VAMS250V3A

DAIKIN

Perfecting the Air

- 100% FRESH COMFORT AIR INTAKE
- EXTRACTION FROM BATHROOMS AND DAMP AREAS
- COMPACT DESIGN
- OPTIONAL CO2 SENSOR

NEW

VAMS FOR RESIDENTIAL

SENSIBLE HEAT RECLAIM VENTILATOR

VAMS-V3A

DAIKIN VAM SERIES ENSURES FRESH AIR INTAKE AND ENERGY SAVINGS

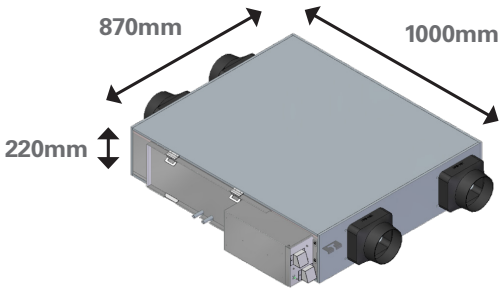
250m³/h (69L/s)
AIRFLOW RATE

1
MODELS

Our NEW VAMS-V3A Sensible unit is compact, energy efficient and is best fit for apartments and other residential applications including commercial projects for Retirement Villages and Aged Care facilities.

COMPACT DESIGN

Reduce the Unit Height Size from 278mm (HVE) & 250 mm (DIS) to 220 mm (Casing Size with insulation).



DC MOTOR

Adopted single inlet centrifugal fan integrated with DC motor to achieve AUS J5.4 Fan efficiency and low height casing design.

OPTIONAL ACCESSORIES

Stylish Remote Controller (Zigbee sensor - CO2, temperature, window/door, humidity)

zigbee

Optional Stylish Remote Controller BRC1H63W / BRC1H63K

Through Zigbee communication, the sensor (temperature, window/door, CO2 concentration & humidity) able to connect to R/C

HEAT EXCHANGER

Adopted aluminum sensible heat exchanger able to suit customer requirement to avoid cross contaminants from RA (toilet) to OA and maintain NCC J5.3 sensible heat efficiency min 60% and reduce unit size.

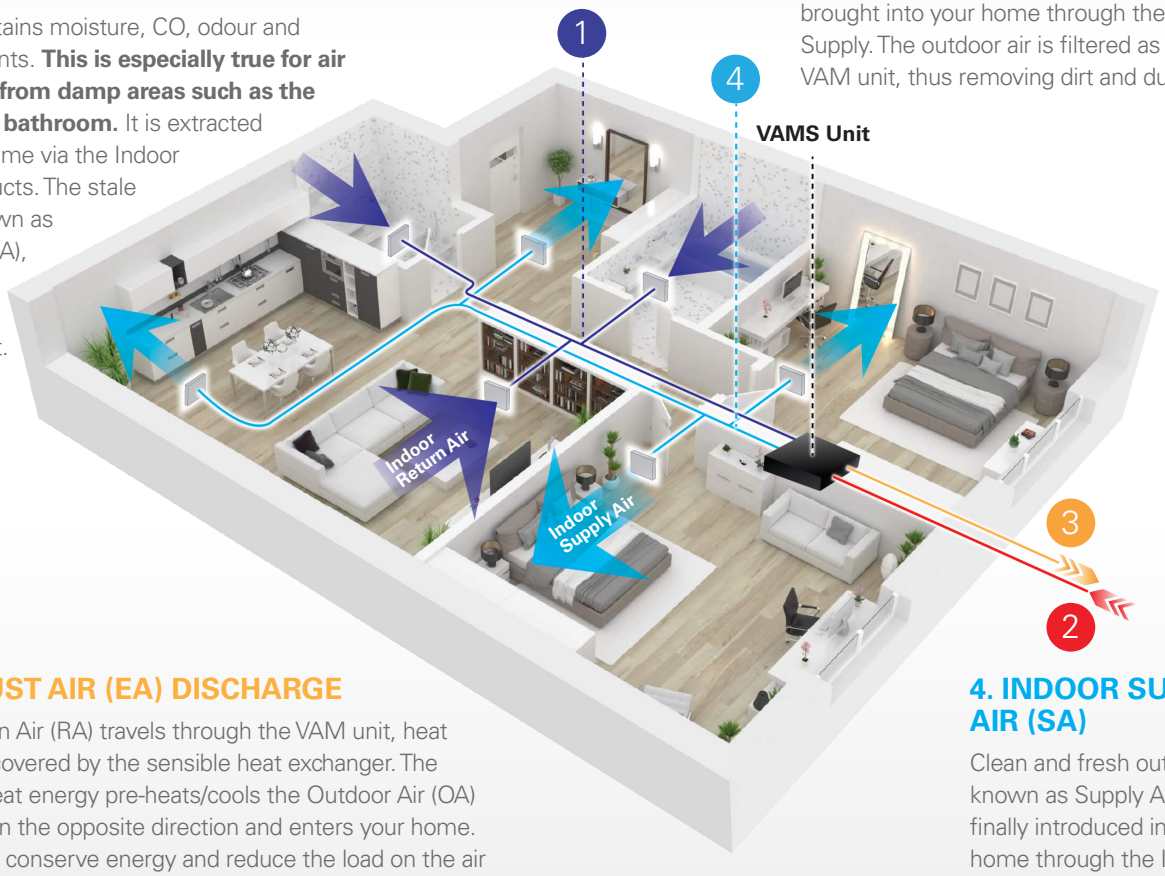
SENSIBLE HEAT RECLAIM VENTILATOR (VAMS) - MECHANISM

1. INDOOR RETURN AIR (RA)

Stale air contains moisture, CO, odour and other pollutants. **This is especially true for air that comes from damp areas such as the kitchen and bathroom.** It is extracted from your home via the Indoor Return Air ducts. The stale air, now known as Return Air (RA), then passes through the VAM unit.

2. OUTDOOR AIR (OA) SUPPLY

At the same time, fresh Outdoor Air (OA) is brought into your home through the Outdoor Air Supply. The outdoor air is filtered as it enters the VAM unit, thus removing dirt and dust.

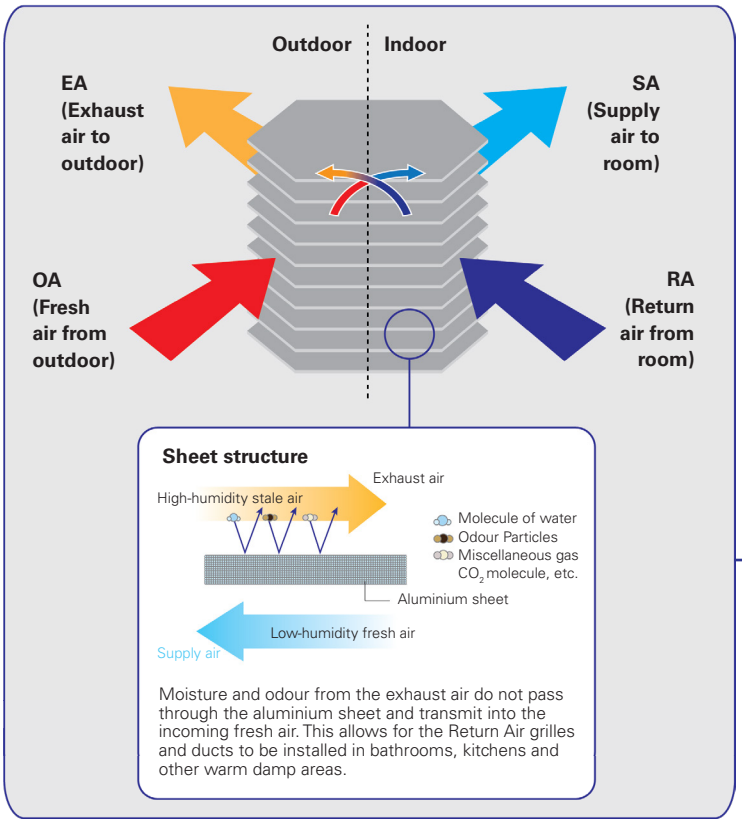


3. EXHAUST AIR (EA) DISCHARGE

As the Return Air (RA) travels through the VAM unit, heat energy is recovered by the sensible heat exchanger. The recovered heat energy pre-heats/cools the Outdoor Air (OA) that passes in the opposite direction and enters your home. This helps to conserve energy and reduce the load on the air conditioning system. The Return Air (RA) is then exhausted outside through the Exhaust Air (EA) Discharge.

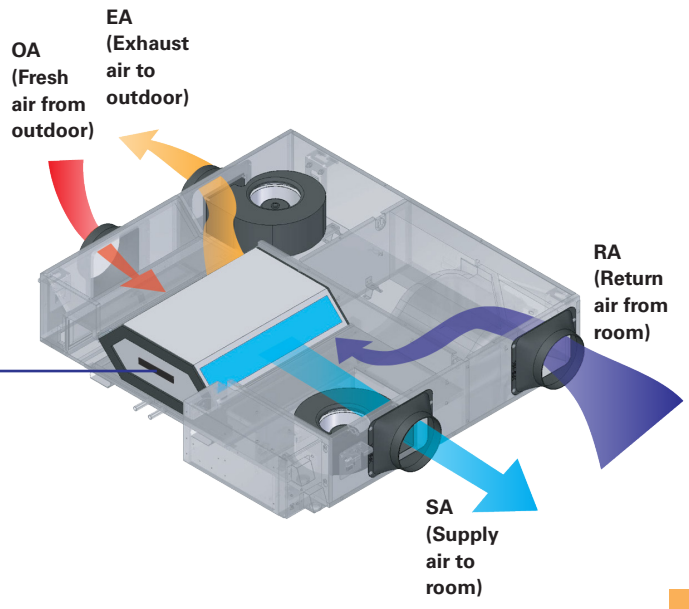
4. INDOOR SUPPLY AIR (SA)

Clean and fresh outdoor air, known as Supply Air (SA), is finally introduced into your home through the Indoor Supply Air ducts.



SENSIBLE HEAT RECOVERY

This unit recovers heat energy loss from ventilation and curbs room temperature changes. As a result, energy is conserved and the air conditioning load is reduced!

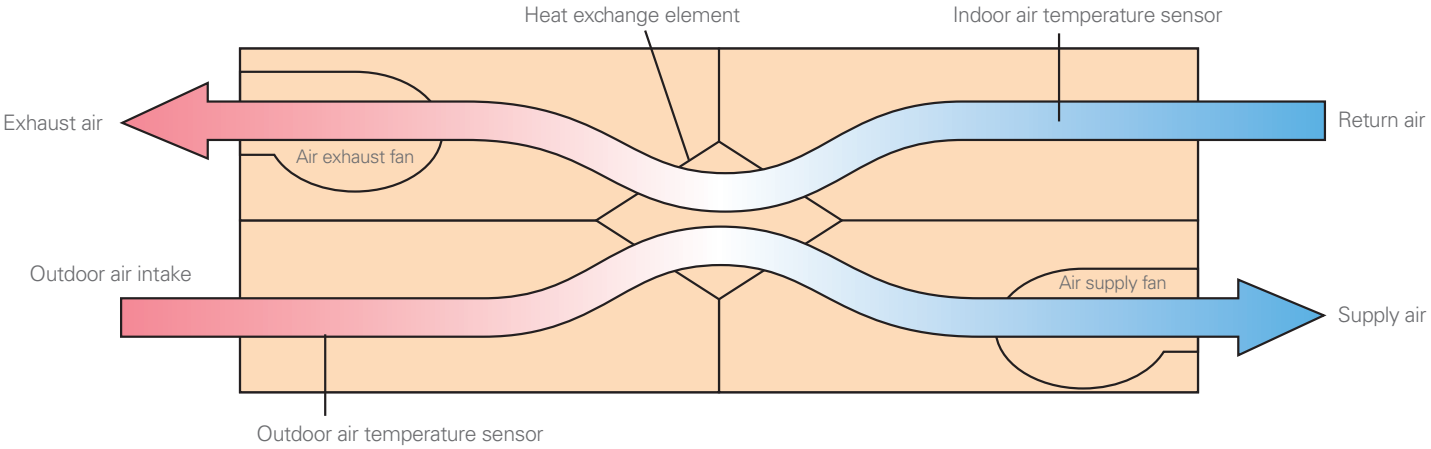


AUTO-VENTILATION MODE CHANGEOVER SWITCHING

Automatically switches the ventilation mode (Sensible Heat Exchange Mode/Bypass Mode) according to the operating status of the air conditioner. When the cooling operation is required in winter, use of heat recovery ventilation is not efficient because the outdoor air temperature is normally lower than that of the indoor. Thus, the proper use of ventilation mode enhances the heating / cooling efficiency.

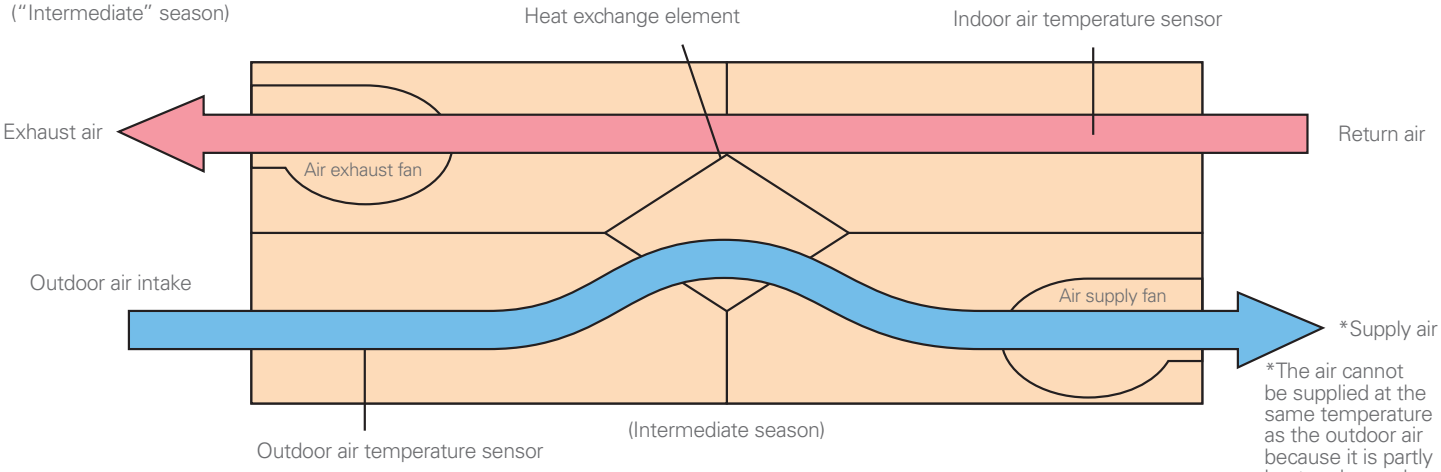
SENSIBLE HEAT EXCHANGE MODE

(Cooling operation in summer/Heating operation in winter)



BYPASS MODE

("Intermediate" season)



*The air cannot be supplied at the same temperature as the outdoor air because it is partly heat-exchanged.

TECHNOLOGY / FEATURES

1. BETTER ENERGY EFFICIENCY

Singlet Inlet blower integrated with DC motor

2. ENHANCE CO/ HP EFFICIENCY

Bypass Mode Damper

Allow RA-EA airflow to bypass HEX

3. EASE OF INSTALLATION AND HIGH EFFICIENCY

In order to achieve low height and minimum temperature efficiency:

Implement I – U airflow pattern

4. EASY ACCESSIBILITY AND SERVICEABILITY

Sensible Heat Exchanger (HEX)

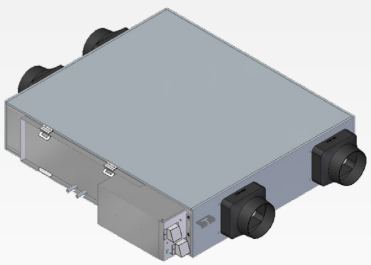
Aluminum, with detachable SUS (Steel Use Stainless) drain pan for ease maintenance

Service Panel

With removable hinge and access to HEX and filters

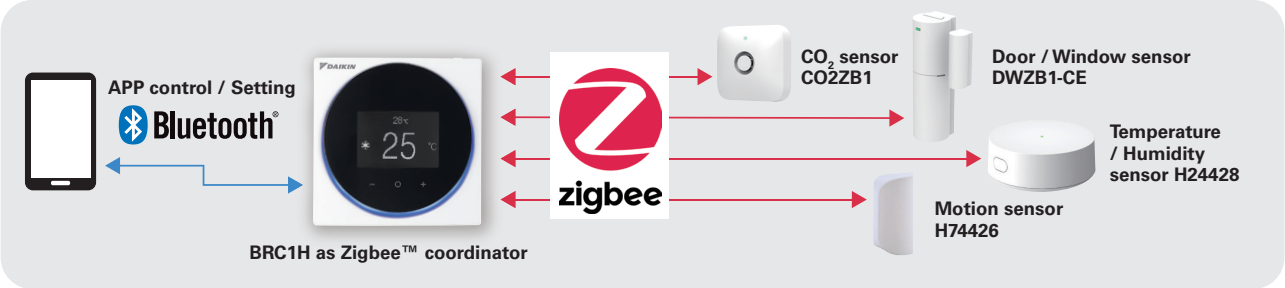
Electrical Component Box

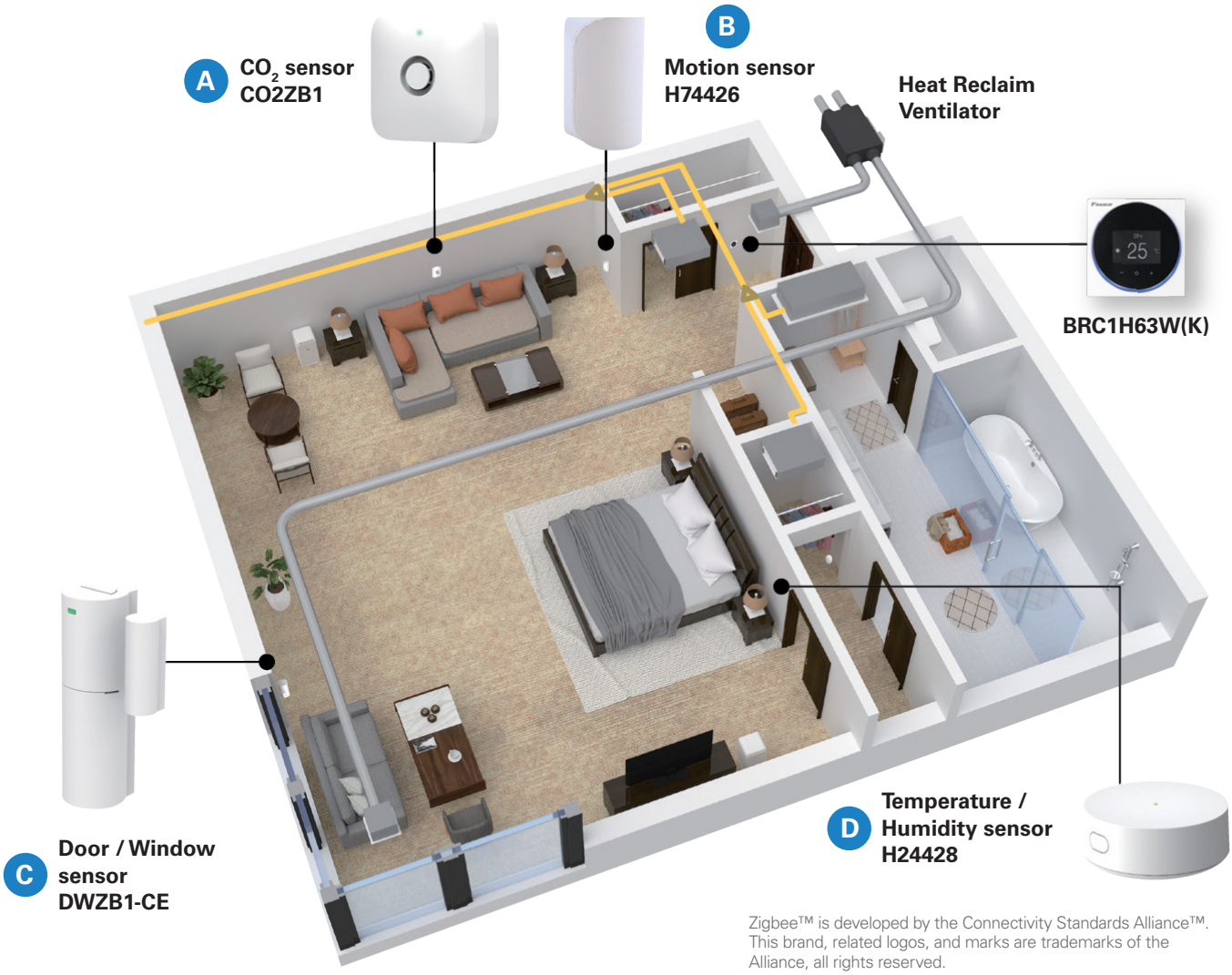
Side-maintained control box with swing mechanism



ZIGBEE™ SENSOR INTERLOCKING FUNCTION

Four kinds of sensors (Temperature/Humidity, Door/Window, CO, Motion) and a remote controller are connected via Zigbee™ communication which displays sensor value and uses it to control equipment.





A CO2 sensor CO2ZB1

- **Display**
- **Change ventilation rate or airflow rate**

The upper and lower limits are set, and ventilation rate (or airflow rate) is instructed whenever either the upper or lower limit is exceeded for a specified time Ventilation rate/ airflow rate can be instructed even in the middle of the upper and lower limits.

B Motion sensor H74426

- **Air conditioner operation ON/OFF**

Operation ON/OFF is instructed according to the detection (or non-detection) of human movement for a specified time.

C Door / Window sensor DWZB1-CE

- **Air conditioner operation ON/OFF**

Operation ON/OFF is instructed according to Open/ Closed status of windows for a specified time.

D Temperature / Humidity sensor H24428

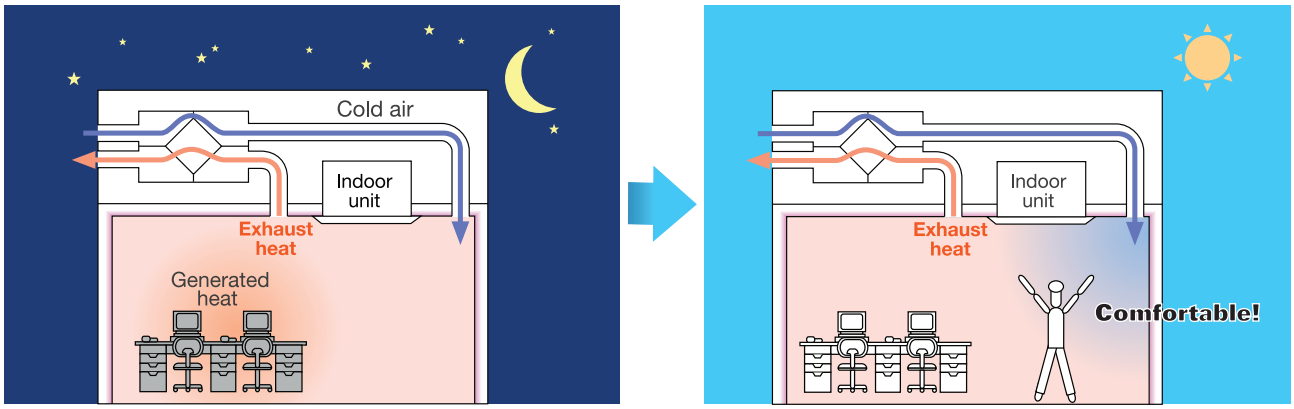
- **Display**
- **Air conditioner operation ON/OFF**

The upper and lower limits are set, and operation ON/OFF is instructed whenever either the upper or lower limit is exceeded for a specified time.

NIGHTTIME FREE COOLING OPERATION

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 reduce 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.

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



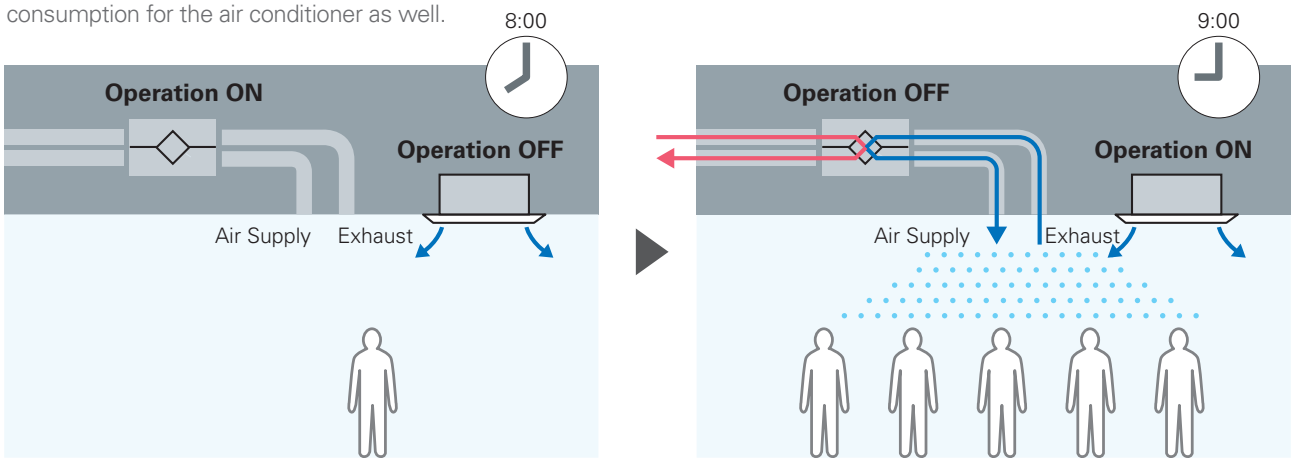
Heat is discharged.

The load is small so the temperature is rapidly reduced to a comfortable level.

*Interlocked operation with an air conditioner

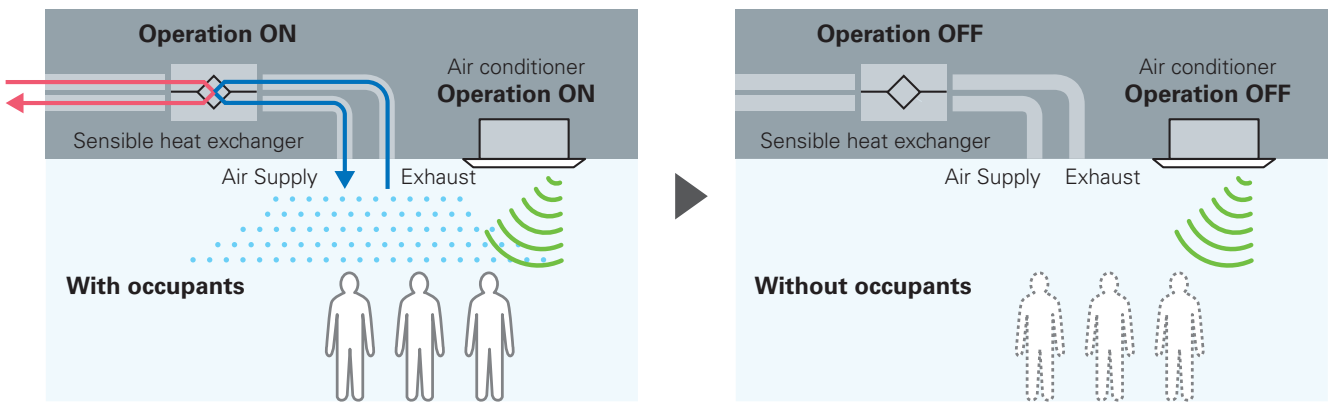
PRE-COOLING / PRE-HEATING CONTROL

The operation of ventilation system is delayed during this mode. During first start up of the air conditioner, the start up operation of ventilation system is delayed in order to reduce additional heat load from outside air. This will reduce power consumption for the air conditioner as well.



SENSING SENSOR STOP MODE

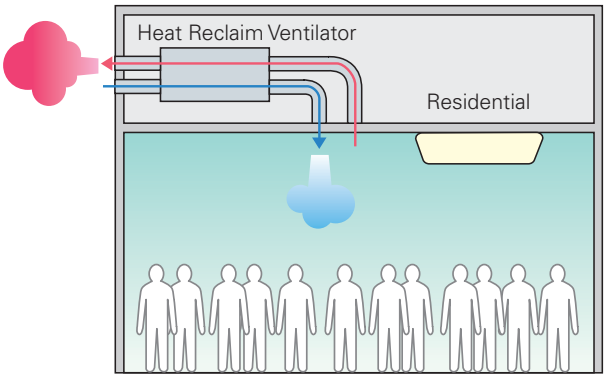
In a situation where there is no human occupancy detected, the operation is turned off. When the "Sensing sensor" installed on the air conditioner detects no occupancy in the room, the ventilation and air conditioner systems are turned o automatically to reduce energy wastage.



AIRFLOW RATE CONTROL WITH CO_2 SENSOR

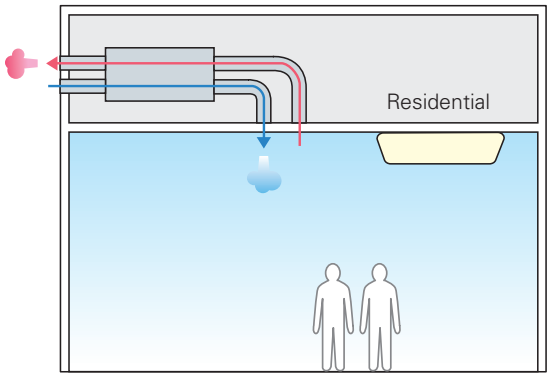
The CO_2 sensor controls airflow rate so that it best matches the changes of CO_2 level in the room. This prevents energy losses from over-ventilation while maintaining indoor air quality with optional CO_2 sensor.

Example of CO2 sensor operation in an office room:



Many people increase CO_2 level:

Airflow rate up

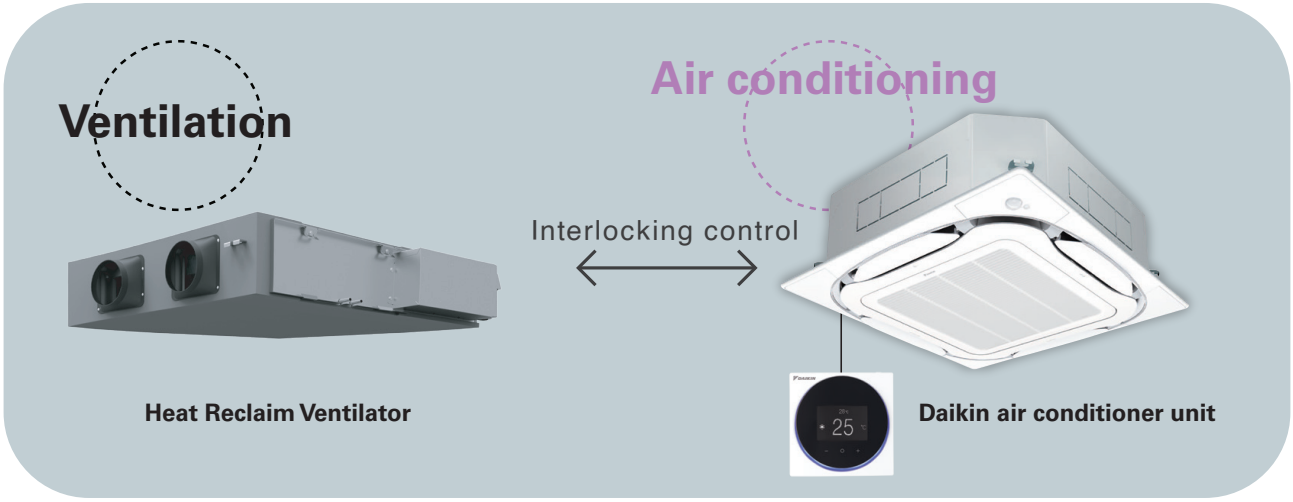


Fewer people decrease CO_2 level:

Airflow rate down

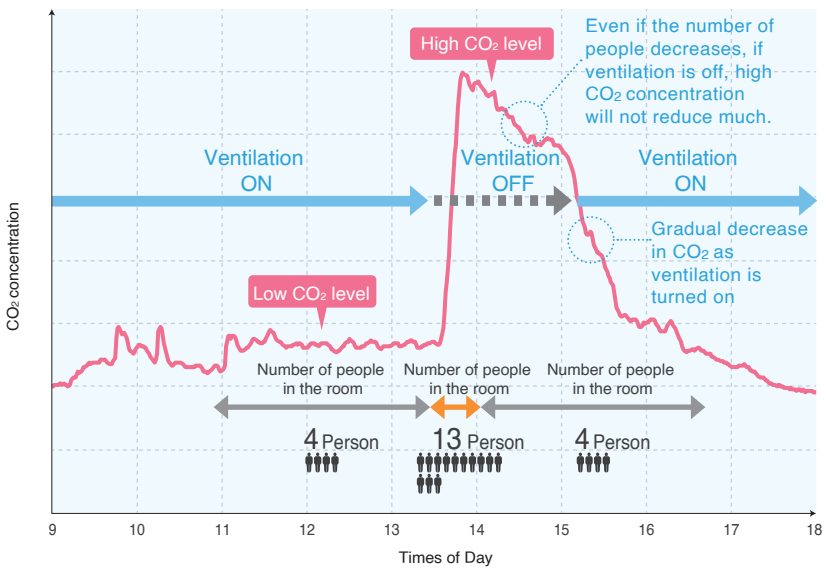
ENERGY SAVING VENTILATION (INTERLOCKED WITH AIR CONDITIONER)

Air conditioner and ventilation system can be interlocked to provide even greater comfort and energy saving. The system can be interlocked with Daikin air conditioners to provide energy saving ventilation solution for various situation.



VENTILATION VOLUME CONTROL WITH CO_2 SENSOR INTERLOCKING

As the CO_2 level in the room increases, the ventilation air volume will be increased to have a higher air exchange. This reduces the CO_2 concentration in the room overtime. Human occupancy is reflected as CO_2 concentration. Equipped with a CO_2 sensor to automatically control the ventilation volume according to the CO_2 concentration.



REMOTE CONTROLLER & OPTION LIST

Function	Detail	BRC1H63W(K)	BRC1E63	BRC2E61
				
Air conditioner interlock	Interlock Heat Reclaim Ventilator with air conditioner by one remote controller	●	●	●
Ventilation mode	Switch the ventilation mode (Automatic, Heat exchange, Bypass)	●	●	-
Ventilation airflow rate	When using CO_2 sensor, ventilation volume can be changed	●	●	●
Fresh up indication	Indicates that fresh up operation is being carried out	●	-	-
CO_2 indication	Indicates value of CO_2 sensor	○	-	-
Outdoor temperature indication	Indicates outdoor air temperature (OA)	○	-	-
Nighttime free cooling indication	Show the night purge icon when is set	○	-	-
24 hours ventilating indication	Show the icon when is 24hrs operation is set	○	-	-
Ventilating operation indication	Indicates that ventilating operation is being carried out even when night purge operation and 24 hour ventilating operation is being carried out	●	●	-
Ventilating standby indication	Indicates that ventilating operation has been stopped temporarily during pre-cool / pre-heat control	○	-	-

Additional functions:

● Installed functions ○ Additional Installation function - Not available

Note: BRC1H63W/K is the standard remote controller most functions are available. BRC1E63 and BRC2E61 are the optional remote controllers some functions are limited. Please refer to the table above.

OPTION LIST

Item	Description	
Wired Controller	Stylish remote controller	BRC1H63W (White) & BRC1H63K (Black)
	Navigation remote controller	BRC1E63
	Simplified remote controller	BRC2E61
	Residential central remote controller	DCS303A51*1
	Central remote controller	DCS302CA61
	Unified ON/OFF controller	DCS301BA61
	Schedule Timer	DST301BA61
PCB adaptor	Wiring adaptor for electrical appendices	KRP2A62
	Installation box for adaptor	KRP1C18A90
	For heater control kit	BRP4A50A
	PCB adaptor for wiring	KRP1C18
Flexible duct (1m)		K-FDS151E
Flexible duct (2m)		K-FDS152E

*1 For residential only. When connected with a Heat Reclaim Ventilator (VAM), you can only switch the power ON/OFF. It cannot be used with other central control equipment.

SENSOR LIST

				
Model Name	CO2ZB1	H24428	H74426	DWZB1-CE
Sensor Type	CO2 Sensor	Temperature & Humidity Sensor	Door Sensor	Motion Sensor

SPECIFICATIONS

MODEL NAME				VAMS250V3A
Unit				
Power Supply				1 phase, 230V, 50Hz
Thermal Efficiency*1 *2 *3	For Cooling	UH	%	62
		H	%	62
		L	%	69
	For Heating	UH	%	70
		H	%	70
		L	%	75
Power Consumption*1	Heat Reclaim Mode	UH	W	105
		H	W	98
		L	W	34
Sound Level*4	Heat Reclaim Mode	U-H	dB	37
		H	dB	36
		L	dB	29
	Bypass Mode	U-H	dB	40
		H	dB	39
		L	dB	31
Installation (Vertical/Horizontal)				Horizontal
Max Airflow Rate (m^3/h) (l/s)				250 (69)
Casing				Galvanized Steel Plate
Insulation Material				Self-Extinguishable Polyurethane Foam
Dimension (H x W x D)*5			mm	220 x 870 x 1000
Machine Weight			kg	40
Heat Exchange System				Air to Air Counter Flow Sensible Heat Exchange
Heat Exchange Element Material				Aluminium Sensible Heat Exchanger
Air Filter				Pre-Filter
Fan	Type			Inlet Sirocco Fan
	Airflow Rate	UH	m^3/h	250
		H		250
		L		165
	External Static Pressure (Standard Pre-Filter)	UH	Pa	100
		H		80
		L		35
	Motor Type			DC
CO_2 Interlocking				Optional (with BRC1H63W/K Zigbee™ control)
Connection Duct Diameter			mm	Ø150
Unit Ambient Condition	Around The Unit			0°C~50°C DB, 80% RH or less
	Outdoor Air			-5°C~50°C DB, 80% RH or less
	Return Air			0°C~50°C DB, 90% RH or less

*1. Values for electrical current, power consumption, and efficiency are at the above above-stated airflow.

*2. Exchange efficiencies are values based on performance codes and air conditions that comply with JIS B8628:2017.

*3. Temperature exchange efficiency and enthalpy exchange efficiency vary according to the ratio of supply air and exhaust air and air conditions.

*4. Operation sound is an anechoic chamber conversion that complies with JISB8628:2017. When measured under actual installation conditions,the operation sound is usually greater due to ambient noise and reverberation.

*5. The stated dimensions are inclusive of external insulation.

Notes:

1. Temperature exchange efficiency may vary depending on the air volume ratio between supply air and exhaust air, as well as air conditions.
2. The air condition is for a general occupant's room, and it cannot be used in a refrigerator with a large temperature difference even if it is within the indicated value.
3. Please refer to Installation Drawing or Manual for precautions regarding installation.
4. Please confirm that External Static Pressure & Airflow Rate are within range prescribed in Catalogue/Specification Sheet and Performance Settings. Settings outside of range may cause insufficient airflow rate and water leak. Significant difference between the Supply Air Airflow Rate and Exhaust Air Airflow Rate may cause increased noise and make doors more difficult to open or close.
5. The specifications, designs & information in this flyer are subject to change without notice. Unit colours shown are as close as possible to actual unit colours. Colours depicted in this flyer may vary slightly.

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