



- Warning
- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
 - Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorized parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
 - Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

For any inquiries, contact your local distributor.



PCH0601

VAM-GJ SERIES

HEAT RECLAIM VENTILATION

HRV

Combined Air Conditioning and Ventilation
for Energy Efficiency and Comfort

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided and choose an outdoor unit with anti-corrosion treatment.



The air conditioners manufactured by Daikin Industries have received ISO 9001 certification for quality assurance.

Certificate Number. JMI-0107
JQA-0495
JQA-1452



All Daikin Industries locations and subsidiaries in Japan have received environmental management system standard ISO 14001 certification.

Daikin Industries, Ltd.
Domestic Group
Certificate Number. EC99J2044

About ISO 14001

ISO 14001 is the standard defined by the International Organization for Standardization (ISO) relating to environmental management systems. Our group has been acknowledged by an internationally accredited compliance organisation as having an appropriate programme of environmental protection procedures and activities to meet the requirements of ISO 14001.

Dealer

DAIKIN INDUSTRIES, LTD.

Head Office:
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka, 530-8323 Japan

Tokyo Office:
JR Shinagawa East Bldg., 2-18-1, Konan,
Minato-ku, Tokyo, 108-0075 Japan

<http://www.daikin.com/global/>

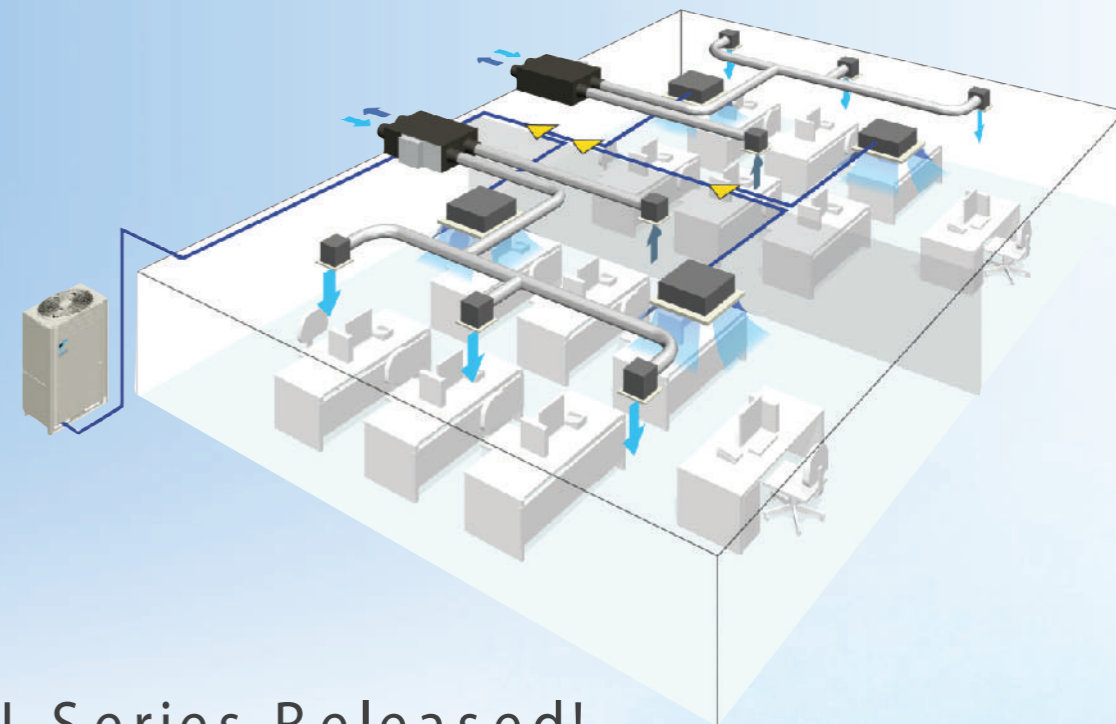
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**Centralized Control of Air Conditioning and Ventilation by Interlocking
with Daikin's VRV system, SkyAir, and Other Air Conditioning Systems**

The HRV Creates a High-Quality Environment by Interlocking with the Air Conditioner

Daikin's HRV (Heat Reclaim Ventilation) recovers heat energy lost through ventilation and holds down room temperature changes caused by ventilation, thereby maintaining a comfortable and clean environment. This also curbs the load on the air conditioning system and conserves energy.

In addition, the HRV is interlocked to Daikin's VRV system, SkyAir and other air conditioning systems and automatically switches over ventilation mode, further increasing the effects of energy conservation. HRV operation has been centralized on the air conditioner remote controller allowing total control over air conditioning and ventilation with a simple configuration.



VAM-GJ Series Released! 9 Models to Choose From!

Improved Enthalpy Efficiency*¹

Higher External Static Pressure*²

Enhanced Energy Saving Functions

★1 For models: VAM150/250/350/650/800/1000/2000GJVE
★2 For models: VAM150/350/500GJVE

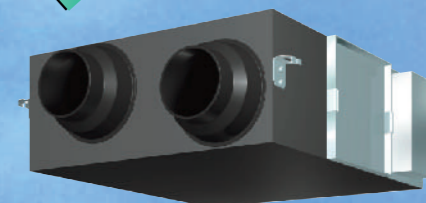
Daikin air conditioner
Indoor unit



- Operating mode signal
- Filter cleaning signal
- Failure detection signal

Interlocking

- ON/OFF signal
- Cooling/Heating mode signal
- Set temperature signal
- Ventilation signal
- Humidifier ON/OFF signal



HRV



LCD remote controller
for indoor unit

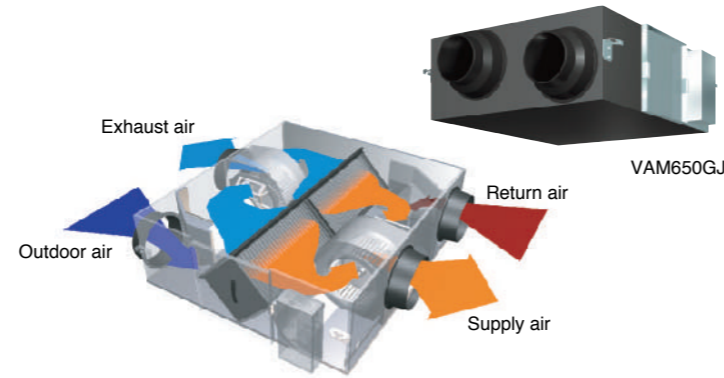
Model Lineup

Model Series	Air flow rate (m ³ /h)								
	150	250	350	500	650	800	1000	1500	2000
VAM-GJ	●	●	●	●	●	●	●	●	●

Features of Daikin HRV

VAM-GJ Series

This series provides higher enthalpy efficiency^{*1}, due to the greatly enhanced performance of the new ultra-thin film element. Furthermore, improved external static pressure^{*2} offers more flexibility for installation. Along with these three improvements, Daikin's exclusive function —nighttime free cooling operation—contributes to energy conservation and more comfortable space.



★1 For models: VAM150/250/350/650/800/1000/2000GJVE
★2 For models: VAM150/350/500GJVE

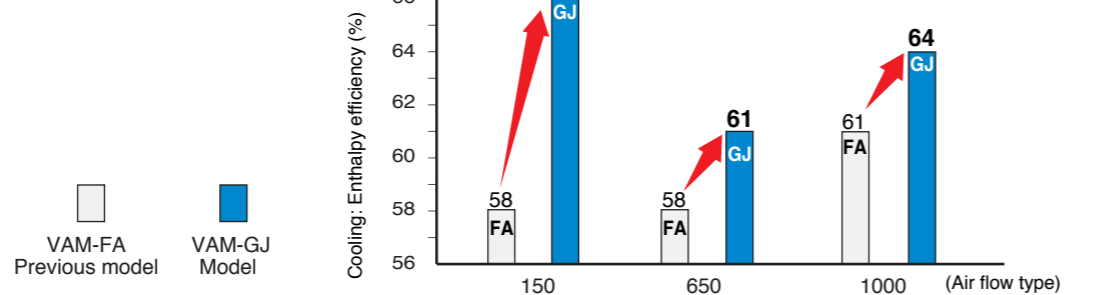
Enthalpy efficiency drastically improved!

Introduction of ultra-thin film element significantly increases enthalpy efficiency!

Enthalpy efficiency improved^{*1}

Adoption of the ultra-thin film element leads to highly improved enthalpy efficiency. ^{*1}

■ Achieving higher enthalpy efficiency^{*1}



★1 For models: VAM150/250/350/650/800/1000/2000GJVE

Ultra-thin film element

The partition sheet in the heat exchanger element has been significantly upgraded. It is approximately two-third thinner than the conventional type, resulting in a great improvement in moisture absorption!

Previous element (FA model)
Moisture absorption is less effective due to the thickness of the partition sheets. It also limits the effective area that supply and exhaust air can be exposed to.

Thickness of the partition sheet: **60 μm**

Ultra-thin film element
Due to the thinner film...
•Decreases the moisture resistance of the partition sheets drastically.
•Realizes more space for extra layers in the element, resulting in increased effective area that supply and exhaust air can be exposed to.

Moisture absorption increased by approx. 10%!

Thickness of the partition sheet: **40 μm**

Sheet structure: High-humidity air (Exhaust air) and Low-humidity air (Supply air) flow through a precise, thin-film material. Molecules of water and miscellaneous gas (CO2) are shown passing through the film.

Moisture exchange efficiency is greatly improved by using optimized thinner films and moisture-absorption materials in the element. Furthermore, miscellaneous gas barrier properties are maintained by decreasing the porosity in the moisture-absorption materials.

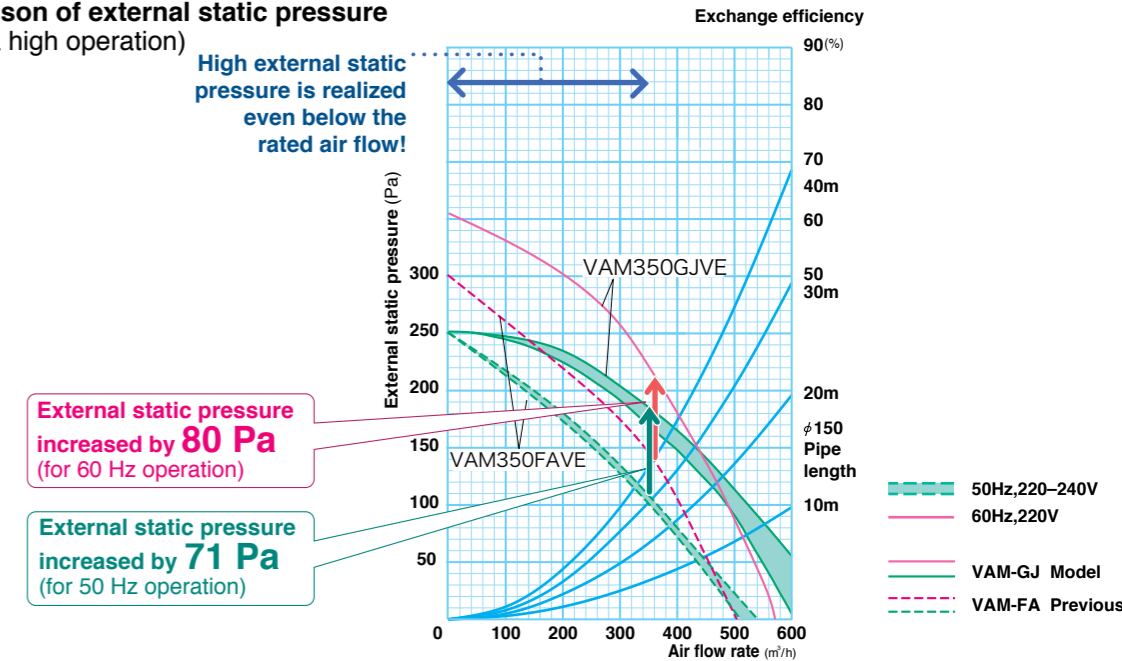
Higher external static pressure^{*2}

External static pressure has been significantly increased by adopting a new type of fan.^{*2}

High external static pressure design adopting efficient fan performance

Improvements to the fan, including the use of multi-arc blades and optimized fan sizes, help boost efficiency.

■ Comparison of external static pressure (For ultra high operation)



★2 For models: VAM150/350/500GJVE

Energy conservation and comfortable air space

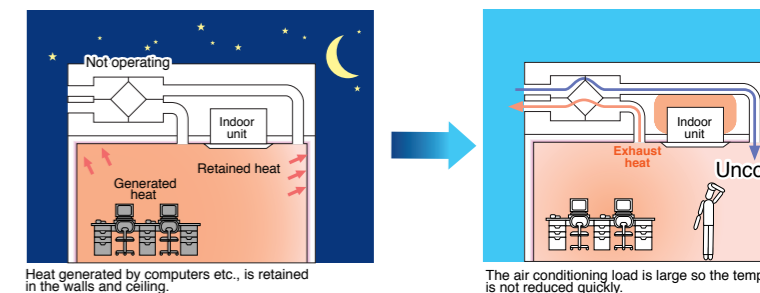
Nighttime free cooling operation

Air conditioning sensible heat load reduced by approx. **5%**

Nighttime free cooling operation is an energy-conserving function that works at night when air conditioners are off. By ventilating rooms containing office equipment that raises the room temperature, nighttime free cooling operation reduces the cooling load when air conditioners are turned on in the morning. It also alleviates feelings of discomfort in the morning caused by heat accumulated during the night.

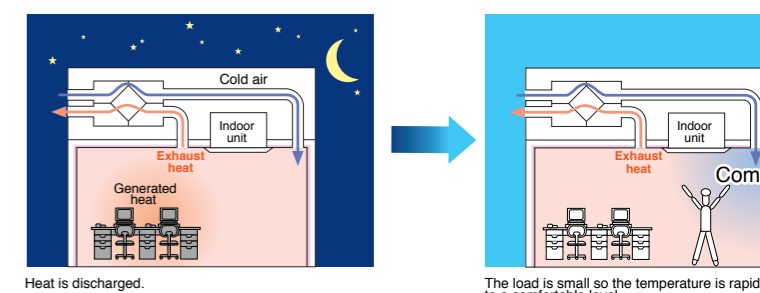
- Nighttime free cooling operation only works to cool and if connected to Building Multi or VRV systems.
- Nighttime free cooling operation is set to "off" in the factory settings, so if you wish to use it, request your dealer to turn it on.

■ No operation



■ Nighttime free cooling operation

The indoor accumulated heat is discharged at night. This reduces the air conditioning load the next day thereby increasing efficiency.



*Interlocked operation with an air conditioner.

Air Conditioning Load Reduced by Approximately 30%

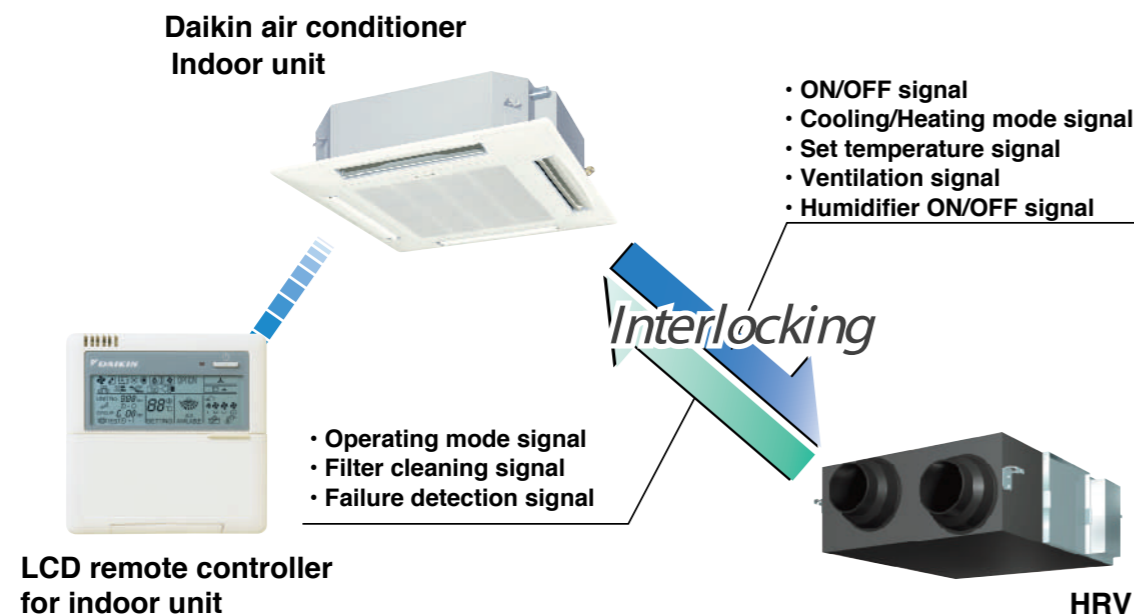
1. Approximately 20% by operating in total heat exchange mode
(in comparison with normal ventilation fans)
2. Another approximately 8% gained by auto-ventilation mode changeover switching
3. Yet another approximately 2% by pre-cool, pre-heat control

• The above values may vary according to weather and other environmental conditions at the location of the machine's installation.
 • The above values are based on the following conditions;
 Application: Tokyo office building
 Building form: 2 floors above ground, 6 floors underground, floor area 2,100 m²
 Personnel density: 0.25 person/m²
 Ventilation volume: 25 m³/h
 Indoor air conditioning level: summer 25°C 50% RH, intermediate seasons 24°C 50% RH, winter 22°C 40% RH
 Operating time: 2745 hours (9 hours per day, approx. 25 days per month)
 Calculation method: simulation based on "MICRO-HASP/1982" of the Japan Building Mechanical and Electrical Engineers Association.

Interlocking

Annual air conditioning load reduced by approx. **30%**

The HRV is interlocked to Daikin's VRV system, SkyAir and other air conditioning systems and automatically switches over ventilation mode, further increasing the effects of energy conservation. HRV operation has been centralized on the air conditioner remote controller allowing total control over air conditioning and ventilation with a simple configuration.

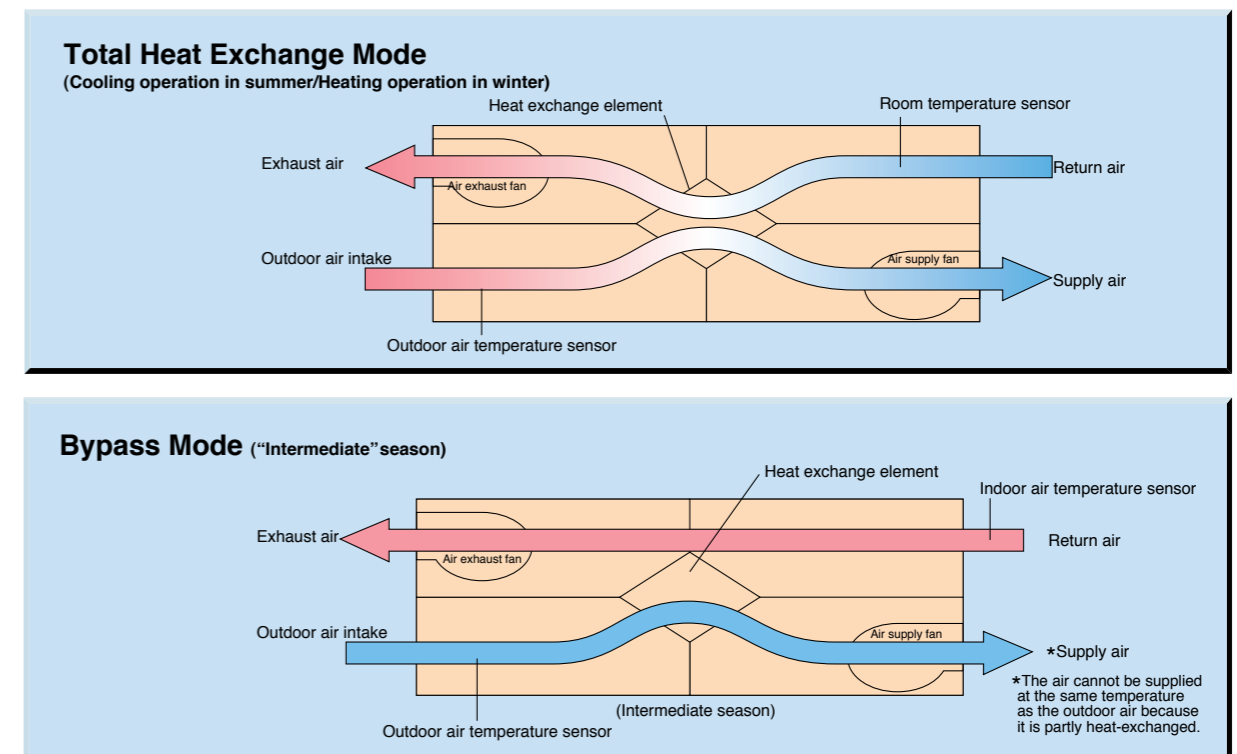


Pre-cool, Pre-heat Control

Reduces air conditioning load by not running the HRV while air is still clean soon after the air conditioner is turned ON.

Auto-ventilation Mode Changeover Switching

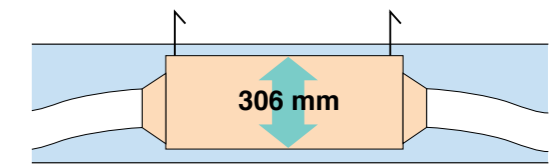
Automatically switches the ventilation mode (Total Heat Exchange Mode/Bypass Mode) according to the operating status of the air conditioner.



Compact equipment

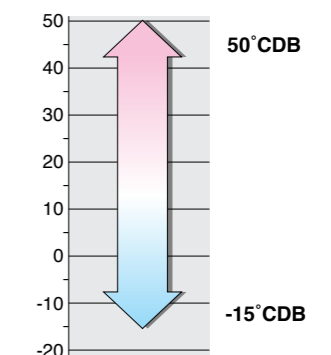
With a height of just 306 mm, the unit easily fits in limited spaces, such as above ceilings.

* In case of VAM500GJVE



Cold climate compatible : Standard operation at temperatures down to -15°C

The intermittent operation mode is activated when outdoor temperature goes down to -10°C or below, preventing freezing or condensation in the unit. Standard models can now be used in cold climate regions.



Centralized Control of Air Conditioning and Ventilation

The operation of the air conditioner using the remote controller is interlocked to the operation of the HRV, greatly simplifying overall system operation. In addition, installation work associated with the HRV remote controller is not necessary because operations for air conditioning and ventilation are completely centralized on the air conditioner remote controller. Also, the use of such a centralized remote controller allows the user to choose a wide range of control systems that integrate air conditioning and ventilation. Furthermore, by using a variety of centralized control equipment, the user can build a large, high-grade centralized control system.

Operations and Control with the Air Conditioning Remote Controller

- Simultaneous ON/OFF of the HRV and indoor unit air conditioner
- Independent operation of the HRV
- Airflow rate switching (initial setting)
- Ventilation mode switching
- Self-diagnosis functions
- Filter sign display and reset
- Timer settings (simultaneous control with air conditioner)
- Pre-cool, pre-heat control settings (initial setting)
- Fresh-up mode switching (Selectable: supply rich mode, exhaust rich mode; Initial setting)

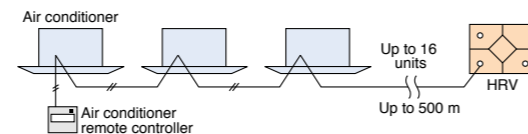


BRC1C62

A Variety of Control Systems That Can Be Controlled Using Only the Air Conditioner Remote Controller

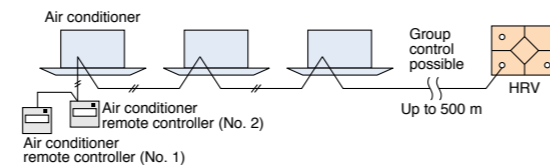
■ Group Control

One air conditioner remote controller simultaneously controls up to 16 air conditioner and HRV units.



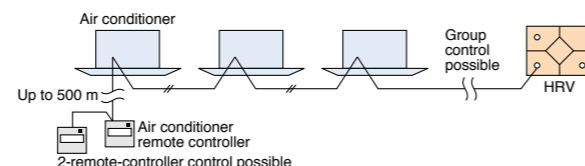
■ 2-Remote-Controller Control

Allows control of air conditioner and HRV units from two places by connecting two air conditioner remote controllers. (Group control possible)



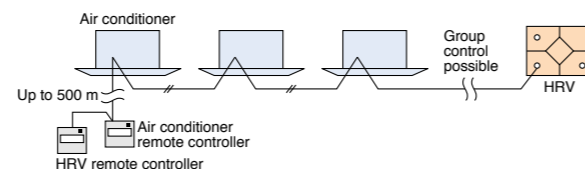
■ Long-distance Remote Control

Operation control from afar, i.e., a distant control room, is possible thanks to wiring of up to 500 m. (Group control and 2-remote-controller control possible)



■ Control with 2 Remote Controllers (for HRV and Air Conditioner)

System with dual use of the HRV remote controller and air conditioner remote controller can be achieved. Changes in initial setting functions are always possible. (Group control possible)

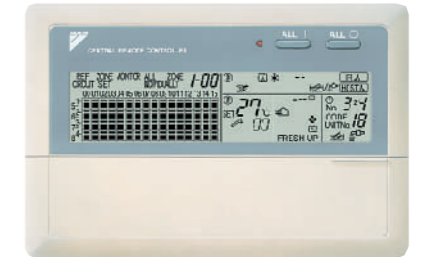


Centralized Control System

By combining the (optional) centralized control equipment below, the user can achieve a wide range of comprehensive centralized control systems for air conditioning and ventilation.

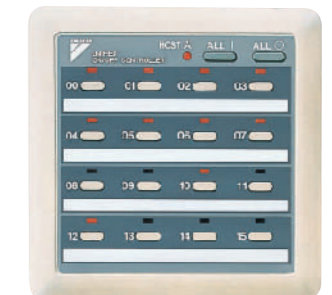
Centralized Controller (DCS302CA61)

- One unit can operate and monitor up to 64 groups (128 units) of HRV and air conditioner units individually or in batch.
- Allows the user to divide connected HRV or air conditioner units into zones (up to 64) and control any or all of them.
- Two units of this controller can be linked, thereby allowing centralized control of up to 128 groups (128 units).
- Centralized control from two places is possible using two units of this controller.
- Ventilation volume and mode can be controlled for Heat Reclaim Ventilation.



Unified ON/OFF Controller (DCS301BA61)

- One unit can turn ON/OFF up to 16 groups (128 units) of HRV and air conditioner units individually or in a batch.
- Lamps display operation and failure status of the connected HRV and air conditioner units.
- Up to 8 units can be linked to allow centralized control of up to 128 units.



Schedule Timer (DST301BA61)

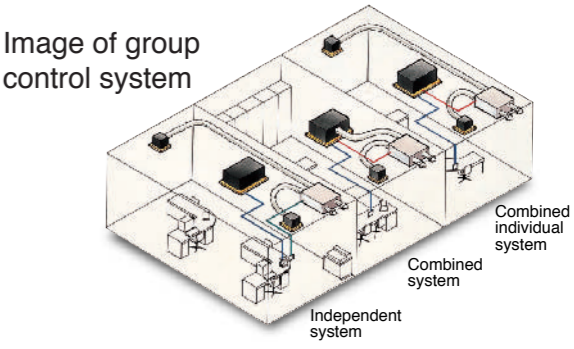
- One unit can control the operation of up to 128 HRV and air conditioner units on a weekly schedule.
- Can set two ON/OFF operations per day for a period of one week.



Number of units that can be connected per system

Centralized controller	2 units
Unified ON/OFF controller	8 units
Schedule timer	1 unit

Various Control Systems According to Applications and Conditions



Major HRV Control Systems

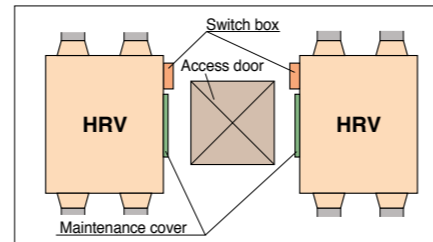
		System Construction	System Characteristics	Necessary Accessories
Independent Operation System	Independent Operation		<ul style="list-style-type: none"> Independent operation of HRV is possible. 	HRV remote controller
	Simultaneous Operation of Multiple Units		<ul style="list-style-type: none"> Operation is possible using 2 HRV remote controllers. Multiple HRV units can be simultaneously controlled in batch. 	HRV remote controller
Air Conditioning Interlocked Control (VRV, SkyAir) System	Standard System		<ul style="list-style-type: none"> HRV remote controller does not have to be used. Up to 16 VRV indoor units or HRV units can be connected and controlled in batch, with interlocked operation of HRVs and air conditioners by using the air conditioner remote controller. 	VRV remote controller/ SkyAir remote controller
	Multiple groups Interlocked Operation System		<ul style="list-style-type: none"> Can control interlocked operation of multiple groups of VRV or SkyAir indoor units. When one of the multiple groups operates, HRVs are interlocked and operates simultaneously. 	VRV remote controller/ SkyAir remote controller

		System Construction	System Characteristics	Necessary Accessories
Air Conditioning Interlocked Centralized Control System	Batch/Individual Control System		<ul style="list-style-type: none"> Up to 128 VRV, SkyAir and HRV units can be centrally controlled over a centralized line (Special adaptor is required to connect the SkyAir to the centralized line.) HRV remote controller can set the individual operation of each HRV unit. Control system can be expanded depending on its purposes by combining a variety of centralized control equipment. 	Unified ON/OFF controller, VRV remote controller, SkyAir remote controller When necessary, centralized controller, schedule timer, HRV remote controller, and SkyAir connection adaptor
	Zone Control System		<ul style="list-style-type: none"> Centralized controller has setting and monitoring functions equivalent to those of a remote controller and can centrally control up to 128 VRV, SkyAir and HRV units. (Special adaptor is required to connect the SkyAir to the centralized line.) Control is possible in three different patterns: Individual/Batch/Zone. Can independently operate multiple HRV units. System without air conditioner and HRV remote controllers can be constructed. Control system can be expanded depending on its purposes by combining a variety of centralized control equipment. 	Unified ON/OFF controller, VRV remote controller, SkyAir remote controller When necessary, centralized controller, schedule timer, HRV remote controller, and SkyAir connection adaptor
Combination with Other Types of Air Conditioners			<ul style="list-style-type: none"> Simultaneous operation of HRVs and air conditioners is possible using the air conditioner remote controller. Use of the HRV remote controller enables to change settings or operate HRVs independently. 	Connection adaptor (No-voltage a-contact signal)

Simple Design and Construction

■ With only one 450-mm square inspection aperture, maintenance and heat exchange element replacement can be performed with ease.

■ The unit can be installed upside down in accordance with the conditions of the location.



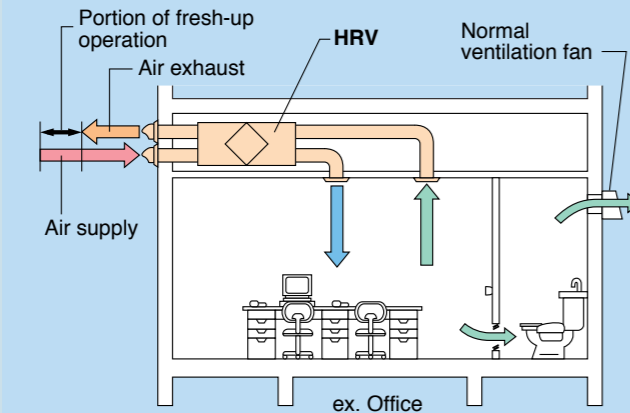
Clean

Fresh-up Operation

The user can select between two fresh-up modes using the remote controller.

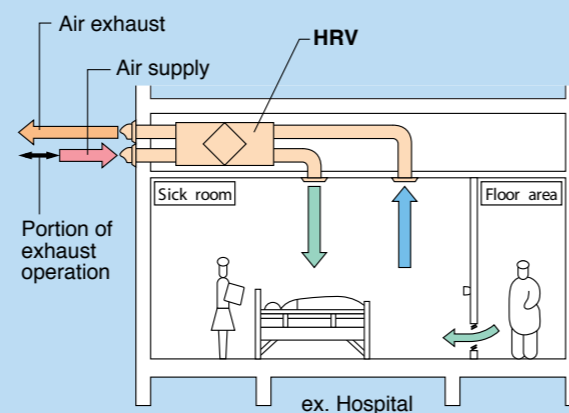
Supply rich mode:

Raising the air supply maintains proper room pressure to prevent back-flow of toilet/kitchen odors or moisture inflow.

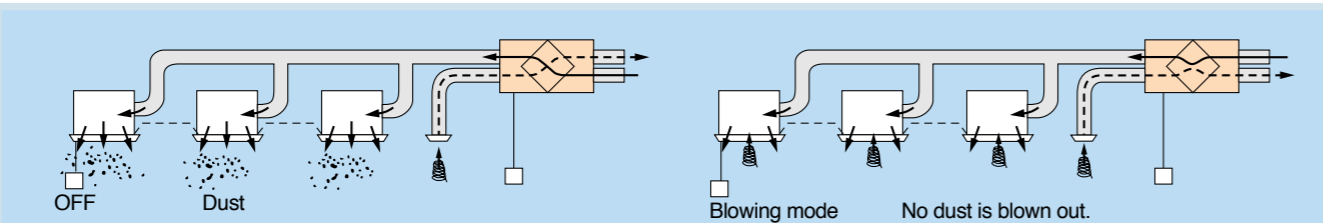


Exhaust rich mode:

Raising exhaust air decreases room pressure to prevent the leaking of odors or floating bacteria into other rooms.



Preventing Dust from Falling with Directly Mounted Ducts



With Competitors' Products
When conventional total heat exchange units, which are independently operated using a dedicated remote controller, are directly connected by a duct, there is a possibility of dust falling from the air filter of the indoor unit when the air conditioner is OFF.

With the HRV
When the HRV is operating independently, the fan in a interlocked indoor unit continues turning, so dust does not fall from the air filter.

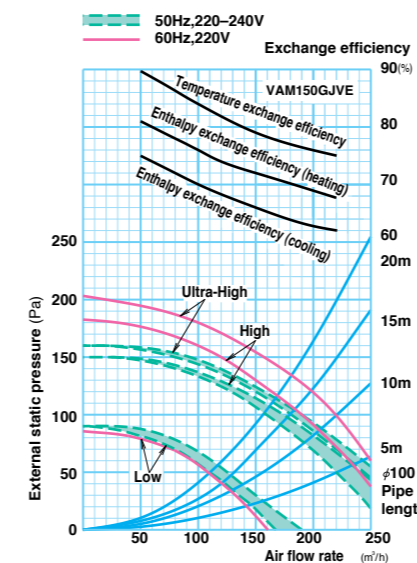
■ A sign is displayed on the remote controller when the air filter needs cleaning.

Model Line Up

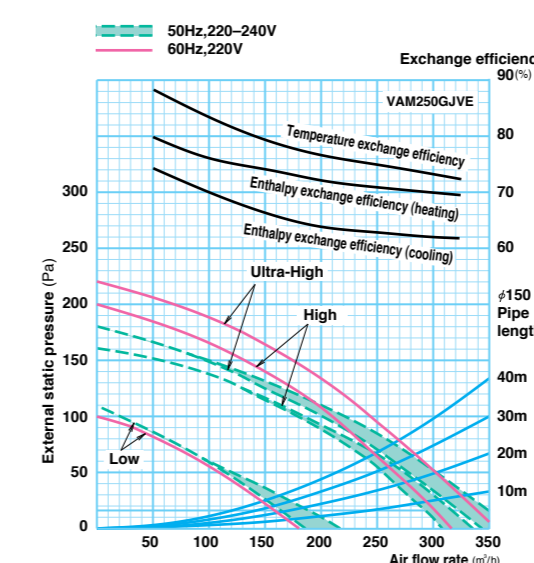
VAM-GJVE Series



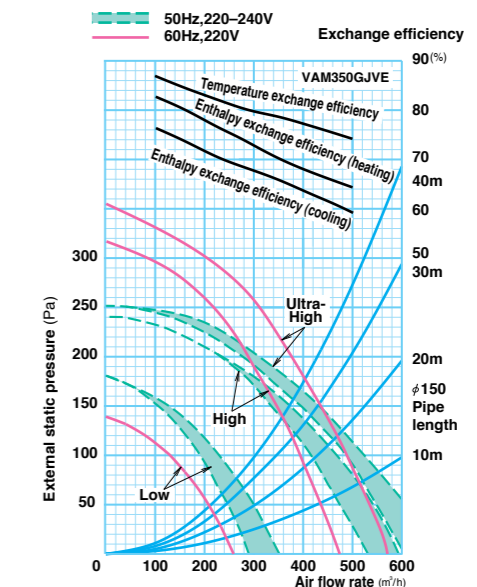
VAM150GJVE



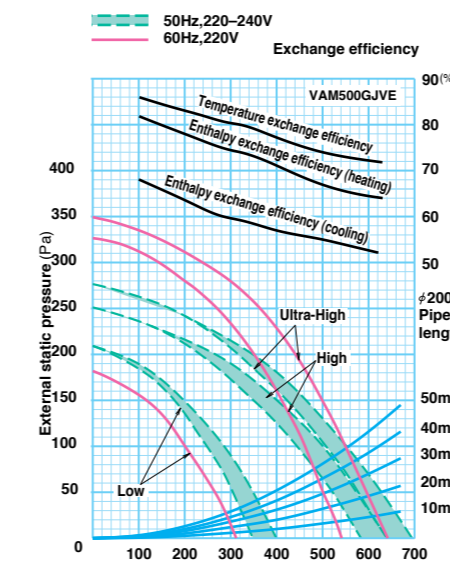
VAM250GJVE



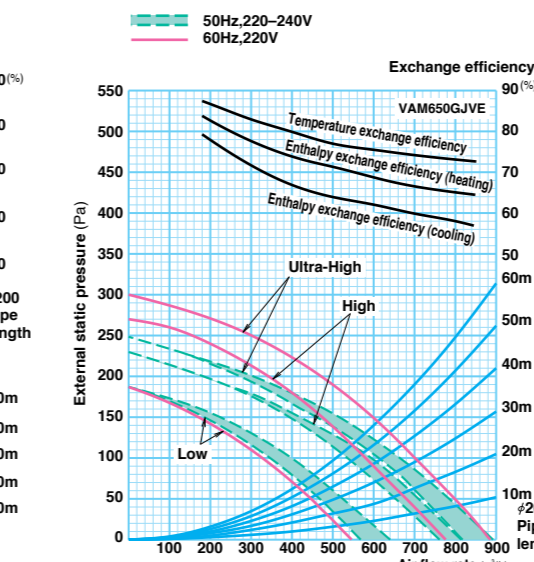
VAM350GJVE



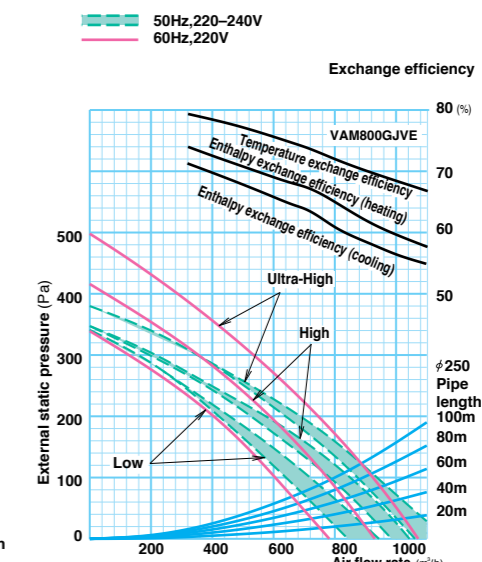
VAM500GJVE



VAM650GJVE



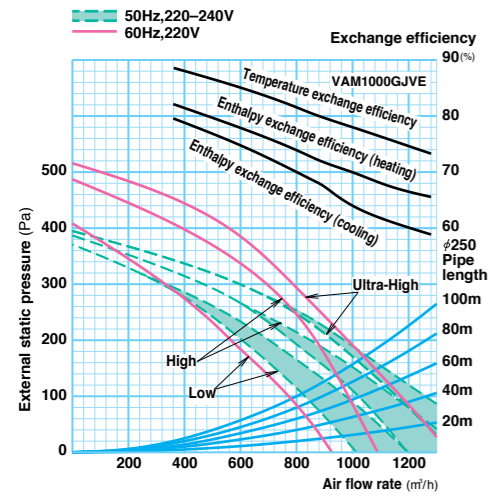
VAM800GJVE



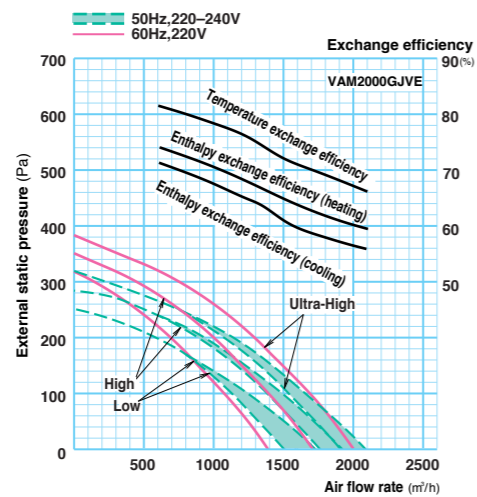
VAM-GJVE Series



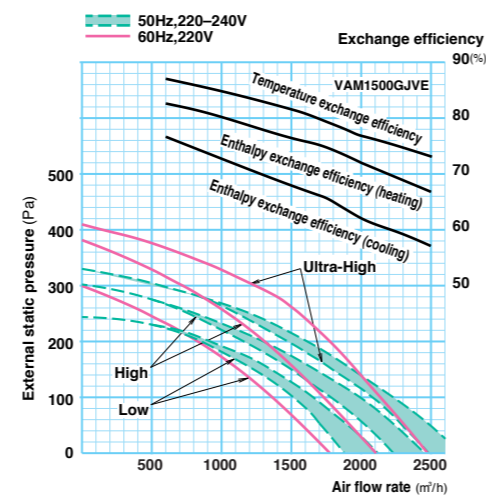
VAM1000GJVE



VAM1500GJVE

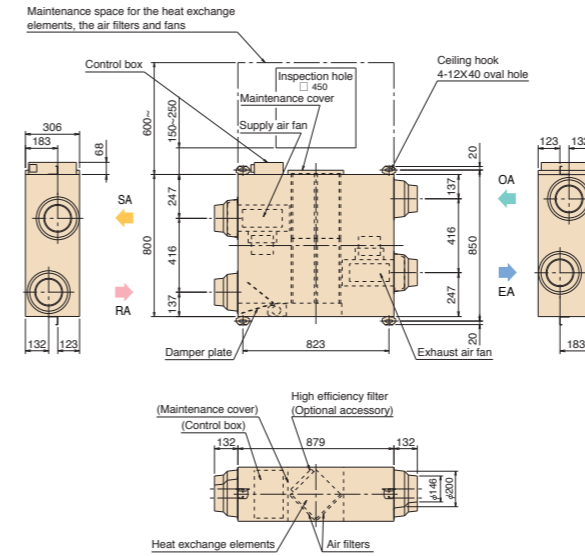


VAM2000GJVE



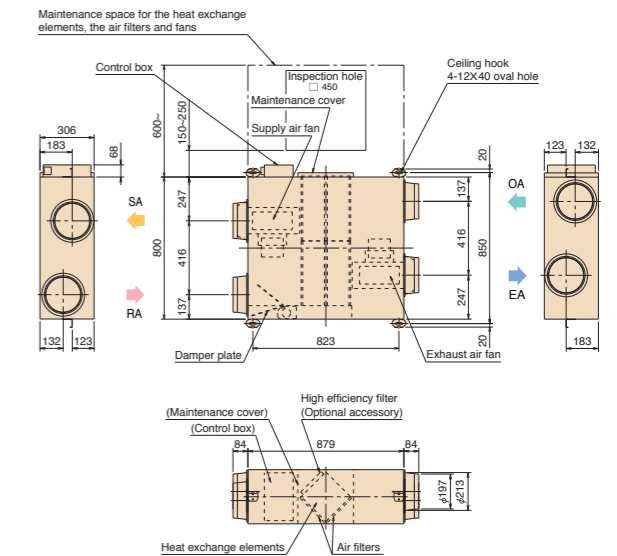
Dimensions

VAM350GJVE



Remark
 1. Be sure to provide the inspection hole (450X450 mm) to inspect the air filters, the exchange elements and fans.
 2. It is possible to install the high efficiency filter on the SA face side of heat exchange element.

VAM500GJVE

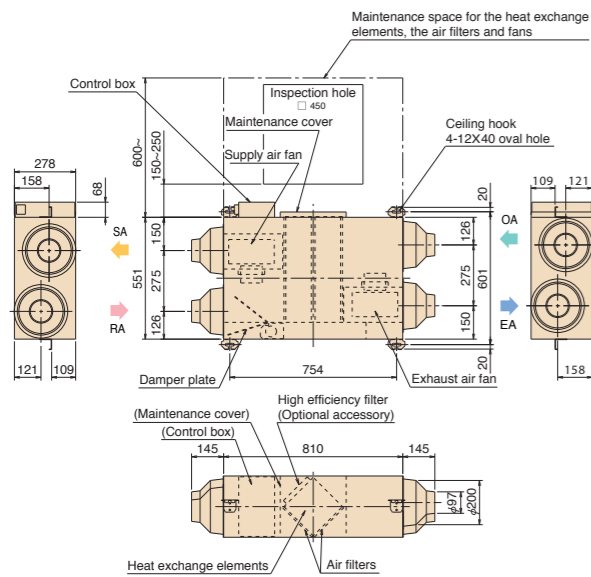


Remark
 1. Be sure to provide the inspection hole (450X450 mm) to inspect the air filters, the exchange elements and fans.
 2. It is possible to install the high efficiency filter on the SA face side of heat exchange element.

Dimensions

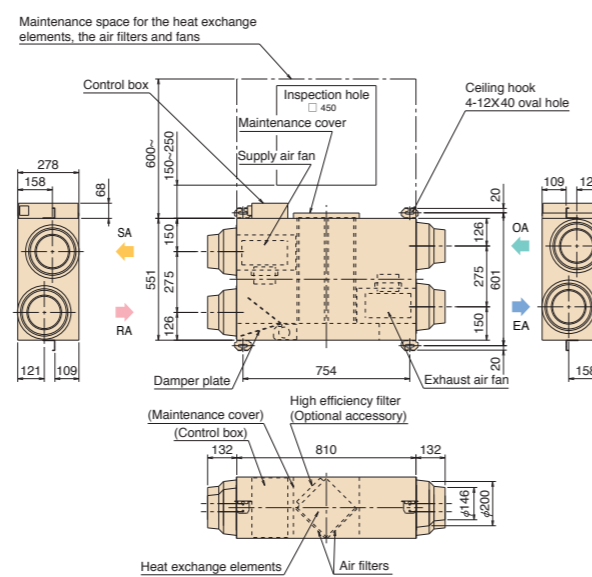
SA: Supply air from room
 OA: Fresh air from outdoors (Outdoor air)
 RA: Return air from room
 EA: Exhaust air to outdoors

VAM150GJVE



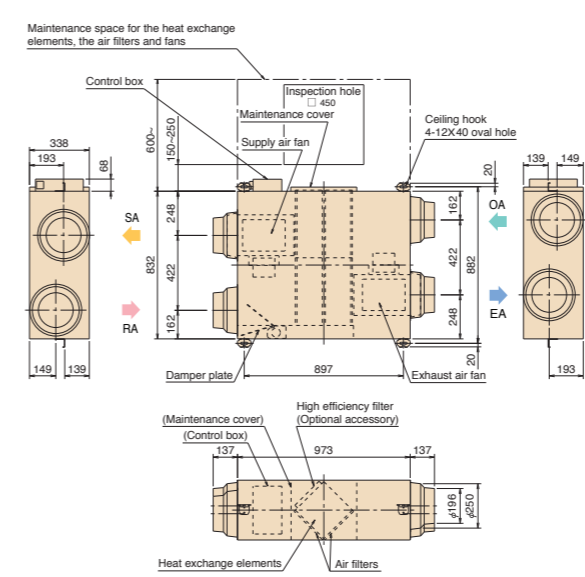
Remark
 1. Be sure to provide the inspection hole (450X450 mm) to inspect the air filters, the exchange elements and fans.
 2. It is possible to install the high efficiency filter on the SA face side of heat exchange element.

VAM250GJVE



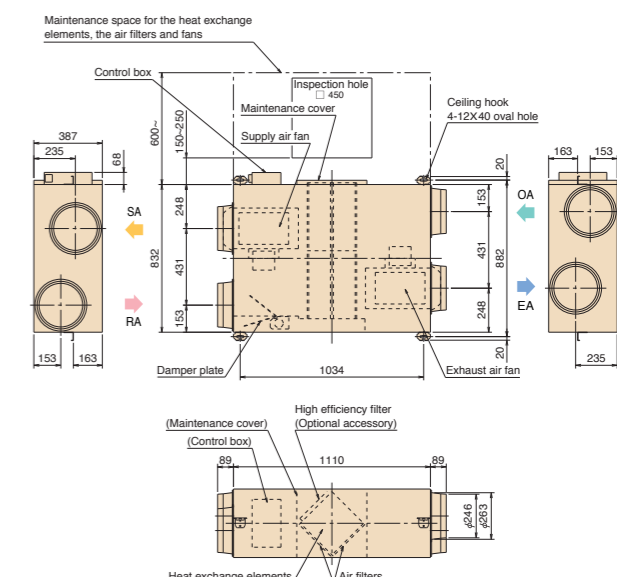
Remark
 1. Be sure to provide the inspection hole (450X450 mm) to inspect the air filters, the exchange elements and fans.
 2. It is possible to install the high efficiency filter on the SA face side of heat exchange element.

VAM650GJVE



Remark
 1. Be sure to provide the inspection hole (450X450 mm) to inspect the air filters, the exchange elements and fans.
 2. It is possible to install the high efficiency filter on the SA face side of heat exchange element.

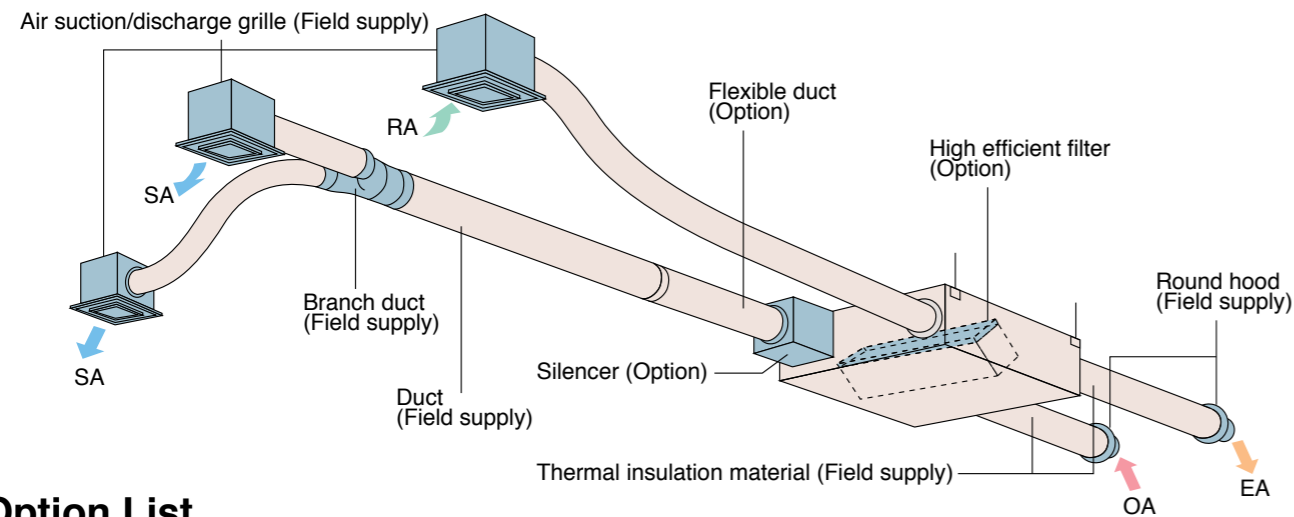
VAM800GJVE



Remark
 1. Be sure to provide the inspection hole (450X450 mm) to inspect the air filters, the exchange elements and fans.
 2. It is possible to install the high efficiency filter on the SA face side of heat exchange element.

Option

Installation of Optional Products (For VAM150GJVE, VAM250GJVE, VAM350GJVE, VAM500GJVE, VAM650GJVE, VAM800GJVE, VAM1000GJVE, VAM1500GJVE, VAM2000GJVE.)



Option List

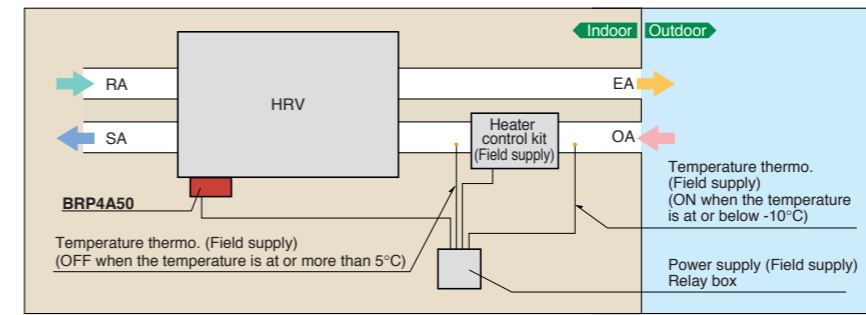
Member	Applicable model	VAM150 · 250 · 350 · 500 · 650 · 800 · 1000 · 1500 · 2000GJVE												
Controlling device	HRV remote controller	BRC301B61												
	Centralized controlling device	Central remote controller	DCS302CA61											
		Unified ON/OFF controller	DCS301BA61											
		Schedule timer	DST301BA61											
PC Board Adaptor	Wiring adaptor for electrical appendices	KRP2A61												
	For humidifier	KRP50-2												
	Installation box for adaptor PCB	KRP50-2A90 (Mounted electric component assy of HRV)												
	For heater control kit	BRP4A50												
	For wiring	Type (indoor unit of VRV)	FXC-L FXCQ-M	FXF-L FXFQ-M	FXK-L FXKQ-MA	FXD-P FXD-N FXDQ-P FXDQ-NA	FXS-L FXSQ-M	FXM-L FXMQ-MA	FXH-L FXHQ-MA	FXA-L FXAQ-MA	FXB-K	FXD-KA	FXL-L FXLQ-MA FXN-L FXNQ-MA	FXUQ-MA
Installation box for adaptor PCB☆		Note 2, 3 KRP1B96	Note 2, 3 KRP1D98	-	Note 4, 6 KRP1B101	Note 5 KRP4A91	-	Note 3 KRP1C93	Note 2, 3 KRP4A93	-	Note 5 KRP1B100	-	KRP1B97	

Note: 1. Installation box ☆ is necessary for each adaptor marked ☆.
 2. Up to 2 adaptors can be fixed for each installation box.
 3. Only one installation box can be installed for each indoor unit.
 4. Up to 2 installation boxes can be installed for each indoor unit.
 5. Installation box ☆ is necessary for second adaptor.
 6. Installation box ☆ is necessary for each adaptor.

Member	Applicable model	VAM150GJVE	VAM250GJVE	VAM350GJVE	VAM500GJVE	VAM650GJVE	VAM800GJVE	VAM1000GJVE	VAM1500GJVE	VAM2000GJVE
Additional function	Silencer				KDDM24B50		KDDM24B100		KDDM24A100X2	
	Nominal pipe diameter (mm)				φ 200		φ 250		φ 250	
	High efficiency filter	KAF242G25M		KAF241G25M	KAF242G50M	KAF242G65M	KAF242G80M	KAF242G100M	KAF242G80MX2	KAF242G100MX2
Air filter for replacement	KAF241G25M		KAF241G50M	KAF241G65M	KAF241G80M	KAF241G100M	KAF241G80MX2	KAF241G100MX2	KAF241G100MX2	
Flexible duct (1m)	K-FDS101C	K-FDS151C		K-FDS201C				K-FDS251C		
Flexible duct (2m)	K-FDS102C	K-FDS152C		K-FDS202C				K-FDS252C		
Duct adaptor								YDFA25A1		
Nominal pipe diameter (mm)								φ 250		

PC board adaptor for heater control kit (BRP4A50)

When the installation of an electric heater is required in a cold region, this adaptor with an internal timer function eliminates the complicated timer connecting work that was necessary with conventional heaters.



- Notes when installing**
- Examine fully an installation place and specification for using the electric heater based on the standard and regulation of each country.
 - Supply the electric heater and safety production devices such as a relay and a thermostat, etc of which qualities satisfy the standard and regulation of each country at site.
 - Use a non-inflammable connecting duct to the electric heater. Be sure to allow 2m or more between the electric heater and HRV for safety.
 - For the HRV units, use a different power supply from that of the electric heater and install a circuit breaker for each.

