turn on the circuit breaker at least 12 hours before starting operation.



* The screens shown here are examples. The content that is displayed may differ, depending on the environment settings being used.

1 **[☰ Menu] button**
Shows the “Menu”.

2 **[▭ Set/Fix] button**
Fixes and applies settings.
Ways to use it are shown on screen.

3 **[⮌ Return] button**
Deletes selections.
Ways to use it are shown on screen.

4 **[∧] and [∨] buttons**
Changes settings and selects items.

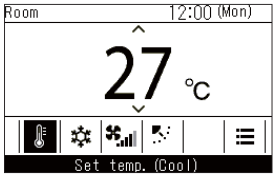
5 **[<] and [>] buttons**
Selects setting items.
Other ways to use it are shown on screen.

6 **[ON/OFF ON/OFF] button**
Starts and stops connected devices.

◆Main screen types and configuration

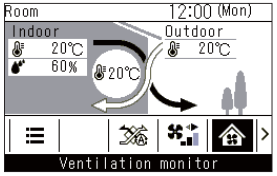
- When connected to an air conditioner, the main screen of the air conditioner is displayed, and when connected to a Heat recovery ventilation unit, the main screen of the Heat recovery ventilation unit is display on screen.
- When connected to both air conditioners and Heat recovery ventilation units, you can switch screens by pushing [<] or [>] in either of the main screens.

Air conditioner main screen



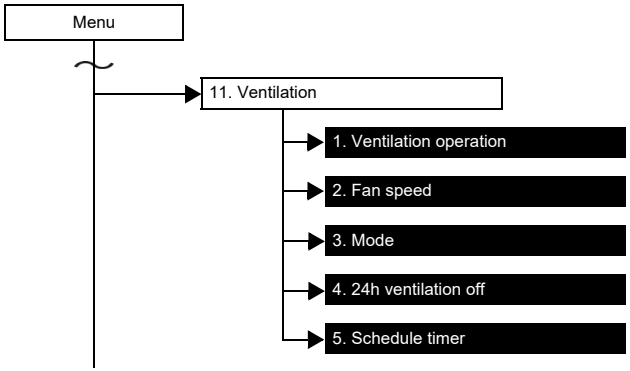
Push the [<] or [>] button.

Heat recovery ventilation unit main screen



◆Menu items

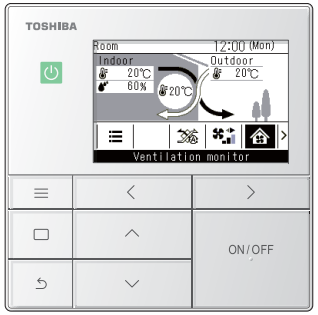
Push the [≡ Menu] button to display the main menu screen.
Select items with the [∧] and [∨] button to set.
In addition to the operations on the main screen, there are also items related to setting Heat recovery ventilation in the menu “11. Ventilation”.



6 How to use

When the Heat recovery ventilation is used for the first time or change the settings, operate the remote following the procedure below.
From the next time, the unit starts running following the set operation conditions by just pressing the [ON/OFF ON/OFF] button.

■Operations



1 Push [ON/OFF ON/OFF] to start operations
→The operation LED lights.

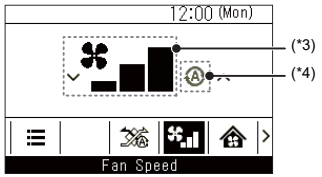
2 Push [<] and [>] to select the item you want to change
→You can change the following items.
1. Adjusting fan speed
2. Ventilation mode settings
3. Ventilation menu

3 To stop operations, push [ON/OFF ON/OFF] again

1. Adjusting fan speed

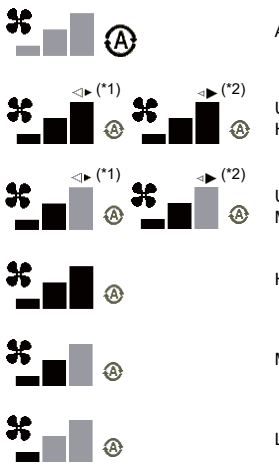
NOTE

The factory default setting for fan speed “Auto” and unbalance (“Supply air > Exhaust air” or “Supply air < Exhaust air”) is disabled. Disabled setting items are not shown. To enable it, contact your supplier (dealer).



1 **Push [ ] and [ ] to switch to the “Fan speed” screen**

2 **Push [ ] and [ ] to select ventilation fan speed**



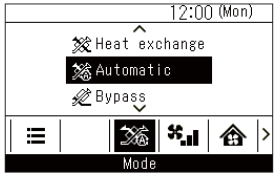
(*1) ◁▸ When “Supply air > Exhaust air” is set
The volume of supply air to the inside is larger than the volume of exhaust air to the outside.

(*2) ◃▶ When “Supply air < Exhaust air” is set
The volume of exhaust air to the outside is larger than the volume of supply air to the inside.

(*3) The display differs depending on the system.
If Heat recovery system linked with Air conditioner, display is “ ”.

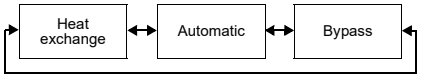
(*4) This “Ⓐ” display appears only when an optional sensor is connected.
Consult your dealer to change the setting to active.

2. Ventilation mode settings

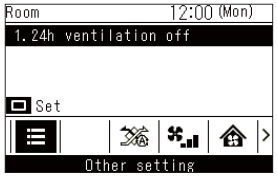


1 **Push [ ] and [ ] to switch to the “Mode” screen**

2 **Push [ ] and [ ] to select a ventilation mode**



3. Ventilation menu



1 **Push [ ] and [ ] to switch to the menu function setting screen**

2 **Push [ ] and [ ] to select menu functions**

3 **Push [Set/Fix]**
→A screen to confirm appears.

4 **Push [Set/Fix]**
→Return to the menu function setting screen.

■ Functions

About ventilation modes

* For details, see “About ventilation modes”.
  [Heat exchange mode], [Bypass mode] or [Automatic mode] can be selected.

About unbalanced ventilation fan speed (◁▷ [SA>EA]/ ◁▶ [SA<EA])

For normal ventilation High, Medium and Low:

The volumes of the indoor air supply and outdoor air exhaustion are set to the same level.

For unbalanced ventilation fan speed:

- When ◁▷ [SA>EA] is selected: the volume of the indoor air supply is larger than that of the outdoor air exhaustion.
  (Inflow of humidity and smells from the toilet and kitchen is reduced.)
- When ◁▶ [SA<EA] is selected: the volume of the outdoor air exhaustion is larger than that of the indoor air supply.
  (Outflow of smells and floating bacteria into a corridor or other places is reduced.

* Consult your dealer if the setting of the imbalanced ventilation fan speed seems incorrect.

About 24-hour ventilation

- When the 24-hour ventilation setting is active, push the [ON/OFF ON/OFF] button while the system is running and the operation lamp turns off, “24H” appears on the display, and 24-hour ventilation starts.
- From “Ventilation menu” of main screen or in the menu “11. Ventilation”, you can stop 24-hour ventilation temporarily.
  The “24H” indicator turns off and 24-hour ventilation stops temporarily.

NOTE

- The setting of 24-hour ventilation is “OFF” As factory default. Consult your dealer to change the setting to “ON”.
- The ventilation setting of fan speed or mode cannot be changed during 24-hour ventilation. Their indicators are not displayed.
  * During 24-hour ventilation, the unit is running under the settings [LOW] ventilation fan speed and [Heat exchange mode].
- If interval 24-hour ventilation operation mode is set, the “24H” indicator stays lit even during the intervals.
- The “” indicator stays lit or stops by the central control mode. (Central 1, 2 and the external input of a Heat recovery ventilation CN61 (2)-(3) or CN705 (1)-(2) prohibition of remote controller operation)

About nighttime heat purge operation

- **Nighttime heat purge is a function to reduce the room air conditioning load in the morning in summer by exhausting the air indoor which has become warm while the Air conditioner is stopped in the night automatically in the Bypass mode.**
- **Nighttime heat purge is compatible with the following two systems.**
  1. Heat recovery ventilation unit system (one unit or multiple units)
     The nighttime heat purge operation functions if night purge is activated and the Heat recovery ventilation is stopped.
  2. Heat recovery ventilation unit system linked with Air conditioners.
- **The nighttime heat purge operation functions if night purge is activated and the last operation mode of the Air conditioner before stopping is Ⓐ, or in a Heat recovery ventilation unit system linked with Air conditioners.**
  If the [ON/OFF ON/OFF] button is pushed while the system is running, the operation lamp turns off, “” appears on the display, and the nighttime heat purge operation turns on-standby.
  After the operation becomes on-standby, the unit automatically starts ventilation in [Low] ventilation fan speed and [Bypass mode] when the conditions to start the nighttime heat purge operation below are fulfilled.
  The nighttime heat purge operation is paused for half an hour if any of the conditions to pause the operation are detected.
  If the conditions to start the nighttime heat purge operation are fulfilled half an hour after the pause, the operation will start again. If not, the operation will remain paused for once more half an hour.
  This cycle is repeated until the conditions to stop (end) the nighttime heat purge operation below are fulfilled.

The conditions to start the nighttime heat purge operation

The unit compares temperatures indoor and outdoor using the monitoring operation (for about 5 minutes) and will start the nighttime heat purge operation if the following conditions are fulfilled.

1. A certain amount of time has passed between the nighttime heat purge operation becoming on-standby and the monitoring operation starting. (The time is set between 1- 48 hours in 1 hour steps.)

2-1. Heat recovery ventilation unit system: The outdoor temperature (TOA) is the same or more higher than 24°C and the indoor temperature (TRA) is higher than the supply air temperature (TSA).

2-2. The indoor temperature is 3°C or more higher than the outdoor temperature and the indoor temperature is 2°C or more higher than the temperature set for the operation.

The conditions to pause the nighttime heat purge operation (the operation pauses for half an hour.)

1-1. Heat recovery ventilation unit system: The outdoor temperature (TOA) is the same or lower than 22°C or the indoor temperature (TRA) is the same or lower than the supply air temperature (TSA) .

1-2. Heat recovery ventilation unit system linked with Air conditioners: The indoor temperature (TRA) is the same or lower than the outdoor temperature (TOA) or the indoor temperature (TRA) is the same or lower than the temperature set for the operation.

The conditions to stop (end) the nighttime heat purge operation

The nighttime heat purge operation ends and the “” indicator disappears if any of the following conditions are fulfilled.

1. The Air conditioner or Heat recovery ventilation unit is started.
2. 48 hours has passed since the monitoring operation started.

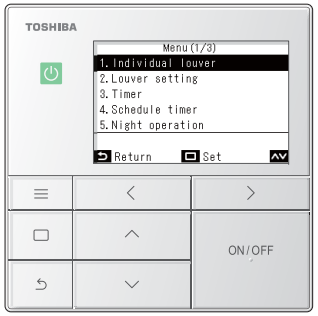
NOTE

- The setting of the nighttime heat purge operation is “OFF” As factory default.
  Consult your dealer to change the setting to “ON” or the setting of the time until the monitoring operation starts. Also consult your dealer to change the outdoor temperature conditions (24°C) on a Heat recovery ventilation unit system.
- The ventilation setting of fan speed or mode cannot be changed during the nighttime heat purge operation. Their indicators are not displayed.
- The “” indicator stays lit while the operation is on-standby or paused.
- The nighttime heat purge operation cannot be activated if 24-hour ventilation is activated.

⚠ CAUTION

- The nighttime heat purge operation is not executed if the outdoor temperature becomes about 15°C or less to prevent condensation in the Heat recovery ventilation unit, but the “” indicator is still lit.
- The “” indicator stays lit or stops by the central control mode. (Central 1, 2 and the external input of a Heat recovery ventilation CN61 (2)-(3) or CN705 (1)-(2) prohibition of remote controller operation)

■ How to operate menus



1 **Push [Menu]**

2 **Push [ ] and [ ] to select an item**
→The selected item is highlighted in black.

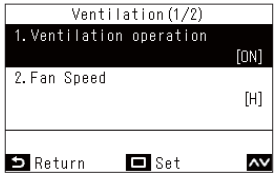
3 **Push [Return]**
→"Menu" is displayed or return to the main screen.

■ Ventilation

You can set the ventilation items.

NOTE

- Depending on the system, there are items that can be set or cannot be set.
- Depending on the settings, there are items that change the displayed content.



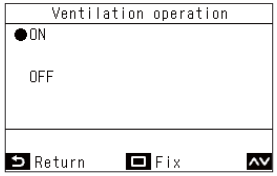
1 **In "Menu", select "Ventilation", and push [Set/Fix]**

2 **Push [ ] and [ ] to select an item**

3 **Push [Set/Fix]**

Item	Description
1. Ventilation operation	Do "ON" or "OFF" for ventilation.
2. Fan speed	Select the "Fan speed".
3. Mode	Select the "Mode".
4. 24h ventilation off	Stop 24 hour ventilation operation.
5. Schedule timer	Set the schedule for ventilation. * This can only be set when a Heat recovery ventilation is connected alone.

Ventilation operation (ON or OFF for ventilation)



1 **In the "Ventilation" screen, push [ ] and [ ] to select "Ventilation operation", and then push [Set/Fix]**

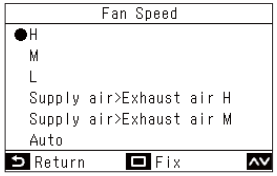
2 **Push [ ] and [ ] to select "ON" or "OFF"**

3 **Push [Set/Fix]**
→Return to the "Ventilation" screen.

NOTE

- If no ventilation unit is connected, or if settings to enable "Individual ventilation" operations are not set, "Impossible" is displayed.
- "Fan speed", "Mode", and "24h ventilation off" can only be set when our Heat recovery ventilation of the VN-M*HE* Series or VN-*SY-E is connected to your system. "Schedule timer" can only be set when our Heat recovery ventilation of the VN-*SY-E Series is connected alone to your system.
- When a setting is configured to enable "Individual ventilation" operation with a Heat recovery ventilation other than the VN-M*HE* or VN-*SY-E Series connected, "" is displayed in the Details screen during ventilation operation.

Fan speed

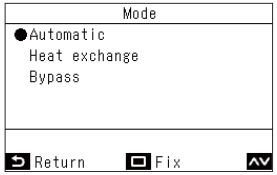


1 **In the “Ventilation” screen, push [^] and [v] to select “Fan speed”, and then push [▭ Set/Fix]**

2 **Push [^] and [v] to select “Fan speed”**

3 **Push [▭ Set/Fix]**
→Return to the “Ventilation” screen.

Mode

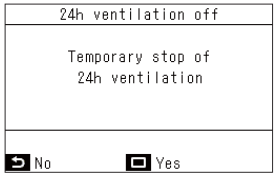


1 **In the “Ventilation” screen, push [^] and [v] to select “Mode”, and then push [▭ Set/Fix]**

2 **Push [^] and [v] to select “Mode”**

3 **Push [▭ Set/Fix]**
→Return to the “Ventilation” screen.

24h ventilation off

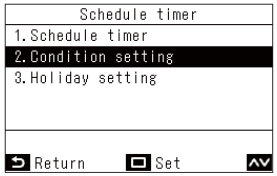


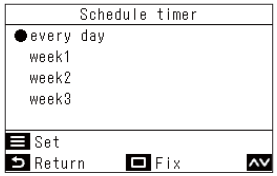
1 **In the “Ventilation” screen, push [^] and [v] to select “24h ventilation off”, and then push [▭ Set/Fix]**
→A screen to confirm appears.

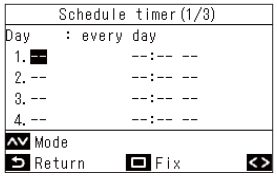
2 **Push [▭ Set/Fix]**
→Return to the “Ventilation” screen.

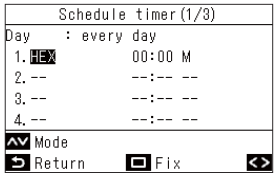
Schedule timer

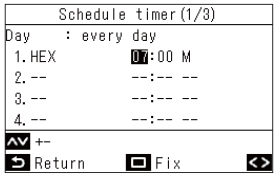
You can use only on a Heat recovery ventilation unit system (one unit or multiple units).











1 **In the “Ventilation” screen, push [^] and [v] to select “Schedule timer”, and then push [▭ Set/Fix]**

2 **Push [^] and [v] to select “Condition setting”, and then push [▭ Set/Fix]**

3 **Push [^] and [v] to select “every day”, and then push [☰ Menu]**

4 **Push [▭ Set/Fix]**

5 **Push [^] and [v] to select “--” (not set), “ON”, “OFF” or a ventilation mode**

6 **Push [>] to select start time and fan speed**
→If “--” (not set) is displayed, the fan speed and time cannot be set.

7 **Push [^] and [v] to change the time and fan speed**
→Push [>] to switch to an item you want to change.

8 **Push [>] to move to the next pattern**
→Up to a total of 8 patterns can be set.
→Do the settings in steps ***5*** to ***7*** to set each pattern.

9 **Push [▭ Set/Fix]**
→A screen to confirm changes appears.

10 **Push [▭ Set/Fix]**
→Return to the “Schedule timer” screen.

NOTE

- The items that are displayed vary depending on the model setting of the Heat recovery ventilation.
- For details on setting “week”, refer to Owner's Manual of the wired remote controller.

7 Timer operation

For Timer operation in the remote controllers for RBC-AW(M)SU5* refer to the Owner's Manual of the respective remote controllers.
Select a timer type from the following three: (Max. 168 hours)

OFF timer	: Stops running after a specified period.
Off reminder timer	: Stops running after a specified period every time the unit is used.
On timer	: Starts running after a specified period.

■ Timer (Setting a timer to start or stop operation)

Selecting a timer type

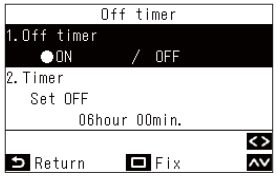
1 **In “Menu”, select “Timer”, and push [Set/Fix]**
2 **Push [ ] and [ ] to select the timer you want to set**
3 **Push [Set/Fix]**

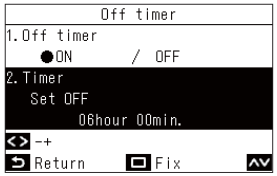
NOTE

About “Off timer” and “On timer” operations
- “Off timer” and “On timer” are enabled for only 1 time.
- “Off timer” and “On timer” do not operate in the following conditions.
  When “Off timer” and “On timer” are disabled, during function settings, during central control (if “ON/OFF” is prohibited)
- When 2 remote controllers are connected, settings cannot be done on the “Follower remote controller”.
- The setting range of “Off timer” and “On timer” is a minimum of 30 minutes and a maximum of 168 hours (7 days).
- Push [Return] to not fix the changes, so conditions are as before changes, and return to the “Timer” screen.
- If there is a power outage, the “Off timer” and “On timer” settings are cancelled. (They become “OFF”.)
- When “Off timer” and “On timer” are “ON”, then “” is displayed in the detailed display.

Off timer

You can set the timer to the time at which to stop operation of a Heat recovery ventilation unit.

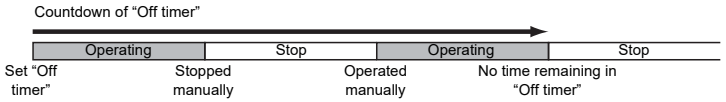




1 **In the “Off timer” screen, push [ ] and [ ] to select “Off timer”**
2 **Push [ ]**
→Pushing [ ] cancels the settings.
3 **Push [ ] and [ ] to select “Timer”**
4 **Push [ ] and [ ] to change the time**
→The time can be set in 30 minute intervals for up to 24 hours, and at 1 hour intervals after that.
5 **Push [Set/Fix]**
→Return to the “Timer” screen.

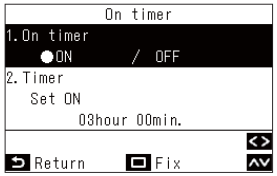
NOTE

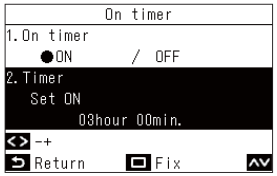
- The Heat recovery ventilation unit stops operating after the time set in “Off timer” has elapsed.
- In the period until the Heat recovery ventilation unit operation is stopped by the “Off timer”, countdown of the “Off timer” continues even if the Heat recovery ventilation unit is stopped and started.



On timer

You can set the timer to the time at which to start operation of a Heat recovery ventilation unit.





1 **In the “On timer” screen, push [ ] and [ ] to select “On timer”**

2 **Push [ ]**
→Pushing [ ] cancels the settings.

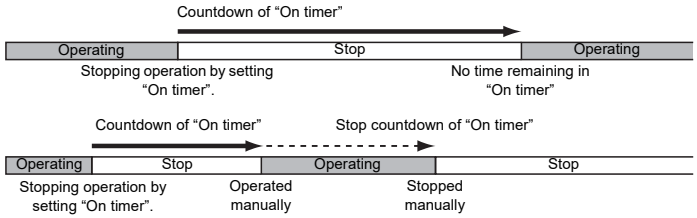
3 **Push [ ] and [ ] to select “Timer”**

4 **Push [ ] and [ ] to change the time**
→The time can be set in 30 minute intervals for up to 24 hours, and at 1 hour intervals after that.

5 **Push [Set/Fix]**
→Return to the “Timer” screen.

NOTE

- The Heat recovery ventilation unit starts operating after the time set in “On timer” has elapsed.
- The Heat recovery ventilation unit stops operating as soon as a time is set in “On timer”.
- When the Heat recovery ventilation unit operation is started during the countdown of “On timer”, the “On timer” becomes “OFF”.

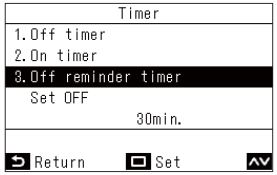


“Off timer” “On timer” operation

- “Off timer” “On timer” are valid only one time each.
- “Off timer” “On timer” do not operate in the following conditions.
  When “Off timer” “On timer” is disabled, during abnormalities, during function settings, and during central control (if “ON/OFF” is prohibited)
- When 2 remote controllers are connected, settings cannot be done on the “Follower remote controller”.
- The setting range of “Off timer” “On timer” are a minimum of 30 minutes and a maximum of 168 hours (7 days).
- Push [Return] to not fix the changes, so conditions are as before changes, and return to the “Timer” screen.
- When the power fails, “Off timer” “On timer” are canceled. (become “OFF”.)
- When “Off timer” “On timer” are “ON”, then “” is displayed in the detailed display.

Off reminder timer

You can set the timer from the Heat recovery ventilation unit operation start time to the stop time.



1 **In the “Off reminder timer” screen, push [ ] and [ ] to select “Off reminder timer”**

2 **Push [ ]**
→Pushing [ ] cancels the settings.

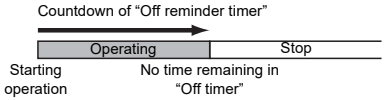
3 **Push [ ] and [ ] to select “Timer”**

4 **Push [ ] and [ ] to change the time**
→Times can be set in 10 minute intervals.

5 **Push [Set/Fix]**
→Return to the “Timer” screen.

NOTE

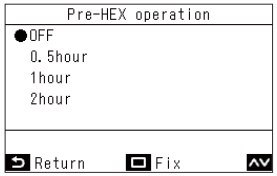
- The Heat recovery ventilation unit starts operating, and after the set time has elapsed, the Heat recovery ventilation unit stops operating.



- “Off reminder timer” does not operate in the following conditions.
  When “Off reminder timer” is disabled, during abnormalities, in test mode, during function settings, while a timer is set, and during central control (if “ON/OFF” is prohibited)
- When 2 remote controllers are connected, settings cannot be done on the “Follower remote controller”.
- The setting range of “Off reminder timer” is a minimum of 30 minutes and a maximum of 240 minutes.
- Push [Return] to not fix the changes, so conditions are as before changes, and return to the “Timer” screen.
- When “Off reminder timer” is “ON”, then “” is displayed in the detailed display.

Pre-HEX operation

You can operate the ventilation before the air conditioner operates with the schedule timer.



1 **In the “Schedule timer” screen, push [ ] and [ ] to select “Pre-HEX operation”, and then push [Set/Fix]**

2 **Push [ ] and [ ] to select the time to do operations in advance**

3 **Push [Set/Fix]**
→Return to the “Schedule timer” screen.

NOTE

- “Pre-HEX operation” does not operate in the following conditions.
  - If the schedule timer is set to “OFF”
  - If “Holiday setting” is set on the schedule timer for that day
  - If the date and time are not set in “Clock” (clock is flashing)
  - If an error occurs in the Heat recovery ventilation unit (the check code and indoor unit number flash).
  - During “Test mode”
  - While “” is displayed
  - If “Timer” is set to “ON” and while “Timer” is set
  - When the central control is used (when the run and stop operation is prohibited)
- They are set to “OFF” as the factory default setting.

8 Maintenance

■Maintenance of the filter and heat exchange element

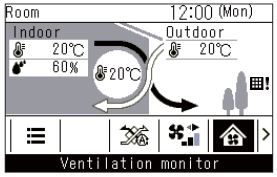
⚠WARNING

Cleaning the filter and heat exchange element involves dangerous work in high places, have a qualified installer or qualified service person to do it.
Do not attempt it by yourself.

⚠CAUTION

Do not push buttons with wet hands.
Doing so may result in electric shock.

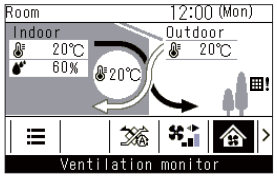
◆Cleaning the filters



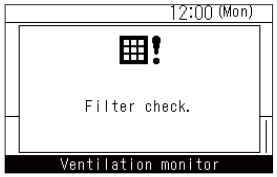
When “!” is displayed on the detailed display, clean the filters.
- Clogged filters may cause lower performance.

◆Filter sign reset

"▦!" appears on the detailed display to tell the time for cleaning the filter.

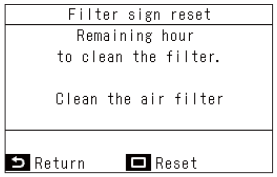


- When "▦!" is displayed, be sure to clean the filters and then do a reset.



- If the Heat recovery ventilation units are operated while "▦!" is displayed, then "Filter check." is displayed. Push an operation button while it is displayed or leave it for at least 5 seconds and the display will disappear.

When the filter check mark is displayed (filter check reset)



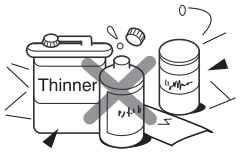
1 In "Menu", select "Filter sign reset", and push [Set/Fix]

2 Push [Set/Fix]

⚠CAUTION

Cleaning remote controller

- Use a dry cloth to wipe the remote controller.
- Do not use a damp cloth on the remote controller.
- Do not use a chemically-treated duster for wiping or leave such materials on the unit for long.
  It may damage or fade the surface of the unit.
- Do not use benzene, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.



9 Specifications

■Concealed microcomputer control type

Item	Model No. / Fan Speed		VN-U0***1SY* 015	025	035	050	065	080	100
Power Supply			220 - 240 V~, 50 Hz / 208 - 230 V~, 60Hz						
Power consumption (W)	Heat Exchange Mode	Extra high	56	75	152	174	306	328	541
		High	43	57	92	105	176	196	291
		Medium	35	39	59	60	96	114	151
		Low	28	29	39	51	55	62	74
	Bypass Mode	Extra high	56	75	152	174	306	328	541
		High	45	62	92	114	191	215	320
		Medium	37	41	59	64	105	126	165
		Low	29	30	39	54	58	67	80
Current (A)	Heat Exchange Mode	Extra high	0.61	0.77	1.17	1.32	2.16	2.26	3.48
		High	0.47	0.61	0.75	0.85	1.33	1.43	2.04
		Medium	0.40	0.42	0.48	0.51	0.78	0.86	1.12
		Low	0.32	0.32	0.32	0.43	0.46	0.48	0.57
	Bypass Mode	Extra high	0.61	0.77	1.17	1.32	2.16	2.26	3.48
		High	0.51	0.67	0.75	0.93	1.46	1.59	2.25
		Medium	0.43	0.45	0.48	0.55	0.86	0.95	1.24
		Low	0.34	0.34	0.32	0.47	0.50	0.53	0.63
Maximum running Current (A)	Heat Exchange Mode	Extra high	0.61	0.77	1.17	1.32	2.16	2.26	3.48
		High	0.47	0.61	0.75	0.85	1.33	1.43	2.04
		Medium	0.40	0.42	0.48	0.51	0.78	0.86	1.12
		Low	0.32	0.32	0.32	0.43	0.46	0.48	0.57
	Bypass Mode	Extra high	0.61	0.77	1.17	1.32	2.16	2.26	3.48
		High	0.51	0.67	0.75	0.93	1.46	1.59	2.25
		Medium	0.43	0.45	0.48	0.55	0.86	0.95	1.24
		Low	0.34	0.34	0.32	0.47	0.50	0.53	0.63
Air Volume (m^3/h)		Extra high	150	250	350	500	650	800	1000
		High	120	210	280	400	520	640	800
		Medium	95	145	210	300	390	480	600
		Low	73	100	140	260	260	320	400
External Static Pressure (Pa)	Heat Exchange Mode	Extra high	90	75	160	125	150	145	170
		High	60	53	100	80	100	92	110
		Medium	43	30	57	45	58	53	60
		Low	26	16	26	39	29	28	30
	Bypass Mode	Extra high	90	75	160	125	150	145	170
		High	60	53	100	80	100	92	110
		Medium	43	30	57	45	58	53	60
		Low	26	16	26	39	29	28	30

Item	Model No. / Fan Speed		VN-U0***1SY*						
			015	025	035	050	065	080	100
Sound pressure level (dB(A))	Heat Exchange Mode	Extra high	28.0	28.0	34.0	36.0	39.0	39.0	41.0
		High	25.0	27.0	31.0	31.0	35.0	35.0	38.0
		Medium	22.0	24.0	26.0	27.0	30.0	30.0	33.0
		Low	20.0	20.0	21.0	25.0	24.0	23.0	24.0
	Bypass Mode	Extra high	28.0	28.0	34.0	36.0	39.0	39.0	41.0
		High	26.0	27.0	31.0	32.0	36.0	36.0	39.0
		Medium	23.0	25.0	26.0	28.0	31.0	31.0	34.0
		Low	21.0	21.0	21.0	26.0	25.0	24.0	25.0
Temperature Exchange Efficiency (%)	average	Extra high	77.0	75.0	74.0	74.0	70.0	72.5	70.5
		High	80.0	76.0	75.0	74.5	72.0	74.5	71.0
		Medium	81.0	78.5	79.5	76.0	74.5	80.5	76.0
		Low	81.5	80.5	83.5	77.0	76.0	88.5	84.0
	for heating	Extra high	83.0	80.0	81.0	79.0	77.0	78.0	78.0
		High	83.5	80.5	81.5	79.5	77.5	79.0	78.5
		Medium	84.5	82.0	84.0	80.0	78.0	84.0	80.0
		Low	85.0	84.0	87.0	80.5	79.0	91.0	87.0
	for cooling	Extra high	71.0	70.0	67.0	69.0	63.0	67.0	63.0
		High	76.5	71.5	68.5	69.5	66.5	70.0	63.5
		Medium	77.5	75.0	75.0	72.0	71.0	77.0	72.0
		Low	78.0	77.0	80.0	73.5	73.0	86.0	81.0
Enthalpy exchange Efficiency (%)	for heating	Extra high	76.0	75.0	73.0	73.0	70.0	73.0	72.0
		High	80.0	76.0	76.0	74.0	72.0	74.0	73.0
		Medium	81.0	78.0	80.0	75.0	74.0	80.0	75.0
		Low	82.0	81.0	84.0	76.0	76.0	88.0	83.0
	for cooling	Extra high	66.0	65.0	64.0	64.0	60.0	64.0	62.0
		High	73.0	68.0	67.0	66.0	62.0	67.0	63.0
		Medium	75.0	71.0	71.0	68.0	66.0	73.0	68.0
		Low	77.0	75.0	76.0	69.0	69.0	81.0	77.0
External dimensions (Length × Width × Height) (mm)			778 × 735 × 278		880 × 880 × 305	920 × 1020 × 337		1130 × 1230 × 386	
Product weight (kg)			29	29	40	47	47	63	63
Applicable duct nominal diameter (mm)			100	150	150	200	200	250	250

* Sound pressure level is less than 70 dBA.

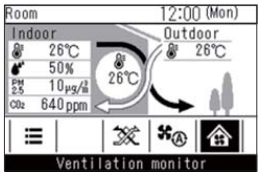
Product information of ecodesign requirements. (Regulation (EU) 2016/2281)
http://ecodesign.toshiba-airconditioning.eu/en

10 Operating precautions of CO_2 / PM2.5 sensor (Optional parts)

- **This multi function sensor is not a measuring instrument based on the Measurement Law. Do not use the sensor unit as a safety device to detect and prevent toxic gases or flammable gases that will result in oxygen deficiency, carbon monoxide poisoning and so on.**
- The concentration is detected be each sensor in the indoor suction (RA) air path of the heat recovery ventilation unit. As unevenness will also occur in the living room concentration, a difference between the concentration displayed in the remote controller and the environmental measurement etc. may result. If there is a difference between the concentration displayed in the remote controller and the concentration in the environmental measurements etc., you may adjust the sensor sensitivity or correct the concentration to be displayed in the remote controller.
  (Environmental measurements: Measurements, investigations and analysis of the concentration etc. that are conducted in order to understand the atmospheric and other environmental conditions)
- In this multi function sensor, the heat recovery ventilation unit cannot be started/stopped automatically.
- When running at Fan speed “Auto”, the ventilation mode is fixed as the [Heat exchange mode] regardless of the heat exchange mode set from the remote controller.
  (The remote controller display will remain in the ventilation mode set.)
- During 24-hr ventilation operation and nighttime heat purge operation, the automatic fan speed control is not performed by this sensor.
- If you want to remove odors, dust, etc. by ventilation regardless of the indoor concentration, select [High] instead of “Auto” for the fan speed.
- Due to the impact of sudden changes in the temperature and humidity (rain etc.), the detection accuracy of this sensor may change and the indoor concentration may not be detected correctly. In such a situation, run the unit with the fan speed set to “High” for a while instead of “Auto”.
- When running at Fan speed “Auto”, the fan speed may increase automatically and the noise may get louder.
- As the detection concentration of each sensor may differ depending on the operating environment, product installation conditions and so on, the target concentration may be exceeded depending on the operating environment.
- This multi function sensor is designed for use in a typical indoor air environment. When it is used in an extremely dusty room etc., the concentration may not be detected correctly.

◆Display of concentration and control

*If CO_2 / PM2.5 sensor (Multi function sensor) is connected to a heat recovery ventilation unit, each concentration is displayed on the remote controller as shown in the figure on the right.
*The display of the CO_2 concentration and PM2.5 concentration on the remote controller can be hidden with the DN settings. If you want to change, contact your supplier (dealer).
*If the concentration is hidden, in the event of a sensor failure, the CO_2 concentration "- - ppm", PM2.5 concentration "- - μg/m^3 " will also not be displayed.
*The display range of the concentration is as follows: CO_2: 300 - 5000 ppm, PM2.5: 0 - 999 μg/m^3.

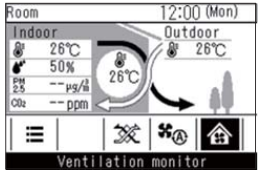


*If you select the fan speed "Auto", The fan speed is changed automatically in 7 stages according to the CO_2 concentration and PM2.5 concentration.
*The target concentration of the factory default is as follows: CO_2: 1000 ppm, PM2.5: 70 μg/m^3. If you want to change the target concentration, contact your supplier (dealer).
*The automatic fan speed control according to the CO_2 concentration or PM2.5 concentration can be selected individually. When both controls are enabled, the heat recovery ventilation unit will run at a fan speed close to the target concentration (higher of the concentrations). If you want to select the control either CO_2 or PM2.5 concentration, contact your supplier (dealer).

*As a general guideline, the CO_2 concentration should be 1000 ppm or less.
(REHVA(Federation of European Heating Ventilation and Air Conditioning Associations))
*As a general guideline, the PM2.5 concentration (daily average) should be 70 μ g/m^3 or less.
(Ministry of Environment of China)

◆Sensor malfunction

*CO_2 concentration display is "- - ppm" while the heat recovery ventilation unit is running, the concentration may be abnormal or the sensor may be possible to malfunction.
*PM2.5 concentration display is "- - ppm", the sensor may be possible to malfunction.
*In addition, if the check code [E30] [J04] [J05] flash on the display of the remote controller, CO_2 / PM2.5 sensor may be possible to malfunction. In the above case, contact your supplier (dealer).
*In the event of this CO_2 / PM2.5 sensor failure, the heat recovery ventilation unit will keep operating.



11 Before calling for service

Check the points described below before asking for repair servicing.

Symptom	Cause
Operation does not start after pressing the button.	• Is the circuit breaker turned off?
	• Has a power failure occurred?
	• Does the "⏻" indicator light up? (The ventilation delay setting is set to "ON" and it is not malfunction. The Heat recovery ventilation unit will start running after the time set has passed. Consult your dealer for details.)
The unit runs though the operation lamp does not turn on.	Does the "🌙" or "24H" indicator appear on the display? The nighttime heat purge operation or 24-hour ventilation is set to "ON". Refer to "Functions" for details. Consult your dealer to change the setting to "OFF".
The unit starts running without any operation of the remote controller.	Has the unit just recovered from a power failure or have you just turned on the circuit breaker? (The settings concerning recovering from power failure are set to "ON". Consult your dealer for details.

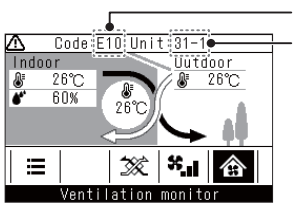
12 Troubleshooting

⚠ CAUTION

If any of the following conditions occur, turn off the main power supply switch and immediately contact the dealer:

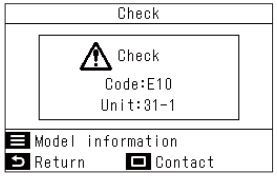
- Switch operation does not work properly.
- The main power fuse often blows out, or the circuit breaker is often activated.
- A foreign matter or water fall indoor the Heat recovery ventilation unit.
- When the Heat recovery ventilation unit does not operate even after the cause of the protective device activation has been removed.
  (The operation lamp and 🔧 on the remote controller are flashing. When 🔧 and a combination of E, F, H, L, or P and a number are displayed on the remote controller, also inform a qualified service person of the display content.)
- Any other unusual conditions are observed.

◆Confirm and check



Check code

Indoor unit number or Heat recovery ventilation unit number



When a trouble occurs in the Heat recovery ventilation unit, the check code and the Heat recovery ventilation unit number flash on the display of the remote controller.

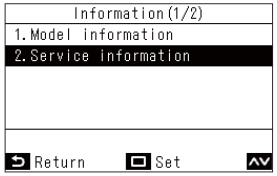
* The check code is only displayed during the operation.

When the check code and Heat recovery ventilation unit number are displayed, pushing [Return] opens the “Check” screen.

In the “Check” screen, push [Set/Fix] to show the contacts.
Push [Menu] to display “Model information”.

◆Contact information for repairs

You can look for contact information for repairs.



1 In the “Information” screen, push [ ] and [ ] to select “Service information”, and then push [Set/Fix]

Declaration of Conformity

Manufacturer: Carrier HVAC Equipment (Hangzhou) Co., Ltd.
No.181, Weiken Street, Baiyang Block, Hangzhou Qiantang Area,
Zhejiang Province, China

TCF holder: Carrier RLC Europe S.A.S
Immeuble Le Cristalia 3 rue Joseph Monier 92500 Rueil-Malmaison FRANCE

Hereby declares that the machinery described below:

Generic Denomination: Heat recovery ventilation unit

Model / type: VN-U00151SY-E VN-U00251SY-E
VN-U00351SY-E VN-U00501SY-E
VN-U00651SY-E VN-U00801SY-E
VN-U01001SY-E

Commercial name: Heat recovery ventilation

Complies with the provisions of the “Machinery Directive” (Directive 2006/42/EC) and the regulations transposing into national law.

Must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of Machinery Directive, where appropriate.

Name: Takeuchi, Hiroyuki
Position: SM, Quality Assurance Dept.
Date: 1 May, 2024
Place Issued: People’s Republic of China

NOTE

This declaration becomes invalid if technical or operational modifications are introduced without the manufacturer’s consent.

Carrier HVAC Equipment (Hangzhou) Co., Ltd.

D0X7302901-03
(D0X7204101-03)