

VRV S High Seasonal Efficiency SERIES

The Ideal Air Conditioning System
for Residential Houses,
Small Offices and Shops

Heat Pump
4 HP – 8 HP
(11.2 kW) (22.4 kW)

New



RSUYQ4-6AVM
RSUYQ7-8AYM

The VRV S High Seasonal Efficiency Series concept

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.

Energy savings
& comfort

High performance
& reliability

Design
flexibility of
installation

Energy savings & comfort

- ✓ Higher energy efficiency
- ✓ VRT Smart Control
- ✓ Quiet operation

High performance & reliability

- ✓ Extended operation range up to 52°C
- ✓ High voltage shield PCB
- ✓ Automatic refrigerant charge function

Design flexibility of installation

- ✓ The high external static pressure of 40 Pa enables installation in small installation spaces where the airflow direction needs to be diverted to avoid short circuits.
- ✓ Low height casing design
- ✓ Increased actual piping length up to 120 m

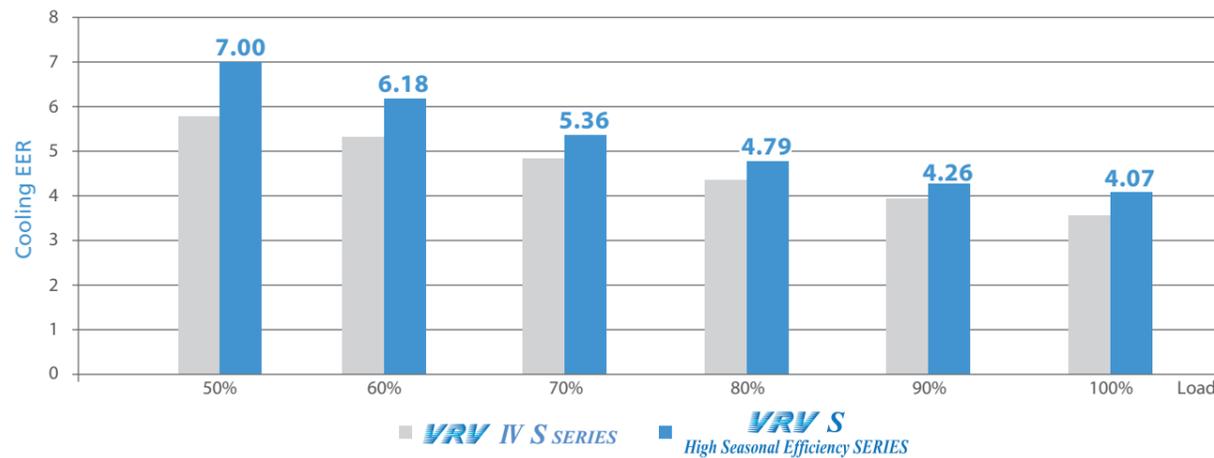
Energy Savings & Comfort

Energy savings

High seasonal efficiency

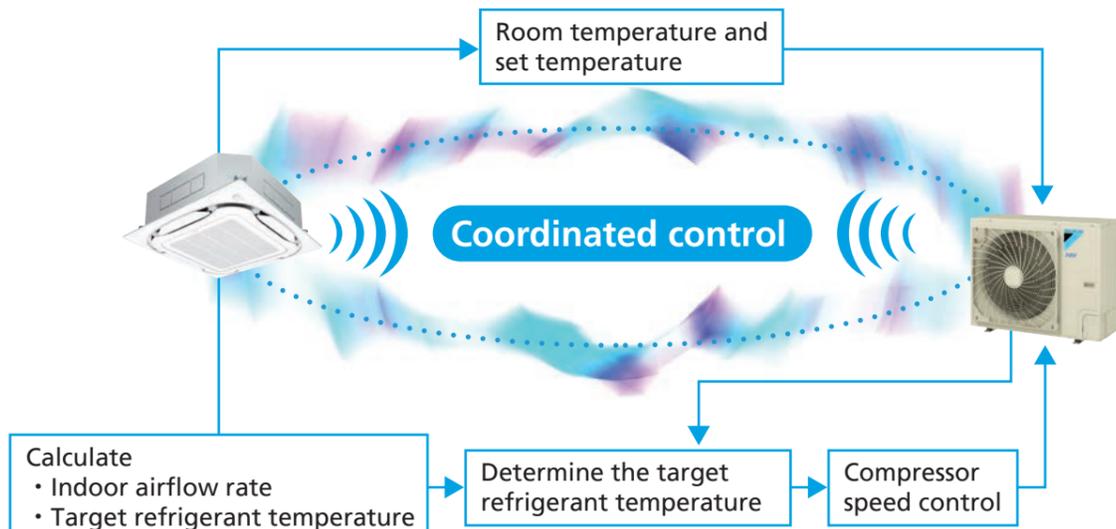
The VRT Smart Control enables improvements on efficiency during low load operation, achieving high seasonal efficiency.

EER for 5 HP



VRT Smart Control

VRT Smart function is available in the VRV S High Seasonal Efficiency Series for the first time. Coordination between indoor and outdoor units minimizes energy consumption by optimising capacity to meet actual operation load.



Notes: • For the classification of indoor units (VRT smart control and VRT control), refer to pages 57 - 58.
 • If a system has indoor units subject to both VRT smart and VRT control, the system is operated under VRT control.
 • If a system has both outdoor-air processing air conditioners and outdoor-air processing type indoor units, VRT smart control and VRT control are disabled.

Comfort

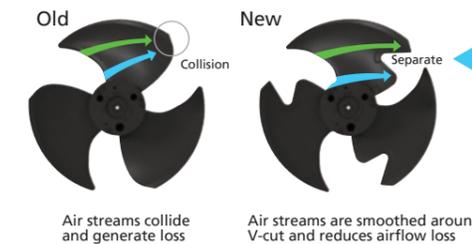
Quiet operation

Low operation sound

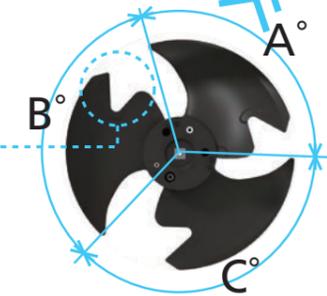
New fan and bell mouth help enable low operation sound.

Cooling	4 HP	5 HP	6 HP	7 HP	8 HP
New	51	51	52	58	59

V-cut & irregular pitch propeller fan



The fan's V-cut enables streamlined and effective airflow.



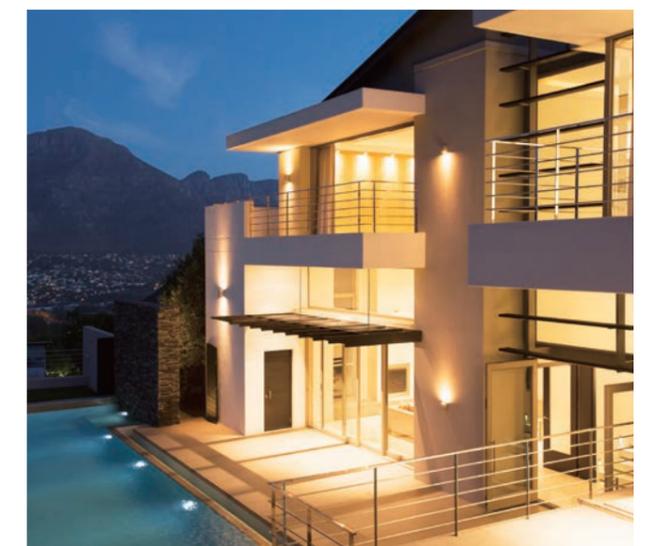
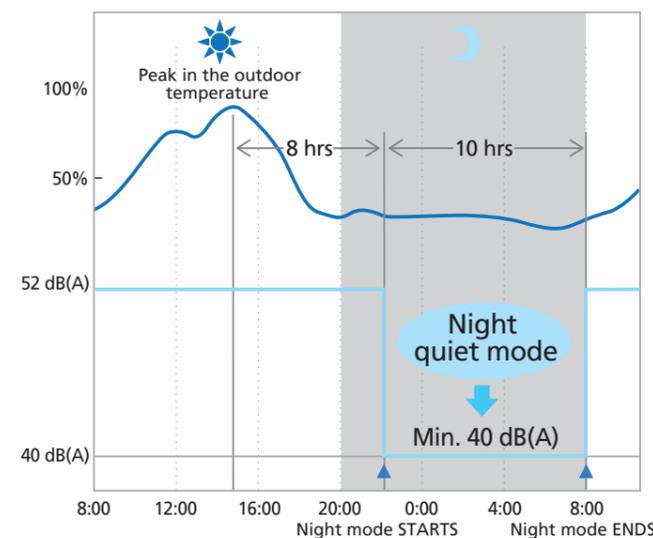
Irregular blade pitch also contributes to reduced airflow noise.

$$A^\circ < B^\circ < C^\circ$$

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. This function is suitable for use in residential areas.

Cooling	Night Quiet Mode
RSUYQ4/5/6A	Min. 40 dB(A)
RSUYQ7/8A	Min. 45 dB(A)



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.
 • In case of 4-6 HP outdoor unit

High Performance & Reliability

High temperature operation

Extended operation range up to 52°C

The outdoor operation temperature range is now extended to 52°C. This enables reliable operation even under high temperature conditions and a wider choice of installation locations.



The refrigerant-cooled PCB and large 3-row heat exchanger raise the maximum cooling outdoor operation temperature from 46°C to 52°C.



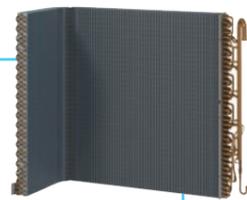
Refrigerant cooled PCB

Daikin's unique refrigerant cooling helps maintain high cooling capacity even during high outdoor temperatures.



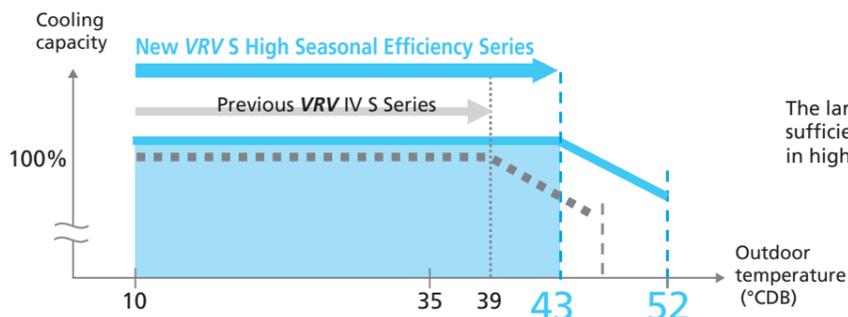
New heat exchanger

- 2-sided 3-row
- Heat exchanger area **68% UP** (4,5 HP model only)



Keep rated cooling capacity in high outdoor temperature up to 43°C

Rated cooling capacity can be maintained even when outdoor temperature is up to 43°C.

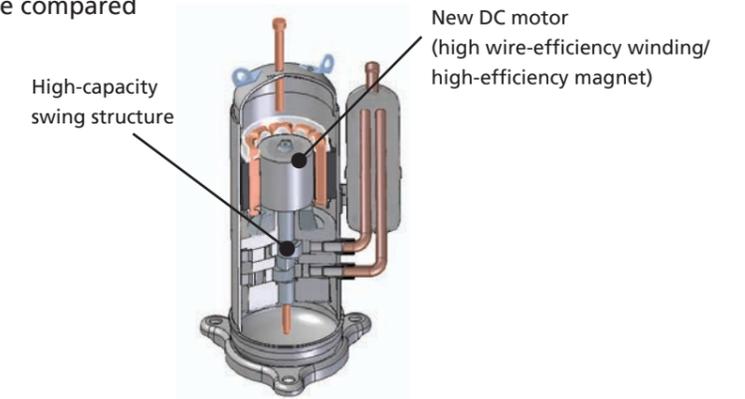


The large heat exchanger ensures sufficient cooling capacity even in high ambient temperatures.

New swing compressor

High efficiency, high capacity DC inverter swing compressor

The new compressors offer higher performance compared to that of conventional scroll compressors.

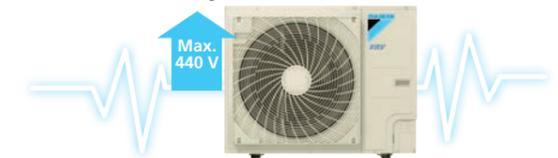


Improved performance

The new DC motor designed with small-diameter bearing and improved efficiency during low-speed operation has improved seasonal efficiency.

High voltage shield PCB (4-6 HP model only)

The high voltage shield PCB protects the electrical parts and prevents malfunctions at the highest voltage of 440 V.



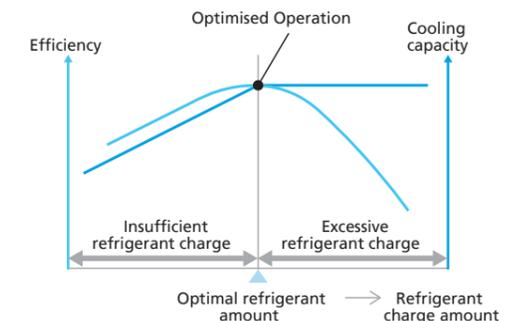
* Continuous operation range is 198 to 264 V.

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.



Higher quality and easier installation

The automatic refrigerant charge function automates the charging of the proper refrigerant amount and easy start by pressing one button.

1 Calculation of necessary refrigerant amount from design drawing



2 Start of automatic refrigerant charge operation



- Automatic completion by proper refrigerant amount
- Monitoring refrigerant charging is unnecessary
- No recalculation of charge amounts due to minor design changes locally

* Must use automatic refrigerant charge function. Refer to installation manual for details.

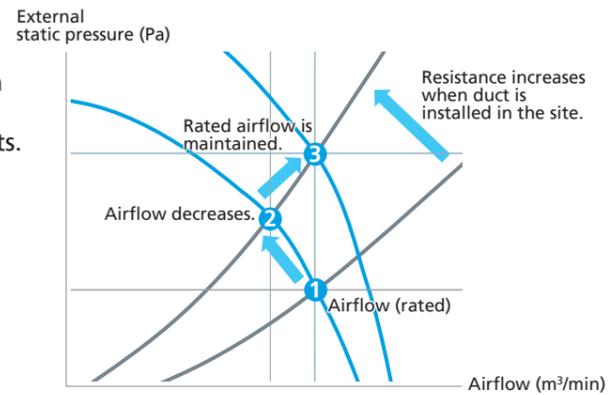
Design Flexibility of Installation

No short circuits

High external static pressure up to 40 Pa and automatic adjustment of external static pressure

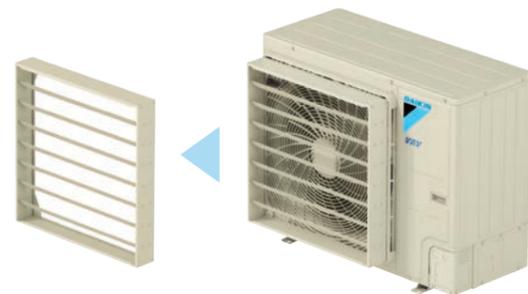
The new VRV S High Seasonal Efficiency Series outdoor unit has been achieved high external static pressure up to 40 Pa, realizing stable operation in small installation sites where the air direction adjustment grille or duct is used to avoid short circuits.

The external static pressure automatic adjustment function maintains rated airflow and capacity by automatically adjusting the external static pressure during the test operation to suit the resistance of the installation site.



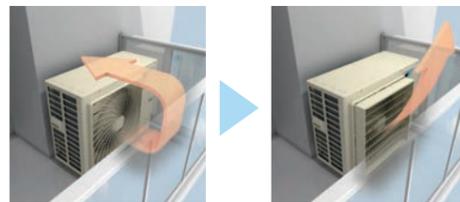
Optimum airflow direction with the optional air direction adjustment grille

When discharged air is blocked by some obstacle, the optional air direction adjustment grille can divert the airflow to one of 4 directions (up, down, left or right) to avoid the obstacle.

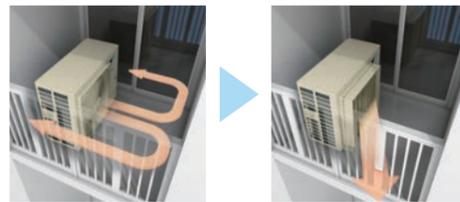


Air direction adjustment grille (option)

Wind is diverted upwards.

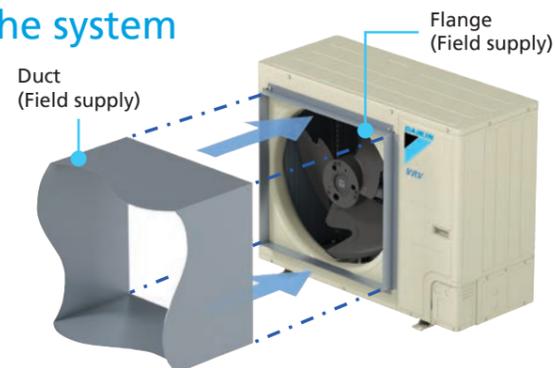


Wind is diverted sideways.



Duct installation to stabilize the system

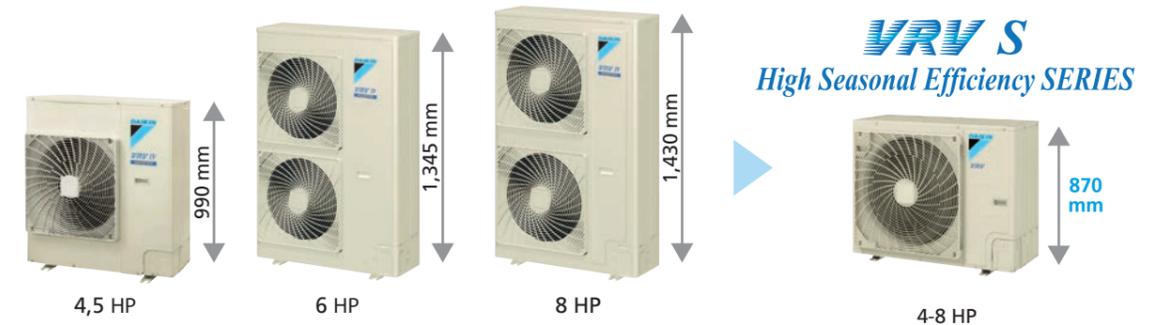
When the obstacle is not avoidable by the air direction adjustment grille, installing a field-supplied duct can bypass the obstacle. In this way, installation of the outdoor unit is possible in places like behind an advertising board.



Low height casing design

The new design has been optimised for the VRV S High Seasonal Efficiency Series with the height of all models reduced to only 870 mm. This low height casing design provides occupants with a clear, unobstructed view of the scenery.

Previous VRV IV S series

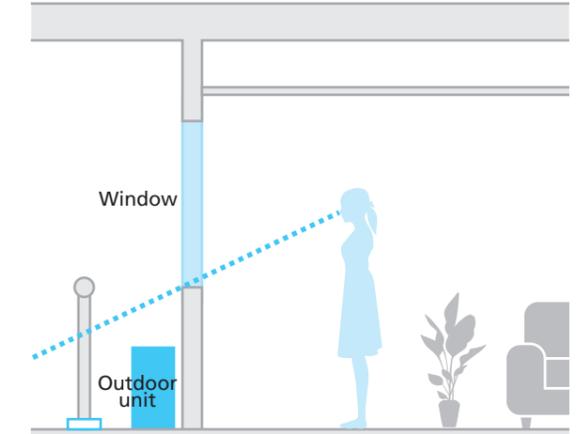


- Ideal solution that minimises both visual and sound impact
- Can be installed in a wide variety of locations and applications
- No space required for multiple outdoor units

View from outside

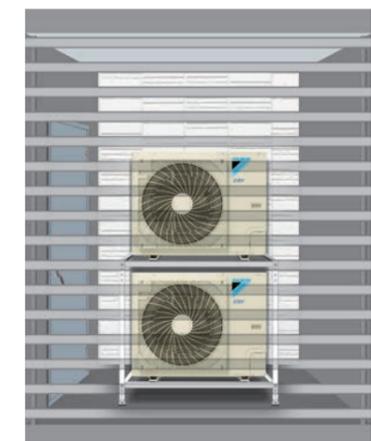


View from inside



Double-stacking installation possible

The low height casing design allows for compact double-stacking of outdoor units to maximize utilization of installation space.



Design Flexibility of Installation

Increased actual piping length up to 120 m*

Actual piping length increased by 20% allows for various installation!

Installation on the rooftop of residential apartments

Previous VRV IV S series **100 m** **▶** **120 m***
 VRV S High Seasonal Efficiency SERIES



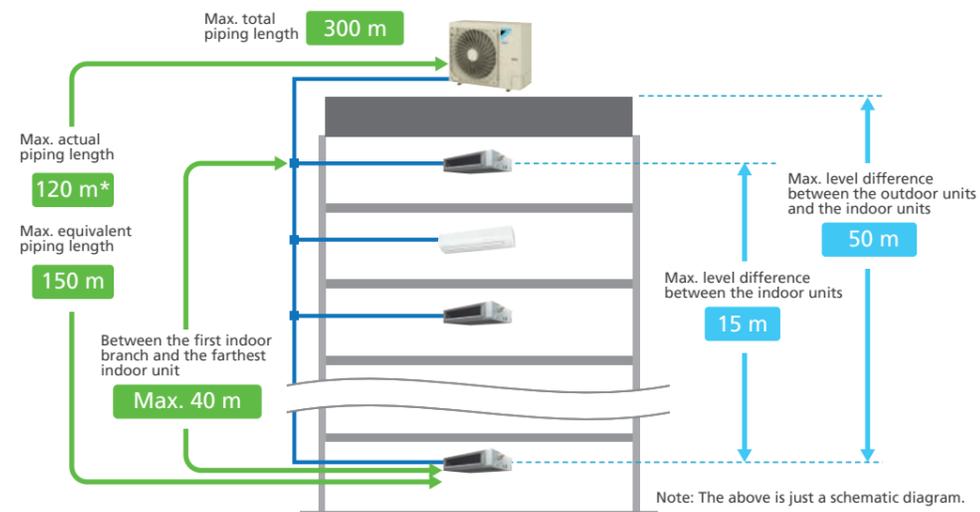
Installation on balconies of residential apartments



One outdoor unit can provide comfort for the whole house



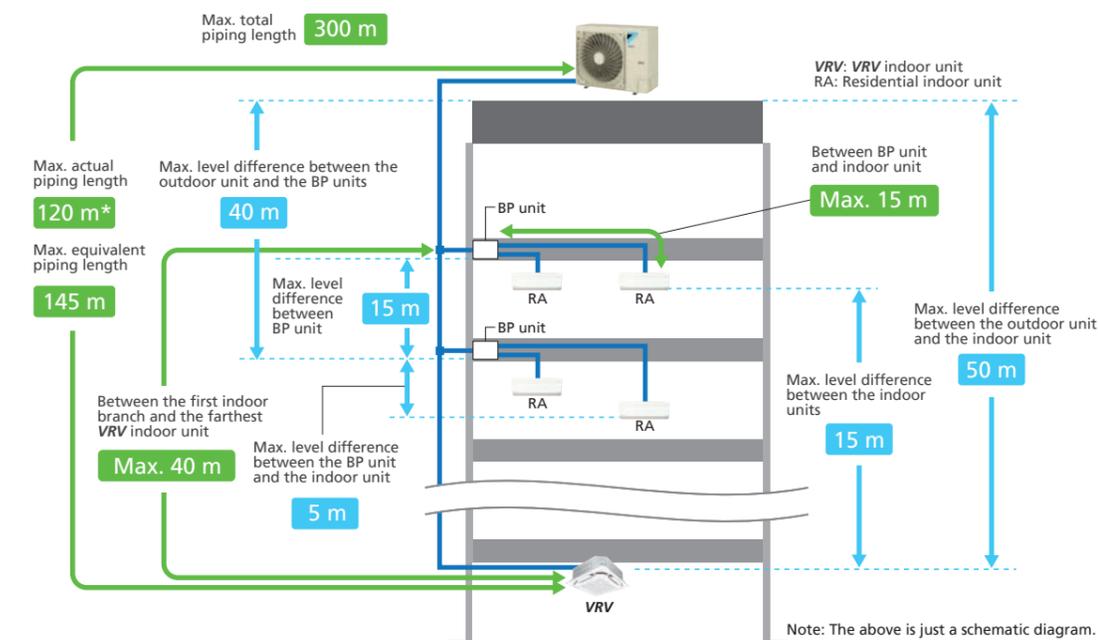
Installation for VRV indoor units only



	4 HP	5-8 HP	
Maximum allowable piping length	Actual piping length (Equivalent)	120 m* (150 m)	120 m* (150 m)
	Total piping length	300 m	300 m
	Between the first indoor branch and the farthest indoor unit	40 m	40 m
Maximum allowable level difference	Between the indoor units	10 m	15 m
	Between the outdoor units and the indoor units	If the outdoor unit is above. 50 m If the outdoor unit is below. 40 m	50 m 40 m

* Must use automatic refrigerant charge function. Refer to installation manual for details.

Installation for mixed combination of VRV and residential indoor units



	4 HP	5-8 HP	
Maximum allowable piping length	Actual piping length (Equivalent)	120 m* (145 m)	120 m* (145 m)
	Total piping length	300 m	300 m
	Between BP unit and indoor unit	If indoor unit capacity index < 60. 2 m-15 m If indoor unit capacity index is 60. 2 m-12 m If indoor unit capacity index is 71. 2 m-8 m	2 m-15 m 2 m-12 m 2 m-8 m
Minimum allowable piping length	Between the first indoor branch and the farthest BP unit or between the first indoor branch and the farthest VRV indoor unit	40 m	40 m
	Between outdoor unit and the first indoor branch	5 m	5 m
Maximum allowable level difference	Between the indoor units	10 m	15 m
	Between BP units	10 m	15 m
	Between the outdoor unit and the indoor unit	If the outdoor unit is above. 50 m If the outdoor unit is below. 40 m	50 m 40 m
	Between the outdoor unit and the BP unit	40 m	40 m
	Between the BP unit and the indoor unit	5 m	5 m

* Must use automatic refrigerant charge function. Refer to installation manual for details.

Indoor Unit Lineup

Wide variety of indoor units

Indoor units can be selected from 2 lineups, both **VRV** and residential indoor units, to match rooms and preferences.

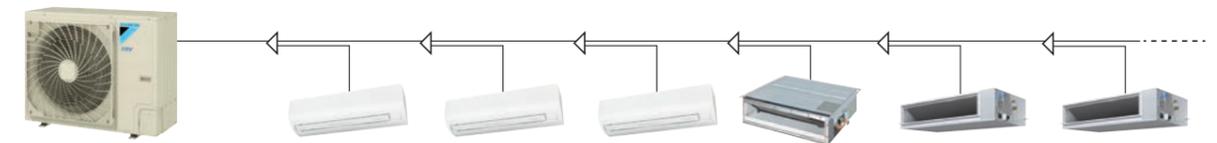
VRV indoor units

Category	Type	Model Name	Capacity Range	Indoor units subject to VRT smart control														Indoor units subject to VRT control	
				Capacity Index														Capacity Index	
				0.8 HP	1 HP	1.25 HP	1.6 HP	2 HP	2.5 HP	3 HP	3.2 HP	4 HP	5 HP	6 HP	8 HP	10 HP	20	250	
Ceiling Mounted Cassette	Round Flow Cassette with Sensing	FXFSQ-AVM			●	●	●	●	●			●	●	●	●				
	Round Flow Cassette	FXFQ-AVM			●	●	●	●	●			●	●	●	●				
	Compact Multi Flow Cassette	New FXZQ-AVM		●	●	●	●	●											
	Double Flow Cassette	FXCQ-AVM		●	●	●	●	●				●							
	Corner Cassette	FXKQ-MAVE			●	●	●	●											
Ceiling Concealed Duct	Slim Duct (Standard)	FXDQ-PDVE (with drain pump)		●	●	●													
		FXDQ-PDVET (without drain pump)		●	●	●													
		FXDQ-NDVE (with drain pump)					●	●	●										
		FXDQ-NDVET (without drain pump)					●	●	●										
Middle Static Pressure Duct	FXSQ-PAVE		●	●	●	●	●	●			●	●	●	●					
Middle-High Static Pressure Duct	FXMQ-PAVE		●	●	●	●	●	●			●	●	●	●					
High Static Pressure Duct	FXMQ-MVE9															●	●		
Outdoor-Air Processing Unit	FXMQ-MFV1													●		●			
Ceiling Suspended	4-Way Flow Ceiling Suspended	FXUQ-AVEB												●		●			
	Ceiling Suspended	FXHQ-MAVE				●			●					●					
		FXHQ-AVM												●	●				
Wall Mounted	FXAQ-AVM		●	●	●	●	●	●											
Floor Standing	Floor Standing	FXLQ-MAVE		●	●	●	●	●	●										
	Concealed Floor Standing	FXNQ-MAVE		●	●	●	●	●	●										
Heat Reclaim Ventilator	VAM-GJVE		Airflow rate 150-2000 m ³ /h																

Residential indoor units with connection to BP units

Type	Model Name	Rated Capacity (kW)	20	25	35	50	60	71
			Capacity Index	20	25	35	50	60
Slim Ceiling Concealed Duct	CDXS-EAVMA			●	●			
	FDXS-CVMA			●	●	●	●	
Wall Mounted	FTXS-DVMA		●	●	●			
	FTXS-FVMA					●	●	●

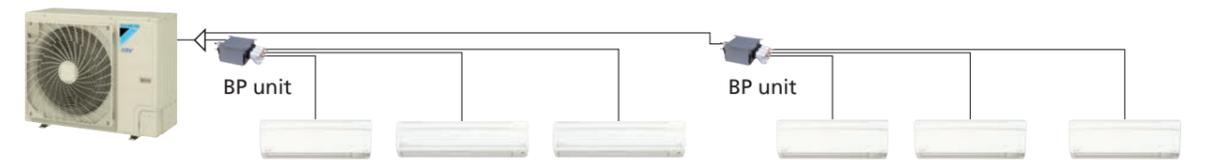
Note: BP units are necessary for residential indoor units.



VRV indoor units only

Max. 13 indoor units

- If a system has indoor units subject to both VRT smart and VRT control, the system is operated under VRT control.
- If a system has both outdoor-air processing air conditioners and outdoor-air processing type indoor units, VRT smart control and VRT control are disabled.



Residential indoor units only

Max. 13 indoor units

- BP units are necessary for residential indoor units.
- If a system has only residential indoor units, the system is operated under VRT control.



Outdoor Units

VRV S High Seasonal Efficiency Series

Specifications

Heat Pump



MODEL		RSUYQ4AVM	RSUYQ5AVM	RSUYQ6AVM	RSUYQ7AYM	RSUYQ8AYM	
Power supply		1-phase, 220-240/220-230 V, 50/60 Hz			3-phase, 380-415 V/380 V, 50/60 Hz		
Cooling capacity	Btu/h	38,200	47,800	54,600	68,200	76,400	
	kW	11.2	14.0	16.0	20.0	22.4	
Heating capacity	Btu/h	42,700	54,600	61,400	76,400	85,300	
	kW	12.5	16.0	18.0	22.4	25.0	
Power consumption	Cooling	kW	2.49	3.44	4.10	5.46	6.61
	Heating	kW	2.54	3.37	3.98	5.10	5.92
Capacity control	%	23 to 100	15 to 100		9 to 100		
Casing colour		Ivory white (5Y7.5/1)					
Compressor	Type	Hermetically sealed swing type					
	Motor output (Cooling / Heating)	kW	2.0/2.4	3.1/3.6	3.5/4.0	1.9/2.3	3.2/3.2
Airflow rate	Cooling	m ³ /min	87	84	87	123	
	Heating	m ³ /min	90	84	94	137	145
Dimensions (HxWxD)	mm	870x1,100x460					
Machine weight	kg	95	98		120		
Sound level (Cooling/Heating)	dB(A)	51/52		52/54	58/61	59/63	
Operation range	Cooling	°CDB		-5 to 52			
	Heating	°CWB		-20 to 15.5			
Refrigerant	Type	R-410A					
	Charge	kg	4.0	4.2		5.4	
Piping connections	Liquid	mm					
	Gas	mm		mm			
		φ 15.9 (Flare)		φ 9.5 (Flare)			
				φ 19.1 (Brazing)			

Note: 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.
- Heating: Indoor temp.: 20°CDB, Outdoor temp.: 7°CDB, 6°CWB, Equivalent piping length: 7.5 m, Level difference: 0 m.
- 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 the surrounding area such as residences, we recommend investigating the installation location and taking soundproofing measures.
- Refrigerant charge is required.

Outdoor unit combinations

MODEL		RSUYQ4AVM	RSUYQ5AVM	RSUYQ6AVM	RSUYQ7AYM	RSUYQ8AYM	
kW		11.2	14.0	16.0	20.0	22.4	
HP		4	5	6	7	8	
Capacity index		100	125	150	175	200	
Total capacity index of connectable indoor units	Combination(%)	50%*1	50	62.5	75	87.5	100
		80%*2	80	100	120	140	160
		100%	100	125	150	175	200
		130%	130	162.5	195	227.5	260
Maximum number of connectable indoor units		6	8	9	11	13	

Note: ★ 1. When only VRV indoor units are connected, total capacity index of connectable indoor units must be 50%-130% of the capacity index of the outdoor unit.
★ 2. When a mixed combination of VRV and residential indoor units is connected or when only residential indoor units are connected, total capacity index of connectable indoor units must be 80%-130% of the capacity index of the outdoor unit.