
Total Heat Exchanger HRV (Heat Reclaim Ventilation) -with DX Coil-

MODELS**(Ceiling mounted duct type)****With DX coil & Humidifier**

VKM50GAMV1
VKM80GAMV1
VKM100GAMV1

With DX coil

VKM50GAV1
VKM80GAV1
VKM100GAV1

English

Deutsch

Français

Español

Italiano

Ελληνικά

Nederlands

Portugues

Русский

HRV

HRV; Heat Reclaim Ventilation

- Thank you for purchasing this Daikin total heat exchanger. Carefully read this operation manual before using the total heat exchanger. It will tell you how to use the unit properly and help you if any trouble occurs. This manual explains about the indoor unit only. Use it along with the operation manual for the outdoor unit. After reading the manual, file it away for future reference.
- This unit is an option type for the VRVII system air conditioner. It should normally be used in combination with the M-type VRVII system indoor air conditioner. (RXYQ, REYQ, RXQ)
It is also possible to use this unit as an independent system.
- This unit cannot control room temperature. If this is needed, do not install the HRV unit alone, but rather install another indoor unit.
- Use the remote controller of the VRVII-system indoor air conditioner to control the unit.

HRV; Wärmerückgewinnungslüftung

- Danke, dass Sie sich für den Wärmetauscher von Daikin entschieden haben. Lesen Sie diese Bedienungsanleitung sorgfältig, ehe Sie den Wärmetauscher in Betrieb nehmen. Hier erfahren Sie, wie Sie das Gerät korrekt betreiben. In diesem Handbuch wird nur die Installation der Inneneinheit beschrieben. Bewahren Sie die Anweisung gut auf, wenn Sie sie durchgelesen haben, damit Sie auch später noch darin nachschlagen können.
- Das Gerät ist eine Option für das VRVII-Klimagerät. Normalerweise wird es in Kombination mit dem Model M der VRVII-Inneneinheit verwendet. (RXYQ, REYQ, RXQ)
Zusätzlich kann das Gerät als eigenständiges System verwendet werden.
- Dieses Gerät kann nicht zur Regulierung der Raumtemperatur verwendet werden. Ist dies gewünscht, installieren Sie nicht nur die HRV sondern eine zusätzliche Raumeinheit.
- Das Gerät wird über die Fernbedienung der VRVII-Inneneinheit gesteuert.

HRV; Ventilation avec récupération de chaleur

- Nous vous remercions pour avoir choisi cet échangeur de chaleur à enthalpie totale Daikin. Lisez attentivement ce manuel d'utilisation avant d'utiliser l'échangeur de chaleur à enthalpie totale. Il vous enseignera à utiliser correctement l'unité et vous aidera en cas de panne. Ce manuel traite uniquement de l'unité intérieure. Utilisez-le avec le manuel d'utilisation de l'unité extérieure. Après avoir lu le manuel, rangez-le en vue d'une utilisation ultérieure.
- Cette unité est en option pour le climatiseur du système VRVII. Elle doit normalement être utilisée en association avec le climatiseur intérieur du système VRVII de type M. (RXYQ, REYQ, RXQ)
Cette unité peut également être utilisée en tant que système indépendant.
- Cette unité ne peut commander la température ambiante. Si cette fonction est nécessaire, n'installez pas l'unité HRV seule, mais installez plutôt une autre unité intérieure.
- Utilisez la télécommande du climatiseur intérieur du système VRVII pour commander l'unité.

HRV; Ventilación con recuperación de calor

- Muchas gracias por haber adquirido este intercambiador de calor total Daikin. Lea atentamente este manual de uso antes de utilizar la unidad. El manual explica cómo usar la unidad correctamente y lo ayuda en caso de que surjan problemas. Este manual trata sobre la unidad interior solamente. Utilícelo conjuntamente con el manual de uso de la unidad exterior. Después de leerlo, guárdelo para referencia futura.
- Esta unidad es un equipamiento opcional para el sistema de climatización VRVII. Normalmente debería utilizarse en combinación con un sistema de climatización interior VRVII de tipo M (RXYQ, REYQ, RXQ).
También es posible utilizar esta unidad a modo de sistema independiente.
- Esta unidad no puede controlar la temperatura ambiente. Si es necesario controlarla, no instale la unidad HRV sola, instale también otra unidad interior.
- Utilice el mando a distancia del sistema de climatización interior VRVII para controlar esta unidad.

HRV; Ventilazione per recupero del calore

- Grazie di aver acquistato questo scambiatore di calore totale Daikin. Prima di usare lo scambiatore di calore totale, leggere con attenzione questo manuale d'istruzioni. Esso insegna il modo corretto di utilizzare l'unità e fornisce consigli, nel caso si verificano dei problemi. Il manuale si riferisce solo all'unità interna. Usarlo insieme al manuale di istruzioni dell'unità esterna. Dopo aver letto il manuale, conservarlo per riferimenti futuri.
- Questa unità è un tipo opzionale di condizionatore d'aria a sistema VRVII. Normalmente deve essere usato insieme al condizionatore d'aria per interni, sistema VRVII di tipo M. (RXYQ, REYQ, RXQ)
È anche possibile utilizzare questa unità come sistema indipendente.
- L'unità non può controllare la temperatura del locale. Se ciò è necessario, non installare l'unità HRV da sola, ma invece installare un'altra unità interna.
- Per controllare l'unità, utilizzare il telecomando del condizionatore d'aria interno a sistema VRVII.

HRV; Αερισμός με ανάκτηση θερμότητας

- Ευχαριστούμε για την αγορά σας αυτού του εναλλάκτη συνολικής θερμότητας Daikin. Διαβάστε προσεκτικά αυτό το εγχειρίδιο λειτουργίας πριν χρησιμοποιήσετε τον εναλλάκτη συνολικής θερμότητας. Θα σας πουν πώς θα χρησιμοποιήσετε σωστά τη μονάδα και θα σας βοηθήσουν αν εμφανιστούν προβλήματα. Το παρόν εγχειρίδιο δίνει εξηγήσεις μόνο για την εσωτερική μονάδα. Χρησιμοποιήστε το μαζί με το εγχειρίδιο λειτουργίας της εξωτερικής μονάδας. Αφού διαβάσετε τις οδηγίες, βάλτε τις στο αρχείο σας για μελλοντική αναφορά.
- Αυτή η μονάδα είναι εναλλακτικός τύπος για το σύστημα κλιματισμού VRVII. Κανονικά θα πρέπει να χρησιμοποιείται σε συνδυασμό με τον τύπο M-VRVII του συστήματος κλιματισμού εσωτερικής μονάδας. (RXYQ, REYQ, RXQ)
Υπάρχει επίσης η δυνατότητα να χρησιμοποιήσετε αυτή τη μονάδα ως ανεξάρτητο σύστημα.
- Η μονάδα αυτή δεν ελέγχει τη θερμοκρασία του χώρου. Αν αυτό χρειάζεται, μην εγκαταστήσετε τη μονάδα HRV μόνη της, αλλά μαζί με μια άλλη εσωτερική μονάδα.
- Χρησιμοποιήστε το τηλεχειριστήριο του συστήματος κλιματισμού εσωτερικής μονάδας VRVII για έλεγχο της μονάδας.

HRV; Hergebruik van warmte

- Hartelijk dank voor uw keuze voor een warmtewisselaar van Daikin. Lees eerst deze bedieningshandleiding aandachtig door voordat u de warmtewisselaar gaat gebruiken. In de gebruiksaanwijzing kunt u lezen hoe u het apparaat op de juiste manier gebruikt en wat u kunt doen bij storingen. Deze handleiding bevat alleen informatie over de binneneenheid. Gebruik deze handleiding samen met die van de buitenunit. Bewaar deze gebruiksaanwijzing nadat u deze heeft gelezen.
- Dit apparaat is een optioneel model voor de airconditioners in een VRVII-systeem. Het wordt gewoonlijk gebruikt in combinatie met een binneneenheid van het type M in een VRVII-systeem. (RXYQ, REYQ, RXQ)
Het is ook mogelijk om dit apparaat als onafhankelijk systeem te gebruiken.
- Dit apparaat kan niet worden gebruikt om de temperatuur in een ruimte te regelen. Installeer, als dit gewenst is, geen afzonderlijke HRV-unit maar een andere binneneenheid.
- Gebruik de afstandsbediening de binneneenheid van het VRVII-systeem om het apparaat te bedienen.

HRV; Ventilação de Recuperação Térmica

- Agradecemos a aquisição deste permutador térmico total da Daikin. Antes de utilizar o permutador térmico total, leia atentamente o presente manual. Nele obterá informações sobre o modo de utilizar corretamente o aparelho e ajuda na eventualidade de ocorrência de problemas. Este manual fornece explicações exclusivamente sobre a unidade interior. Utilize-o em conjunto com o manual de funcionamento da unidade exterior. Depois de ler o manual, guarde-o para consultas futuras.
- Esta unidade é uma opção para o aparelho de ar condicionado do sistema VRVII. Normalmente, deve ser utilizado em conjunto com o aparelho de ar condicionado interior do sistema VRVII do tipo M. (RXYQ, REYQ, RXQ)
É também possível utilizar esta unidade como sistema independente.
- Esta unidade não controla a temperatura do compartimento. Se isso for necessário, não instale só a unidade HRV, em vez disso, instale outra unidade interior.
- Utilize o controlador remoto do aparelho de ar condicionado interior do sistema VRVII para controlar a unidade.

HRV; Вентиляция с регенерацией тепла

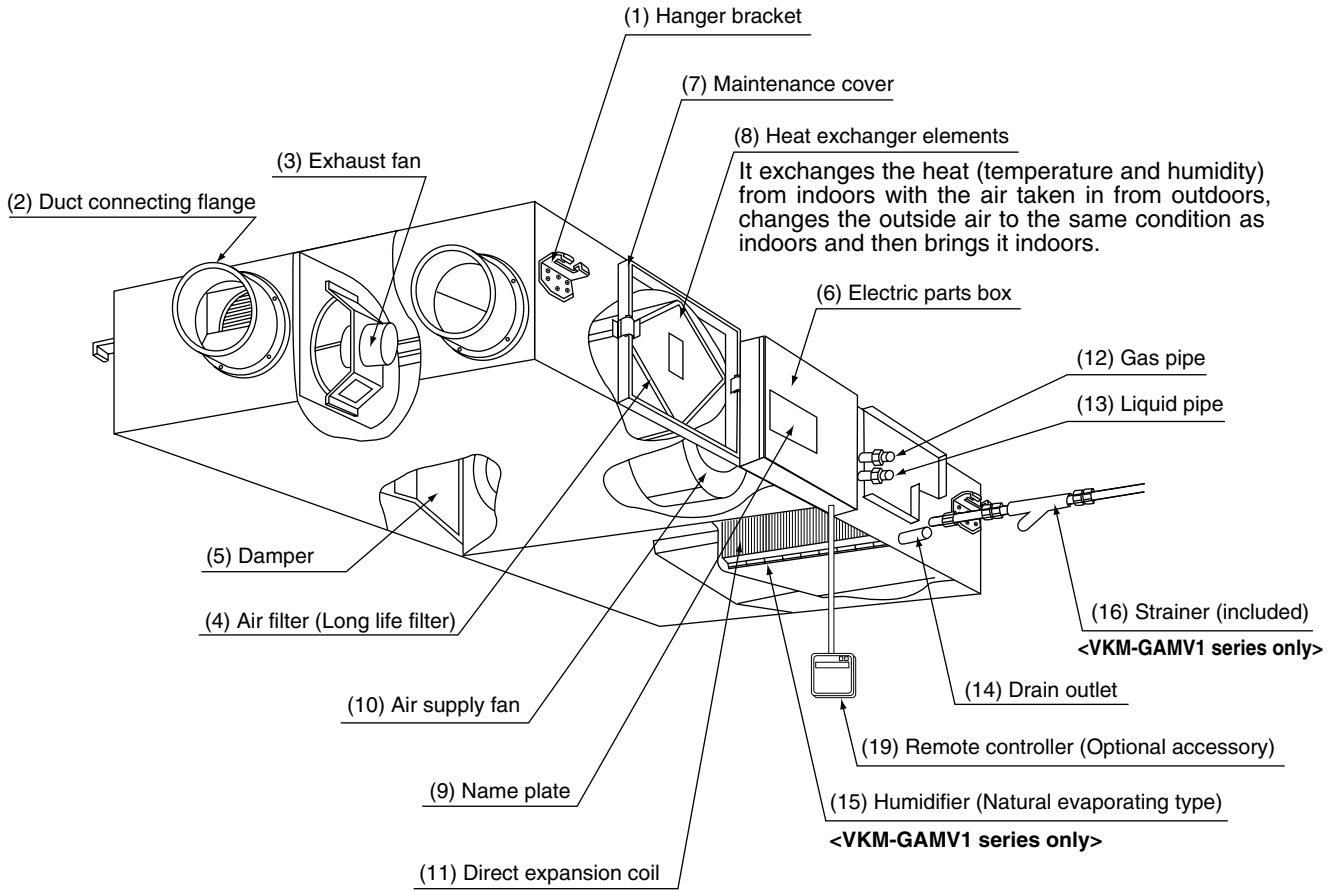
- Благодарим вас за покупку данного энтальпийного теплообменника Daikin. До начала работы с энтальпийным теплообменником внимательно изучите данное руководство по эксплуатации. В нем излагаются правила надлежащего пользования устройством и приводятся рекомендации пользователю по поиску и устранению неисправностей. В данном руководстве рассматривается только комнатный блок. Используйте его вместе с руководством для наружного блока. После изучения руководства сохраните его для обращений в будущем.
- Данный блок является дополнительным для кондиционера системы VRVII. Обычно он должен использоваться в сочетании с комнатным кондиционером системы VRVII типа M. (RXYQ, REYQ, RXQ)
Данный блок также можно использовать в качестве независимой системы.
- Данный блок не может контролировать температуру в помещении. Если это необходимо, не устанавливайте блок HRV отдельно; установите еще один комнатный блок.
- Используйте пульт дистанционного управления комнатным кондиционером системы VRVII для управления данным блоком.

MODELS

**VKM50GAMV1
VKM50GAV1**

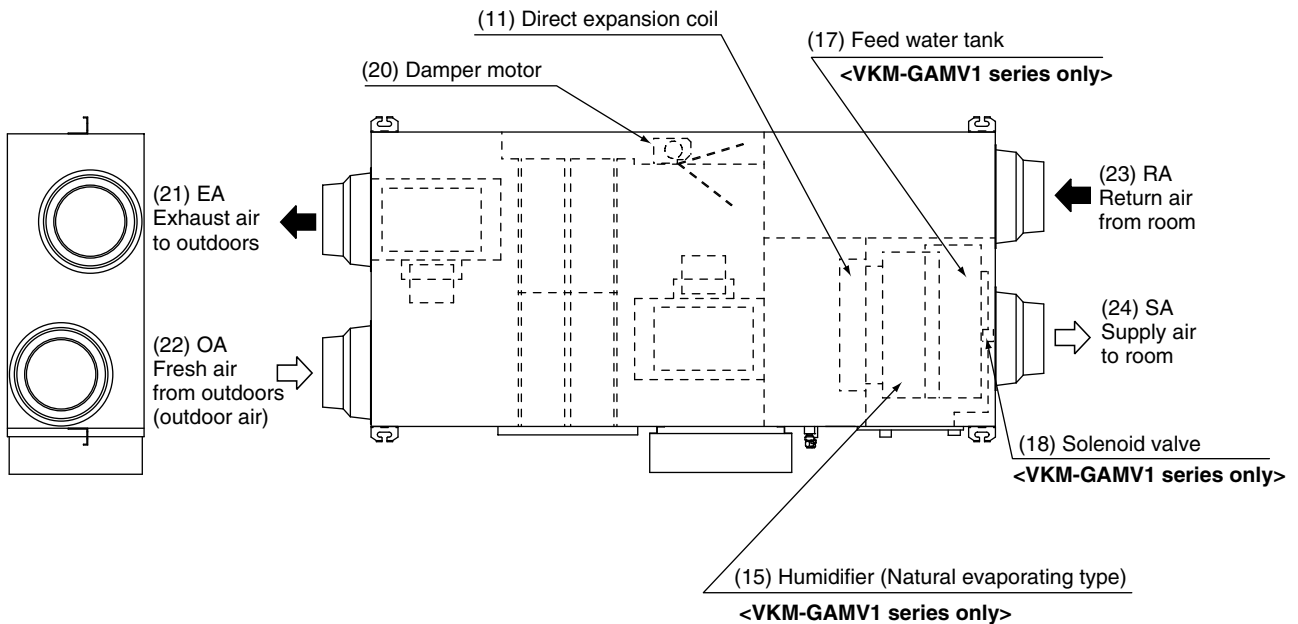
**VKM80GAMV1
VKM80GAV1**

**VKM100GAMV1
VKM100GAV1**

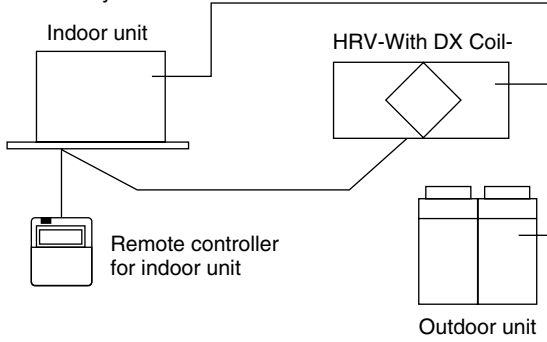


Important

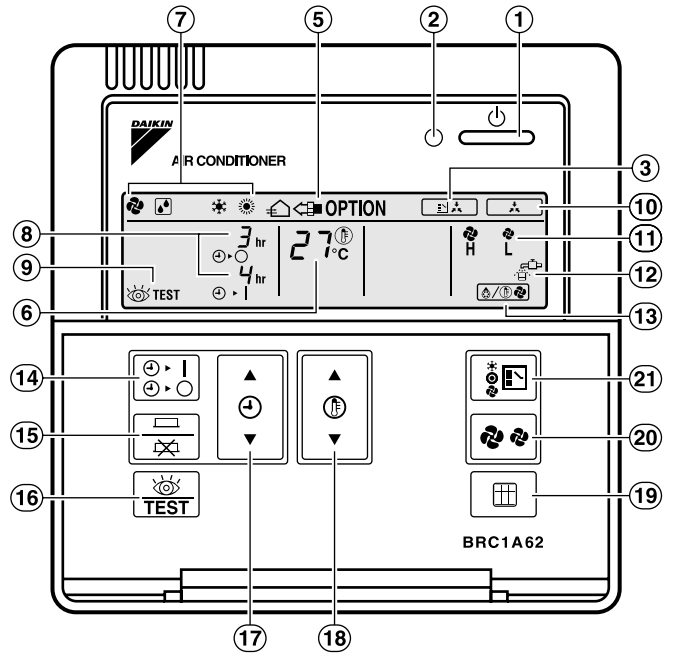
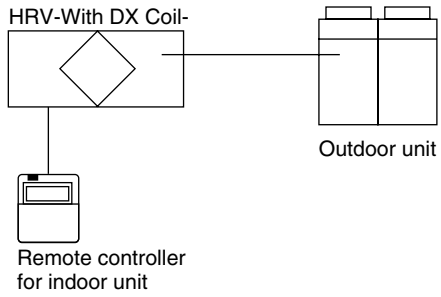
Sometimes when first using the unit, the smell of the heat exchanging element may be noticeable, but it is not harmful. The smell will gradually go away as the unit is used.



- Combined operation system with VRV systems



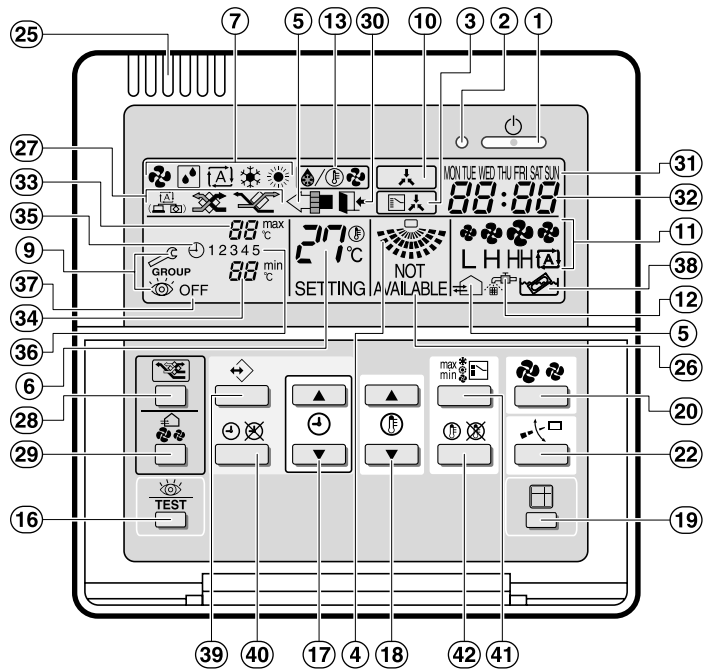
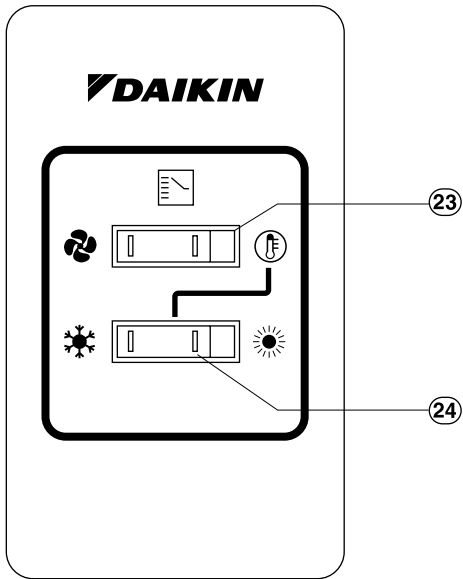
- Independent system



Remote controller for VRV BRC1A62

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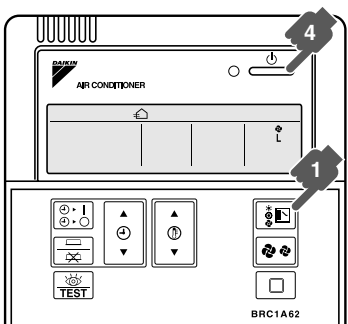
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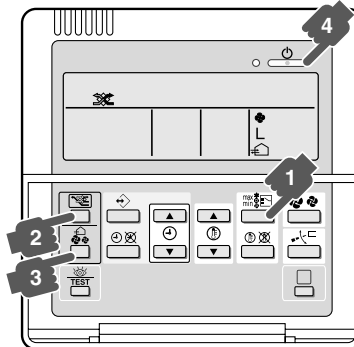
Remote controller for VKM BRC1D527 (EU only)

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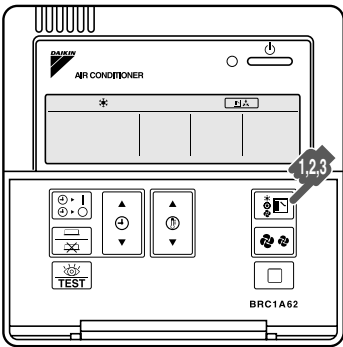
Remote controller for VRV BRC1A62



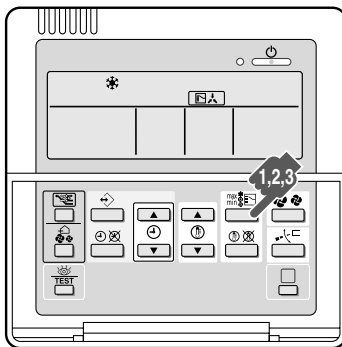
Remote controller for VKM BRC1D527 (EU only)

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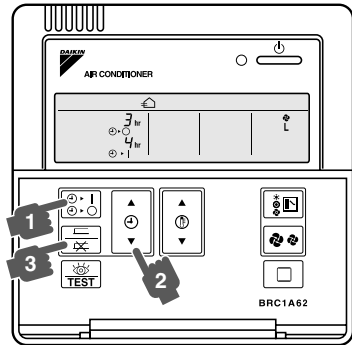


Remote controller for VRV BRC1A62

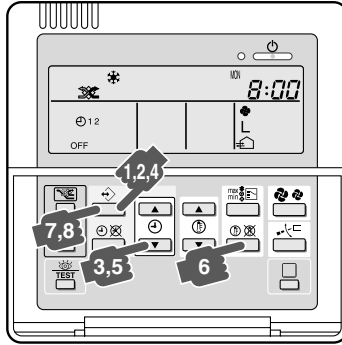


Remote controller for VKM BRC1D527 (EU only)

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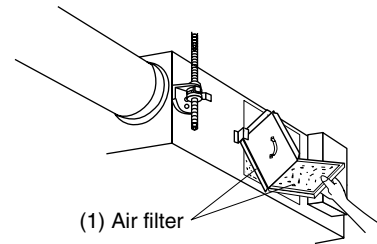
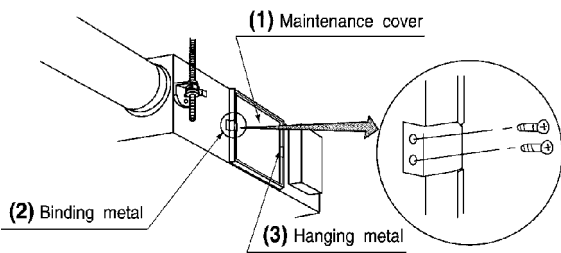


Remote controller for VRV BRC1A62

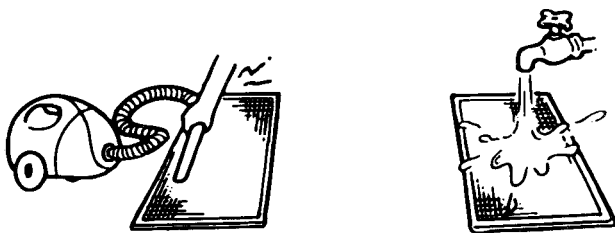


Remote controller for VKM BRC1D527 (EU only)

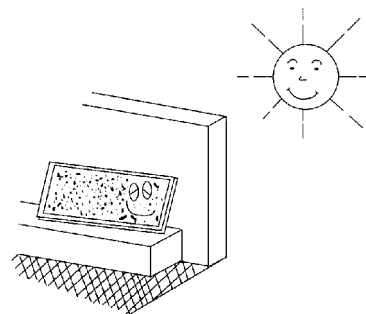
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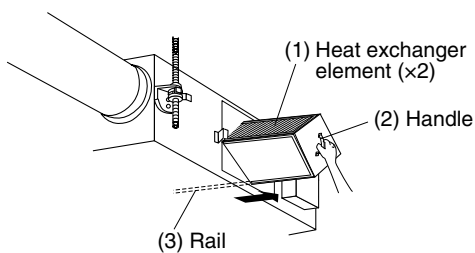
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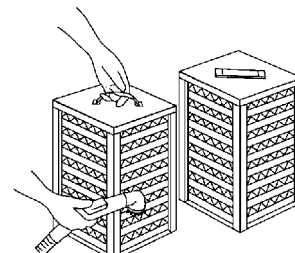
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Important information regarding the refrigerant used

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol.

Refrigerant type: R410A

GWP⁽¹⁾ value: 1975

⁽¹⁾ GWP = global warming potential


Periodical inspections for refrigerant leaks may be required depending on European or local legislation. Please contact your local dealer for more information.


1 SAFETY CAUTIONS

Read the following cautions carefully and use your equipment properly.

This unit comes under the term “appliances not accessible to the general public.”

There are two kinds of safety cautions and tips listed here as follows:

 **WARNING**..... Improper handling can lead to such serious consequences as death or severe injury.

 **CAUTION**..... Improper handling can lead to injury or damage. It could also have serious consequences under certain conditions.

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 (During Operation)**

• **When the unit is in abnormal conditions (smell of something burning, etc.), cut off the power, and contact your dealer.**

Continued operation under such circumstances may result in a failure, electric shock, and fire.

• **It is not good for your health to expose your body to the air flow for a long time.**

• **Do not operate the unit with a wet hand.**
An electric shock may result.

• **Open the windows and ventilate the room if flammable gas is leaked.**
Insufficient ventilation when the unit is turned on or off may cause an explosion from sparks at the electrical connection.

- **Do not wash the HRV unit with water.**
Electric shock or fire may result. (Not including air filters, etc.)
- **Be sure to stop the unit and turn off the power when cleaning or inspecting it.**
As the fan is rotating at high speed, it will cause injury.
- **Never inspect or service the unit by yourself.**
Ask a qualified service person to perform this work. (The qualified service person)
- **Keep all flames away if the refrigerant leaks.**
The refrigerant in the air conditioner is safe and normally does not leak. If the refrigerant leaks inside the room, the contact with a fire of a burner, a heater or a cooker may result in a harmful gas. Extinguish all flames from burning appliances (such as stoves, heaters, etc.) ventilate the room, and contact your dealer. Do not use the air conditioner until when a service person confirms to finish repairing the portion where the refrigerant leaks.
- **Consult the dealer if the air conditioner submerges owing to a natural disaster, such as a flood or typhoon.**
Do not operate the air conditioner in that case, or otherwise a malfunction, electric shock, or fire may result.

 **CAUTION (During Operation)**

- **Do not use the HRV unit for other purposes.**
In order to avoid any quality deterioration, do not use the unit for cooling precision instruments, food, plants, animals or works of art.
- **Do not use burning appliances directly in the path of the air from the unit.**
Incomplete combustion of the burning appliances may occur.
- **Never expose little children, plants or animals directly to the air flow.**
Adverse influence to little children, animals and plants may result.
- **Neither place a flammable spray bottle near the HRV unit or indoor intake and outlet grills nor perform spraying.**
Doing so may result in a fire.
- **Turn off the power when the unit is not to be used for long periods of time.**
Otherwise, the unit may get hot or catch on fire due to dust accumulation.
- **Do not block the intake or outlet grills.**
If the fan does not blow air throughout the entire room, it may cause oxygen deficiency leading to bad health condition or long-term health problems.
- **Use gloves when cleaning.**
Cleaning without gloves may cause injury.
- **Do not operate the remote controller with wet hands.**
This may cause electric shock.
- **Never touch the internal parts of the controller.**
An electric shock or a machine trouble may happen. For checking and adjusting the internal parts, contact your dealer.

- **Do not place objects in direct proximity of the outdoor unit and do not let leaves and other debris accumulate around the unit.**

Leaves are a hotbed for small animals which can enter the unit. Once in the unit, such animals can cause malfunctions, smoke or fire when making contact with electrical parts.

- **Watch your steps at the time of air filter cleaning or inspection.**

High-place work is required, to which utmost attention must be paid.

If the scaffold is unstable, you may fall or topple down, thus causing injury.

⚠ WARNING (For installation)

- **Do not attempt to install the unit yourself.**
Ask your dealer for installation of the unit.
Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.
- **Installation should be done following the installation manual.**
Incorrect installation may cause leaking, electric shock, or fire. Injuries may result if the unit falls.
- **Do not install the unit in locations where the temperature in the areas around the unit or indoor intake and outlet grills may fall below freezing.**
<VKM-GAMV1 series only>
The water of the water pipes, humidifier element, solenoid valves, and other components may freeze, causing breakage and leaks.
- **Do not allow exhaust air to enter the outside air intake vent.**
This may cause the interior of the room to become contaminated and harming the health.
- **Locate the outside air intake vent so that it does not take in exhaust air which contains combustion air, etc.**
Incorrect installation may cause a loss of oxygen in the room, leading to serious accidents.
- **All wiring must be performed by an authorized electrician.**
To do wiring, ask your dealer. Never do it yourself.
- **Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations.**
Insufficient power circuit capacity or incorrect work may cause electric shock or fires.
- **Be sure to establish an earth.**
Do not earth the unit to a utility pipe, arrester, or telephone earth.
Incomplete earth may cause electrical shock, or fire.
A high surge current from lightning or other sources may cause damage to the air conditioner.
- **Install the unit on a foundation strong enough to withstand the weight of the unit.**
A foundation of insufficient strength may result in the unit falling and causing injuries.
- **Connect the remote controller to the correct model.**
This may cause electric shock or fire.
- **Do not connect additional electric wirings.**
This may cause fire.

- **For refrigerant leakage, consult your dealer.**

When the HRV unit is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the limiting concentration even when it leaks. If the refrigerant leaks exceeding the level of limiting concentration, an oxygen deficiency accident may happen.

- **Do not install the HRV unit at any place where flammable gas may leak out.**

If the gas leaks out and stays around the unit, a fire may break out.


- **Be sure to install an earth leakage breaker.**

Failure to install an earth leakage breaker may result in electric shocks, or fire.

⚠ CAUTION (For installation)

- **Do not use the HRV unit or an air suction/discharge grille in the following places.**
 - Place 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 40°C. If the unit is used at high temperature, deformed air filter and heat exchange element or burned motor result.
 - Place such as kitchens or other places where oil fumes are present.**
This may cause fire.
 - Place such as machinery plant and chemical plant where gas, which contains noxious gas or corrosive components of materials such as acid, alkali, organic solvent and paint, is generated.**
Place where combustible gas leakage is likely.
This may cause gas poisoning or fires.
 - Place such as bathroom subjected to moisture.**
Electric leak or electric shock and other failure can be caused.
 - Locations below freezing point.**
<VKM-GAMV1 series only>
Using the unit at temperatures below 0°C may cause the drain pan the supply and discharge piping, the humidifying element, the solenoid valves, and other parts to freeze, which can cause accidents.
 - Near machinery emitting electromagnetic waves.**
Electromagnetic waves may disturb the operation of the control system and result in a malfunction of the equipment.
 - Place subjected to much carbon black.**
Carbon black attaches to air filter and heat exchange element, marking them unable to use.
- **Is a snow protection measure taken?**
For detail, consult your dealer.
- **Make sure the temperature and the humidity of the installation location is within the usage range, not exceed the limit.**
Do not install in cold storage or other locations with low temperatures or near heated pools. This may cause electrical shock and fire.
- **Install the two outdoor ducts with down slope to prevent rainwater from entering the unit.**
If this is not done completely, water may enter the building, damaging furniture, and cause electric shock and fire.
- **Insulate the two outdoor ducts to prevent dew condensation (and the indoor duct as well if needed).**
If this is not done completely, water may enter the building, damaging furniture, etc.

- **Use electric insulation between the duct and the wall when using metal ducts to pass metal or wire laths or metal plating into wooden buildings.**
This may cause electric shock and fire.
- **Arrange the drain hose to ensure smooth drainage.**
Incomplete drainage may cause wetting of the building, furniture etc.
- **Avoid placing the controller in a spot splashed with water.**
Water coming inside the controller may cause an electric leak or may damage the internal electronic parts.

 **WARNING** (For moving and reinstalling/repairing)

- **Do not modify the unit.**
This may cause electric shock or fire.
- **Ask your dealer to move and reinstall the unit.**
Incomplete installation may result in a water leakage, electric shock, and fire.
- **Do not disassemble or repair the unit yourself.**
This may cause electric shock or fire.
Contact your dealer to have such work done.
- **When removing the unit, be sure not to tip it.**
The water inside the unit may drip or leak out, and get on furniture, etc.
- **Do not move or attempt to re-install the remote controller yourself.**
Incorrect installation, may cause electric shock or fire. Contact your dealer to have such work done.

<CHECK LIST EXCEPT SAFETY CAUTION>

The items described below should be checked and ask your dealer when you feel uncertain or you can't check by yourself.

■ **CHECK LIST ABOUT SELECTING INSTALLATION SITE**

- **Is the outdoor unit installed in a well-ventilated location with no obstructions in its vicinity?**
- **Do not use in the locations described below.**
 - a. Locations with mineral oil such as cutting oil in the atmosphere.
 - b. Locations with salt in the air, such as coastal areas.
 - c. Locations with sulfide gas in the air, such as hot springs.
 - d. Locations where voltage fluctuates, such as factory.
 - e. In automobiles or marine vessels.
 - f. Locations containing steam in the atmosphere or splattered oil, such as kitchen.
 - g. Locations with mechanical equipment generating electromagnetic wave.
 - h. Locations enveloped in acidic or alkaline steam.
- **Has any action for snow protection been taken?**
Contact your Daikin dealer for details.

■ **CHECK LIST ABOUT ELECTRIC WIRING WORK**

- **All wiring must be performed by an authorized electrician.**
Do not conduct the work yourself. Contact your dealer.
- **Electrical wiring must be done according to the local standards.**
- **Is the circuit specific to air conditioner?**

■ **CHECK LIST CORRESPONDING TO OPERATING NOISE**

- **Is the unit installed at the following locations?**
 - a. Location strong enough to support the weight of the unit, and which will not amplify noise or vibration.
 - b. Location where the warm air and the noise from the outlet vent of the outdoor unit will not bother neighbors.

- **Are any obstructions near the outlet vent of the outdoor unit?**
They may reduce the function and increase the operating noise.
 - **If any abnormal noise is heard during the operation, contact your dealer.**
- **CHECK LIST ABOUT DRAIN PIPING AND WATER SUPPLY WORK**
- **Make sure the drain works properly.**
During cooling operation, no drainage from the outdoor drain piping may clog the drain piping with dirt or dust, causing water leakage from the indoor unit.
Stop the unit operation, and contact your dealer.

2 WHAT TO DO BEFORE OPERATION

This operation manual is for the following systems with standard control. Before initiating operation, contact your Daikin dealer for the operation that corresponds to your system type and mark.

If your installation has a customized control system, ask your dealer for the operation that corresponds to your system.

2.1 NAMES OF PARTS (Refer to figure 1)

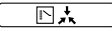















- (1) Hanger bracket
- (2) Duct connecting flange
- (3) Exhaust fan
- (4) Air filter (Long life filter)
- (5) Damper
- (6) Electric parts box
- (7) Maintenance cover
- (8) Heat exchanger elements
- (9) Name plate
- (10) Air supply fan
- (11) Direct expansion coil
- (12) Gas pipe
- (13) Liquid pipe
- (14) Drain outlet
- (15) Humidifier (Natural evaporating type)
<VKM-GAMV1 series only>
- (16) Strainer (included) <VKM-GAMV1 series only>
- (17) Feed water tank <VKM-GAMV1 series only>
- (18) Solenoid valve <VKM-GAMV1 series only>
- (19) Remote controller (Optional accessory)
- (20) Damper motor
- (21) EA Exhaust air to outdoors
- (22) OA Fresh air from outdoors
- (23) RA Return air from room
- (24) SA Supply air to room











2.2 REMOTE CONTROLLER AND CHANGEVER SWITCH: NAME AND FUNCTION OF EACH SWITCH AND DISPLAY (Refer to figure 3 and 4)

- Only the items marked with an asterisk (* mark) are explanation relating to the functions and display of the unit. Unmarked items are functions of the combined air conditioners. When using buttons for functions which are not available (buttons which are not described in the text) will cause "NOT AVAILABLE" to be displayed.
Contact your dealer for more detailed descriptions of those functions (buttons).

*1 **On/off button**

Press the button and the system will start. Press the button again and the system will stop.

- *2 Operation lamp (red)**
The lamp lights up during operation or blinks if a malfunction occurs.
- *3 Display “” (changeover under control)**
May be displayed when combined with a VRV-system air conditioner.
It is impossible to changeover heat/cool with the remote controller when this icon is displayed.
- 4 Display “” (air flow flap)**
This displays the direction and mode of the air flow flap of the combined air conditioner.
- 5 Display “ OPTION” (ventilation/air cleaning)**
This display shows that the total heat exchange and the air cleaning unit are in operation. (these are optional accessories)
- 6 Display “” (set temperature)**
This displays the set temperature of the combined air conditioner.
It is not displayed when the unit is used as an independent system.
- 7 Display “” “” “” “” “” (operation mode: “FAN, DRY, AUTOMATIC, COOLING, HEATING”)**
This displays the operating status of the combined air conditioner.
- There is no “heating” for the VRV system (Cooling only type).
 - “” is only available for systems operating in cooling and heating at the same time.
- *8 Display “” (programmed time)**
This display shows the programmed time of the system start or stop.
- 9 Display “ TEST” (inspection/test operation)**
When the inspection/test operation button is pressed, the display shows the mode in which the system actually is.
- Do not use under usual use (service person/installer only).
- 10 Display “” (under centralized control)**
When this display shows, the system is under centralized control. (This is not a standard specification.)
- *11 Display “” (fan speed)**
This display shows the fan speed you have selected.
- * This is only displayed when the fan speed selection button is pressed. It normally displays the set fan strength of the combined air conditioner.
- *12 Display “” (time to clean air filter)**
Refer to “4.1 HOW TO CLEAN THE AIR FILTER”.
- *13 Display “” (defrost/hot start)**
It may be displayed when freezing of outdoor unit’s coil increases in heating mode.
- *14 Timer mode start/stop button**
Refer to the chapter “Operation procedure - Programming start and stop of the system with timer.” (Refer to page 9 (3.3))
- *15 Timer on/off button**
Refer to the chapter “Operation procedure - Programming start and stop of the system with timer.” (Refer to page 9 (3.3))
- *16 Inspection/test operation button**
Pressed during inspection or “test run.”
- Do not use under usual use. (service person/installer only)
- *17 Programming time button**
Use this button for programming start and/or stop time.

- 18 Temperature setting button**
Use this button for setting the desired temperature of air conditioner combined with this unit.
This button can’t use for this unit.
This unit can’t change temperature setting.
- *19 Filter sign reset button**
Refer to “4.1 HOW TO CLEAN THE AIR FILTER”.
- 20 Fan speed control button**
Press this button to select the fan speed of air conditioner combined with this unit.
- *21 Operation mode selector button**
Press this button to select the operation mode of air conditioner combined with this unit.
- 22 Air flow direction adjust button**
Press this button to select the air flow direction of air conditioner combined with this unit.
- 23 Fan only/air conditioning selector switch**
Set the switch to “” for fan only operation or to “” for heating or cooling operation.
- 24 Cool/heat changeover switch**
Set the switch to “” for cooling or to “” for heating operation.
- 25 Remote controller thermo**
This detects the temperature around the remote controller. This is not the same as the temperature of return air from room (RA) by heat exchanger unit.
- *26 Display “NOT AVAILABLE”**
- “NOT AVAILABLE” may be displayed for a few seconds if the function for the button pressed is not available for the unit or the air conditioner.
 - “NOT AVAILABLE” is only displayed when none of the indoor units is equipped with the function in question when running several units simultaneously. It is not displayed if the function is available on even one of the units.
- *27 Display “” “” “”**
This displays the ventilation mode. (BRC1D527 and so on.) (This is not displayed on the controller BRC1A62)
- *28 Ventilation mode selector button (available only connecting the HRV unit)**
This is pressed to switch the ventilation mode of the HRV unit.
- *29 Ventilation fan speed control button (available only connecting the HRV unit)**
This is pressed to control the fan speed of the HRV unit. (Refer to item 11)
- 30 LEAVE HOME ICON “”**
The leave home icon shows the status of the leave home function.
- | | |
|----------|------------------------|
| ON | Leave home is enabled |
| FLASHING | Leave home is active |
| OFF | Leave home is disabled |
- *31 DAY OF THE WEEK INDICATOR “MON TUE WED THU FRI SAT SUN”**
The day of the week indicator shows the current week day (or the set day when reading or programming the schedule timer).
- *32 CLOCK DISPLAY “”**
The clock display indicates the current time (or the action time when reading or programming the schedule timer).
- 33 MAXIMUM SET TEMPERATURE “^{max}”**
The maximum set temperature indicates the maximum set temperature when in limit operation.

34 MINIMUM SET TEMPERATURE “88^{min} °C”

The minimum set temperature indicates the minimum set temperature when in limit operation.

*35 SCHEDULE TIMER ICON “⌚”

This icon indicates that the schedule timer is enabled.

*36 ACTION ICONS “1 2 3 4 5”

These icons indicate the actions for each day of the schedule timer.

*37 OFF ICON “OFF”

This icon indicates that the OFF action is selected when programming the schedule timer.

*38 ELEMENT CLEANING TIME ICON “🧽”

This icon indicates the element must be cleaned (“HRV” only).

*39 PROGRAMMING BUTTON “⏸”

This button is a multi-purpose button. Depending on the previous manipulations of the user, the programming button can have various functions.

*40 SCHEDULE TIMER BUTTON “⌚⊗”

This button enables or disables the schedule timer.

41 OPERATION CHANGE/MIN-MAX BUTTON “max/min”

This button is a multi-purpose button. Depending on the previous manipulations of the user, it can have following functions:

- 1 select the operation mode of the installation (FAN, DRY, AUTOMATIC, COOLING, HEATING)
- 2 toggle between minimum temperature and maximum temperature when in limit operation

42 SETPOINT/LIMIT BUTTON “⊕⊗”

This button toggles between setpoint, limit operation or OFF (programming mode only).

NOTE 📖

- In contradistinction to actual operating situations, the display on figure 3 shows all possible indications.
- If the filter sign lamp lights up, clean the air filter as explained in the chapter “MAINTENANCE”. After cleaning and reinstalling the air filter: press the filter sign reset button on the remote controller. The filter sign lamp on the display will go out.
- Item 27~ Item 42 can be used with BRC1D527. In detail, refer to operation manual of the remote controller.
- Only the items marked with an asterisk (* mark) are explanation relating to the functions and display of the unit. Unmarked items are functions of the combined air conditioners.

2.3 EXPLANATION FOR SYSTEMS

This unit can be made a part of two different systems: as part of the combined operation system used together with VRVII SYSTEM Air Conditioners and as the independent system using only the HRV. An operating remote controller is required when using the unit as an independent system. Ask your dealer what kind of system your system is set up for before operation.

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

See the included operating manuals for details on how to operate each remote control.

■ OPERATION for EACH SYSTEM

Sample system (Refer to figure 2)

Combined operation system with VRVII systems

[Operation]

The air conditioner remote controller starts and stops the air conditioner and the HRV unit.

You can also select the ventilation amount and the ventilation mode. Refer to “3 OPERATION PROCEDURE”.

During intermediate periods when only the HRV unit is used without the air conditioner, select “ventilation” with the operation selection button. (Refer to 2.4)

Sample system (Refer to figure 2)

Independent system

[Operation]

The HRV unit can be started and stopped using the remote controller. You can also select the ventilation amount and the ventilation mode. Refer to “3 OPERATION PROCEDURE”.

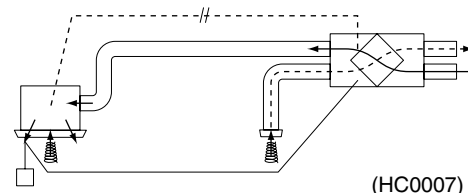
NOTE 📖

- This unit cannot control room temperature. If this is needed, do not install the HRV unit alone, but rather install another indoor unit.

2.4 ABOUT DIRECT DUCT CONNECTION SYSTEM

Installation Examples

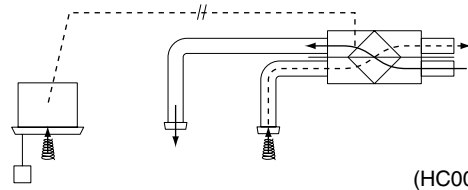
Direct duct connection system



(HC0007)
NOTE • The system must be operated interlocking with the air conditioner.

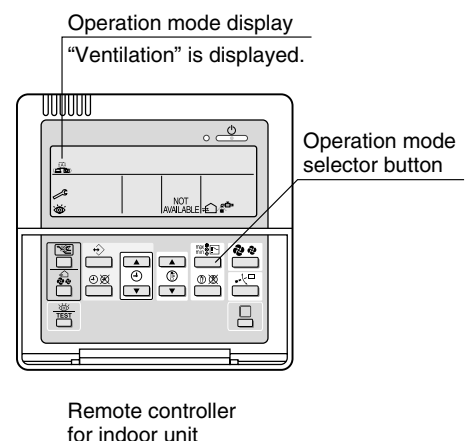
- Do not connect to the outlet side of the indoor unit.

Independent duct system



(HC0008)

The HRV unit cannot be operated independently when the air conditioner is connected to the HRV unit via a duct. When using the HRV unit, set the air conditioner to “fan” mode on weak fan strength.



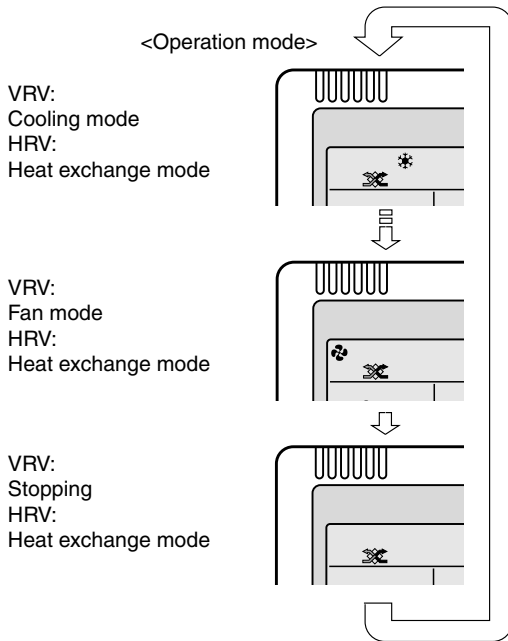
Remote controller for indoor unit

- Each time you press the operation selection button, the operation mode display will change as shown in the figure below.

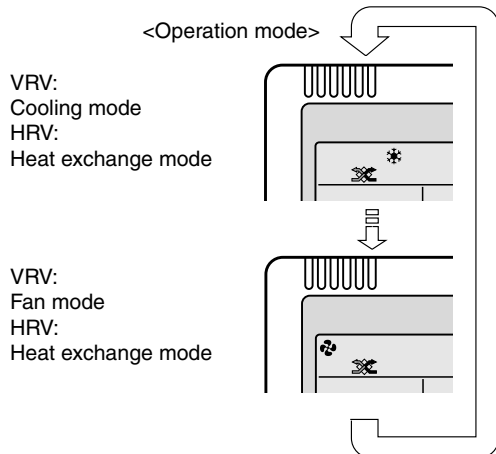
Example 1:
In case of the remote controller “BRC1D527” and as equivalent.

Display changes as below.

When air conditioner and HRV unit are not connected via duct



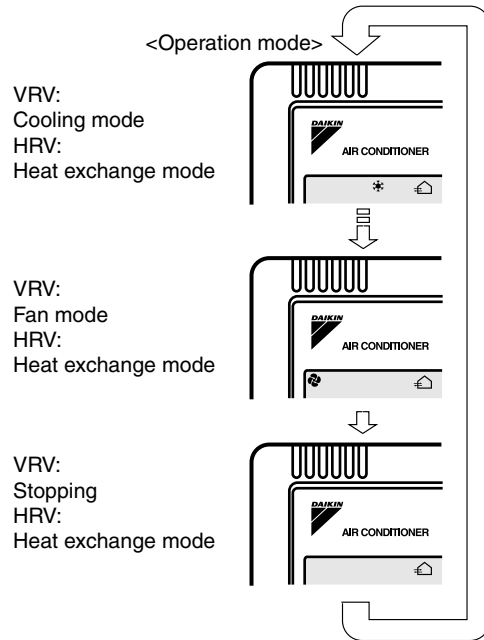
When air conditioner and HRV unit are connected via duct



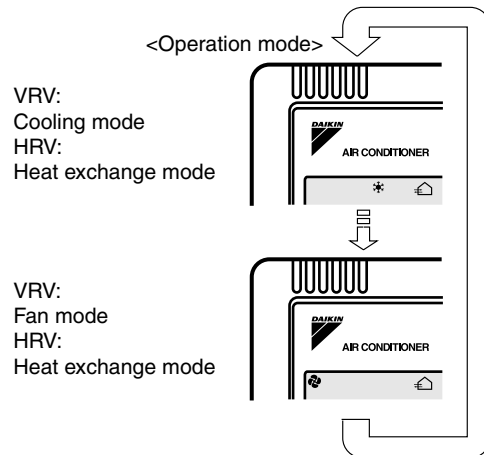
NOTE) Current Ventilation mode can be visible and selected on the remote controller.

Example 2:
In case of the remote controller “BRC1A62”
Display changes as below.

When air conditioner and HRV unit are not connected via duct



When air conditioner and HRV unit are connected via duct



NOTE) Current Ventilation mode doesn't be displayed.

- When the display shows “” (time to clean air filter), ask a qualified service person to clean the filters (Refer to the chapter “MAINTENANCE”).

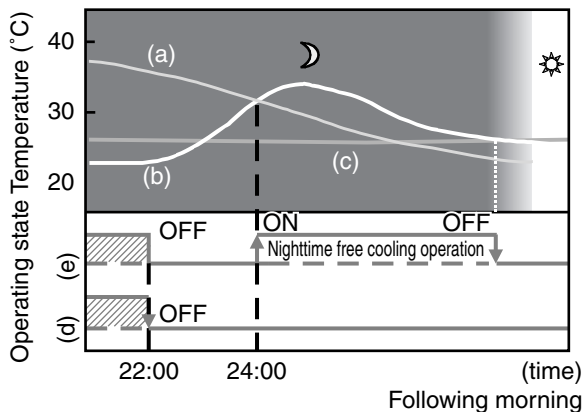
2.5 NIGHTTIME FREE COOLING OPERATION

(AUTOMATIC HEAT PORGE FUNCTION AT NIGHT)

The nighttime free cooling is an energy-conserving function which works at night when the air conditioner is off, reducing the cooling load in the morning when the air conditioner is turned on by ventilating rooms which contain office equipment which raises the room temperature.

- Nighttime free cooling only works during cooling and when connected to Building Multi or VRV systems.
- Nighttime free cooling is set to “off” in the factory settings; so request your dealer to turn it on if you intend to use it.

Operation image



- (a) Outside temperature
- (b) Indoor temperature
- (c) Set temperature
- (d) Operating state of Air conditioner
- (e) Operating state of Total heat exchanger

■ EXPLANATION OF NIGHTTIME FREE COOLING OPERATION IMAGE

The unit compares the indoor and outdoor temperatures after the air conditioning operation stops for the night. If the following conditions are satisfied, the operation starts, and when the indoor temperature reaches the air conditioning setting, the operation stops.

<Conditions>

- [1] the indoor temperature is higher than the air conditioning setting and
- [2] the outdoor temperature is lower than the indoor temperature,

If the above conditions are not satisfied, reevaluation is made every 60 minutes.

3 OPERATION PROCEDURE

3.1 COOLING, HEATING, AND FAN ONLY OPERATION (Refer to figure 5)

[PREPARATIONS]

- To protect the unit, turn on the main power switch 6 hours before operation.
Do not turn off the power during the heating or cooling season. This is to ensure smooth start-up.

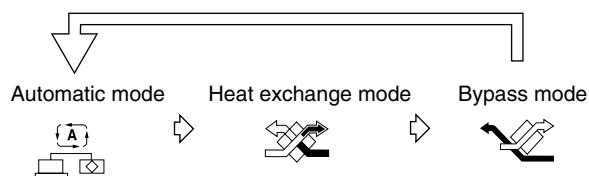
Press the operation mode selector button several times and select the operation mode of your choice;

- “☀” Cooling operation
- “☀” Heating operation
- “🌀” Fan only operation

NOTE

- “☀” can only be set for systems operating in cooling and heating at the same time.
“🌀” is displayed on all remote controllers when using the VRV system cooling only type, but only “☀” and “🌀” can be set.
- Select the operating mode on a remote controller on which “🌀” is not displayed.
“☀” “☀” and “☀” (only for simultaneous cooling/heating systems) cannot be selected on remote controllers on which it is displayed.
See 3.2 if “🌀” is displayed.

- 2 Press ventilation mode selector button if you wish to change the mode.
The display rotates through the following selections every time the button is pressed.



NOTE

- Above is available only if the remote controller BRC1D527 is connected with this unit.
It is unnecessary to change ventilation mode because the mode is already set to “automatic mode”.
- If you change this mode with BRC1A62, consult your dealer.

- 3 Press ventilation fan speed button if you wish to change the fan speed.
The display rotates through the following selections every time the button is pressed.



After the selection, the ventilation fan speed display disappears.
And the fan speed of the combined air conditioner regularly displays.

NOTE

- Above is available only if the remote controller BRC1D527 is connected with this unit.
- It is unnecessary to change four speed mode because the mode is already set to “Low” or “High” mode by the installer.
- If you want to know or change this mode with BRC1A62 consult your dealer.

- 4 Press the on/off button.
The operation lamp lights up and the system starts operation.

Stopping the system







Press start/stop one more time. The operation lamp will go off. The unit will stop.

- After stopping operation, the fan may continue operating for up to a minute.
- The fan may stop, but this is not a malfunction.

NOTE 

- Do not turn off the power immediately after operation stops. Wait at least 5 minutes. Not waiting may cause leaking or malfunction.
- Do not change operations suddenly. It can result not only in malfunction but also failure of switches or relays in the remote controller.
- Never press the button of the remote controller with a hard, pointed object. The remote controller may be damaged.

EXPLANATION OF OPERATION MODE

Cooling mode 	Heating mode 	Automatic mode 
While operating in ventilation mode, the unit adjusts the outside air to the indoor temperature and then brings it into the room.		<p>It automatically selects “” or “.</p> <p>Fan mode </p> <p>It only operates in ventilation mode. The unit processes outside air using the heat exchanger element, but not the DX expansion coil.</p>






NOTE 


- This unit cannot control room temperature. If this is needed, do not install the HRV unit alone, but rather install another indoor unit.


EXPLANATION OF VENTILATION MODE

NOTE 

- These icons below are displayed on the remote controller BRC1D527.


Automatic mode : When combined with a VRVII-system air conditioner
The unit automatically switches between “” and “” based on information from the VRVII system air conditioner (heating, cooling, fan, and set temperature) and information from the HRV unit (indoor and outdoor temperatures).
The unit automatically switches between “” and “” when it is combined with an air conditioner (Not produced by Daikin) and based on only the information from the HRV unit (indoor and outdoor temperatures) when the HRV unit is operating alone.

Total heat exchange mode : Outdoor air passes through the heat exchange element and heat exchanged air is sent into the room.


Bypass mode : In this mode outdoor air does not through the heat exchange element, but rather sent into the room as is.

EXPLANATION OF HEATING OPERATION


Defrost operation

- In heating operation, freezing of the outdoor unit’s coil increases. Heating capability decreases and the system goes into defrost operation.
- The remote controller will read “” until the hot air starts blowing.
- It returns to the heating operation again after 6 to 8 minutes (10 at the longest).
- During defrost operation, the fans of the unit continues driving (factory setting). The purpose of this is to maintain the amount of ventilation and humidifying.
- The change of the layout in the room should be examined when the cold draft from air supplying opening is feared.
- Though the fan can be stopped by the setting of remote controller. Do not stop the fan in the place where no ventilation by stopping the fan may cause the influence of diffusion of air which it is dirty and moisture into another room, or the inflow from outside the room. (outflow such as viruses from the sickroom, or smell leakage from the rest room, etc.) Contact your dealer for details.

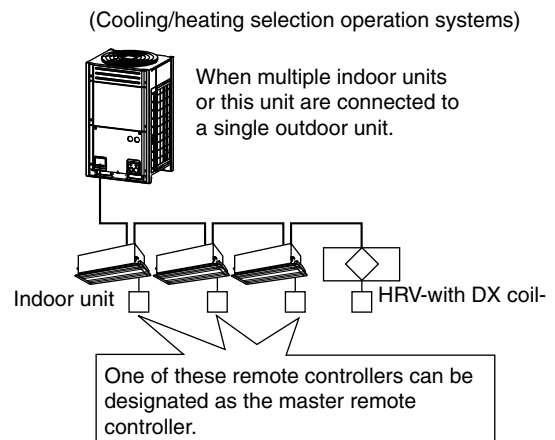
Hot start

- The remote controller will read “” until the hot air starts blowing, e.g. at the start of heating operation.

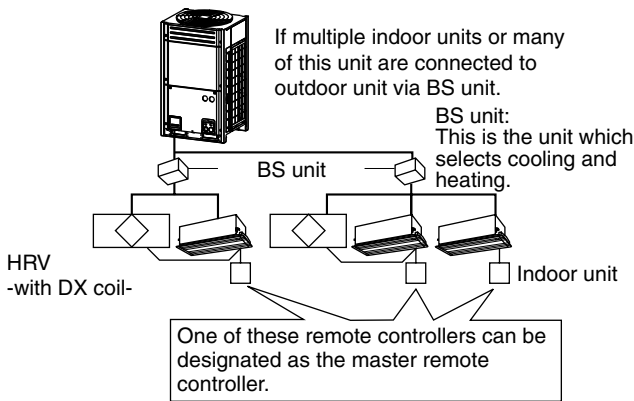
3.2 SETTING THE MASTER REMOTE CONTROLLER (Refer to figure 6)

- When the system is installed as shown bellow it is necessary to designate one of the remote controllers as the master remote controller.
- Only the master remote controller can select cooling, heating, or automatic operation (the last only on simultaneous cooling/heating systems).
- The displays of slave remote controllers show “” (changeover under control) and they automatically follow the operation mode directed by the master remote controller.

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

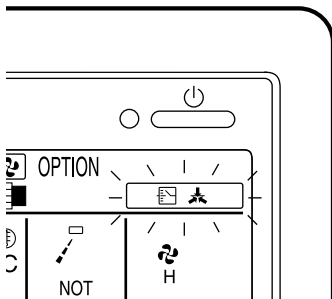


(Simultaneous cooling/heating systems)



HOW TO DESIGNATE THE MASTER REMOTE CONTROLLER

- Press the operation mode selector button of the current master remote controller for 4 seconds. The display showing “” (changeover under control) of all slave remote controllers connected to the same outdoor unit or BS unit flashes on.



- “” flashes when the power is first turned on.
- The ventilation mode can be changed regardless of the setting (main or slave).

NOTE

- This unit cannot control room temperature. If the unit is connected to the same system with other indoor units, set the master remote controller on the other indoor units.
- Press the operation mode selector button of the controller that you wish to designate as the master remote controller. Then designation is completed. This remote controller is designated as the master remote controller and the display showing “” (changeover under control) vanishes. The displays of other remote controller show “” (changeover under control).
 - Press the operation mode selector button on the master remote controller (i.e. a remote controller which does not display “”) to scroll through the modes. The display will scroll through “” – “” (only for simultaneous cooling/heating systems) – “” – “”. The display on slave remote controllers will also change automatically.

■ Details and activity of operation

- Setting the master remote controller (without the “” display) to cooling/heating mode will make slave remote controllers (with the “” display) to follow to the mode of the master remote controller. Selection of fan mode is possible, however.
- Setting the master remote controller (without the “” display) to fan mode will make slave remote controllers (with the “” display) any setting other than fan mode impossible.

3.3 PROGRAMMING START AND STOP OF THE SYSTEM WITH TIMER

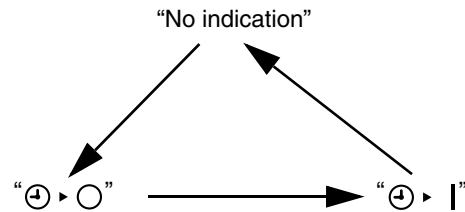
3.3.1 HOW TO PROGRAM AND SET THE TIMER WITH THE REMOTE CONTROLLER “BRC1A62” (Refer to figure 7)

- The timer is operated in the following two ways.
 - Programming the stop time “”. The system stops operating after the set time has elapsed.
 - Programming the start time “”. The system starts operating after the set time has elapsed.
- The start and the stop time can be simultaneously programmed.

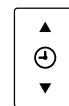
- Press the timer mode start/stop button “” several times and select the mode on the display.

- For setting the timer stop “”
- For setting the timer start “”

Each time the button is pushed, the indication changes as shown below.



- Press the programming time button and set the time for stopping or starting the system.



Each time this button is pressed, the time advances or goes backward by 1 hour.

- The timer can be programmed for a maximum of 72 hours.
- Each time when “” is pushed, the time advances one hour. Each time when “” is pushed, the time goes back one hour.

- Press the timer on/off button.

The timer setting procedure ends. The display “” or “” changes from flashing light to constant light.

- After the timer is programmed, the display shows the remaining time.
- For cancelling the timer operation, push the timer on/off button “” once again. The indication disappears.

NOTE

- When setting the timer off and on at the same time, repeat the above procedure (from “” to “”) once again.

■ DETAIL EXPLANATION

When you want to stop operation after a desired time, Example:

Set the time to “8”.



“ 8hr ” will display.
 ” will display.

Stops operation 8 hours after the reservation is complete. The program will be cleared after the operation stops.

- Set the stop time during operation.

When you want to start operation after a desired time has elapsed

Example:

Set the time to "8".

↓
"8hr" will display.

Starts operation 8 hours after the reservation is complete.

The reservation is cancelled after operation starts.

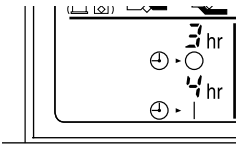
- Set the start time while the unit is stopped.
- The remaining time will count at the same time after reservation is complete.

See the example below if you want to reserve "off after time" and "on after time" at the same time.

For example: (Refer to figure below)

When the timer is programmed to stop the system after 3 hours and start the system after 4 hours, the system will stop after 3 hours and start 1 hour later.

Example:



- Setting "off after 3 hours" and "on after 4 hours" will
- ↓
- Operation will stop after 3 hours.
Operation will then start in 1 hour from the time it stopped.

3.3.2 HOW TO PROGRAM AND SET THE TIMER WITH THE REMOTE CONTROLLER "BRC1D527" (Refer to figure 7)

- The controller is equipped with a schedule timer that enables the user to operate the installation automatically; setting the clock and day of the week is required to be able to use the schedule timer.
- To set up clock, refer to the operation manual of the remote controller.

- 1 Browse to Monday by pressing the "↔" button. The "⊖" icon appears, "MON" will blink and one of the "🌀", "🌞", "🌧️", "☀️" icons, one of the "📺", "📻", "🎧" icons might be displayed but all other fields remain blank, indicating that no actions are programmed for Monday.
- 2 Enter the program mode by holding down the "↔" button for 5 seconds, the "⊖" icon will now blink too.
- 3 Press the "↔" button to activate the first programmed action. A blinking "1" is displayed indicating that the first programmed action for Monday is being programmed; The set temperature and clock display are blinking.
- 3 Enter the time when the action must start using the "⏰ ▲" & "⏰ ▼" buttons (min. step = 10 minutes).
- 4 Press the "↔" button to display the next programmed action. If a second action is programmed for Monday, "MON" will still be blinking and "1 2" will appear. Assuming that 5 actions were programmed for Monday, a total of 5 presses will be required to display all programmed actions.
- 5 Enter the time when the action must stop using the "⏰ ▲" & "⏰ ▼" buttons (min. step = 10 minutes).

- 6 Press the "⊖" button. "OFF" icon displays. This icon means the unit will stop at the set time. When all data for the schedule timer actions for Monday are entered, you must confirm the programmed actions. Make sure the last schedule timer action you want to keep is selected (schedule timer actions with a higher number will be deleted).

Now you must choose between 2 options:

1. CONFIRM AND COPY TO NEXT DAY

- 7 The schedule timer action programmed for the current day are also valid for the next day: use the "confirm last action and copy actions to next day" function by pressing the "↔" and "⊖" buttons simultaneously for 5 seconds. "DAY OF THE WEEK INDICATOR" will change blinking from "MON" to "SUN".

2. CONFIRM ONLY

- 8 The schedule timer action programmed for the current day are only valid for the selected day: use the "confirm last action and go to next day" function by pressing the "↔" button for 5 seconds.

Program mode is quit and depending on the choice made, the programmed actions are saved for Monday (and possibly Tuesday).

PROGRAMMING THE OTHER DAYS OF THE WEEK

Programming the other days of the week is identical to programming the first day of the week. "TUE" is blinking to indicate the selected day, "⊖" and "1" are steady if actions were copied from Monday to Tuesday, only "⊖" is displayed if no actions were copied from Monday to Tuesday.

NOTE) The schedule timer will not:

- control fan speed,
- control air flow direction,
- control ventilation mode,
- control ventilation amount,
- change the operation mode for a scheduled setpoint.

The parameters listed above can be set manually, without interfering with the schedule timer.

3.4 OPTIMUM OPERATION

Observe the following precautions to ensure the system operates.

- **When the display shows "🌀", ask a qualified service person to clean the filters (Refer to MAINTENANCE).**
- **Do not operate the HRV unit in Bypass mode when the room air is under heating in winter or when the outside temperature is 30°C or higher.**
This may cause condensation to form on the main unit or on discharge grill, or around air supply opening.
- **Keep the indoor unit and the remote controller at least 1 m away from televisions, radios, stereos, and other similar equipments.**
This may cause distorted picture or noise.
- **Turn off the main power supply switch when it is not used for long periods of time. When the main power switch is turned on, some watts of electricity is being used even if the system is not operating.**
Turn off the main power supply switch for saving energy. When reoperating, turn on the main power supply switch 6 hours before operation for smooth running.

- **Use city water or clean water and take steps to prevent condensation from forming. (VKM-GAMV1 series only)**
- **The life of humidifier become shorter when the supply water is hard water. (VKM-GAMV1 series only)**
Use a water softener.
- **Do not install the remote controller where the indoor temperature and humidity, respectively, are out of the range of 0-35°C and RH 40-80%.**
This may cause malfunction.
- **Do not install the remote controller where direct sunlight may fall on it.**
This may cause discoloration or deformation.

NOTE

- When the fan motor fails, the remote controller does not display any error code.
Usage under that status will lead to insufficient ventilation.
The air supply and exhaust fans should be checked once every one or two months.
You can make a simple check such as below way.
To check the wind flow, hold a bar of which the end has a string or other similar lightweight item over the supply grille and exhaust grille.
- When the solenoid valve fails, the remote controller does not display any error code.
Usage under that status will lead to insufficient humidification and increased tap water consumption.
The solenoid valve should be checked at the beginning of the heating season. <VKM-GAMV1 series only>

4 MAINTENANCE (for a qualified service person only)

ONLY A QUALIFIED SERVICE PERSON IS ALLOWED TO PERFORM MAINTENANCE
DO NOT CHECK OPENING INSIDE THE UNIT BY YOURSELF.


WARNING

- **BEFORE OBTAINING ACCESS TO TERMINAL DEVICES, ALL POWER SUPPLY CIRCUITS MUST BE INTERRUPTED.**
- To clean the HRV, or maintenance be sure to stop operation, and turn the power switch off. It may cause electrical shock and it is very dangerous to touch the rotating part.
- Do not wash the HRV with water.
Doing so may result in an electric shock.

CAUTION

- Use gloves when cleaning.
Cleaning without gloves may cause injury.
- Watch your step.
Use caution, as this requires working in high places.
- Do not use benzene or thinner to clean the outside surfaces of the air conditioner.
This may cause cracks, discoloration, or machine trouble.

4.1 HOW TO CLEAN THE AIR FILTER

Clean the air filter when the display shows “” (TIME TO CLEAN AIR FILTER).

It will display that it will operate for a set amount of time.

**AT LEAST ONCE EVERY YEARS (FOR GENERAL OFFICE USE)
(CLEAN THE MORE FREQUENTLY IF NECESSARY.)**

- Increase the frequency of cleaning if the unit is installed in a room where the air is eternely contaminated.

- If the dirt becomes impossible to clean, change the air filter (Air filter for exchange is optional).
- (1) Detach the maintenance cover.
Go into ceiling through the inspection hatch, remove binding metal of maintenance cover and take it off.
(Refer to figure 8-1)
 - (2) Detach the air filter.
Take out from the heat exchange elements.
(Refer to figure 8-2)
 - (3) Clean the air filter. **(Refer to figure 9)**
Use vacuum cleaner A) or wash the air filter with water B).
A) Using a vacuum cleaner
B) Washing with water
When the air filter is very dirty, use soft brush and neutral detergent.
After cleaning, remove water and dry in the shade.

NOTE

- Do not wash the air filter with hot water of more than 50°C, as doing so may result in discoloration and/or deformation.
 - Do not expose the air filter to fire, as doing so may result in burning.
 - Do not use gasoline, thinner, or other organic solvents.
This may cause discoloration or deformation.
- (4) Fix the air filter.
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 10)

NOTE

- 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.
- (5) Install the maintenance cover.
Refer to page 11 (4.1, (1)).

For remote controllers which display the filter sign, turn on the power after maintenance, and press the filter sign reset button.

* Consult your dealer if you want to change the time setting for when the filter sign goes on.

CAUTION

- **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.

4.2 HOW TO CLEAN THE HEAT EXCHANGE ELEMENT

**AT LEAST ONCE EVERY TWO YEARS
(FOR GENERAL OFFICE USE)
(CLEAN THE ELEMENT MORE FREQUENTLY IF NECESSARY.)**

WARNING

- **Please exchange the heat exchange element if you find that the knob of the heat exchange element is damaged or is deteriorated when cleaning it.**
There is falling danger.

- (1) Detach the maintenance cover.
Refer to page 11 (4.1, (1)).
- (2) Detach the air filter.
Refer to page 11 (4.1, (2)).
- (3) Take out the heat exchange elements.
Pull out the air filter and then pull out the two heat exchanger elements. **(Refer to figure 11)**

- (4) Use a vacuum cleaner to remove dust and foreign objects on the surface of the heat exchange element.
(Refer to figure 12)
- 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 exchange element when cleaning.
(Do not crush the heat exchange element while cleaning.)

CAUTION

- Do not clean touching strongly with a vacuum cleaner. This may crush the mesh of the heat exchange elements.
- Never wash the heat exchange element with water.
- Have your dealer professionally clean the filter if it is very dirty.

- (5) Put the heat exchange element on the rail and insert it securely in place.
(6) Install the air filter securely in place.
(Refer to page 11 (4.1, (4)))
(7) Install the maintenance cover securely in place.
(Refer to page 11 (4.1, (5)))

4.3 SEASONAL MAINTENANCE
<VKM-GAMV1 series only>

4.3.1 AT THE BEGINNING OF THE SEASON

- (1) **Check below**
- Are the indoor and outdoor unit intake and outlet vents blocked?
Remove anything that might be blocking them.
- (2) **Turn the power on**
- When the power comes on, the characters in the remote controller display appear.
(To protect the unit, turn the power on at least 6 hours before operating it. This makes operation smoother.)

(3) **Supply water** (Start of heating season)

4.3.2 AT THE END OF THE SEASON

- (1) **On a clear day, use fan only operation for around half a day to thoroughly dry out the interior of the unit.**
- Refer to page 7 for details on fan operation.
- (2) **Turn off the power**
- When the power is shut off, the characters in the remote controller display disappear.
 - When the power is on, the unit consumes up to several dozen Watts of power.
Turn off the power to conserve energy.
- (3) **Stop water supply** (End of heating season)

4.4 INSPECTION AND MAINTENANCE OF THE HUMIDIFIER <VKM-GAMV1 series only>

- **Have your dealer do the following inspections in order to get the longest use.**
- In order to prevent harmful bacteria from generating, ask your dealer to do maintenance on humidifying unit portion at the beginning or the end of the heating season.

NOTE

- When the solenoid valve fails, the remote controller does not display any error code.
Usage under that status will lead to insufficient humidification and increased tap water consumption.
The solenoid valve should be checked at the beginning of the heating season.

For dealers

Inspected part	Content of maintenance		Problems if maintenance is not carried out
	Items to be inspected	Solution	
Strainer (80-mesh)	Check for clogging	Clean if clogged.	Insufficient humidifying.
	Check o-ring for cracks	Replace if cracked.	Leaking.
Feed water tank	Check for operation of float switch	Clean if it does not work properly due to build-up.	Insufficient humidifying. Overflowed feed water tank.
	Check for dirt	Clean if very dirty.	Weak fan strength. Reduced humidifying capacity.
Solenoid valve	Check for shutting and opening. Check in a similar fashion when checking the float switch operation.	Replace if it doesn't work.	Insufficient humidifying. Overflowed feed water tank. (Increased tap water consumption)

4.5 INSPECTION OF THE FAN MOTER

NOTE

- When the fan motor fails, the remote controller does not display any error code.
Usage under that status will lead to insufficient ventilation.
The air supply and exhaust fans should be checked once every one or two months.
You can make a simple check such as below way.
To check the wind flow, hold a bar of which the end has a string or other similar lightweight item over the supply grille and exhaust grille.

4.6 REPLACING THE HUMIDIFIER ELEMENT <VKM-GAMV1 series only>

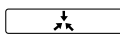
- The humidifier element needs to be replaced regularly.
The humidifier element should in general be replaced once every three years when supply water is soft water, but outside factors (If the water quality is hard water, etc.) as well as operating conditions (24-hour-a-day air conditioning, etc.) may shorten its productive life.
- Contact your dealer if you have any questions.

5 TROUBLE SHOOTING

5.1 THE FOLLOWING SITUATIONS ARE NOT MALFUNCTIONS

- **Operation does not start.**

<Symptom>

The icon “  ” (under centralized control) is displayed on the remote controller and pressing the on/off button causes the display to blink for a few seconds.

<Cause>

This indicates that the central device is controlling the unit.
The blinking display indicates that the remote controller cannot be used.

<Symptom>

The fans rotate after 1 minute when pressing on on/off button.

<Cause>

This indicates that the operation is in preparation. Wait for about 1 minute.

• Operation stops sometimes.

<Symptom>

“U5” is displayed on the remote controller and the operation stops but then restarts after a few minutes.

<Cause>

This indicates that the remote controller is intercepting noise from electrical appliances other than the HRV unit, and this prevents communication between the units, causing them to stop.

Operation automatically restarts when the noise goes away.

• “88” is displayed on the remote controller.

<Symptom>

It displays immediately after the power is turned on, and disappears after several seconds.

<Cause>

This indicates that the unit is checking whether or not the remote controller is normal.

It is only displayed temporarily.

5.2 IF ONE OF THE FOLLOWING MALFUNCTIONS OCCURS, TAKE THE MEASURES SHOWN BELOW AND CONTACT YOUR DAIKIN DEALER

The system must be repaired by a qualified service person. DO NOT CHECK AND REPAIR OPENING INSIDE THE UNIT BY YOURSELF.

⚠ WARNING

When the HRV is in abnormal conditions (smell of something burning, etc), cut off the power, and contact your dealer.

Continued operation under such circumstances may result in a failure, electric shock, and fire.

• The unit does not operate at all.

a. Check if there is a power failure.

Measure: After power has been restored, start operation again.

b. Check if the fuse has blown.

Measure: Turn the power off.

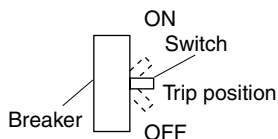
c. Check if breaker has worked.

Measure:

Turn the power on with the breaker switch in the off position.

Do not turn the power on with the breaker switch in the trip position.

(Contact your dealer.)



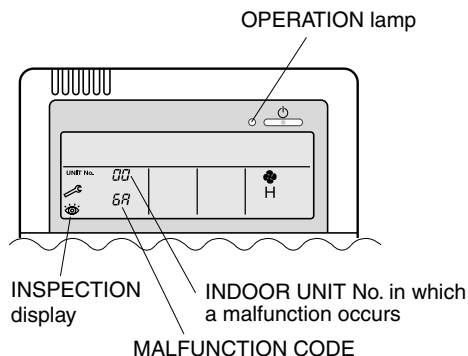
• If a safety device such as a fuse, a breaker, or an earth leakage breaker frequency actuates, or ON/OFF switch does not properly work.

Measure: Do not turn the power on.

• The remote control buttons do not work well.

Measure: Turn off the main power switch.

• If the display “” (INSPECTION), “UNIT No.” and the OPERATION lamp flash and the “MALFUNCTION CODE” appears.



Measure: Notify and inform the model name and what the malfunction code indicates to your Daikin dealer.

• There are other malfunctions.

Measure: Stop the unit.

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

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	Dumper-related malfunction
Blinking	Blinking	Blinking	6A	Dumper-related malfunction + thermistor malfunction
Blinking	Blinking	Blinking	A1	Printed circuit board fault
On	Off	Blinking	A1	Printed circuit board fault
Blinking	Blinking	Blinking	A9	Electric expansion valve drive error
Blinking	Blinking	Blinking	C4	Liquid piping thermistor error (faulty connection, disconnection short circuit, fault)
Blinking	Blinking	Blinking	C5	Gas piping thermistor error (faulty connection, cut wire, short circuit, fault)
Blinking	Blinking	Blinking	C9	Intake air into coil thermistor error (faulty connection, disconnection, short circuit, fault)
Blinking	Blinking	Blinking	U3	Test run not performed
Blinking	Blinking	Blinking	U5	Transmission error between the unit and remote controller
Off	Blinking	Off	U5	Setting error of remote controller
Off	Blinking	Off	U8	Transmission error between main remote controller and sub remote controller
Off	Blinking	Blinking	UA	Incorrect combination with indoor unit and remote controller.
On	Blinking	On	UC	Central control address overlapping
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.

If other than the above error codes are displayed, there is a possibility that the problem in question has occurred with a combined air conditioner or outdoor unit. See the operation manuals included with the air conditioners or outdoor units for details.

5.3 IF THE SYSTEM DOES NOT PROPERLY OPERATE EXCEPT FOR THE ABOVE MENTIONED CASE, AND NONE OF THE ABOVE MENTIONED MALFUNCTIONS IS EVIDENT, CONTACT YOUR DEALER, AND REQUEST FOR INVESTIGATION THE SYSTEM ACCORDING TO THE FOLLOWING PROCEDURES BY A QUALIFIED SERVICE PERSON

The following malfunctions must be checked by a qualified service person. Do not check by yourself.

- **The unit does not operate at all.**
 - a. Check if there is a power failure.
After power has been restored, start operation again.
 - b. Check if the fuse has blown.
Change the fuse.
 - c. Check if breaker has worked.
Contact your dealer.
 - d. Are there any problems with the power or wiring?
Inspect the power and wiring.
 - e. Are there any problems with the fan unit?
Inspect the fan motor and fan.
- **Amount of discharged air is small and the discharging sound is high.**
 - a. Check if the air filter and heat exchange element are clogged. (Check both SA and RA air filter. Check both sides of elements.)
Clean the air filter and heat exchange element.
- **Amount of discharged air is large and so is the sound.**
 - a. Check if the air filter and heat exchange element are not installed.
Install the air filter and heat exchange element.
- **It dries usually in winter. <VKM-GAMV1 series only>**
 - a. Is the water supply service valve open?
Open the water supply service valve.
 - b. Have you lowered setting on the humidistat (locally procured) too far?
Correct the setting.
- **Humidifies very little or not at all. <VKM-GAMV1 series only>**
 - a. Is there water in the water supply tank?
 - b. Is water being supplied?
Inspect the water supply pipes and supply the water.
 - c. Is the strainer clogged?
Clean the strainer.
 - d. Is the solenoid valve broken (i.e. won't open)?
Replace the solenoid valve.
 - e. Is the humidifier element torn?
Replace.
 - f. Has the water resistance of the humidifier element dropped?
Replace the humidifier element.
 - g. Are the control circuits broken?
Replace the printed circuit board and other electric parts.
 - h. Is the float switch broken?
Replace the float switch.
 - i. Is the water supply pressure sufficient?
Re-set it so that there is sufficient pressure.
 - j. Is there foreign matter in the feed water tank?
Clean the feed water tank.

After-sales service and warranty

After-sales service:

WARNING

- **Do not modify the unit.**
This may cause electric shock or fire.
- **Do not disassemble or repair the unit.**
This may cause electric shock or fire.
Contact your dealer.
- **If the refrigerant leaks, keep out of fire.**
The refrigerant used in this unit is safe.
Although the refrigerant does not usually leak, if the refrigerant leaks out into a room and comes in contact with the combustible air in the equipment such as fan heater, stove, oil (gas) cooker, etc., it will cause toxic gas to be generated.
When a refrigerant leakage failure has been repaired, confirm a service person that the leakage point has been corrected surely before restarting operation.
- **Do not remove or reinstall the unit by yourself.**
Incomplete installation may cause a water leakage electric shock and fire.
Contact your dealer.

■ When asking your dealer to repair, inform related staff of the details as follows:

- Shipping date and installation date:
- Malfunction:
Inform the staff of the defective details.
(Malfunction code being displayed on the remote controller.)
- Name, address, telephone number

■ Repair where the warranty term is expired

Contact your dealer. If necessary to repair, pay service is available.

■ Minimum storage period of important parts

Even after a certain type of air conditioner is discontinued, we have the related important parts in stock for 6 years at least.

The important parts indicate parts essential to operate the air conditioner.

■ Recommendations for maintenance and inspection

Since dust collects after using the unit for several years, the performance will be deteriorated to some extent.

Taking apart and cleaning inside require technical expertise, so we recommend entering a maintenance and inspection contract (at a cost) separate from normal maintenance.

■ Recommended inspection and maintenance cycles

[Note: The maintenance cycle is not the same as the warranty period.]

Table 1 assumes the following usage conditions.

- Normal use without frequent starting and stopping of the machine.
(Although it varies with the model, we recommend not starting and stopping the machine more than 6 times/hour for normal use.)
- Operation of the product is assumed to be 10 hours/day, 2500 hours/year.

• Table 1 “Inspection Cycle” and “Maintenance Cycle” Lists

Name of Main Part	Inspection Cycle	Maintenance Cycle [replacements and/or repairs]
Electric motor (fan, damper, etc.)	1~2 months recommended *1	20,000 hours
PC boards	1 year	25,000 hours
Heat exchanger element		10 years
Heat exchanger		5 years
Sensor (thermistor)		5 years
Remote controller and switches		25,000 hours
Drain pan		8 years
Expansion valve	1 year *2	20,000 hours
Electromagnetic valve	1 year	20,000 hours

*1:

- When the fan motor fails, the remote controller does not display any error code. Usage under that status will lead to insufficient ventilation. The air supply and exhaust fans should be checked once every one or two months.
- You can make a simple check such as below way. To check the wind flow, hold a bar of which the end has a string or other similar lightweight item over the supply grille and exhaust grille.

*2:

- When the solenoid valve fails, the remote controller does not display any error code. Usage under that status will lead to insufficient humidification and increased tap water consumption. The solenoid valve should be checked at the beginning of the heating season.

Note 1

This table indicates main parts.

See the maintenance and inspection contract for details.

Note 2

This maintenance cycle indicates recommended lengths of time until the need arises for maintenance work, in order to ensure the product is operational as long as possible.

Use for appropriate maintenance design (budgeting maintenance and inspection fees, etc.).

Depending on the content of the maintenance and inspection contract, the inspection and maintenance cycles may in reality be shorter than those listed here.

Shortening of “maintenance cycle” and “replacement cycle” needs to be considered in the following cases.

- When used in hot, humid locations or locations where temperature and humidity fluctuate greatly.
- When used in locations where power fluctuation (voltage, frequency, wave distortion, etc.) is high. (Cannot be used if it is outside the allowable range.)
- When installed and used in locations where bumps and vibrations are frequent.
- When used in bad locations where dust, salt, harmful gas or oil mist such as sulfuric acid and hydrogen sulfide may be present in the air.
- When used in locations where the machine is started and stopped frequently or operation time is long. (Example: 24 hour air-conditioning)
- When the supply water is hard water the humidifier’s life become shorter.

■ **Recommended replacement cycle of wear-out parts**

[The cycle is not the same as the warranty period.]

• Table 2 “Replacement Cycle” Lists

Name of Main Part	Inspection Cycle	Replacement Cycle
Air filter	1 year	3 years
High efficiency filter (Optional accessory)		1 year
Heat exchanger element	2 years	10 years
Humidifier element	1 year	3 years (Note 3)

Note 1

This table indicates main parts.

See the maintenance and inspection contract for details.

Note 2

This maintenance cycle indicates recommended lengths of time until the need arises for maintenance work, in order to ensure the product is operational as long as possible.

Use for appropriate maintenance design (budgeting maintenance and inspection fees, etc.).

Note 3

Life of humidifying element is about 3 years (4,000 hours), under the supply water conditions of hardness: 150mg/l.

(Life of humidifying element is about 1 year (1,500 hours), under the supply water conditions of hardness: 400mg/l.)

Annual operating hours: 10 hours/day × 26 days/month × 5 month = 1,300 hours.

Contact your dealer for details.

Note: Breakage due to taking apart or cleaning inside by anyone other than our authorized dealers may not be included in the warranty.

■ **Moving and discarding the unit**

- Contact your dealer for removing and reinstalling the total enthalpy heat exchanger when moving house since they require technical expertise.
- This unit contains chlorofluorocarbon in the refrigerant. When discarding, removing installing and maintaining the unit, collect the refrigerant in accordance with the local law for the global environmental destruction prevention. In detail contact your dealer.

■ **Where to call**

For after-sales service, etc., consult with your dealer.

■ **Warranty period:**

Warranty period: Within one year after installation.

- If it is necessary to repair the air conditioner within the warranty period, contact your dealer.

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