





Cooling Only 50 / 60 Hz

### NEW

#### VRV join EGAT No. 5 Energy Saving Label

from 1 Jan 2024 onward. Become Daikin Highest SEER Series, Ultra High Energy Efficiency.

\*SEER will cover all VRV model under 100,000 BTU/h





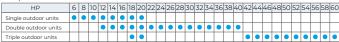
#### **URU** X SERIES



New heights in energy efficiency during actual operation

The VRV X series features new models specially developed for higher efficiency. All compressors used in outdoor units are new scroll compressors designed to enhance energy efficiency.







#### **VRV** A SERIES



Saves space and delivers excellent performance

The VRV A series achieves high efficiency in a design that is more compact and lightweight. It also offers comfort, easy installation, and high reliability to meet the needs in various buildings.



	HP	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
Single o	outdoor units	•	•	•	•	•	•	•	•																				
Double	outdoor units							•	•	•	•	•	•	•	•	•	•	•	•										
Triple o	utdoor units																			•	•	•	•	•	•	•	•	•	•



#### **VRV** S High Seasonal Efficiency SERIES

Especially designed for residential houses, small office and shops

New VRV S High Seasonal Efficiency series achieves higher energy efficiency with a variety of function for comfort and high performance. A wide range of options for installation location and application are easily achieved by the low height casing, long piping length and other features.



Lineup

HP	4	5	6	7	8	9
Cooling Only	•	•	•	•	•	•



Especially designed for residential houses, small offices and shops

VRV IV S series aims to provide sufficient capacity, along with the compact size required by residential houses, small offices and shops. Outdoor units are designed to be slim and space saving to suit your needs.



4 HP: 1-phase, 220 V, 50 Hz 5-6 HP: 1-phase, 220-240 V/ 220-230 V, 50/60 Hz

Lineup					
HP	4	5	6	8	9
Cooling Only	•	•	•	•	•

## Exceeding Boundaries with Innovative Energy Savings

First launched in Japan in 1982, the Daikin VRV system has been embraced by world markets for over 35 years. Daikin proudly introduces the advanced VRV system. By combining the technologies of VRV, VRT and VAV, we have attained both energy savings and comfortable air conditioning.





VRV X series / A series movie

## **YRY**



#### **Energy savings & comfort**

- Uniting VRV, VRT and VAV technologies
- Quiet operation

#### **Design flexibility & easy installation**

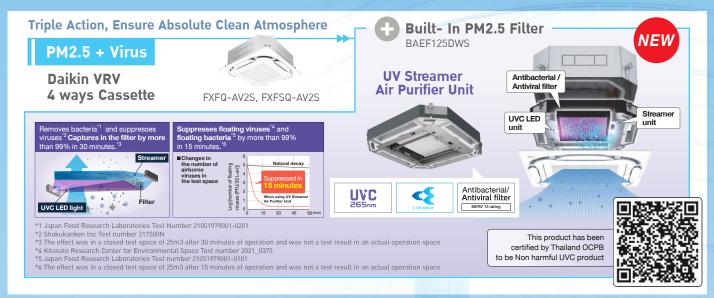
- Automatic refrigerant charge function
- Varied lineup of models

#### **High reliability**

- Refrigerant cooled PCB
- Double backup operation
- Heavy anti-corrosion model

## **Design Your Own Clean Air Solution**

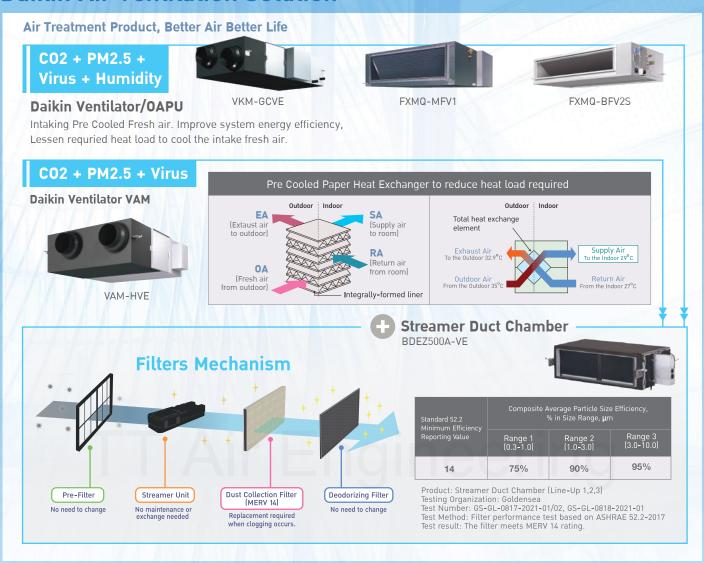
#### **Daikin Air Filtration Solution**

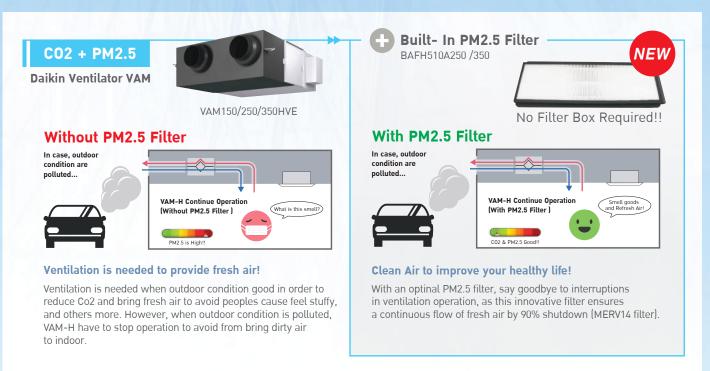






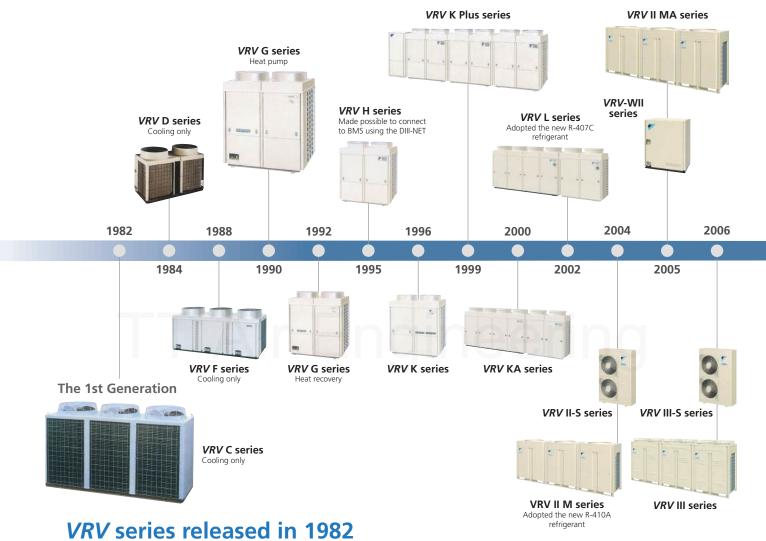
#### **Daikin Air Ventilation Solution**





## **VRV** Development History

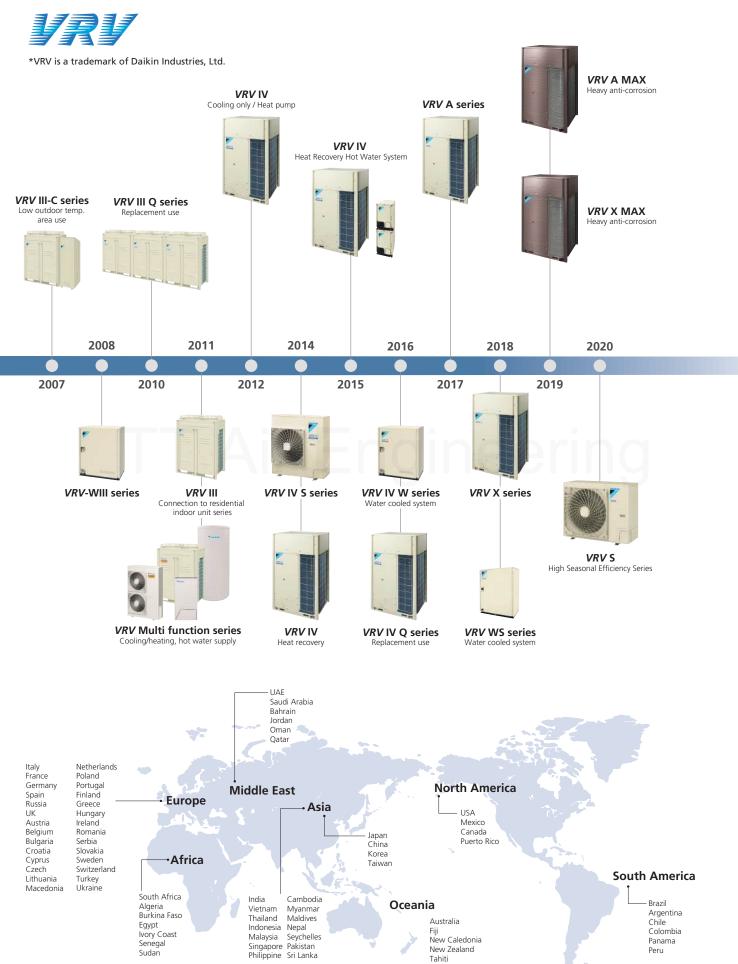
To meet the needs of the times, we've been continuously developing technologies as the leading air conditioning manufacturer in the world.



The birth of innovative products that changed the history of air conditioning technology

- 2.5-year development term
- Completion of development in May, 1982
- Technical award of Japan Society of Refrigerating & Air-conditioning Engineers in 1983

# Sales companies well established in more than 70 countries



# Wide Variety of Series Models to Supply Total Air Solutions



RXUQ-A 3-phase 4-wire system, 380-415 V, 50 Hz

#### **URU** X SERIES



## New heights in energy efficiency during actual operation

The VRV X series features new models specially developed for higher efficiency. All compressors used in outdoor units are new scroll compressors designed to enhance energy efficiency.

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HP	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
Single outdoor units	•	•	•	•	•	•	•	•																				
Double outdoor units				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•										
Triple outdoor units							•	•											•		•	•	•	•	•	•	•	•



RXQ-A 3-phase 4-wire system, 380-415 V, 50 Hz

#### **URV** A SERIES



## Saves space and delivers excellent performance

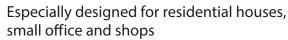
The VRV A series achieves high efficiency in a design that is more compact and lightweight. It also offers comfort, easy installation, and high reliability to meet the needs in various buildings.

HP	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
Single outdoor units	•	•	•	•	•	•	•	•				7																
Double outdoor units							•	•	•	•	•	•	•	•	•	•	•	•										
Triple outdoor units																			•	•	•	•	•	•	•	•	•	



RSUQ-A 4-6 HP: 1-phase, 220-240/220-230 V, 50/60 Hz 7-9 HP: 3-phase, 380-415 V, 50 Hz

#### **IPI** S High Seasonal Efficiency SERIES



New VRV S High Seasonal Efficiency series achieves higher energy efficiency with a variety of function for comfort and high performance. A wide range of options for installation location and application are easily achieved by the low height casing, long piping length and other features.



HP	4	5	6	7	8	9
Cooling Only	•	•	•	•	•	•



4 HP: 1-phase, 220 V, 50 Hz 5-6 HP: 1-phase, 220-240 V/220-230 V, 50/60 Hz 8-9 HP: 3-phase, 380-415 V, 50 Hz

#### **VRV IV S SERIES**

## Especially designed for residential houses, small offices and shops

VRV IV S series aims to provide sufficient capacity, along with the compact size required by residential houses, small offices and shops. Outdoor units are designed to be slim and space saving to suit your needs.



HP	4	5	6	8	9
Cooling Only	•	•	•	•	•

From residential houses to large buildings, and from newly constructed to renovated buildings, VRV system meets a wide range of air conditioning needs and supplies total air solutions.



RQQ-T 3-phase 4-wire system, 380-415 V, 50 Hz

#### **URV** IV Q SERIES

#### For quick & high quality replacement use

VRV IV Q series, a replacement VRV unit, can be installed using existing refrigerant piping, so renovation of the air conditioning system can be carried out quickly and smoothly. This minimises inconveniences to activities and users in the building.

HP	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
Standard Type	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Space Saving Type							•	•					•	•	•	•	•	•	•	•	•	•



RWEYQ-T 3-phase 4-wire system, 380-415 V, 50 Hz

#### **URY IV W SERIES**

#### Water cooled system suitable for tall multi-storied buildings

Water cooled VRV IV W series utilises water as a heat source. The temperature of heat source water can be from  $10^{\circ}$ C to  $45^{\circ}$ C, and outdoor air temperature does not affect cooling capacity. The outside unit is compact and saves space in the machine room.

	Lineup																
I	HP	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
l	Cooling Only	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•



#### **RWXQ-A** 1-phase, 220-240 V/220 V, 50/60 Hz

#### **VAV** WS SERIES

#### Water cooled system suitable for residential houses

Water cooled VRV WS series outside units are designed to be compact and lightweight, and single phase power supply enables simplified installation in residential applications.

Lineup			
HP	4	5	6
Cooling Only	•	•	•



## W HEAT RECOVERY HOT WATER SYSTEM

## Comfortable air conditioning and energy-efficient hot water heating

This energy-efficient, multifunction system recovers waste heat generated by air conditioning, as energy to heat water. It is suitable for different business applications and provides flexible combination of VRV IV indoor units achieving comfort and aesthetic.

#### Lineup

HP	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
High-COP Type				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					
Standard Type	•	•	•	•	•	•	_	_	_	_	_	_	_	_	_	_	_	_	_	•	_	_	_	•	•	•	•	•
Space Saving Type							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					

## IN X SERIES

New Heights in Energy Efficiency During Actual Operation

Cooling Only

6 HP — 60 HP

(16 kW) (168 kW)



Single outdoor units

RXIIO6-20AV1

RXUQ6-20AY1S(W)

Double outdoor units

RXUQ12-40AMY1S(W)

Triple outdoor units

RXUQ18-20AM1Y1S(W) RXUQ42-60AMY1S(W)

\*(W): Heavy anti-corrosion model

#### Greater energy savings during low-load operation

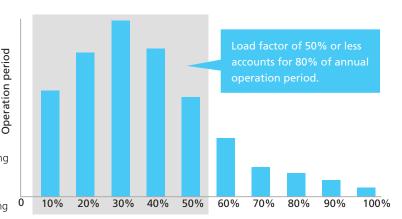
Daikin's VRV X series raised the standard of energy efficiency.

#### The key to innovative energy savings

## Increased efficiency during low-load operation.

#### \* Data source

- Number of properties connected to the Air Conditioning Network Service System: 42 projects
- Number of outdoor unit systems: 535 systems
- Data collection period: 8:00-18:00, weekdays (excluding public holidays), from July 2015 to June 2016 in office buildings in Singapore.

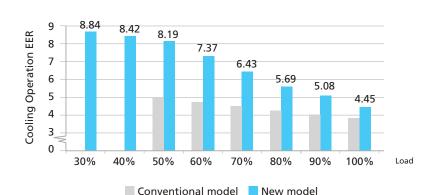


Load factor for the rated capacity

## TT Air Engineering

## **Higher Energy Efficiency Ratio (EER)** for 10 HP





#### \* Simulation conditions:

• Location: Bangkok, Thailand

• System: Outdoor unit (10 HP) x 1

Indoor unit (2 HP, Round Flow with Sensing type) x 5

• Operation time: 8:00-20:00 5 days/week

Outdoor units: New model: RXUQ10A (VRV X series)
 Conventional model: RXQ10T (VRV IV)

#### \* Cooling operation conditions:

• Indoor temperature of 27°CDB, 19°CWB, and outdoor temperature of 35°CDB.

## Advanced Technologies

#### Advanced technologies for greater energy savings

By uniting advanced software and hardware technologies for greater energy savings during actual operation and combining the technologies of VRV, VRT and VAV, we have attained both energy savings and comfortable air conditioning.

Software technology VRT Smart Control



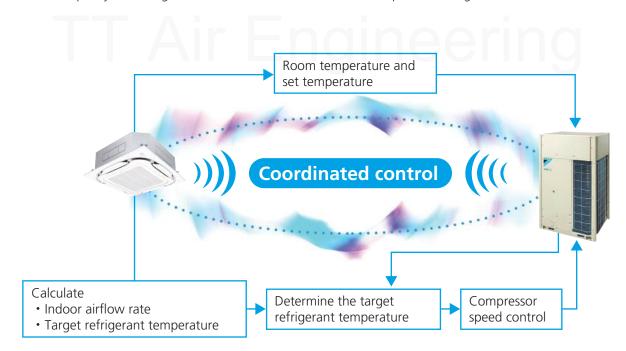


Fully Automatic Energy-saving Refrigerant Control

**Control Function** 

#### Optimally supply only for the needed capacity of indoor units

- Reduces compressor load and minimizes operation loss so it is energy saving
- Controls capacity according to load to ensure a constant room temperature for greater comfort.



<sup>\*</sup> For the classification of indoor units (VRT smart control and VRT control), refer to the indoor unit lineup.

## **URU** + VRT + VAV

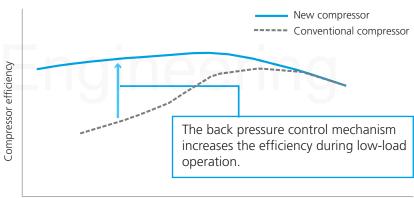
#### Hardware technology New Scroll Compressor



Compressor

#### Refrigerant leakage is minimized during low-load operation

• Refrigerant leakage is minimized by a back pressure control mechanism that increases the efficiency during low-load operation.



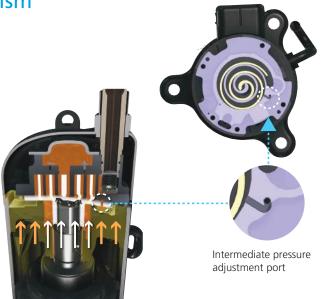
<sup>\*</sup> Graph shown above is for illustration purposes only.

Load factor

#### ■ Back pressure control mechanism

#### New intermediate pressure mechanism

The pressure on the orbiting scroll is optimised according to operating conditions. As a result, the orbiting scroll has been stabilised to increase efficiency during low-load operation.



## Advanced Technologies

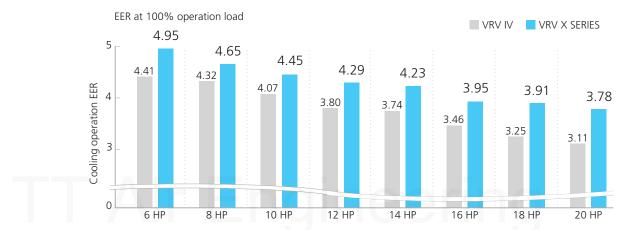
#### Advanced oil temperature control

Standby power needed for preheating refrigerator oil was reduced up to 65.4% to save energy when the air conditioner is stopped.

\* Operation calculation conditions: VRV X series 14 HP Location: Singapore Operation time: 08:00–18:00 on weekdays



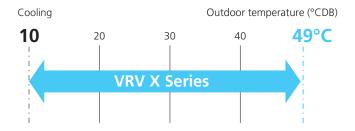
#### Higher efficiency is provided during rated operation



Cooling operation conditions: Indoor temperature of 27°CDB 19°CWB, and outdoor temperature of 35°CDB.

#### ■ Extended operation range up to 49°C

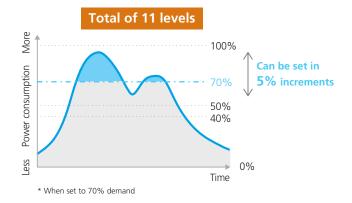
Note: When outdoor temperature falls below 10°C, the thermostat shuts OFF, the outdoor unit stops, and operation switches from cooling to fan operation.



#### I-demand function

Peak power cut-off can be accomplished according to each user situation.

\* Set on the PCB of the outdoor unit.



#### High external static pressure

VRV X series outdoor unit has been achieved high external static pressure up to 78.4 Pa.

#### Automatic refrigerant charge function

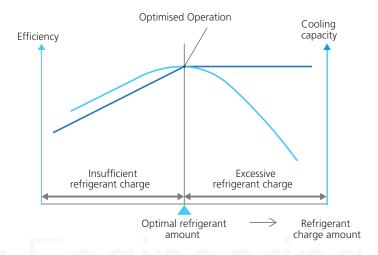
Contribute to optimised operation efficiency, higher quality and easier installation.

#### Optimised operation efficiency

This function prevents a capacity shortage or energy loss due to excessive or insufficient refrigerant.



Automatic Refrigerant Charge Function movie



#### Higher quality and easier installation

The automatic refrigerant charge function automates the charging of the proper refrigerant amount and the closing of shut-off valves by simply pressing a switch after pre-charging.



- Automatic completion by proper refrigerant amount
- Monitoring refrigerant charging is unnecessary
- No recalculation of charge amounts due to minor design changes locally
- \* There are conditions in the range of ambient temperature in which the automatic refrigerant charge can be used. Refer to the installation manual for details.
- \* The refrigerant amount that can be automatically charged may differ from the additional refrigerant amount that is provided from calculations, but there are no problems in performance and quality.

## Comfort & Reliability

#### Comfort

#### Nighttime quiet operation function

The nighttime quiet operation function automatically suppresses the nighttime operating sound by reducing operation capacity to maintain the quiet environment of the neighborhood.

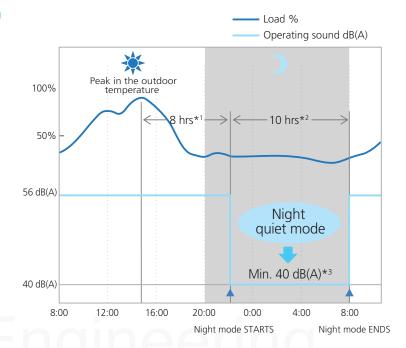
Three selectable modes are available depending on the required level.

- \*1. Initial setting is 8 hours. Can be selected from 6, 8 and 10 hours.
- \*2. Initial setting is 9 hours. Can be selected from 8, 9 and 10 hours. \*3. In case of 10 HP outdoor unit.

Notes: • This function is available in setting at site.

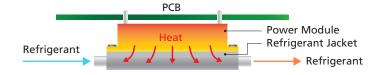
- The operating sound in quiet operation mode is the actual value measured by our company.

  • The relationship of outdoor temperature (load) and time shown
- above is just an example.

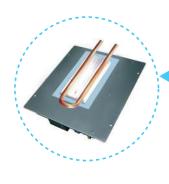


#### Reliable and stable technology

#### High reliability at high ambient temperature



Using refrigerant to cool the inverter power module helps minimise the size of the electronic components, and this results in reduction of airflow resistance and high efficiency of the heat exchanger.





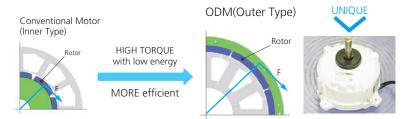
Control board failure ratio at stable operation is reduced.

#### This enables

- Suitability for high ambient temperatures
- Miniaturization of electronic components

#### Outer rotor DC motor (ODM)

Only Daikin has adapted an ODM with the feature of stable rotation and volumetric efficiency.



#### Function of information display by luminous digital tube

VRV X series utilises a bright 7-segment digital display to convey operational status and facilitate simple installation and after-sales service.

Displays system operation information directly



7-segment digital display

#### SMT\* packaging technology

- Improves the anti-clutter performance.
- Protects your computer boards from the adverse effects of sandy climates and humid weather.

\*SMT: Surface mounted technology

#### Computer control board surface adopting SMT packaging technology





#### Automatic sequencing operation



**Emergency** 

operation

#### Double backup operation functions

Unit backup operation function

Malfunction





Compressor backup operation function



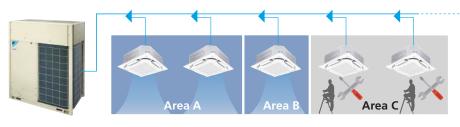
#### Malfunction

\* For single outdoor unit system RXUQ14-20AY1S models. On-site settings are required using the PCB of the outdoor unit.

#### Ease of maintenance

Can provide maintenance feature\* without shutting down the whole VRV system.

\* Field setting is required. This feature does not apply to residential indoor unit connection. For more information, please contact Daikin sales office.



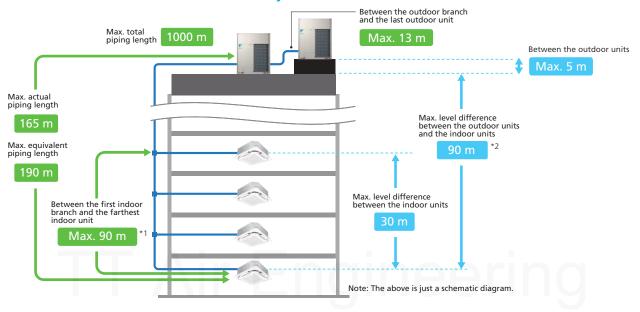
## Flexible System Design

#### More options for installation location

#### Long piping length

The long piping length provides more design flexibility, which can match even large-sized buildings.

#### Installation for **VRV** indoor units only



	Actual piping length (Equivalent)	165 m (190 m)
Maximum allowable piping length	Total piping length	1000 m
Maximum allowable piping length	Between the first indoor branch and the farthest indoor unit	90 m*1
	Between the outdoor branch and the last outdoor unit (Equivalent)	10 m (13 m)
	Between the outdoor units (Multiple use)	5 m
Maximum allowable level difference	Between the indoor units	30 m
	Between the outdoor units and the indoor units	90 m* <sup>2</sup>

<sup>\*1.</sup> No special requirements up to 40 m. The maximum actual piping length can be 90 m, depending on conditions. The VRV X series is easy to extend to 90 m by lessening the conditions from conventional VRV IV models. Be sure to refer to the Engineering Data Book for details of these conditions and requirements.

#### Connection ratio

Connection capacity at maximum is 200%.



 $\mbox{Connection ratio} = \frac{\mbox{Total capacity index of the indoor units}}{\mbox{Capacity index of the outdoor units}}$ 

#### Conditions of VRV indoor unit connection capacity

Applicable VRV indoor units	FXSQ	FXMQ-PA	FXAQ FXB(P)Q	Other VRV indoor unit models*1
Single outdoor units				200%
Double outdoor units		.00°	0/0	160%
Triple outdoor units			<b>/ U</b>	130%

<sup>\*1</sup> For the FXF(S)Q25 and FXVQ models, maximum connection ratio is 130% for the entire range of outdoor units.

<sup>\*2.</sup> When level differences are 50 m or more, the diameter of the main liquid piping size must be increased. If the outdoor unit is above the indoor unit, a dedicated setting on the outdoor unit is required. Refer to the Engineering Data Book and contact your local dealer for more information.

Note: If the operational capacity of indoor units is more than 130%, low airflow operation is enforced in all the indoor units.

<sup>\*</sup>Refer to page 25 for outdoor unit combination details.

## Outdoor Unit Lineup

#### **VRV** X Series

The outdoor unit capacity is up to 60 HP (168 kW) in increments of 2 HP.

#### Lineup

	HP	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
	Single outdoor units	•	•	•	•	•	•	•	•																				
VRV X SERIES	Double outdoor units				•	•	•		•	•		•	•		•	•	•		•										
	Triple outdoor units							•	•											•	•	•	•	•	•	•	•	•	•

#### Outdoor unit combinations

For connection of VRV indoor units only

HP	kW	Capacity index	Model name	Combination	Outdoor unit multi connection piping kit*1	Total capacity index of connectable indoor units*2	Maximum number of connectable indoor units*2
6	16.0	150	RXUQ6A	RXUQ6A	-	75 to 195 (300)	9 (15)
8	22.4	200	RXUQ8A	RXUQ8A	-	100 to 260 (400)	13 (20)
10	28.0	250	RXUQ10A	RXUQ10A	-	125 to 325 (500)	16 (25)
12	33.5	300	RXUQ12A	RXUQ12A	-	150 to 390 (600)	19 (30)
14	40.0	350	RXUQ14A	RXUQ14A	-	175 to 455 (700)	22 (35)
16	45.0	400	RXUQ16A	RXUQ16A		200 to 520 (800)	26 (40)
18	50.0	450	RXUQ18A	RXUQ18A		225 to 585 (900)	29 (45)
20	56.0	500	RXUQ20A	RXUQ20A	-	250 to 650 (1,000)	32 (50)
12	32.0	300	RXUQ12AM	RXUQ6A + RXUQ6A		150 to 390 (480)	19 (24)
14	38.4	350	RXUQ14AM	RXUQ6A + RXUQ8A		175 to 455 (560)	22 (28)
16	44.8	400	RXUQ16AM	RXUQ8A + RXUQ8A	BHFP22P100	200 to 520 (640)	26 (32)
18	50.4	450	RXUQ18AM	RXUQ8A + RXUQ10A		225 to 585 (720)	29 (36)
20	55.9	500	RXUQ20AM	RXUQ8A + RXUQ12A		250 to 650 (800)	32 (40)
18	48.0	450	RXUQ18AM1	RXUQ6A × 3	D. 150000454	225 to 585 (585)	29 (29)
20	54.4	500	RXUQ20AM1	RXUQ6A × 2 + RXUQ8A	BHFP22P151	250 to 650 (650)	32 (32)
22	61.5	550	RXUQ22AM	RXUQ10A + RXUQ12A		275 to 715 (880)	35 (44)
24	67.0	600	RXUQ24AM	RXUQ12A × 2		300 to 780 (960)	39 (48)
26	73.5	650	RXUQ26AM	RXUQ12A + RXUQ14A		325 to 845 (1,040)	42 (52)
28	78.5	700	RXUQ28AM	RXUQ12A + RXUQ16A		350 to 910 (1,120)	45 (56)
30	83.5	750	RXUQ30AM	RXUQ12A + RXUQ18A	BHFP22P100	375 to 975 (1,200)	48 (60)
32	89.5	800	RXUQ32AM	RXUQ12A + RXUQ20A	BHFFZZF100	400 to 1,040 (1,280)	52 (64)
34	96.0	850	RXUQ34AM	RXUQ14A + RXUQ20A		425 to 1,105 (1,360)	55 (64)
36	101	900	RXUQ36AM	RXUQ16A + RXUQ20A		450 to 1,170 (1,440)	58 (64)
38	106	950	RXUQ38AM	RXUQ18A + RXUQ20A		475 to 1,235 (1,520)	61 (64)
40	112	1,000	RXUQ40AM	RXUQ20A × 2		500 to 1,300 (1,600)	64 (64)
42	117	1,050	RXUQ42AM	RXUQ12A × 2 + RXUQ18A		525 to 1,365 (1,365)	
44	123	1,100	RXUQ44AM	RXUQ12A × 2 + RXUQ20A		550 to 1,430 (1,430)	
46	130	1,150	RXUQ46AM	RXUQ12A + RXUQ14A + RXUQ20A		575 to 1,495 (1,495)	
48	135	1,200	RXUQ48AM	RXUQ12A + RXUQ16A+ RXUQ20A		600 to 1,560 (1,560)	
50	140	1,250	RXUQ50AM	RXUQ12A + RXUQ18A + RXUQ20A	BHFP22P151	625 to 1,625 (1,625)	64 (64)
52	146	1,300	RXUQ52AM	RXUQ12A + RXUQ20A × 2	DHFFZZFIJI	650 to 1,690 (1,690)	04 (04)
54	152	1,350	RXUQ54AM	RXUQ14A + RXUQ20A × 2		675 to 1,755 (1,755)	
56	157	1,400	RXUQ56AM	RXUQ16A + RXUQ20A × 2		700 to 1,820 (1,820)	
58	162	1,450	RXUQ58AM	RXUQ18A + RXUQ20A × 2		725 to 1,885 (1,885)	
60	168	1,500	RXUQ60AM	RXUQ20A × 3		750 to 1,950 (1,950)	

Notes: \*1. For multiple connection, the outdoor unit multi connection piping kit (separately sold) is required.

\*2. Values inside brackets are based on connection of indoor units rated at maximum capacity, 200% for single outdoor units, 160% for double outdoor units, and 130% for triple outdoor units. Refer to page 21 for notes on connection capacity of indoor units.

## Anti-corrosion Technology

#### Heavy anti-corrosion model



RXUQ6-20AY1S(W) RXUQ12-60AM(1)Y1S(W)









#### Maximize anti-corrosion and performance

#### **Outer casing**

Multi coating for extreme durability

The hot-dip Zinc-Aluminum-Magnesium alloy coated sheet is optimised for even greater durability with an additional four-layer coating combination.

Anti-corrosion verification by accelerated test

Although the previous anti-corrosion model is rusted, the VRV X MAX outer casing shows no signs of corrosion in either test.





#### Heat exchanger (Fin)

Anti-corrosion technology

The aluminum fins on VRV X MAX are manufactured with thicker anti-corrosion layer including an additional two-layer coating.

High performance technology New aluminum fins are 21% thicker to maintain performance.

Automated fin coating line







Corrosion resistance coating\*
Primer base coating\*
High corrosion resistance aluminium fin
Aluminium fin

\* outside area only

Achieves both anti-corrosion and high efficiency

To prevent differences in coating thickness caused by manual application, the additional fin coatings are performed on the latest automated assembly line, maintaining high precision and quality.

<sup>\*</sup> The cross cut was made in order to simulate a severe case of coating damage and corrosion (not from regular usage).

#### Maximize lifespan

A third party tested the corrosion resistance (ISO 9227: salt spray tests) of the reinforced fins and casing for ISO 12944: 2018 Category C5 and confirmed them to be at very high (VH) levels.

ISO 12944-6:2018 : Paints and varnishes – Corrosion protection

of steel structures by protective paint systems

Category C5 : Industrial areas with high humidity and

aggressive atmosphere and coastal areas with high salinity

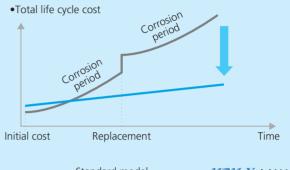
Level VH : Very high (equivalent to an expected life of

25 years \*)

ISO 9227 : Corrosion test in artificial atmospheres-Salt

spray tests

\* This number of years is not the warranty period of the product. Product life depends on installation location and operating conditions. The new model resists corrosion by salt, maintains performance, and greatly reduces life cycle costs.



#### **YRY** X MAX

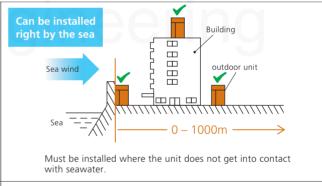
#### **Built for seaside**

#### Previous model: Anti-corrosion

# Sea wind Sea wind Outdoor unit Must be installed at least 300 m away from the sea in a location not in direct contact with sea wind.

300 - 1,000 m

**IRIV** X MAX : Heavy Anti-corrosion

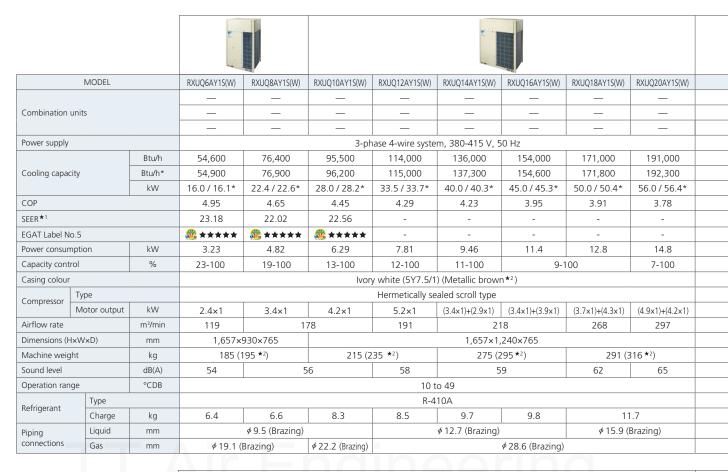


0 - 1,000 m

#### Specifications of anti-corrosion model

Item	Parts		Standard model	VRV X MAX					
1	Sheet metal casing	Outer casing	Hot dip zinc coated sheet + powder coating	Hot-dip zinc-aluminum-magnesium alloy-coated steel sheet + Primer base coating + Powder middle coating + Top coat metallic special coating (metallic brown) + Top clear special coating					
2	Discharge grille • Protect	ion net	Low Density Polyethylene (LDPE) coating						
3	Fasteners		SWCH + zinc-nickel plating	SUS410 + zinc-nickel plating					
4	Heat exchanger		Copper tube + Standard aluminum fin	Copper tube + Anti-corrosion aluminum fin					
5	Aluminum fin		Aluminum fin + Hydrophilic anti-corrosion	Aluminum fin + High corrosion resistance aluminum fin + Primer base coating (outside area only) + Corrosion resistance coating (outside area only)					
6	Heat exchanger end plate	e	Hot-dip zinc-aluminum-magnesium alloy-coated steel sheet without coating	Hot dip zinc coated sheet + corrosion resistance polyurethane coating					
7	Fan motor stand • Electri Inner casing sheet metal	c box •	Galvanized iron sheet	Hot dip zinc coated sheet + corrosion resistance polyurethane coating					
8	Fan • Fan motor		Resin fan + resin casing motor						
9	Pressure vessel (oil separa	ator)	Hot rolled sheet steel + painting	Hot rolled sheet steel + Double rust inhibitor coating with additional touch-up paint					
10	Printed circuit board		Both side resin coating	Expanded both side resin coating					

#### **Specifications**





	MODEL		RXUQ28AMY1S(W)	RXUQ30AMY1S(W)	RXUQ32AMY1S(W)	RXUQ34AMY1S(W)	RXUQ36AMY1S(W)	RXUQ38AMY1S(W)	RXUQ40AMY1S(W)	
			RXUQ12AY1S(W)	RXUQ12AY1S(W)	RXUQ12AY1S(W)	RXUQ14AY1S(W)	RXUQ16AY1S(W)	RXUQ18AY1S(W)	RXUQ20AY1S(W)	
Combination	units		RXUQ16AY1S(W)	RXUQ18AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	
			_	_	_	_	_	_	_	
Power supply				,	3-phase 4-v	vire system, 380-4	15 V, 50 Hz			
		Btu/h	268,000	285,000	305,000	328,000	345,000	362,000	382,000	
Cooling capac	city	Btu/h*	269,500	286,800	307,400	329,800	246,300	363,400	383,900	
		kW	78.5 / 79.0*	83.5 / 84.1*	89.5 / 90.1*	96.0 / 96.7*	101 / 101.5*	106 / 106.5*	112 / 112.5*	
СОР			4.07	4.05	3.96	3.95	3.84	3.84	3.87	
SEER <sup>★1</sup>			-	-	-	-	-	-	-	
EGAT Label N	0.5		-	-	-	-	-	-	-	
Power consur	nption	kW	19.2	20.6	22.6	24.3	26.2	27.6	29.6	
Capacity cont	rol	%		5-100			4-1	00		
Casing colour					Ivory white	(5Y7.5/1) (Metalli	c brown *2)			
	Туре				Herm	etically sealed scro	ll type			
Compressor	Motor output	kW	(5.2×1)+(3.4×1)+(3.9×1)	(5.2×1)+(3.7×1)+(4.3×1)	(5.2×1)+(4.9×1)+(4.2×1)	(3.4×1)+(2.9×1)+ (4.9×1)+(4.2×1)	(3.4×1)+(3.9×1)+ (4.9×1)+(4.2×1)	(3.7×1)+(4.3×1)+ (4.9×1)+(4.2×1)	(4.9×1)+(4.2×1)+ (4.9×1)+(4.2×1)	
Airflow rate		m³/min	191+218	191+268	191+297	218-	+297	268+297	297+297	
Dimensions (H	H×W×D)	mm			(1,657×1,	240×765)+(1,657>	(1,240×765)			
Machine weig	jht	kg	215+275 (235+295*2)	215+291 (2	235+316 <b>*</b> <sup>2</sup> )	275+291 (2	295+316 <b>*</b> ²)	291+291 (3	316+316 <b>*</b> ²)	
Sound level		dB(A)	62	63		66		67	68	
Operation ran	ige	°CDB		,		10 to 49				
D (: .	Туре					R-410A				
Refrigerant	Charge	kg	8.5+9.8	8.5+	11.7	9.7+11.7	9.8+11.7	11.7-	+11.7	
Piping	Liquid	mm	<i>∲</i> 19.1 (Brazing)							
connections	Gas	mm		ø 34.9 (I	Brazing)					

• Sound level: Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.5 m.

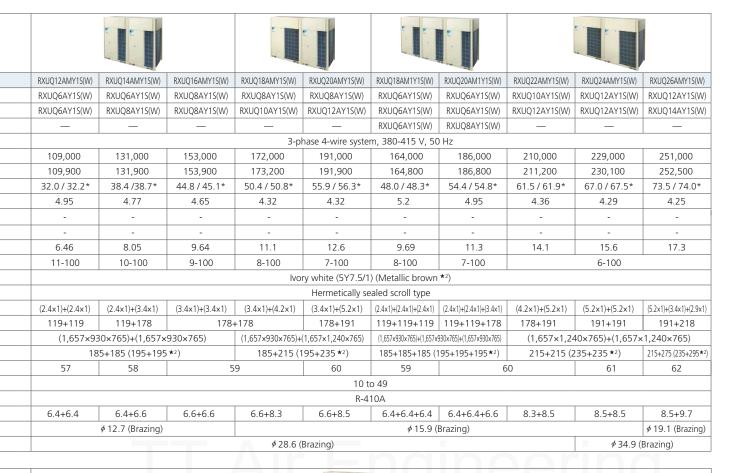
During actual operation, these values are normally somewhat higher as a result of ambient conditions and oil recovery mode. When there is concern for noise to the surrounding area such as residences, we recommend investigating the installation location and taking soundproofing measures.

<sup>\*</sup>Notes: Specifications are based on the following conditions;

• Cooling: Indoor temp.: 27°CDB, 19°CWB,; \*27°CDB, 19.5°CWB, Outdoor temp.: 35°CDB, Equivalent piping length: 7.5 m, Level difference: 0 m.

VRV X Series





RXUQ42AMY1S(W)	RXUQ44AMY1S(W)	RXUQ46AMY1S(W)	RXUQ48AMY1S(W)	RXUQ50AMY1S(W)	RXUQ52AMY1S(W)	RXUQ54AMY1S(W)	RXUQ56AMY1S(W)	RXUQ58AMY1S(W)	RXUQ60AMY1S(W)
RXUQ12AY1S(W)	RXUQ12AY1S(W)	RXUQ12AY1S(W)	RXUQ12AY1S(W)	RXUQ12AY1S(W)	RXUQ12AY1S(W)	RXUQ14AY1S(W)	RXUQ16AY1S(W)	RXUQ18AY1S(W)	RXUQ20AY1S(W)
RXUQ12AY1S(W)	RXUQ12AY1S(W)	RXUQ14AY1S(W)	RXUQ16AY1S(W)	RXUQ18AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)
RXUQ18AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)	RXUQ20AY1S(W)
			3-pl	nase 4-wire system	m, 380-415 V, 50	) Hz			
399,000	420,000	444,000	461,000	478,000	498,000	519,000	536,000	553,000	573,000
402,600	423,100	445,300	462,300	479,400	499,900	522,000	539,100	556,200	576,600
117 / 118*	123 / 124*	130 / 130.5*	135 / 135.5*	140 / 140.5*	146 / 146.5*	152 / 153*	157 / 158*	162 / 163*	168 / 169*
4.12	4.05	4.05	3.96	3.95	3.9	3.89	3.82	3.82	3.78
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
28.4	30.4	32.1	34.0	35.4	37.4	39.1	41.0	42.4	44.4
4-100				3-1	00				2-100
			Ivo	ry white (5Y7.5/1	) (Metallic brown	<b>*</b> 2)			
				Hermetically se	aled scroll type				
(5.2×1)+(5.2×1)+ (3.7×1)+(4.3×1)	(5.2×1)+(5.2×1)+ (4.9×1)+(4.2×1)	(5.2×1)+(3.4×1)+(2.9×1)+ (4.9×1)+(4.2×1)	(5.2×1)+(3.4×1)+(3.9×1)+ (4.9×1)+(4.2×1)	(5.2×1)+(3.7×1)+(4.3×1)+ (4.9×1)+(4.2×1)	(5.2×1)+(4.9×1)+(4.2×1)+ (4.9×1)+(4.2×1)	(3.4×1)+(2.9×1)+(4.9×1)+ (4.2×1)+(4.9×1)+(4.2×1)		(3.7×1)+(4.3×1)+(4.9×1)+ (4.2×1)+(4.9×1)+(4.2×1)	(4.9x1)+(4.2x1)+(4.9x1)+ (4.2x1)+(4.9x1)+(4.2x1)
191+191+268	191+191+297		18+297	191+268+297	191+297+297	218+29		268+297+297	297+297+297
				×765)+(1,657×1,					
215+215+291 (2	35+235+316 *2)	215+275+291 (2	235+295+316 *2)	215+291+291 (2	35+316+316*2)	275+291+291 (2		291+291+291 (3	16+316+316 <b>*</b> <sup>2</sup> )
65	66		67		68		69		70
				10 to	o 49				
				R-4	10A				
 8.5+8.	5+11.7	8.5+9.7+11.7	8.5+9.8+11.7	8.5+11	.7+11.7	9.7+11.7+11.7	9.8+11.7+11.7	11.7+1	1.7+11.7
				ø 19.1 (l	Brazing)				
				φ41.3 (l	Brazing)				

Note: ★1. SEER official announced from EGAT

★2. Models with (W) are the outdoor units with anti-corrosion specifications. For details, refer to pages 23 - 24 for more information.

# Option List

#### Outdoor units

#### **VRV** X SERIES

No	).	Item	Туре	RXUQ6A(W) RXUQ8A(W) RXUQ10A(W)	RXUQ12A(W) RXUQ14A(W) RXUQ16A(W) RXUQ18A(W) RXUQ20A(W)	RXUQ12AM(W) RXUQ14AM(W) RXUQ16AM(W) RXUQ18AM(W) RXUQ20AM(W)	RXUQ18AM1(W) RXUQ20AM1(W) RXUQ22AM(W)			
1		Distributive piping	REFNET header	KHRP26M22H, KHRP26M33H (Max. 4 branch) (Max. 8 branch)		122H, KHRP26M33H, KHF anch) (Max. 8 branch) (Ma				
		p.p.r.g	REFNET joint	KHRP26A22T, KHRP26A33T	KHRP26	RP26A22T, KHRP26A33T, KHRP26A72T				
2		Outdoor unit	multi connection piping kit	_	— BHFP22P100					
		Outdoor driit	Thata connection piping kit			l Billi	221 100			

No.	Item	Туре	RXUQ24AM(W) RXUQ26AM(W) RXUQ28AM(W) RXUQ30AM(W) RXUQ32AM(W)	RXUQ34AM(W) RXUQ36AM(W) RXUQ38AM(W) RXUQ40AM(W)	RXUQ42AM(W) RXUQ44AM(W) RXUQ46AM(W) RXUQ48AM(W) RXUQ50AM(W)	RXUQ52AM(W) RXUQ54AM(W) RXUQ56AM(W) RXUQ58AM(W) RXUQ60AM(W)				
1	Distributive piping	REFNET header			KHRP26M72H, KHRP26M (Max. 8 branch) (Max. 8 b					
	p.p.i.g	REFNET joint	KHRP26A22T, KHRP26A33T, KHRP26A72T, KHRP26A73T							
2	Pipe size redu	ucer	KHRP26M73TP, KHRP26M73HP							
3	Outdoor unit	multi connection piping kit	BHFP2	2P100	BHFP22P151					

TT Ai

REFNET joint (KHRP26A22/33/72/73T)





#### Option PCB

No.	Type	RXUQ6A(W) RXUQ8A(W)	RXUQ10A(W) RXUQ12A(W) RXUQ14A(W) RXUQ16A(W) RXUQ18A(W) RXUQ20A(W)	RXUQ12AM(W) RXUQ14AM(W) RXUQ16AM(W) RXUQ18AM1(W) RXUQ20AM1(W)	RXUQ18AM(W) RXUQ20AM(W)					
1	DIII-NET expander adaptor ★	DTA109A51								
2	External control adaptor ★	DTA104A61								
3	Home Automation Interface Adaptor ★	DTA116A51								
4	Option plate for control adaptor	_	BKS26A*1	_	BKS26A*1					

No.	Type	RXUQ22AM(W) RXUQ24AM(W) RXUQ26AM(W) RXUQ28AM(W) RXUQ28AM(W)	RXUQ32AM(W) RXUQ34AM(W) RXUQ36AM(W) RXUQ38AM(W) RXUQ40AM(W)	RXUQ42AM(W) RXUQ44AM(W) RXUQ46AM(W) RXUQ48AM(W) RXUQ50AM(W)	RXUQ52AM(W) RXUQ54AM(W) RXUQ56AM(W) RXUQ58AM(W) RXUQ60AM(W)					
1	DIII-NET expander adaptor ★	DTA109A51								
2	External control adaptor ★	DTA104A61								
3	Home Automation Interface Adaptor ★	DTA116A51								
4	Option plate for control adaptor	BKS26A*1								

Category	Туре	Model Name		Capacity Range Capacity Index	20 0.8 HP 20	25 1 HP 25	32 1.25 HP 31.25	40 1.6 HP 40	50 2 HP 50	63 2.5 HP 62.5	71 3 HP 71	80 3.2 HP 80	100 4 HP 100	125 5 HP 125	140 6 HP 140	200 8 HP 200	250 10 HP 250	400 16 HP 400	500 20 HP 500
Ceiling Mounted Cassette	Round Flow Cassette with Sensing	FXFSQ-AVS	VRT smart																
		FXFTQ-AVS	VRT smart	+ C															
	Round Flow Cassette	FXFQ-AVS	VRT smart											•					
		FXFRQ-AVS	VRT smart	+ C															
	Compact Multi Flow Cassette	FXZQ-BV2S	VRT smart	+ ***															
_	Double Flow Cassette	FXCQ-BVMS	VRT smart	+ STREAMER															
	Single Flow Cassette	FXEQ-AV36	VRT																
	3D Airflow Duct with Sensing	FXDSQ-AVM	VRT																
luct	Slim Duct (Standard)	FXDQ-PDV2S (with drain pump) FXDQ-PDVTS (without drain pump) FXDQ-NDV2S (with drain pump) FXDQ-NDVTS	VRT smart  VRT smart  VRT smart  VRT smart	(700 mm width type)  (900/1,100 mm width type)	•	•	•	•	•	•									
cealed	Bedroom Duct	(without drain pump)  FXDBQ-AVMS (with drain pump)	VRT	\ width type /															
Ceiling Concealed Duct	Slim Duct (Compact)	FXDQ-SPV1	VRT																
Ceil	Middle Static Pressure Duct	FXSQ-PAVS	VRT smart																
	Middle-High Static Pressure Duct	FXMQ-PAVS	VRT smart									•							
	High Static Pressure Duct	FXMQ-MVES	VRT													•	•		
-		FXMQ-PVM	VRT																
	Outdoor-Air Processing Unit	FXMQ-MFV1 FXMQ-BFV2S	VRT VRT smart																
nded	4-Way Flow Ceiling Suspended	FXUQ-AVEB	VRT																
Suspe		FXHQ-MAVS	VRT																
Ceiling Suspended	Ceiling Suspended	FXHQ-BVMS	VRT smart	+ C	k l														
Wa	all Mounted	FXAQ-AVMS	VRT smart																
D _	Floor Standing	FXLQ-MAVE	VRT																
tandin	Concealed Floor Standing	FXNQ-MAVE	VRT	P															
Floor Standing	Floor Standing Duct	FXVQ-NY1  FXVQ-NY16 [high static pressure type]	VRT																•
Cle	an Room Air Conditioner	FXBQ-PVE FXBPQ-PVE	VRT																
Heat Reclaim Ventilator with DX-Coil		VKM-GCVE			Airfl	ow ra	te 500-	1000 r	m3/h										
Heat Reclaim Ventilator		VAM-HVE		001	Airflow rate 150-2000 m3/h														
Air Handling Unit		AHUR			6-120 HP														
Duct Streamer Chamber		BDEZ500A-VE		••••••••••••••••••••••••••••••••••••••	Airfl	ow ra	te 80-5	100 m	13/h										

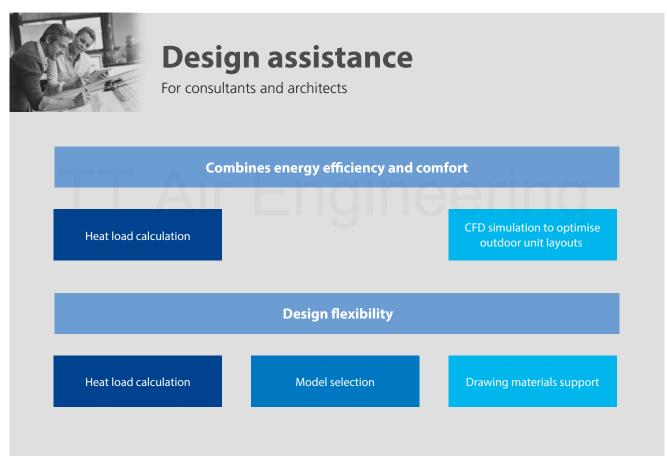
<sup>\*</sup> Optional part

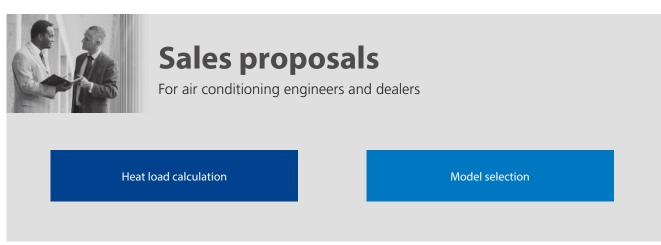
## Daikin Engineering Supports

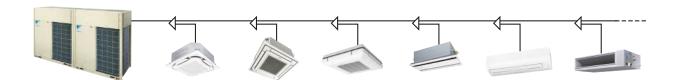
#### VRV design and sales proposal assistance

Daikin provides engineering supports for VRV systems. It consists of design supports that can assist consultants and architects, as well as sales proposal supports for air conditioning engineers and dealers. We at Daikin provide the software, the simulation results, and drawing materials to support the building information modeling (BIM) currently entering the mainstream in construction industries.









#### **Model selection software**

CADXpress is a flexible design software that optimises equipment selection and CAD drawing. It can empower consultants and air conditioning engineers so they can fully enhance their equipment selections to design the most effective, optimum systems possible. The software also allows the choice of outdoor units based on peak loads rather than the sum of required capacities for each indoor unit. This fine-tuning feature reduces VRV system sizes and increases efficiency.

Additionally, the CAD function enables automatic calculation of piping diameter and length without any need for CAD software.

#### CADXpress



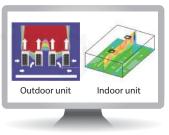
#### **CFD simulation to optimise outdoor unit layouts**

DT FLOW 2 is a simulation software that uses computational fluid dynamics (CFD), aiming to optimise outdoor unit layouts right at the design stage.

When discharged air from the outdoor unit is drawn back into the suction vent, it can short circuit the system and lead to: decrease in efficiency of cooling operations, capacity shortages, operation cut-offs, and shorter lifetime for the outdoor unit. To avoid the need for expensive layout modifications once construction is complete, Daikin uses the CFD method at the early design stage. This can help consultants and architects optimise their outdoor unit arrangement.

New software for indoor airflow simulation will be coming soon. Indoor airflow simulation is a method for predicting temperature distribution and velocity distribution of indoor environment.

#### DT FLOW 2



#### **Heat load calculation**

DS-HL2 uses ASHRAE's Radiant Time Series method to compute heat load for a 24-hour period on summer and winter days. The Radiant Time Series considers the delay in heat load coming into the room through outer walls and the roof in the form of conduction and radiation. Airflow calculation for rooms can be performed. Detailed reports are available for different breakdown requirements. Additional monthly calculation is also available with an advanced license tier.

24-hour weather data for all major cities is based on data recorded from past years.

#### DS-HL2



#### **Drawing supports**

Users download CAD symbol drawing materials, including 2D CAD symbols and 3D Revit data, for VRV systems designing. The 3D Revit data contains specifications for Daikin products, including things like capacities and electric characteristics to support Building Information Modeling (BIM).

#### **CAD Symbols**



## **VRV** User Benefits



#### For property OWNERS

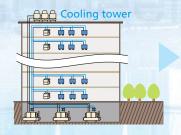
#### **Energy saving & comfortable environment**

- VRT Smart greatly reduces the energy by optimising the capacity according to heat load, especially during low-load operation.
- Comfortable indoor environment is maintained at the time.



#### Efficient space utilisation

- When construct a large-scale air conditioning system on a single refrigerant system, space for air conditioning is drastically reduced.
- Even with a 20-storey building all of the outdoor units can be installed on the rooftop.

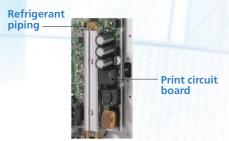




#### High reliability

- Refrigerant cooled PCB
   Daikin's unique refrigerant cooling helps maintain
   high cooling capacity even during high outdoor
   temperatures.
- Double backup operation
   Unit backup & Compressor backup ensure continuous operation.





Heavy anti-corrosion model
 The heavy anti-corrosion
 models can provide
 durable operation at
 humid and seaside areas.
 Also, outdoor unit can
 be installed from 0 m
 from coastline.





#### For USERS

#### Comfortable environment

• VRT Smart operation maintains the indoor temperature and ensures a comfortable environment.

#### Residential indoor units

- Residential indoor units can be connected and it is possible to realise quiet operation.
- By remotely installing an BP unit, the noise of refrigerant passing though the piping can be reduced.





## For CONSULTANT and DESIGN OFFICES

#### Varied lineup of models

• With various types of indoor units available, comfortable airflow is ensured in every space.

#### Long piping provides more flexible system design

- Maximum equivalent piping length between indoor and outdoor unit is 190 m.
- Maximum height difference is 90 m.

#### Compatible with engineering software

• Daikin provide the software, the simulation results, and drawing materials to support the building information modeling (BIM) currently entering the mainstream in construction industries.

#### **Energy efficient**

 Achieves your green building solution by Daikin's innovative energy-saving technology.







#### For INSTALLERS



#### Automatic refrigerant charge function

• Automates the charging of proper refrigerant amount to contribute to optimised operation efficiency, higher quality and easier installation.

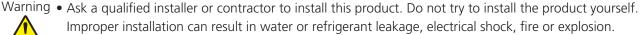
#### Lightweight and compact large-capacity single units

• Easy to install and can be transported in elevators.

#### Simple piping, easy wiring

• The REFNET piping system and DIII-NET system simplify refrigerant piping and control wiring installation.





- 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 unauthorised 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.
- About harmonics, since this product is equipped with an inverter, harmonics will be generated. If local laws require the suppression of harmonics on the building, please take harmonic suppression measures on the electrical equipment side. Please contact your local sales company for details.

Notice



If you have any enquiries, please contact your local importer, distributor and/or retailer.

#### 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.



#### SIAM DAIKIN SALES CO..LTD.

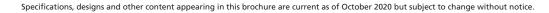
22 Soi On Nut 55/1 Prawet Subdistrict, Prawet District Bangkok 10250

> Tel. 0-2838-3200 Fax. 0-2721-7607

This product complies with TIS1529-2561 and covers the air conditioner total cooling capacity up to 18000 W.

**VRV** is a trademark of Daikin Industries, Ltd.

VRV Air Conditioning System is the world's first individual air conditioning system with variable refrigerant flow control and was commercialised by Daikin in 1982. VRV is the trademark of Daikin Industries, Ltd., which is derived from the technology we call "variable refrigerant volume.



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