



VRV S High Seasonal Efficiency SERIES

For residential and light commercial use



R-410A

Cooling Only 50 Hz



NEW! VRV S High Seasonal

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

- ✓ High seasonal efficiency
- ✓ VRT Smart Control
- ✓ Quiet operation

High performance & reliability

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

Efficiency Series



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

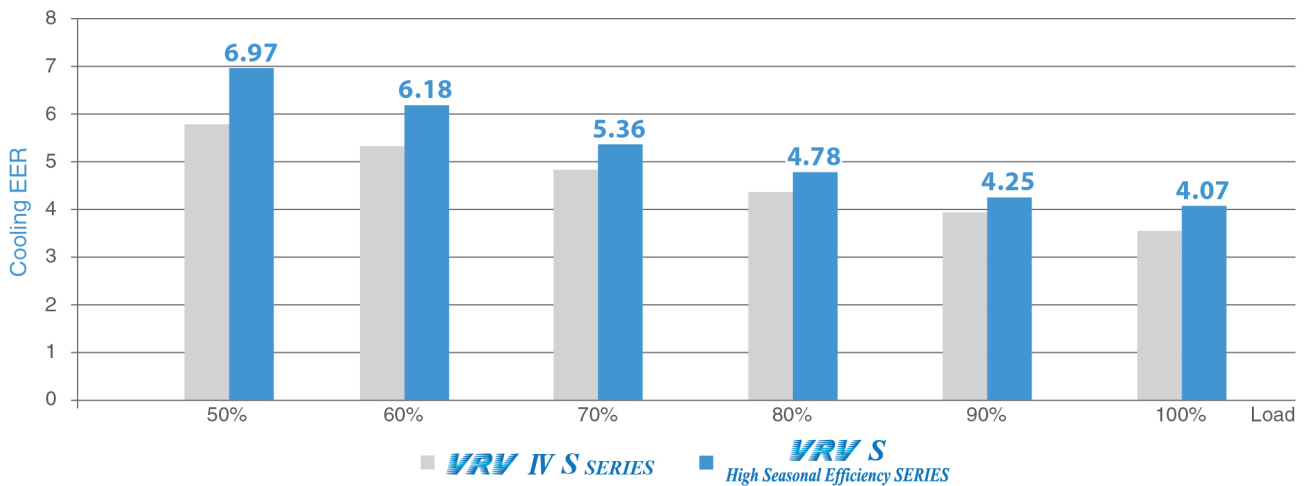
Energy savings & comfort

Energy savings

High seasonal efficiency

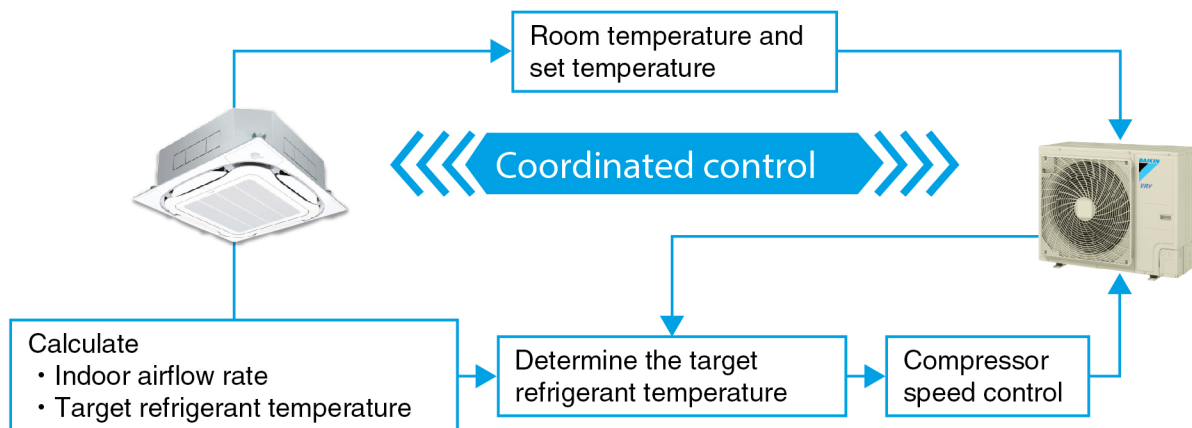
The VRT Smart Control enables improvements on efficiency during low load operation, achieving high seasonal efficiency.

EER for 5 HP



VRT Smart Control

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



Note:

- For the classification of indoor units (VRT smart control and VRT control), refer to page 11-12.
- 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

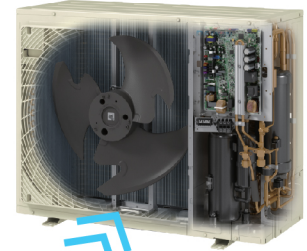
■ Quiet operation

Low operation sound

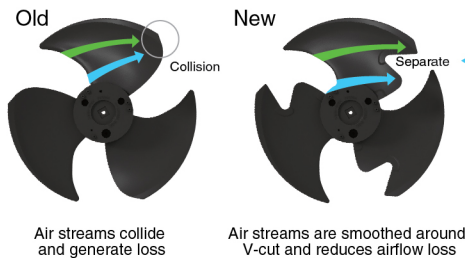
New fan and bell mouth help enable low operation sound.

Cooling	4 HP	5 HP	6 HP	7 HP	8 HP	9 HP
New	52	52	52	58	59	60

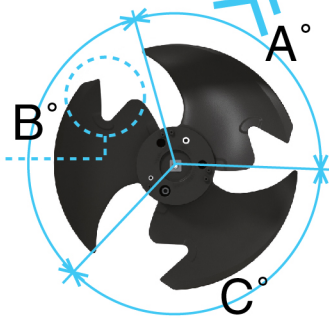
dB(A)



V-cut & irregular pitch propeller fan



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



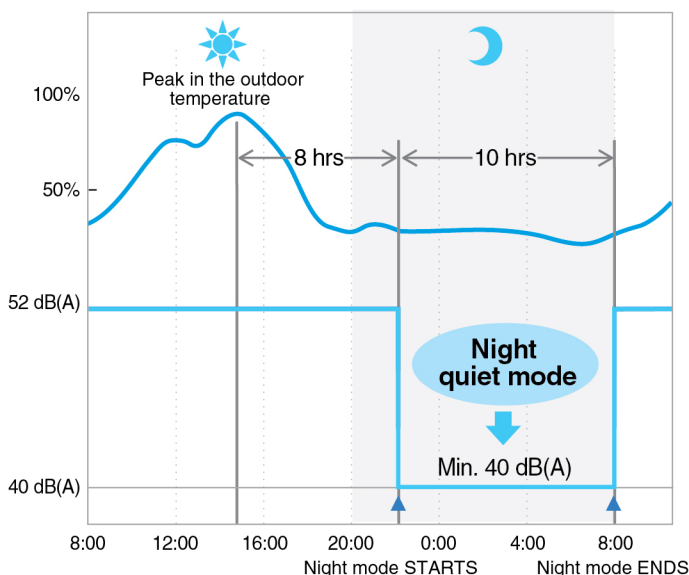
Irregular blade pitch also contributes to reduced airflow noise.

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

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
RSUQ4/5/6A	Min. 40 dB(A)
RSUQ7/8/9A	Min. 45 dB(A)



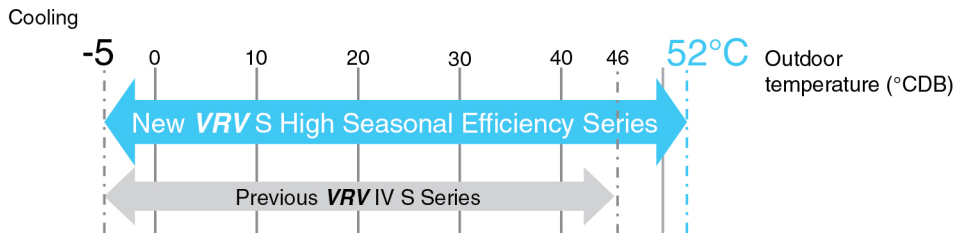
- Note:
- This function is available in setting at site.
 - The operating sound in quiet operation mode is the actual value measured by our company.
 - The relationship of outdoor temperature (load) and time shown above is just an example.
 - In case of 4-6 HP outdoor unit

High performance & reliability

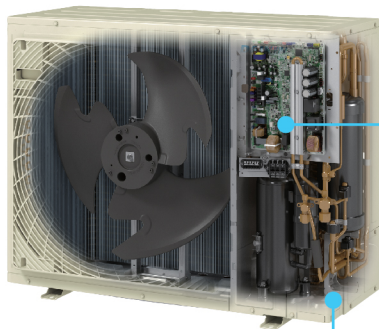
High temperature operation

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.

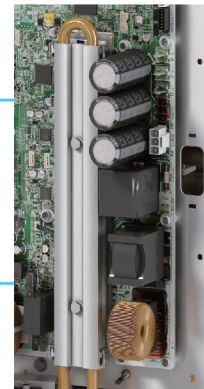


The refrigerant-cooled PCB and large 3-row heat exchanger raise the maximum cooling outdoor operation temperature from 46°C to 52°C.



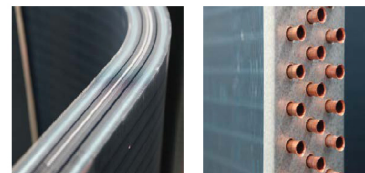
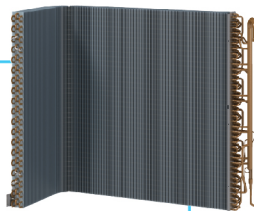
Refrigerant cooled PCB

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



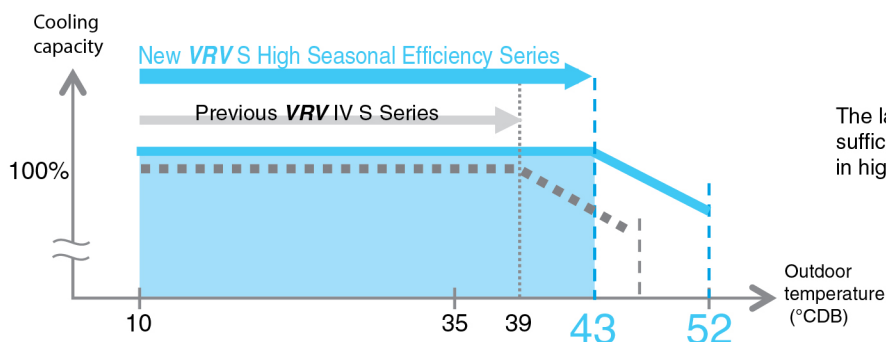
New heat exchanger

- 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

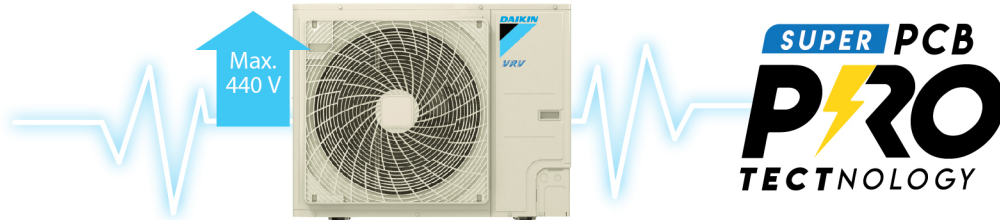
Rated cooling capacity can be maintained even when outdoor temperature is up to 43°C.



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

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.



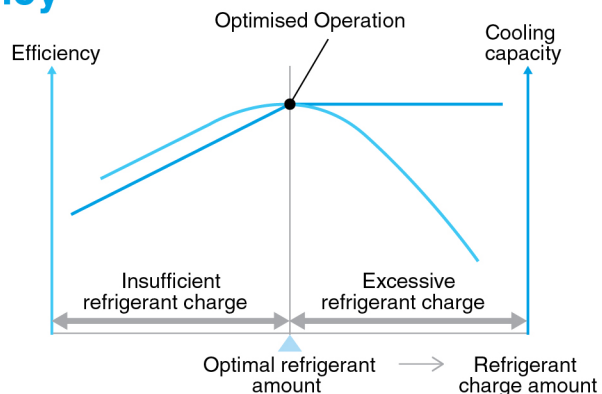
* Continuous operation range is 198 to 264 V.

Automatic refrigerant charge function

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

■ Optimised operation efficiency

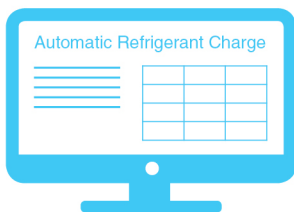
This function prevents a capacity shortage or energy loss due to excessive or insufficient refrigerant.



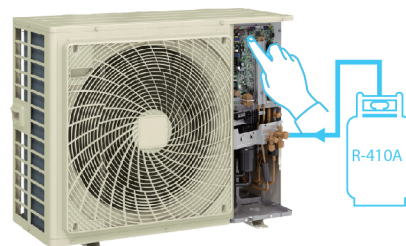
■ Higher quality and easier installation

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.

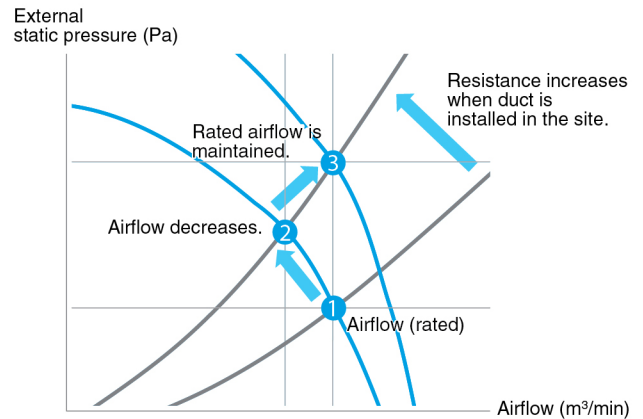
Design flexibility of installation

No short circuits

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

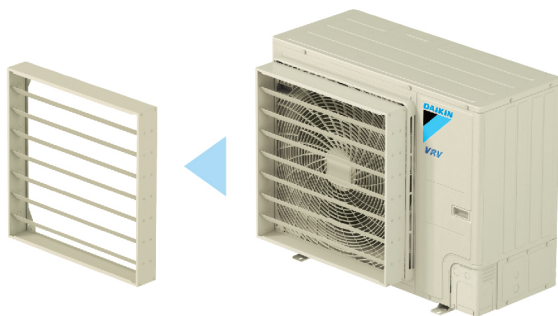
The new **VRV S** series outdoor unit has been achieved high external static pressure up to 40 Pa, realizing stable operation in small installation sites where the air direction adjustment grille or duct is used to avoid short circuits.

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.



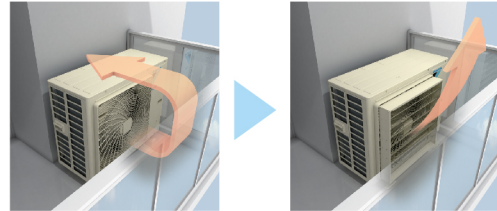
Optimum airflow direction with the optional air direction adjustment grille

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.

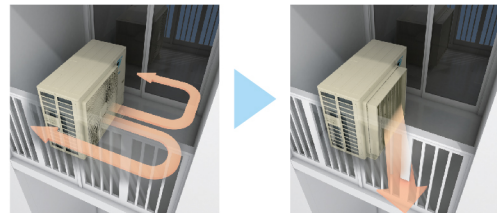


Air direction adjustment grille (option)

Wind is diverted upwards.

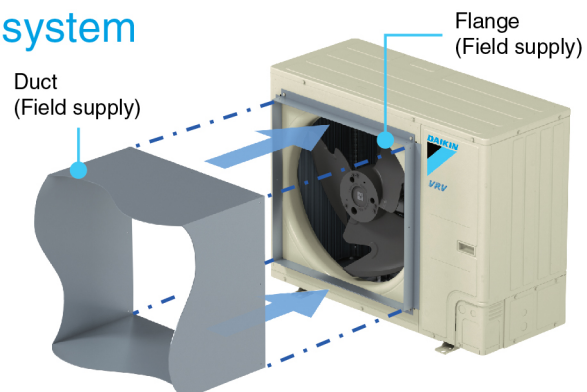


Wind is diverted sideways.



Duct installation to stabilize the system

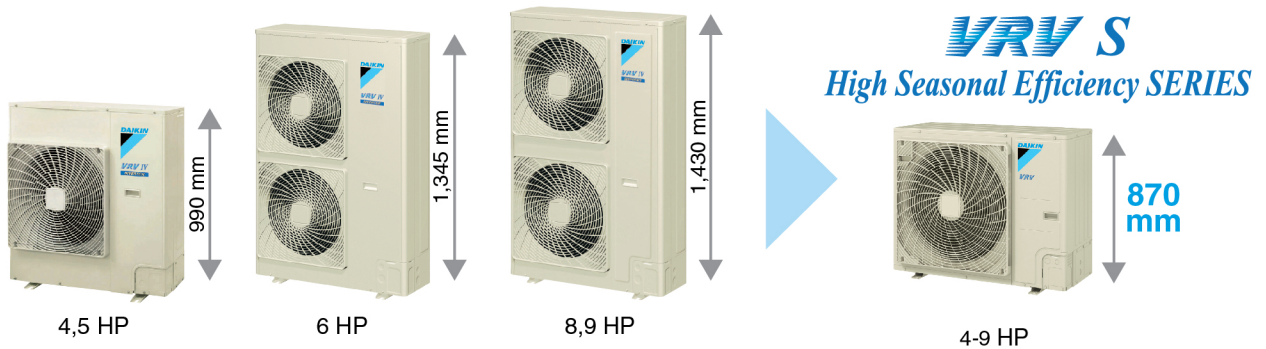
When the obstacle is not avoidable by the air direction adjustment grille, installing a field-supplied duct can bypass the obstacle. In this way, installation of the outdoor unit is possible in places like behind an advertising board.



Low height casing design

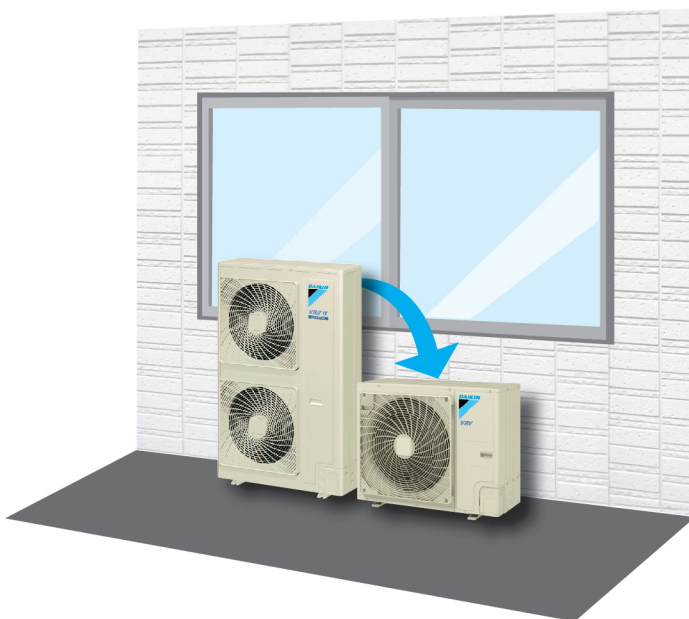
The new design has been optimised for the VRV S high seasonal efficiency series with the height of all models reduced to only 870 mm. This low height casing design provides occupants with a clear, unobstructed view of the scenery.

Previous **VRV IV S** series

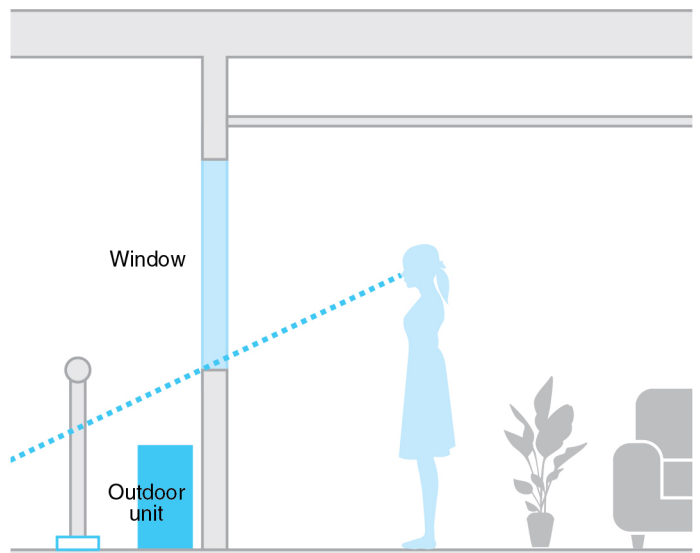


- Ideal solution that minimises both visual and sound impact
- Can be installed in a wide variety of locations and applications
- No space required for multiple outdoor units
- Allows for compact double-stacking of outdoor units

View from outside



View from inside



Design flexibility of installation

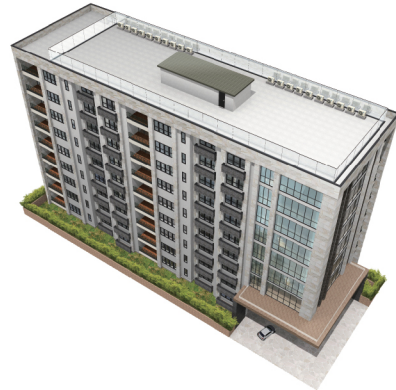
Increased actual piping length up to 120 m*

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

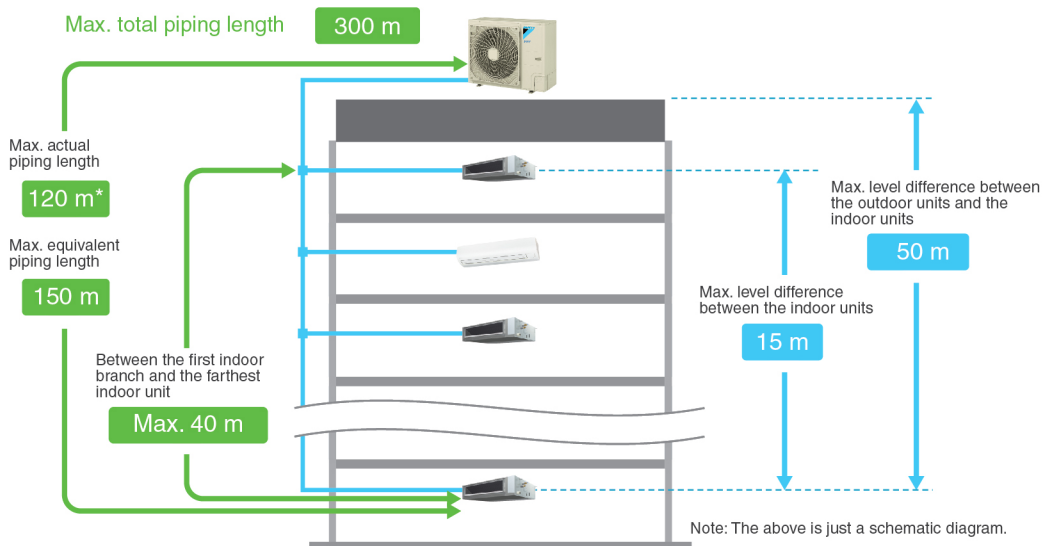
Installation on the rooftop of residential apartments

Previous **VRV IV S series** **VRV S High Seasonal Efficiency SERIES**

100 m **▶** 120 m*



Installation for VRV indoor units only



		4 HP	5-9 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	50 m
		If the outdoor unit is below.	40 m	40 m

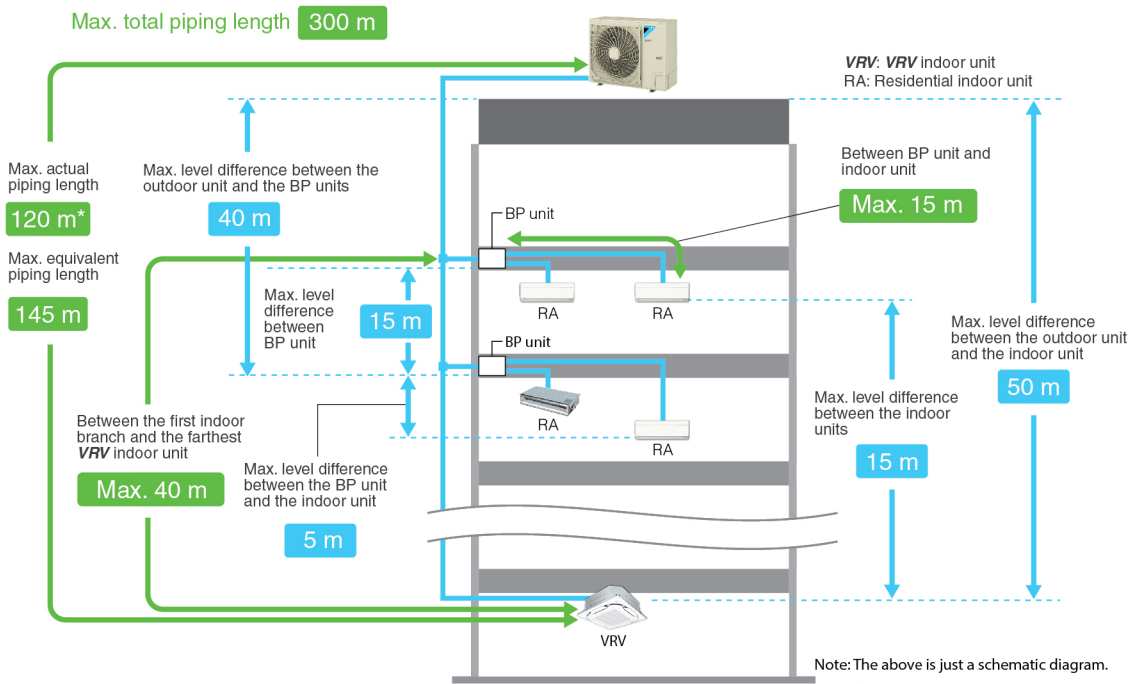
*Must use automatic refrigerant charge function. Refer to installation manual for details.

Installation on balconies of residential apartments

One outdoor unit can provide comfort for the whole house



Installation for mixed combination of VRV and residential indoor units, or residential indoor units only



		4 HP	5-9 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	2 m-15 m
		If indoor unit capacity index is 60.	2 m-12 m	2 m-12 m
		If indoor unit capacity index is 71.	2 m-8 m	2 m-8 m
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	50 m
		If the outdoor unit is below.	40 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


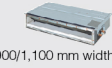


Indoor units can be selected from 2 lineups, both **VRV** and residential indoor units, to match rooms and preferences.

VRV indoor units

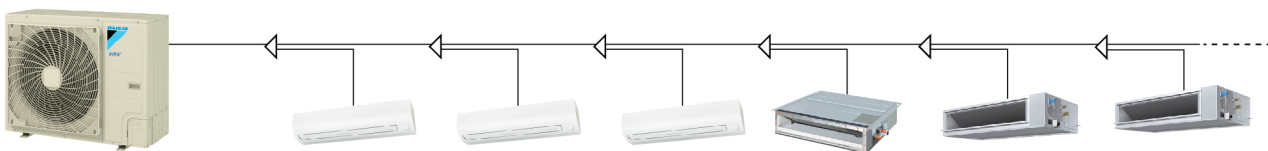
Type	Model Name	Capacity Range	VRV smart Indoor units subject to VRT smart control										VRT Indoor units subject to VRT control				
			20	25	32	40	50	63	71	80	100	125	140	200	250		
			0.8 HP	1 HP	1.25 HP	1.6 HP	2 HP	2.5 HP	3 HP	3.2 HP	4 HP	5 HP	6 HP	8 HP	10 HP		
Capacity Index		20	25	31.25	40	50	62.5	71	80	100	125	140	200	250			
Ceiling Mounted Cassette (Round Flow with Sensing)	FXFSQ-AVS			●	●	●	●	●		●	●	●	●				
Ceiling Mounted Cassette (Round Flow)	FXFQ-AVS			●	●	●	●	●		●	●	●	●				
Ceiling Mounted Cassette (Compact Multi Flow)	FXZQ-AV2S		●	●	●	●	●										
Ceiling Mounted Cassette (Double Flow)	FXCQ-AVMS		●	●	●	●	●	●		●		●					
Ceiling Mounted Cassette (Single Flow)	FXEQ-AV36		●	●	●	●	●	●									
Slim Ceiling Mounted Duct (3D Airflow with Sensing)	FXDSQ-AVM		●	●	●	●	●	●									
Slim Ceiling Mounted Duct (Standard Series)	FXDQ-PDV2S (with drain pump)		●	●	●												
	FXDQ-PDVTS (without drain pump)		●	●	●												
	FXDQ-NDV2S (with drain pump)					●	●	●									
	FXDQ-NDVTS (without drain pump)					●	●	●									
Slim Ceiling Mounted Duct (Compact Series)	FXDQ-SPV1		●	●	●	●	●	●									
Middle Static Pressure Ceiling Mounted Duct	FXSQ-PAVS		●	●	●	●	●	●		●	●	●	●				
Ceiling Mounted Duct	FXMQ-PAVS		●	●	●	●	●	●		●	●	●	●				
	FXMQ-MVES												●	●			
	FXMQ-PVM												●	●			
Outdoor-Air Processing Unit	FXMQ-MFV1											●	●				
4-Way Flow Ceiling Suspended	FXUQ-AVEB								●		●						
Ceiling Suspended	FXHQ-MAVS				●			●			●						
	FXHQ-AVMS											●	●				
Wall Mounted	FXAQ-AVMS		●	●	●	●	●	●									
Floor Standing	FXLQ-MAVE		●	●	●	●	●	●									
Concealed Floor Standing	FXNQ-MAVE		●	●	●	●	●	●									
Floor Standing Duct	FXVQ-NY1											●	●	●			
Clean Room Air Conditioner	FXBQ-PVE					●	●	●									
	FXBPQ-PVE							●									
Heat Reclaim Ventilator	VAM-GJVE		Airflow rate 150-2000 m3/h														

Residential indoor units with connection to BP units

VRT Indoor units subject to VRT control

Type	Model Name	Rated Capacity (kW)	09	12	18	24	28	
			Capacity Index	25	35	50	60	71
Slim Ceiling Mounted Duct	FDKS-EAVMS VRT	 (700 mm width type)	●	●				
	FDKS-C(A)VMS VRT	 (900/1,100 mm width type)	●	●	●	●		
Wall Mounted	FTKS-DVMS VRT		●	●				
	FTKS-FVMS VRT				●	●	●	

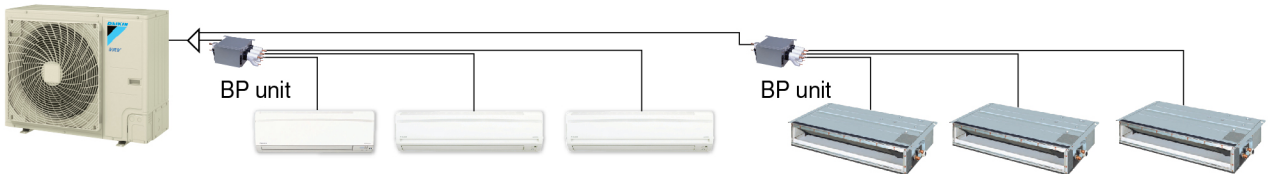
Note: BP units are necessary for residential indoor units.



VRV indoor units only

Max. 14 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. 14 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 unit

Specifications

								
MODEL			RSUQ4AVMS	RSUQ5AVMS	RSUQ6AVMS	RSUQ7AYMS	RSUQ8AYMS	RSUQ9AYMS
Power supply			1-phase, 220-240 V/220-230 V, 50/60 Hz			3-phase, 380-415 V/380 V, 50/60 Hz		
Cooling capacity	Btu/h		41,300	47,800	54,600	68,200	76,400	81,900
	Btu/h*		42,700	49,300	56,300	TBA	79,000	84,100
	kW		12.1 / 12.5*	14.0 / 14.5*	16.0 / 16.5*	20.0 / -	22.4 / 13.2*	24.0 / 24.7*
SEER			16.37	16.29	15.65	TBA		
Power consumption	kW		2.85	3.44	4.10	5.46	6.61	7.21
Capacity control	%		23 to 100	16 to 100		9 to 100		
Casing colour			Ivory white (5Y7.5/1)					
Compressor	Type		Hermetically sealed swing type					
	Motor output	kW	2.2	3.1	3.5	1.9	3.2	3.8
Airflow rate	m ³ /min		87	84	87	TBA		
Dimensions (HxWxD)	mm		870x1,100x460					
Machine weight	kg		95	98		99		
Sound level	dB(A)		52		58	59	60	
Operation range	°CDB		-5 to 52					
Refrigerant	Type		R-410A					
	Charge	kg	4.0	4.2		5.8		
Piping connections	Liquid	mm	φ 9.5 (Flare)					
	Gas	mm	φ 15.9 (Flare)		φ 19.1 (Flare)			φ 22.2 (Flare)

Note: 1. 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.
- SEER: is calculated from cooling performance of Te = 9°C, following "Testing and Calculating Methods for Seasonal Performance Factors" and ISO 16358-12013/Cor.1:2013"
- 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.

2. *Preliminary specifications. Subject to change without notice.

Outdoor unit combinations

MODEL			RSUQ4AVMS	RSUQ5AVMS	RSUQ6AVMS	RSUQ7AYMS	RSUQ8AYMS	RSUQ9AYMS
kW			12.1	14.0	16.0	20.0	22.4	24.0
HP			4	5	6	7	8	9
Capacity index			100	125	150	175	200	215
Total capacity index of connectable indoor units	Combination(%)	50%	50	62.5	75	87.5	100	107.5
		100%	100	125	150	175	200	215
		130%	130	162.5	195	227.5	260	280
Maximum number of connectable indoor units			6	8	9	11	13	14

Note: Total capacity index of connectable indoor units must be 50%–130% of the capacity index of the outdoor unit.

■ Option list

VRV S High Seasonal Efficiency *SERIES*

No.	Item	Type	RSUQ4A	RSUQ5A	RSUQ6A	RSUQ7A	RSUQ8A	RSUQ9A
1	Header pack		BHF6RHP6Z, BHF6ARHP6Z, BHF8RHP6Z					
2	REFNET header		KHRP26M22H (Max. 4 branch) , KHRP26M33H (Max. 8 branch)					
3	REFNET joint		KHRP26A22T			KHRP26A22T, KHRP26A33T		
4	Drain plug		BKP082A41					
5	Air direction adjustment grille		KPW082A41					

Option PCB

No.	Item	Type	RSUQ4A	RSUQ5A	RSUQ6A	RSUQ7A	RSUQ8A	RSUQ9A
1	DIII-NET expander adaptor		DTA109A51					
2	External control adaptor		DTA104A61					
3	Home Automation Interface Adaptor		DTA116A51					
4	Option PCB mounting plate		BKS26B			TBA		

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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."

Specifications, designs and other content appearing in this brochure are current as of April 2020 but subject to change without notice.