DAIKIN

Your Reliable Energy Efficiency Partner

VRV X

Cooling Only | High Ambient

Cooling Seasonal Performance Factor

Index

VRV X

The world's most advanced air conditioning system with innovative VRT technology

First launched in Japan in 1982, the Daikin VRV system has been embraced by the world markets for over three decades. Now, we at Daikin introduce the next generation VRV X system to reinforce our industry leadership. The system offers an enhanced lineup to meet an ever widening variety of needs, while improving energy savings, comfort and ease of installation.

The VRV X is the most advanced airconditioning sytem in the world and is ideal for small and large spaces.

Energy saving technology for VRV Systems

EXTRA POWER SAVINGS

Next generation compressor and VRT control

VRT: Variable Refrigerant Temperature

Thanks to the revolutionary variable refrigerant temperature technology (VRT), VRV X continuously adjusts both the inverter compressor speed and the refrigerant temperature, providing the necessary capacity to meet the building load with the highest seasonal efficiency at all times.

EXTENSIVE RANGE

4-sided, 3 rows heat exchanger with anti-corrosion coating on fins

EXTENDED RELIABILITY

Refrigerant-cooled PCB
VRV Configurator

EXTENSIVE RANGE

Outdoor units lineup to 48HP
Variety of indoor units
Possibility to connect fresh air handling units

VRV X

Cooling Only

Equipped with Advanced Technology that results in high energy efficiency

This technological innovation gives the user the advantage of better comfort, while working further towards creating a sustainable environment.

Cooling Seasonal Performance Factor

Nominal Efficiency vs Seasonal Efficiency in line with real life performance

Currently, the energy efficiency of cooling devices is measured in artificial and standardized conditions. For air conditioners, this is done at a constant temperature of 46 °C or 35 °C and at full cooling capacity. This results in T1 & T3 energy efficiency (EER), which is representing only two points to conclude on Energy performance.

In other markets, like in the US and Europe, seasonal performance is measured with IPLV, SEER or ESEER calculations based on real-life conditions. However, these calculation methods have not been adopted for high Ambient or hot climates. In order to correct this situation, a more realistic calculation method called Cooling Seasonal Performance Factor for Hot Climate CSPFT3 has been developed by the ISO Refrigeration and Air-Conditioning Subcommittee (SC6) for the testing and rating of air conditioners and heat pumps. This is the standard ISO 16358 -1 Amendment 1 issued in 2019 for the hot T3 climate zones.

The implementation of the Seasonal Efficiency calculation reflects more realistic energy efficiency value through the entire cooling season at hot climate conditions compared to currently used EER value.

The calculations follows the below conditions

› Use of a high ambient climate weather bin for cooling instead of one nominal temperature
› Considering operation at partial capacity instead of full capacity

What is CSPFT3?

Cooling Seasonal Performance Factor for Hot Climate (CSPF T3) is the testing and rating of air conditioners as per the ISO 16358 -1 Amendment 1 issued in 2019 for T3 hot climate zones and takes into consideration the bin hours reflecting high ambient conditions.

What is CSPFT3?

It is expressed as the CSPFT3 value (Cooling Seasonal Performance Factor for Hot Climate CSPFT3)
It is defined as the ratio of the total annual amount of heat that the equipment can remove from the indoor air when operating for cooling in active mode to the total annual amount of energy consumed by the equipment during the same period.

$$CSPFT3 = \frac{\text{Cooling Seasonal Total Load @T3 ISO weather bin}}{\text{Cooling Seasonal Energy Consumption @T3 ISO weather bin}}$$

Benefits of CSPF T3

The implementation of seasonal efficiency will provide end users with a fair comparison of different equipment based on realistic year-round efficiency which will lead to:

Reduced energy consuption

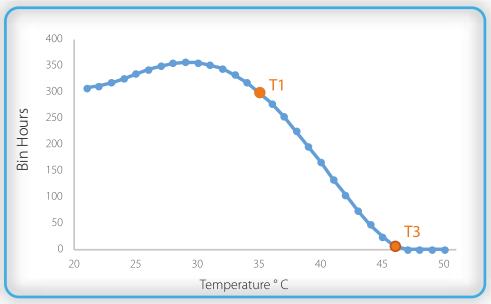
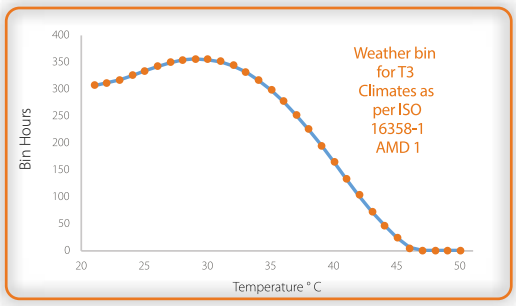
Reduced CO2 emission

Reduced electricity bills

Pioneering in innovation and environmental responsibility

For Daikin, seasonal efficiency brings together two core ambitions: pushing for innovation and reducing the environmental footprint of our products. Being the first in the industry to design equipment based on optimal seasonal efficiency values, Daikin is once again pioneering high-performance cooling products that lower the impact on the environment and on your wallet.

Benefits of Seasonal Efficiency vs Nominal Efficiency

	Energy Efficiency Ratio	Cooling Seasonal Performance Factor
TEMPERATURE		
	Energy Efficiency Ratio rating is based on one outdoor Ambient Temperature condition (T1 or T3)	Cooling Seasonal Performance Factor is based on the Hot Climate Weather bin as per ISO 1-16358 AMD1

EFFICIENCY

$$EER = \frac{\text{Cooling Capacity @T1 or T3}}{\text{Power Input @T1 or T3}}$$

$$CSPFT3 = \frac{\text{Cooling Seasonal Total Load @T3 ISO Weather Bin}}{\text{Cooling Seasonal Energy Consumption @T3 ISO Weather Bin}}$$

Nominal efficiency gives and indication on how efficient an air conditioner operates at normal conditions. 100% capacity performance is used to measure EER.

CSPF T3 gives and indication on how efficient an air conditioner operates over an entire cooling season. Variable or seasonal performance close to real life is used and not 100% capacity performance.

For example, 12 HP Daikin VRV X Unit (RXQ12ARYFK) can be evaluated using below mentioned efficiencies.

T3 EER = 8.89 (Bt u/h)/W 2.61 W/W

CSPFT3 = 18.8 (Bt u/h)/W 5.51 W/W

Variable refrigerant temperature

Customise your VRV for best seasonal efficiency and comfort

Thanks to its revolutionary variable refrigerant temperature technology (VRT) , VRV X continuously adjusts both the Inverter compressor speed and the refrigerant temperature, providing the necessary capacity to meet the building load with the highest seasonal efficiency at all times!

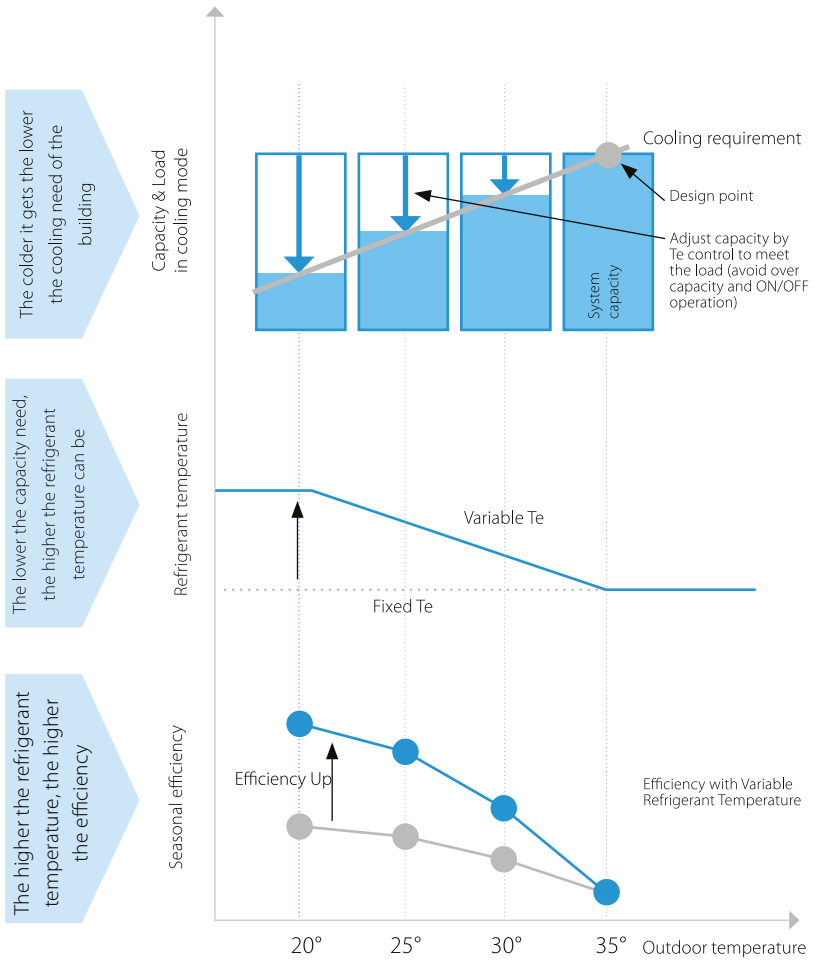
- **Seasonal efficiency increased by 28% (compared to conventional VRF)**
- **First weather compensating control on the market**
- **Customer comfort is assured thanks to higher outblow temperatures (preventing cold draughts)**

How does it work?

VRF Standard
Capacity is controlled only with the variance of the Inverter compressor.

Daikin VRV X
Variable Refrigerant Temperature control for energy saving in partial load condition.

The capacity is controlled by the Inverter compressor and variation of the evaporating (Te) temperature of the refrigerant in order to achieve the highest seasonal efficiency.



New heights in energy efficiency during actual operation

The key to innovative energy saving is to increase efficiency during low-load operation.

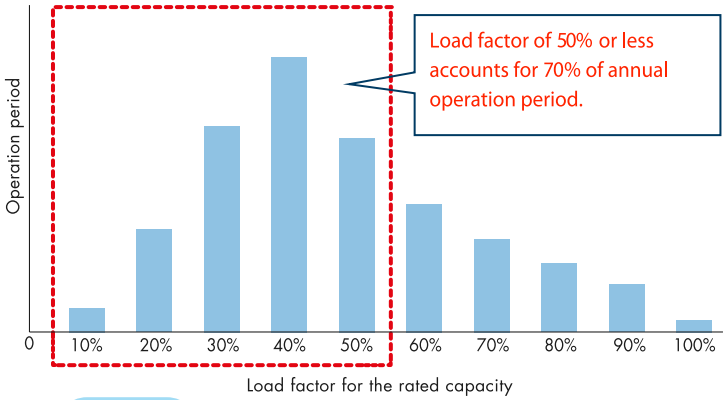
Using data gathered from actual operation, Daikin discovered that air conditioning systems operate at a load factor of 50% or less for 70% of their annual operation period.

This inspired us to develop new technologies to enhance energy efficiency during low loads.

Utilising these technologies, Daikin's new VRV X series raises the standard for energy efficiency.

› Correlation between the load factor for the rated capacity and operation time

*According to a survey by Daikin (based on Air Conditioning Network Service System data)

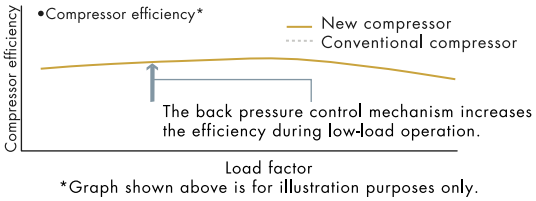


New scroll compressor

Hardware technology

Refrigerant leakage is minimised during low-load operation.

Operation loss due to the refrigerant leakage is reduced by the proprietary back pressure control mechanism to ensure stable low-load operation.



*Graph shown above is for illustration purposes only.

Back pressure control mechanism

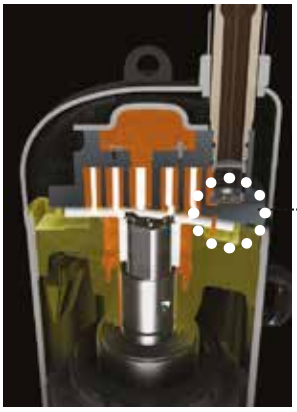
Conventional mechanism

The movable scroll is pressed by the pressure difference between high and low pressures. The force pressing the movable scroll decreases during low-load operation, resulting in compression leakage from movable parts.

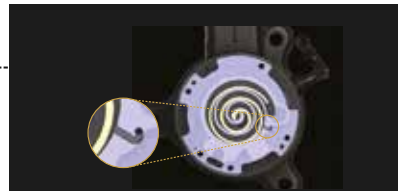
The force pressing the movable scroll decreases during low-load operation.

NEW intermediate pressure mechanism

The force pressing the movable scroll is optimised according to operating conditions. The behaviour of the moveable scroll has been stabilised to increase efficiency during low-load operation.



The intermediate pressure keeps pressing the movable scroll during low-load operation.



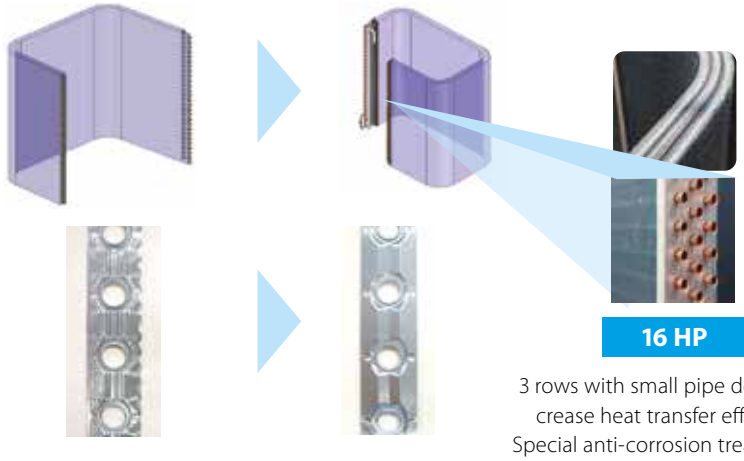
Intermediate pressure adjustment portpressing The intermediate pressure (back pressure) optimises the force pressing the movable scroll depending on the operating condition.

Excellent Technology

Highly integrated heat exchanger

Improves performance by increasing heat exchanger area while maintaining the same installation space.

VRF **VRV X**



Fine Louvre Fin

Waffle Fin

16 HP

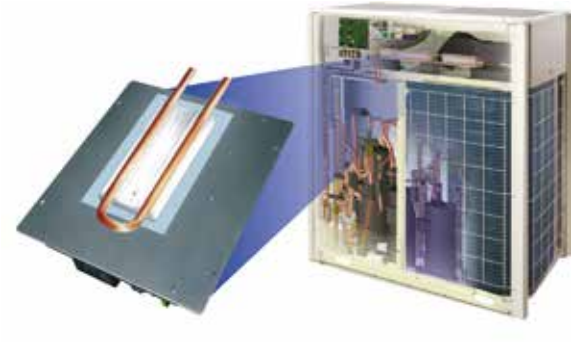
3 rows with small pipe design, increase heat transfer efficiency
Special anti-corrosion treatment of the heat excahnger provides 5 to 6 times greater resistance against acid rain and salt corrosion.

Realises highly integrated heat exchanger performance by employing 3 rows and reduced fin pitch coil as well as reduction in airflow resistance by adopting small pipe size design.

Refrigerant-Cooled PCB

Improves reliability at high ambient temperature

It is possible to cool the inverter power module stability even at high ambient temperature. This helps to keep air conditioning capacity and also ensures efficient and reliable operation.

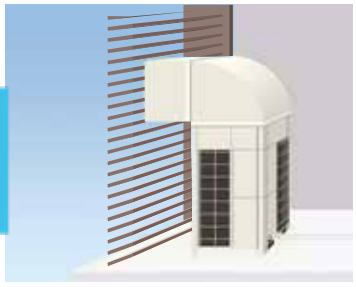


High External Static Pressure

VRV X outdoor unit has achieved high external static pressure up to 78.4 Pa, ensuring the efficient heat dissipation and stable operation of equipment in either heirarchal or intensive arrangement.

78.4 Pa

› More options in the opening / angle of louvre
› Outstanding heat dissipationate effect in both hierarchical and intensive arrangement



Simplified commissioning and after-sales service

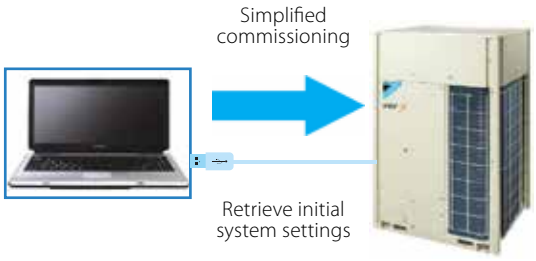
Function of information display by luminous digital tube

VRV X system utilises the 7-segment luminous digital tubes to display system opration information, enabling the operation state to be visually displayed whilst facilitating simplified commissioning and after-sales service.

7-segment digital display	Conventional LED display
Displays system operation information directly. 	Figures out system operation information by reading light emitting state of different diodes, which is both inefficient and fallible. 

VRV configurator

› The VRV configurator is an advanced solution that allows for easy system configuration and commissioning.
› Less time is required on the roof configuring the outdoor unit.
› Multiple system at different sites can be managed in exactly the same way, thus offering simplified commissioing for key accounts.
› Initial setting on the outdoor unit can be easily retrieved.



Outdoor unit sequencing technology

Automatic sequencing operation

During start-up, the Daikin VRV X unit sequencing operation will be automatically enabled to ensure balanced operation of each outdoor unit to improve longevity of equipment and stable operation.

Stage 1

Priority:

Stage 2
Automatic sequencing

Stage 3
Automatic sequencing

Double backup operation functions responding resiliently to various unexpected situations

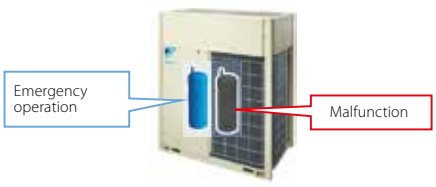
Double backup operation functions

Daikin VRV X system boasts double backup operation functions, which can secure the use of air conditioners in this are to the greatest extent by emergently enabling double backup operation functions even if failure occurs in a set of air conditioning equipment.

In the event of a failure, emergency operation can be enabled conveniently to allow the remaining system to operate in a limited fashion.

Compressor backup operation function

If malfunction occurs in a compressor, emergency operation can be easily set and enabled by the outdoor unit (for a single outdoor unit system).



Unit backup operation function

If malfunction occurs in an outdoor unit, emergency operation can be conveniently set and enabled by the remote controller for indoor unit (for systems composed of two or more outdoor units).

Outdoor Unit Lineup

The outdoor unit capacity is up to 48 HP in increment of 2 HP.

› New series with compact and lightweight design offer a capacity of up to 48HP, responding to the needs of large-sized buildings.
› The single outdoor unit has only 2 different shapes and dimensions, not only simplifying the design process, but also bringing the system flexibility to a new level.
› With the outdoor unit capacity increased in increments of 2HP, customers needs can be precisely met.
› Outdoor units with anti-corrosion specifications (E-type on request) are designed specifically for use in areas which are subject to salt damage and atmospheric pollution.

Single Outdoor Units

6 | 8 HP

RXQ6ARYFK
RXQ8ARYFK

10 | 12 | 14 | 16 HP

RXQ10ARYFK
RXQ12ARYFK
RXQ14ARYFK
RXQ16ARYFK

Double Outdoor Units

18 | 20 | 24 | 26 | 28 | 30 | 32 HP

RXQ18ARYFK
RXQ20ARYFK
RXQ24ARYFK
RXQ26ARYFK
RXQ28ARYFK
RXQ30ARYFK
RXQ32ARYFK

Triple Outdoor Units

34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 HP

RXQ34ARYFK
RXQ36ARYFK
RXQ38ARYFK
RXQ40ARYFK
RXQ42ARYFK
RXQ44ARYFK
RXQ46ARYFK
RXQ48ARYFK

HP	6	8	10	12	14	16	18	20	24	26	28	30	32	34	36	38	40	44	46	48
Cooling Only	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	NEW																			

Indoor Unit Lineup

A variety of VRV indoor units are enabled in one system, opening the door to stylish and quiet indoor units.

Type	Model Name	Capacity Range HP	0.8	1	1.25	1.6	2	2.5	3.2	4	5	6	7	8	10
		Capacity Index	20	25	32	40	50	63	80	100	125	140	170	200	250
Wall Mounted	FXAQ-ARVM		●	●	●	●	●	●							
Ceiling Mounted Cassette Round Flow	FXFSQ-ARV1			●	●	●	●	●	●	●	●	● NEW			
Slim Ceiling Mounted Duct	FXDQ-PDVM		●	●	●										
	FXDQ-NDVM					●	●	●							
Low Static Concealed Ceiling Duct	FXMQ-ARV1					●	●	●	●	●					
High Static Concealed Ceiling Duct	FXMQ-PBV1					● NEW	●	●	●	●	●	●			
High Static Large Concealed Ceiling Duct	FXMQ-NVE6												● NEW	●	●

Wall Mounted Type

FXAQ-ARVM

Stylish flat panel design harmonised with your interior decor

Ceiling Mounted Cassette Round Flow

FXFSQ-ARV1

Individual flap control allows flexibility to suit every room layout without changing the location of the interior decor

Slim Ceiling Mounted Duct

FXDQ-PDVM

FXDQ-NDVM

Slim design, quiet and static pressure switching

Concealed Ceiling Mounted Duct

FXMQ-PBV1

FXMQ-ARV1

FXMQ-NVE6

Variety of the units with different external static pressure allow flexible & concealed installation

Wall Mounted Type

FXAQ20ARVM / FXAQ25ARVM
FXAQ32ARVM / FXAQ40ARVM
FXAQ50ARVM / FXAQ63ARVM

Stylish flat panel design harmonised with your interior decor

› Stylish flat panel design creates a graceful harmony that enhances any interior space.
› Flat panel can be cleaned with only the single pass of a cloth across their smooth surface.
› Vertical auto-swing realises efficiency of air distribution. The louvre closes automatically when the unit stops.

Low operation sound level dB(A)

FXAQ-ARVM	20	25	32	40	50	63
Sound Level (H/L)	35/31	36/31	38/31	39/34	42/37	47/41

› Drain pan and air filter can be kept clean by mould-proof polystyrene
› Vertical auto-swing realises efficiency of air distribution. The louvre closes automatically when the unit stops.
› Five steps of discharge angel can be set by remote controller.
› Discharge angel is automatically set at the same angle as the previous operation when restarting. (Initial setting: 10° for cooling.)

Flexible installation

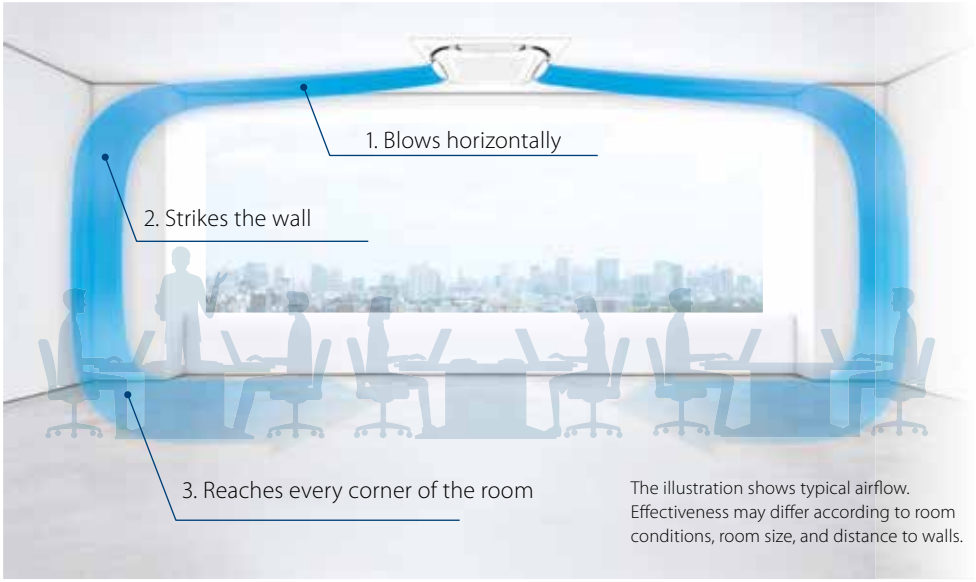
› Drain pipe can be fitted to it from either left or right sides.
› Drain pump kit is available as optional accessory, which lifts the drain 1,000mm from the bottom of the unit.

Ceiling Mounted Cassette Round Flow

FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1
FXFSQ50ARV1 / FXFSQ63A RV1/ FXFSQ80ARV1
FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1

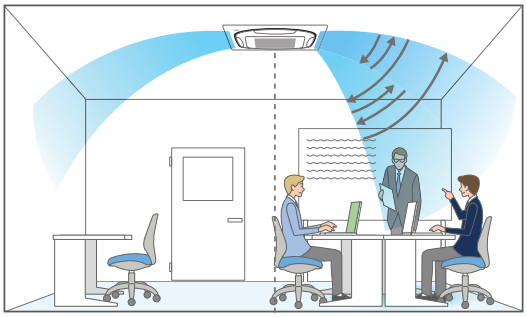
360 ° airflow improves temperature distribution and offers a comfortable living environment

Circulation Airflow



The illustration shows typical airflow. Effectiveness may differ according to room conditions, room size, and distance to walls.

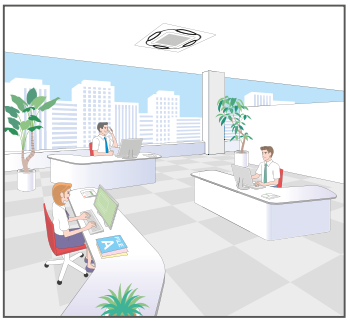
Direct Airflow



Optimal air direction by "Auto"

Swing (narrow)

Individual Airflow

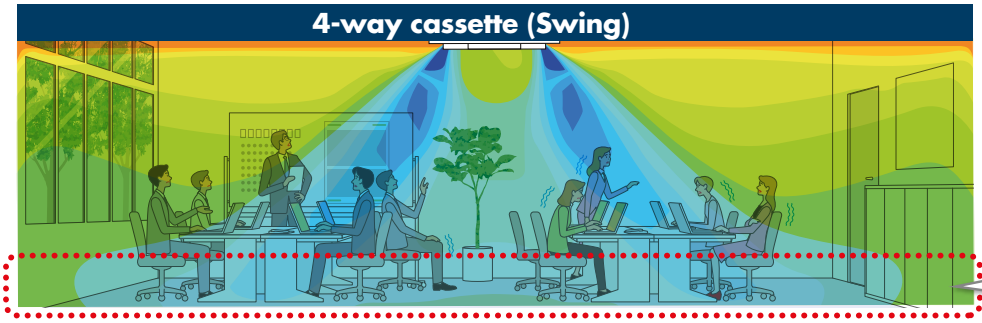


The illustration shows typical airflow.

1. Applicable when wired remote controller BRC1E63 & BRC1H is used.
*2. Not applicable when using individual airflow direction control.
*3. BRC1E63 is not applicable in the UAE.

Circulation airflow cools the entire room to deliver comfort that never feels cold.

Comfort to the entire room with even temperatures and no cold air pockets at floor level

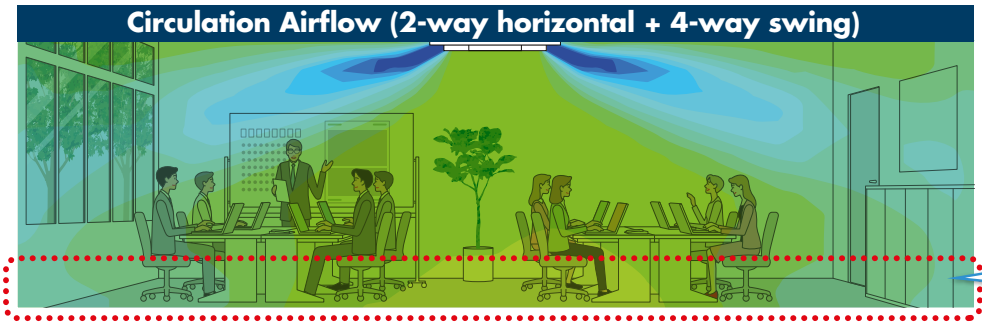


30.0
29.0
28.0
27.0
26.0
25.0
24.0
23.0
22.0
21.0
20.0

Comparison Conditions

- Room size: Width 7.5m x depth 7.5m x height 2.6m
- Indoor unit capacity:71 class
- Outdoor air temperature:35
- Airflow rate and air direction: high / swing

Areas at floor level are cold while areas around walls are hot.

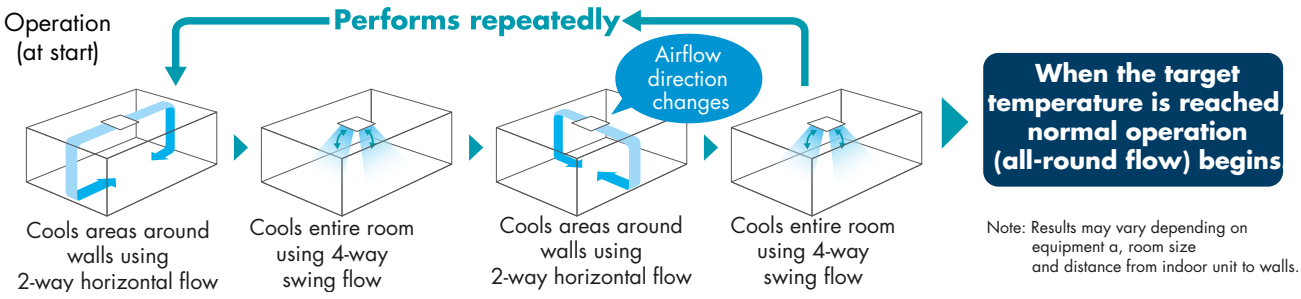


Approx. %5 energy savings by reducing uneven temperatures

*3.Calculated under the following comparison conditions:
When the average temperature at a height of 0.6m above the floor reaches set temperature. (26oC)

Full comfort is provided with no cold feet.

Configurations of Circulation Airflow



When the target temperature is reached, normal operation (all-round flow) begins

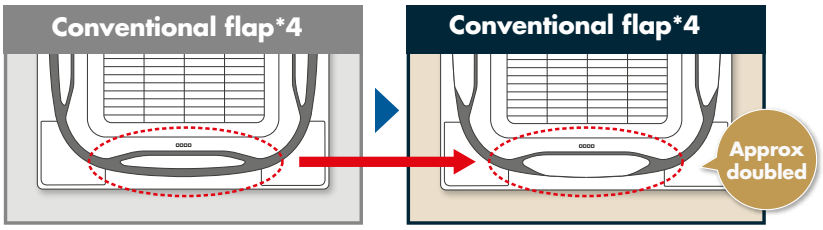
Note: Results may vary depending on equipment a, room size and distance from indoor unit to walls.

Three technologies that achieved circulation airflow

Flow-out is straight, horizontally and strong, so the air travels far and even reaches the wall from which it falls to the floor. This approach and technology makes circulation airflow possible.

1 Use of new wide flaps (Straight)

Compared to conventional models, the new wide flap increases straightness of the airflow, so coverage is approximately doubled.



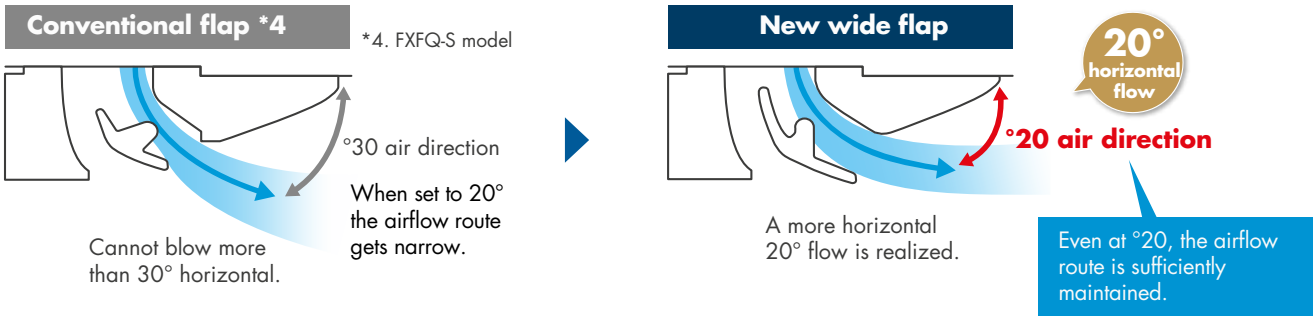
*4. FXFQ-S model

New wide flap construction inhibits ceiling dirt and grime

By tapering both flap ends, the airflow that causes dirty ceilings is directed downward.

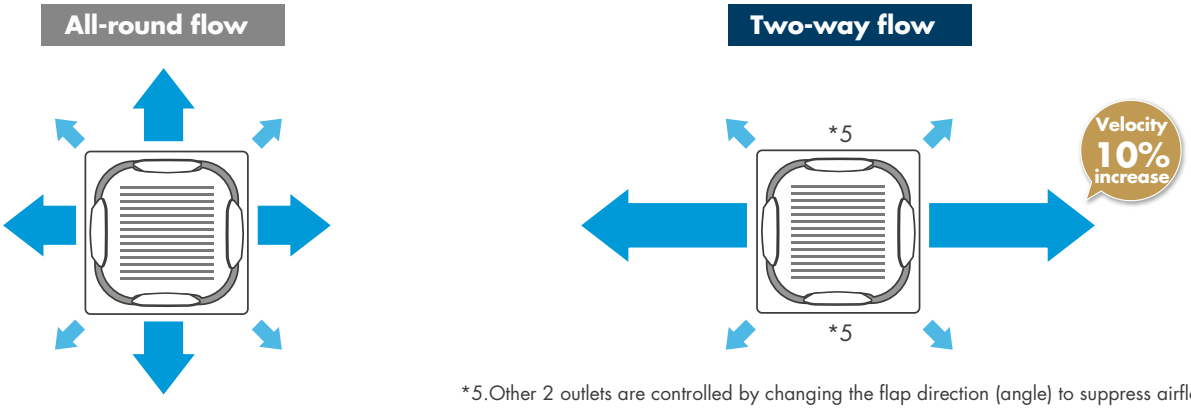
2 Optimising airflow angle (Horizontally)

Even with the flap angle raised, a sufficient airflow route is maintained to realize a more horizontal airflow angle.



3 Increased velocity in -2way flow (Strongly)

Velocity increased by making -2way flow. Powerful airflow was realized.



*5.Other 2 outlets are controlled by changing the flap direction (angle) to suppress airflow volume.

*1. Applicable when wired remote controller BRC1363 and BRC1H is used.

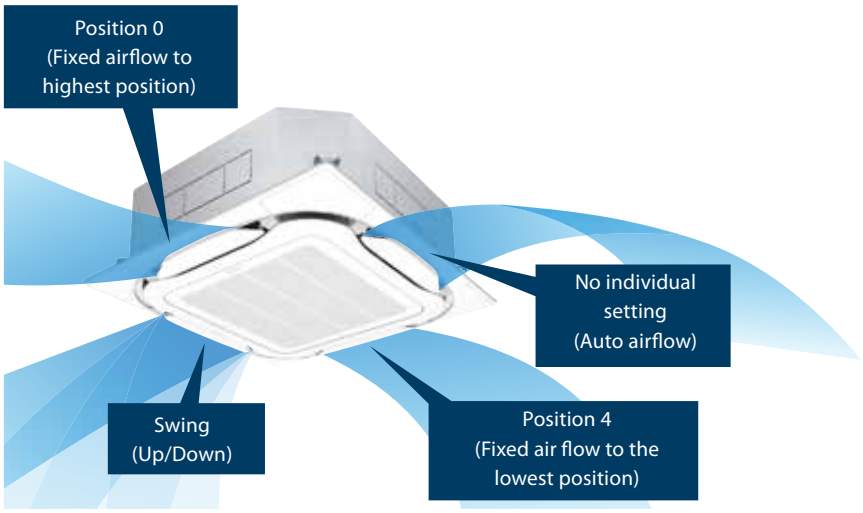
Comfortable air conditioning for all room layouts and conditions

Airflow direction can be individually adjusted for each air discharge outlet to deliver optimal air distribution.

Easy setting is possible with a wired remote controller.

BRC1E63

Remote controller screen



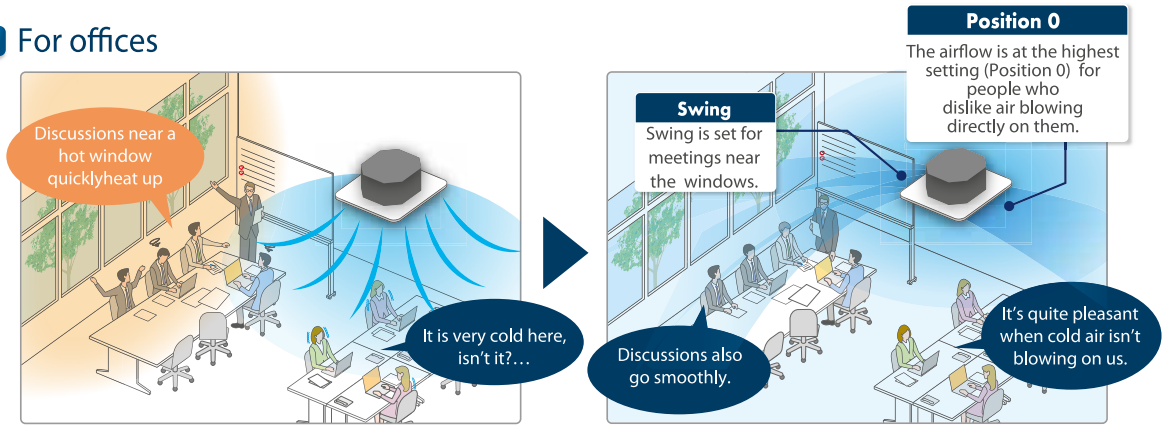
Individual airflow settings

- No individual setting (auto airflow)
- Position 0
- Position 1
- Position 2
- Position 3
- Position 4 (lowest point)
- Swing

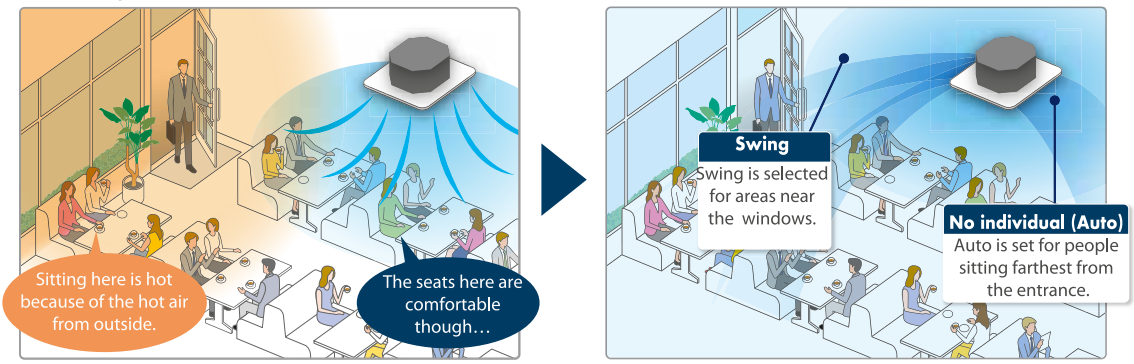
Individual settings are possible as stated above.

When individual airflow is selected, airflow direction can be adjusted to room layout.

For offices



For shops and restaurant

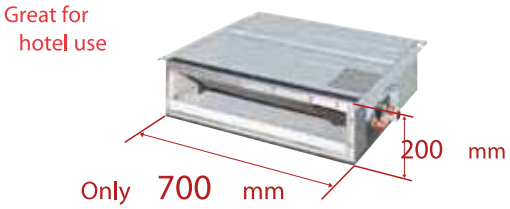


Slim design, quietness and static pressure switching

Suited to use in drop-ceilings

FXDQ20PDVM / FXDQ25PDVM / FXDQ32PDVM

› Only 700mm in width and 23kg in weight, this model is suitable for installation in limited spaces like drop-ceilings in hotels.



› Control of the airflow rate has been improved from 2-step to 3-step control.

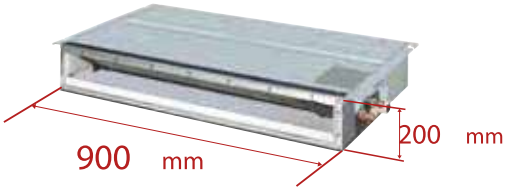
Low operation sound level dB(A)

FXDQ-PDVM/ NDVM	20/25/32	40	50	63
Sound Level (HH/H/L)	33/31/29	34/32/30	35/33/31	36/34/32

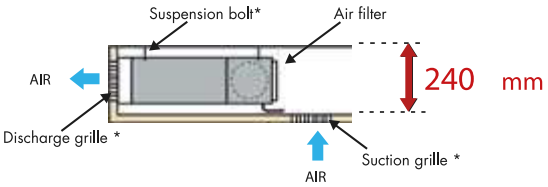
• The values of operation sound level represent those for rear suction operation. Sound level values for bottom-suction operation can be obtained by adding 5 dB(A).
Values are based on the following conditions:
FXDQ-PDVM: external static pressure of 10Pa; FXDQ-NDVM: external static pressure of 15Pa.

FXDQ40NDVM /FXDQ50NDVM / FXDQ63NDVM

› Only 200mm in height, this model can be installed in rooms with as little as 240mm depth between the drop ceiling and ceiling slab



* 1,100 mm in width for the FXDQ63NDVM model.

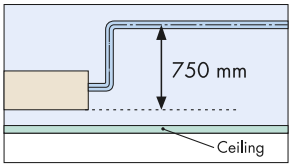


*To be obtained locally

› External static pressure selectable by remote controller switching make this indoor unit a very comfortable and flexible model.

10Pa-30Pa/factory set: 10Pa for FXDQ-PDVM models.
15Pa-44Pa/factory set: 15Pa for FXDQ-NDVM models.

› FXDQ-PDVM and NDVM models are available with a drain pump as a standard accessory.



Low Static Pressure Ceiling Mounted Duct Type

FXMQ40ARV1 / FXMQ50ARV1 / FXMQ63ARV1 / FXMQ80ARV1 / FXMQ100ARV1

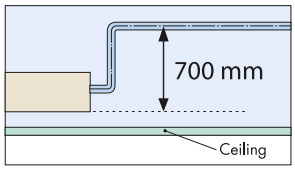
Low static pressure allows for flexible duct design

› AC fan motor is installed to suit applications where external static pressure is required at nominal capacity

30Pa-50Pa for FXMQ40ARV1
30Pa-60Pa for FXMQ100ARV1

All models are only 300mm in height, an improvement over the 390mm height of conventional models.

Drain pump is equipped as standard accessory with 700mm lift.



High airflow rate

› Airflow rate is optimised to meet wider spectrum of airflow requirements.

Low operation sound level (db(A))

FXMQ-PBV1	40	50	63	80	100
Sound Level (H/L)	39/37	41/39	42/40	43/41	44/42

Improved ease of maintenance

› The drain pan can be detached for easy cleaning. An anti-bacterial treatment that uses silver ions has been applied to the drain pan, preventing the growth of slime, mould and bacteria that cause blockages and odours.

High Static Concealed Ceiling Duct

FXMQ40PBV1 / FXMQ50PBV1 / FXMQ63PBV1 / FXMQ80PBV1 / FXMQ100PBV1 / FXMQ125PBV1 / FXMQ140PBV1

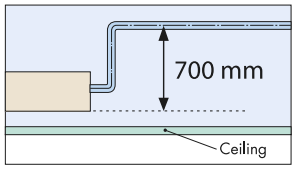
Middle and high static pressure allows for flexible duct design

› A DC fan motor increases the external static pressure capacity range to include middle to high static pressures, increasing design flexibility.

30Pa-160Pa for FXMQ40PBV1
50Pa-2000Pa for FXMQ50-125PBV1
50Pa-140Pa for FXMQ140PBV1

All models are only 300mm in height, an improvement over the 390mm height of conventional models. The weight of the FXMQ40PBV1 has been reduced from 44kg to 28kg.

Drain pump is equipped as standard accessory with 700mm lift.



Control of the airflow rate has been improved from 2-step to 3-step control.

Improved ease of installation

› Airflow rate can be controlled using a remote controller during test operations. With the conventional model, the airflow rate was controlled from the PC board. It is automatically adjusted to the range between approximately ±10% of the rated HH tap airflow for FXMQ-40-125PBV1.

Low operation sound level

dB(A)

FXMQ-PBV1	40	50	63	80/100	125	140
Sound Level (HH/H/L)	33/31/29	34/32/30	35/33/31	36/34/32	44/42/40	46/45/43

Energy-efficient

› The adopted DC fan motor is much more efficient than the conventional AC motor, yielding and approximate 20% decrease in energy consumption (FXMQ125PBV1).

Improved ease of maintenance

› The drain pan can be detached for easy cleaning. An anti-bacterial treatment that uses silver ions has been applied to the drain pan, preventing the growth of slime, mould and bacteria that cause blockages and odours.

FXMQ170NVE6 / FXMQ200NVE6 / FXMQ250NVE6

Simplified static pressure control

External static pressure can be easily adjusted using a change-over switch inside the electrical box to meet the resistance in the duct system.

Wall Mounted

MODEL			FXAQ20ARVM	FXAQ25ARVM	FXAQ32ARVM	FXAQ40ARVM	FXAQ50ARVM	FXAQ63ARVM
Power supply			1-phase, 240-220 V, 60/50 Hz					
Cooling capacity		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200
		kW	2.2	2.8	3.6	4.5	5.6	7.1
Casing			White (N9.5)					
Airflow rate (H/L)		m^3/min	7.5/4.5	9/5	11/5.5	13/9	15/12	19/14
		cfm	265/159	318/177	388/194	459/318	530/424	671/494
Sound level (H/L)		dB(A)	35/31	36/31	38/31	39/34	42/37	47/41
Dimensions (H×W×D)		mm	298x929x258	298x929x258	298x929x258	298x929x258	298x929x258	298x929x258
Machine weight		kg	13	13	13	13	13	13
Piping connections	Liquid (Flare)	mm	˙6.4	˙6.4	˙6.4	˙6.4	˙6.4	˙9.5
	Gas (Flare)		˙12.7	˙12.7	˙12.7	˙12.7	˙12.7	˙15.9
	Drain		VP13 (External Dia, 18/Internal Dia, 13)					

Ceiling Mounted Cassette Round Flow

MODEL			FXFSQ25ARV1	FXFSQ32ARV1	FXFSQ40ARV1	FXFSQ50ARV1	FXFSQ63ARV1	FXFSQ80ARV1	FXFSQ100ARV1	FXFSQ125ARV1	FXFSQ140ARV1
Power supply			-1phase, 220-240V, 50Hz								
Cooling capacity		Btu/h	9,600	12,300	15,400	19,100	24,200	30,700	38,200	47,800	54,600
		kW	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0
Heating capacity		Btu/h	10,900	13,600	17,100	21,500	27,300	34,100	42,700	54,600	54,600
		kW	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	16.0
Casing			Galvanised steel plate								
Airflow rate (H/HM/M/ML/L)		m^3/min	13/12.5/11.5/11/10		17/13.5/12.5/12/11	23/20.5/19/14.5/11	23.5/21/20/16/13.5	24.5/22/20.5/20/15	33.5/30.5/27/23.5/21	34.5/31.5/28.5/25.5/23	35.5/32.5/29.5/26.5/23
		cfm	459/441/406/388/353		600/477/441/424/388	812/724/671/512/388	830/742/706/565/477	865/777/724/706/530	1,183/1,077/954/830/742	1218/1112/1006/901/812	1,254/1,148/1,042/936/812
Sound level (H/HM/M/ML/L)		dB(A)	30/29.5/28.5/28/27		35/29.5/29/28/27	38/35/34.5/29.5/27	38/36/35.5/31.5/28	39/37/36/35.5/31	44/41/38/35/33	45/42.5/39.5/37/35	46/43.5/40.5/38/35
Dimensions (H×W×D)		mm	256×840×840						298×840×840		
Machine weight		kg	19			22			25		26
Piping connections	Liquid (Flare)	mm	Ø 6.4				Ø 9.5				
	Gas (Flare)		Ø 12.7				Ø 15.9				
	Drain		VP25 (External Dia, 32/Internal Dia, 25)								
Standard Panel (Optional)	Model		BYCQ125EAF9 (Fresh White)								
	Dimensions (H×W×D)	mm	50×950×950								
	Weight	kg	5.5								

Note:
Specifications are based on the following conditions:

Cooling: Indoor temp 27CDB, 19CWB / Outdoor temp: 35CDB, Equivalent piping length: 7.5m / Level difference: 0m

Capacity of indoor unit is only for reference. Actual capacity of indoor unit is based on the total capacity index.

(See Engineering Data Book for details.)

Sound level: Anechoic chamber conversion value measured at a point 1.5m downward from the unit center. During actual operation, these values are normally somewhat higher as a result of ambient conditions.


Slim Ceiling Mounted Duct

MODEL			FXDQ20PDVM	FXDQ25PDVM	FXDQ32PDVM	FXDQ40NDVM	FXDQ50NDVM	FXDQ63NDVM
Power supply			-1phase, 240-220 V/220 V, 50 Hz			-1phase, 240-220 V/220 V, 50 Hz		
Cooling capacity		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200
		kW	2.2	2.8	3.6	4.5	5.6	7.1
Heating capacity		Btu/h	8,500	10,900	13,600	17,100	21,500	27,300
		kW	2.5	3.2	4.0	5.0	6.3	8.0
Casing			Galvanised steel plate			Galvanised steel plate		
Airflow rate (HH/H/L)		m^3/min	8.0/7.2/6.4	8.0/7.2/6.4	8.0/7.2/6.4	10.5/9.5/8.5	12.5/11.0/10.0	16.5/14.5/13.0
		cfm	282/254/226	282/254/226	282/254/226	371/335/300	441/388/353	583/512/459
External static pressure		Pa	30-10 *2			44-15 *2		
Sound level (HH/H/L) *1*3		dB(A)	33/31/29	33/31/29	33/31/29	34/32/30	35/33/31	36/34/32
Dimensions (HxWxD)		mm	200x700x620	200x700x620	200x700x620	200x900x620	200x900x620	200x1,100x620
Machine weight		kg	23.0	23.0	23.0	27.0	28.0	31.0
Piping connections	Liquid (Flare)	mm	ø 6.4	ø 6.4	ø 6.4	ø 6.4	ø 6.4	Ø 9.5
	Gas (Flare)		ø 12.7	ø 12.7	ø 12.7	ø 12.7	ø 12.7	Ø 15.9
	Drain		VP20 (External Dia. 26/Internal Dia. 20)			VP20 (External Dia. 26/Internal Dia. 20)		

Low Static Ceiling Mounted Duct Type

MODEL			FXMQ40ARV1	FXMQ50ARV1	FXMQ63ARV1	FXMQ80ARV1	FXMQ100ARV1
Power supply			-1phase, 240-220 V, 50 Hz				
Cooling capacity		Btu/h	15,400	19,100	24,200	30,700	38,200
		kW	4.5	5.6	7.1	9.0	11.2
Heating capacity		Btu/h	17,100	21,500	27,300	34,100	42,700
		kW	5.0	6.3	8.0	10.0	12.5
Casing			Galvanized Steel Plate				
Airflow rate (HH/H/L)		m^3/min	15/12	19/16	24/20	30/25	34/29
		cfm	530/425	671/565	848/706	1060/883	1200/1024
External static pressure		Pa	30-50 *4				30-60 *4
Sound level (H/L)		dB(A)	39/37	41/39	42/40	43/41	44/42
Dimensions (HxWxD)		mm	300x700x700		300x1000x700		
Machine weight		kg	27	28	35		36
Piping connections	Liquid (Flare)	mm	6.4 (Flare Connection)		9.5 (Flare Connection)		
	Gas (Flare)		12.7 (Flare Connection)		15.9 (Flare Connection)		
	Drain		VP25 (External Dia. 32, Internal Dia. 25				

Notes:
Specifications are based on the following conditions:
• Cooling: Indoor temp.: 27°CDB, 19°CWB, Outdoor temp.: 35°CDB, Equivalent piping length: 7.5 m, Level difference: 0 m.
• Capacity of indoor unit is only for reference. Actual capacity of indoor unit is based on the total capacity index.
• Sound level: Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre.
During actual operation, these values are normally somewhat higher as a result of ambient conditions.

* 1: Values are based on the following conditions: FXDQ-PDVM: external static pressure of 10 Pa; FXDQ-NDVM: external static pressure of 15 Pa.
* 2: External static pressure is changeable to set by the remote controller. This pressure means "High static pressure - Standard".
(Factory setting is 10 Pa for FXDQ-PDVM models and 15 Pa for FXDQ-NDVM models.)
* 3: The values of operation sound level represent those for rear-suction operation. Sound level values for bottom-suction operation can be obtained by adding 5 dB(A).
*4: Maximum Static Pressure

High Static Ceiling Mounted Duct Type

MODEL			FXMQ40PBV1	FXMQ50PBV1	FXMQ63PBV1	FXMQ80PBV1	FXMQ1000PBV1	FXMQ125PBV1	FXMQ140PBV1
Power supply			1 phase,240-220V, 60/50Hz						
Cooling capacity		Btu/h	15,400	19,100	24,200	30,700	38,200	47,800	54,600
		kW	4.5	5.6	7.1	9.0	11.2	14.0	16.0
Casing			Galvanised Steel Plate						
Airflow rate (HH/H/L)		m^3/min	16/13/11	18/16.5/15	19.5/17.5/16	25/22.5/20	32/27/23	39/33/28	46/39/32
		cfm	565/459/388	635/582/530	688/618/565	883/794/706	1130/953/812	1377/1165/988	1624/1377/1130
External static pressure		Pa	100(160-30)*2	100(200-50)*2	100(200-50)*2	100(200-50)*2	100(200-50)*2	100(200-50)*2	100(140-50)*2
Sound level (HH/H/L)		dB(A)	39/37/35	41/39/37	42/40/38	43/41/39	44/42/39	43/41/39	46/45/43
Dimensions (H×W×D)		mm	300x700x700	300x1000x700	300x1000x700	300x1000x700	300x1400x700	300x1400x700	300x1400x700
Machine weight		kg	27.0	35.00	35.0	35.0	45.0	45.0	46.0
Piping connections	Liquid (Flare)	mm	6.4	6.4	9.5	9.5	9.5	9.5	9.5
	Gas (Flare)		12.7	12.7	15.9	15.9	15.9	15.9	15.9
	Drain		VP25(External dia.32 Internal dia.25)						

High Static Large Ceiling Mounted Duct Type

MODEL			FXMQ170NVE6	FXMQ200NVE6	FXMQ250NVE6
Power supply			-1phase, 240 ,220 V/220 V, 50 Hz		
Cooling capacity		Btu/h	65,800	76,400	95,500
		kW	19.3	22.4	28
Heating capacity		Btu/h	71,600	83,300	1,07,500
		kW	21	25	31.5
Casing			Galvanised steel plate		
Airflow rate (H/L)		m^3/min	58/50	68/58	80/73
		cfm	2,047/1,765	2400/2,047	2,825/2,578
External static pressure		Pa	100-140	100-200	190-270
Sound level (H/L) 220V		dB(A)	45/42 *3	47/45 *3	49/47 *3
Dimensions (HxWxD)		mm	440x1,190x1,090		440x1,490x1,090
Machine weight		kg	110		130
Piping connections	Liquid (Flare)	mm	ø 9.5		
	Gas (Flare)		ø 19.1		ø 22.2
	Drain		External Dia 32		

Notes:
Specifications are based on the following conditions:
Cooling: Indoor temp.: 27°CDB, 19°CWB, Outdoor temp.: 35°CDB, Equivalent piping length: 7.5 m, Level difference: 0 m.
Capacity of indoor unit is only for reference. Actual capacity of indoor unit is based on the total capacity index.
Sound level: Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre.
During actual operation, these values are normally somewhat higher as a result of ambient conditions.

* 1: Power consumption values are based on conditions of rated external static pressure.
* 2: External static pressure can be modied using a remote controller that offers seven (FXMQ20-32PBV1), thirteen (FXMQ40PBV1), fourteen (FXMQ50-125PBV1) or ten (FXMQ140PBV1) levels of control. These values indicate the lowest and highest possible static pressures. The standard static pressure is 50 Pa for FXMQ20-32PBV1 and 100 Pa for FXMQ40-140PBV1
*3: External static pressure is changeable to change over the connectors inside electrical box, this pressure means "Standard-High static pressure".

Outdoor Units

VRV X Cooling Only | RXQ-ARYFK

Model			RXQ6ARYFK	RXQ8ARYFK	RXQ10ARYFK	RXQ12ARYFK	RXQ14ARYFK	RXQ16ARYFK
Capacity Class			6HP	8HP	10HP	12HP	14HP	16HP
Power supply				415-380V / 3PH /50 Hz, 400V / 3PH / 60Hz				
Nominal Cooling Capacity	T1 (1)	Btu/h	54,600	76,450	95,550	114,350	136,500	153,550
		kW	16.0	22.4	28.0	33.5	40.0	45.0
	T3 (2)	Btu/h	50,000	64,000	89,000	92,500	116,400	118,000
		kW	14.7	18.8	26.1	27.1	34.1	34.6
Maximum Cooling Capacity (3)	T3 (2)	kW	14.8	21.4	26.20	30.1	35.20	38.6
Power Input	T1 (1)	W	4,500	6,600	7,900	9,500	11,300	13,150
	T3 (2)	W	5,100	6,500	9,400	10,400	12,500	12,500
Power Input ODU	T3 (2)	W	4,610	5,830	8,640	9,540	11,520	11,370
EER	T1 (1)	(Btu/h) W	12.13	11.58	12.09	12.04	12.08	11.68
		W/ W	3.56	3.39	3.54	3.53	3.54	3.42
	T3 (2)	(Btu/h) W	9.80	9.85	9.47	8.89	9.31	9.44
		W/ W	2.88	2.89	2.78	2.61	2.73	2.77
Cooling Seasonal Performance Factor for Hot Climate	CSPF T3 (4)	(Btu/h) W	16.24	15.52	16.85	18.80	18.32	16.17
		W/ W	4.76	4.55	4.94	5.51	5.37	4.74
Combination Ratio			50-130%					
Casing Color			Ivory White					
Compressor	Type		Hermitically Sealed Scroll Compressor					
	No of Compressors		1	1	1	1	2	2
Air Flow rate		m3/min	178	178	257	257	297	297
Dimension	H	mm	1,657	1,657	1,657	1,657	1,657	1,657
	W	mm	930	930	1,240	1,240	1,240	1,240
	D	mm	765	765	765	765	765	765
Machine weight		kg	165	175	220	220	285	285
Sound Level		dBA	56	57	60	60	65	65
Operation range	Cooling	CDB	10 ~ 52					
Refrigerant	Type		R410A					
	Charge	kg	5.9	7.3	9.0	9.3	11.7	11.8
Piping Connection	Liquid	mm	9.5	9.5	12.7	12.7	15.9	15.9
	Gas	mm	19.1	22.2	28.6	28.6	28.6	28.6

Notes:
(1) Cooling: Indoor temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDB, ISO15042:2011, power input of indoor units included
(2) Cooling: Indoor temperature: 29°CDB, 19°CWB, outdoor temperature: 46°CDB, ISO15042:2011, power input of indoor units included
(3) Maximum Cooling: Indoor temperature: 19°CWB, outdoor temperature: 46°CDB, Connection Ratio of Indoor Units 130%; can be used for limited number of hours
(4) Cooling seasonal performance factor for hot climates at T3 condition per ISO 16358-1:2013/AMD 1:2019

VRV X

Cooling Only

Control Sytems

Madoka wired remote controller for VRV

BRC1H81W / BRC1H82W / BRC1H81S / BRC1H82S / BRC1H82K

BRC1H81W / BRC1H82W

BRC1H81S / BRC1H82S

BRC1H82K

A complete redesigned controller focused on enhancing user experience

- Sleek and elegant design
- Intuitive touch-button control
- Two display options: standard and detailed
- Direct access to basic functions (on/off, set point, mode, target values, fan speed, louvres, filter icon and reset, error and code)
- Three colours to match any interior
- Compact, measures only 85x85mm
- Real time clock with auto update to daylight saving time
- Equipped with a buzzer

Hotel application features

- Energy saving through key card, window contact integration and set point limitation (BRP7A*)
- Flexible setback function ensures room temperature remains within comfortable limits to ensure guest comfort

A series of energy saving functions that can be individually selected

- Temperature range limit
- Setback function
- Presence and floor sensor setting (available on round flow and fully flat cassette)
- kWh indication
- Set temperature auto reset
- Off timer

Other functions

- Up to 3 independent schedules can be set so the user can easily change the schedule throughout the year (e.g. summer, winter, etc)
- Possibility to individually restrict menu functions

Temperature range limit avoids excessive cooling

Save energy by constraining the lower temperature limit in cooling.

Navigation remote control (wired remote controller)

BRC1E63*

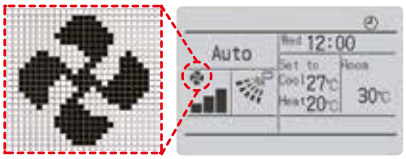
Clear display

› Dot matrix display

A combination of fine dots enables various icons. Large text display is easy to see.

› Backlight display

Backlight display helps operating in dark rooms.



Simple operation

› Large buttons and arrow keys

Large buttons and arrow keys enable easy operation. Basic setting such as fan speed and temperature can be intuitively operated. For other settings just select the function from the menu list.

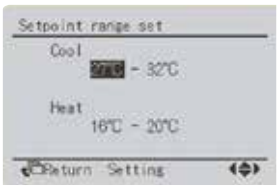
› Guide on display

The display gives an explanation of each setting for easy operation.

Energy saving

› Setpoint range set

- Saves energy by limiting the min and max set temperature
- Avoids excessive cooling.
- This function is convenient when the remote controller is installed at a place where any number of people may operate it.

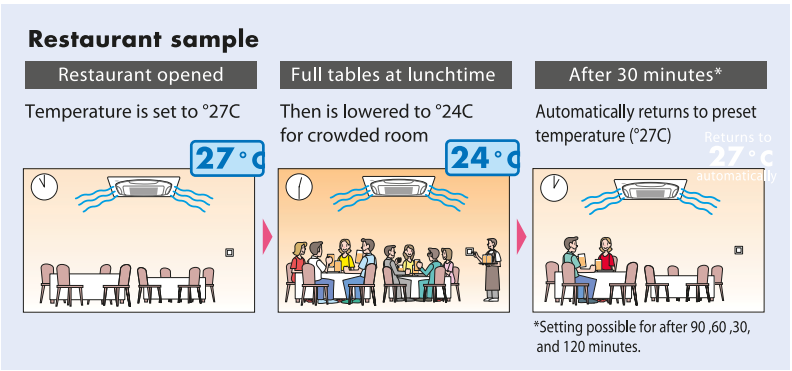


› Setpoint auto reset

- Even if the set temperatureis changed, it returns to the preset temperature after a preset period of time.
- Period selectable from 30min/60min/90min/120min.

› Off timer

- Turns off the airconditioner after a preset period of time.
- Period can be preset from 30 to 180 minutes in 10-minute increments.

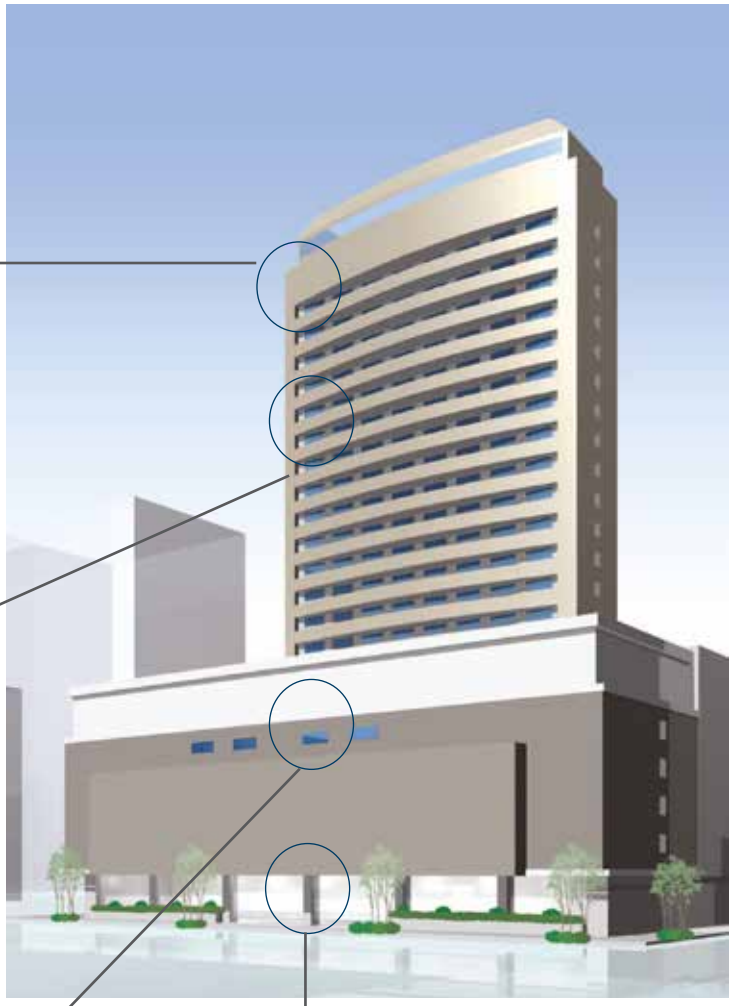


touch Intelligent Manager

One touch selection enables flexible control of equipment in a building.

DCM601A51

Various types of equipment in a building can be controlled by a single controller.

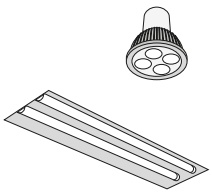


Individual air-conditioning control

The flexible control achieved by the VRV system precisely meets different air conditioning needs in each room (e.g. offices, conference rooms, hotel rooms).

Lighting control

DALI-compatible LED lighting systems can be controlled and monitored. Lighting control is enhanced through an interlock function with air conditioners and other functions.



Air-conditioning control for large spaces

Air handling units can also be controlled. Large spaces, such as entrance halls and shopping malls, can be easily controlled to ensure comfort.

Building equipment control

Various types of equipment other than air conditioners, including ventilation, fans, and pumps, can also be controlled.

Pump

Fan

Intelligent Touch Manager maximises the advantages of VRV features

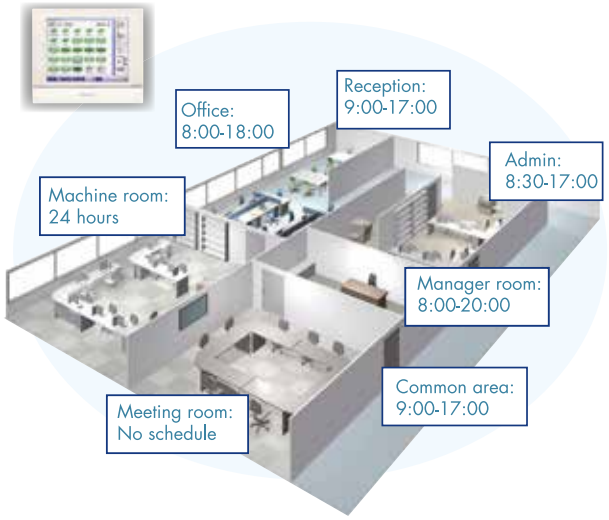
Intelligent Touch Manager is an advanced multi-zone controller that provides teh most cost-effective way to control and monitor the Daikin VRV sytem.

The 10.4" LCD touch screen is easy to use with three different screen views to include the floor plan layout view, icon view and list view and menus for system configurations.

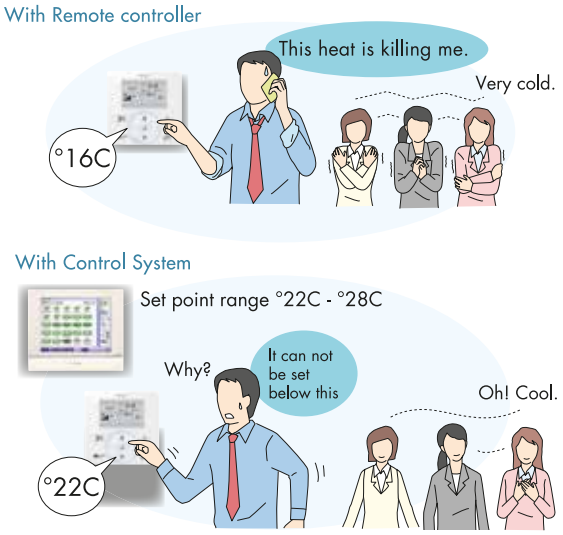
It is also easy to use with standardized remote Web Access from your PC.

It can manage a total of 650 management points consisting of up to 512 Daikin indoor unit groups (up to 1024 indoor units) along with the building equipment control / monitoring with digital inputs / output (DI/Dio), analog inputs / output (AI/Aio) and pulse input (PI) optional devices.

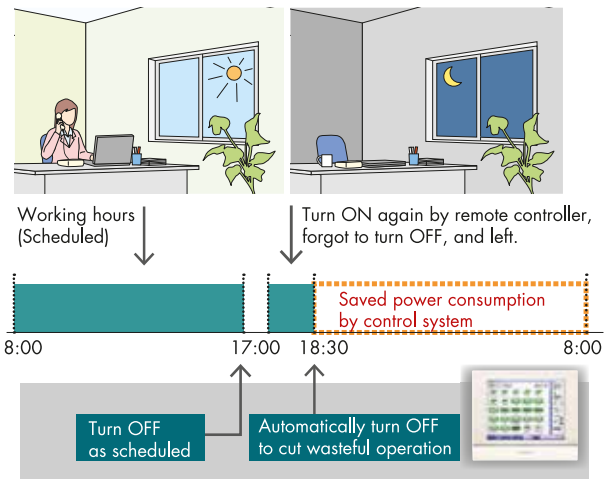
Schedule the operation time for each application.



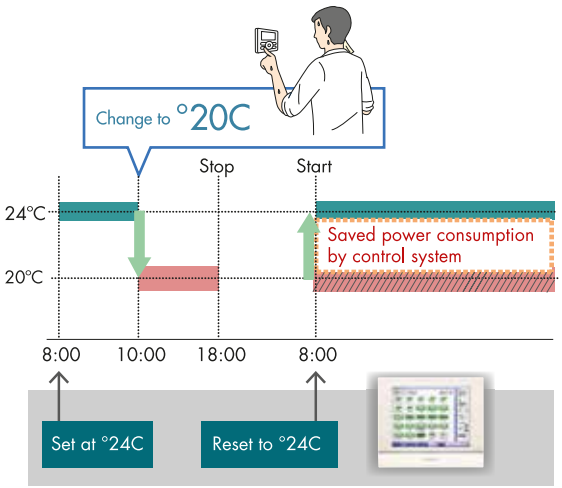
Define the set point range that users can change.



Turn the unit OFF, if a user didn't.



Reset set point regularly.



Tenant Management (PPD Option)

Reporting the power consumption of VRV system for each tenant

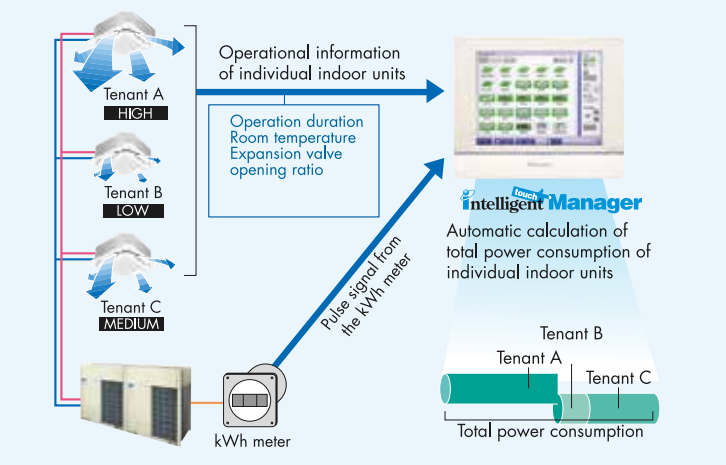
With the PPD function, power consumption can be calculated for each indoor unit (optional)

The energy consumption is proportionally calculated for each indoor unit. The data can be used for energy management and calculation of air conditioning usage fees for respective tenants.

Operation information of individual indoor units are monitored, based on distribution of power consumption of outdoor units.

Daikin's PPD keeps track of power distribution for each indoor unit. If performs air conditioning billing calculations quickly and automatically.

It is easy to output PPD data.
PPD data is output in CSV format to a PC or USB memory device and can be freely processed and managed.



*PPD (Power Proportional Distribution) is Daikin's proprietary calculation method.

Air Conditioning Network Service System

Daikin offers a variety of control systems

Convenient controllers that offer more freedom to administrators

DCS601C51

intelligent touch Controller

Ease of use and expanded control functions
The user-friendly controller features colours, multi-lingual function, and icons in the display for ease of understanding. A wide variety of control methods can be accommodated, permitting administrators to monitor and operate the system even when they are away from the controller.

Conncect VRV system to your BMS via BACnet* or LonWorks**

Compatible with BACnet* and LonWorks**, the two leading open network communication protocols, Daikin offers interfaces that provide a seamless connection between VRV system and your BMS.

Dedicated interfaces make Daikin air conditioners freely compatible with open networks

BACNet*
Seamless connection between VRV system and BACNet* open network protocol.

DMS502B51
(interface for use in BACNet*)

LonWorks**
Facilitating the network integration of VRV system and LonWorks**

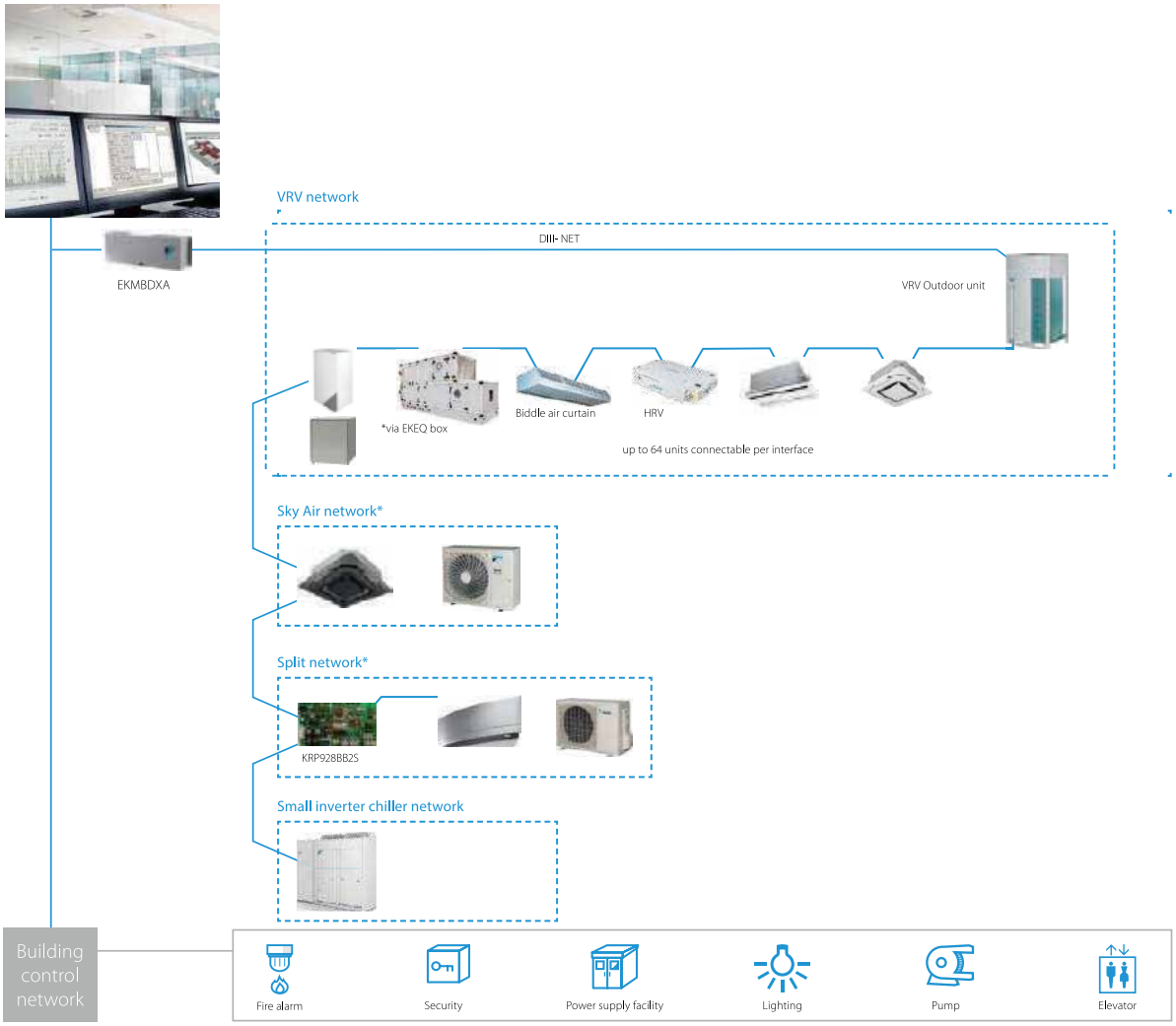
DMS504B51
(interface for use in LonWorks**)

Notes: 1. BACNet* is a registered trademark of American Society of Heating, Refrigerating, and AirConditioning Engineers (ASHRAE).
2. LonWorks** is a trademark of Echelon Corporation registered in the United States and other countries.

EKMBDXA | Modbus Interface

Integrated control system for seamless connection between split, Sky Air, VRV, and small inverter chillers and BMS systems

- Communication via Modbus RS485 protocol
- Detailed monitoring and control of the VRV total solution
- Easy and fast installation via DIII-net protocol
- As the Daikin DIII-net protocol is being used, only one modbus interface is needed for a group of Daikin systems (up to 10 outdoor units systems).



* Additional centralized controller might be required. For more information contact your local dealer.

			EKMBDXA7V1
Maximum number of connectable indoor units			64
Maximum number of connectable outdoor units			10
Communication	DIII-NET - Remark		DIII-NET (F1F2)
	Protocol - Remark		2 wire; communication speed: 9600 bps or 19200 bps
	Protocol - Type		RS485 (modbus)
	Protocol - Max. Wiring length	m	500
Dimensions	HeightxWidthxDepth	mm	124x379x87
Weight		kg	2.1
Ambient temperature - operation	Max.	°C	60
	Min.	°C	0
Installation			Indoor installation
Power supply	Frequency	Hz	50
	Voltage	V	220-240

Notes

› Ask an authorised Daikin dealer to install Daikin products. Do not try to install the product yourself or get it installed by any unauthorised dealer. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion. Warranty of hte product shall be void if not installed by an authorised Daikin dealer.
› Use only those parts and accessories supplied or specified by Daikin. Ask authorised Daikin dealer for any repairs or components. Warranty of hte product / component shall be void if non-specified spares are used or repaired by a non-Daikin dealer.
› Please ensure to isntall ELCB (Earth Leakage Circuit Breaker) for outdoor units to prevent ground fault defects.
› Read the user's manual carefully vefore using the product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

For inquiries, either call the numbers mentioned in the back cover or contact your nearest Daikin dealer.

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. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

JMI0107-

JQA1452-

About ISO 9001

ISO 9001 is a plant certification system defined by the International Organization for Standardization (ISO) relating to quality assurance. ISO 9001 certification covers quality assurance aspects related to the "design, development, manufacture, installation, and supplementary service" of products manufactured at the plant.

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.

www.daikinmea.com

DAIKIN MIDDLE EAST AND AFRICA FZE

P.O. Box 18674, Jebel Ali Free Zone, Dubai, UAE | Tel: +971 (0) 4 815 9300 | Fax: +971 (0) 4 815 9311

Email: info@daikinmea.com Web: www.daikinmea.com

Daikin Middle East and Africa

DMEA21-178