



VRV 5 - R410a Series



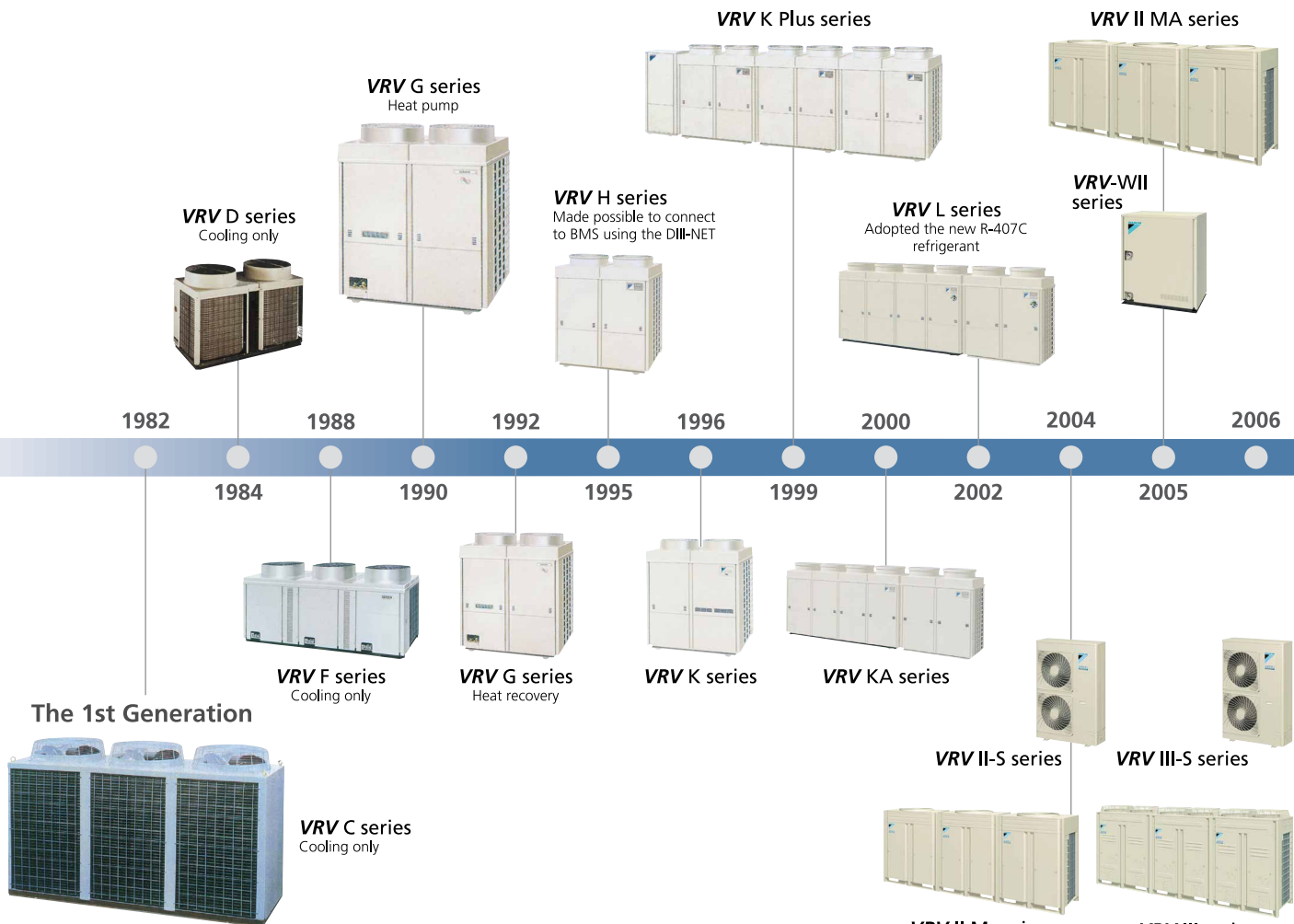
VRV

R-410A

Heat Pump / Heat Recovery 50 Hz

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.



VRV series released in 1982

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

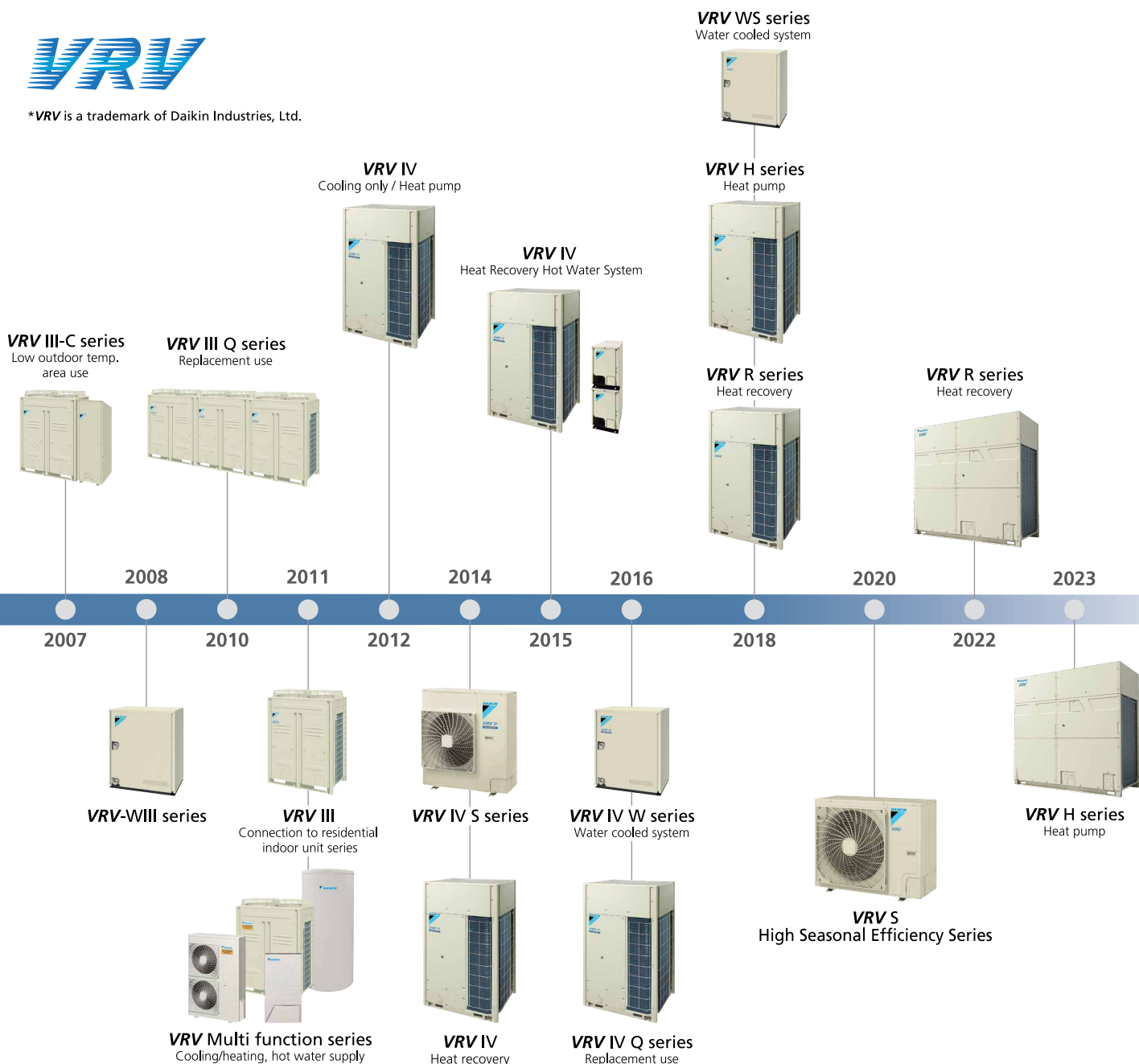
- 2.5-year development term
- Completion of development in May, 1982
- Technical award of Japan Society of Refrigerating & Air-conditioning Engineers in 1983

Expansion of the country of sale

Sales companies well established
in more than 70 countries



*VRV is a trademark of Daikin Industries, Ltd.



New Products Information

VRV R SERIES Heat Recovery



VRV R Series
Promotion Movie



VRV R Series
Special Site

VRV H SERIES Heat Pump



VRV H Series
Promotion Movie

Featuring unique functions in a new large capacity casing

- ✓ Adopt a new casing to realise a single module of up to 24 class
- ✓ Achieved significant energy savings with improved technology
- ✓ Defrost functions improved comfort by extending the heating operation time
- ✓ Design flexibility is further improved by simultaneous extension of height difference and equivalent length.
- ✓ Sealed electrical component box (IP55) blocks the ingress of debris or water, that leads to unexpected failures.
- ✓ A new electrical component service window on the front panel allows easy access to the main board without removing the front panel.
- ✓ Equipped with various new functions, the new model shows a significant improvement in total performance.



REYQ-B
RXYQ-B

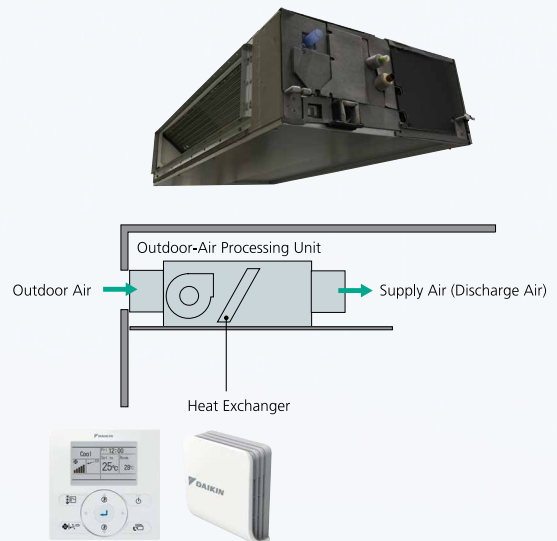


Outdoor-Air Processing Unit

FXMQ-AF Series

Improve IAQ with fresh air ventilation and precise room temperature control

- ✓ Set point temperature can be selected similar to standard **VRV** indoor unit.
- ✓ Maximum connection ratio increased from 100% to 130%.
- ✓ With the VRT control feature, higher efficiency can be achieved.



Stylish Remote Controller

A complete redesigned controller focused to enhance user experience



White
BRC1H63W

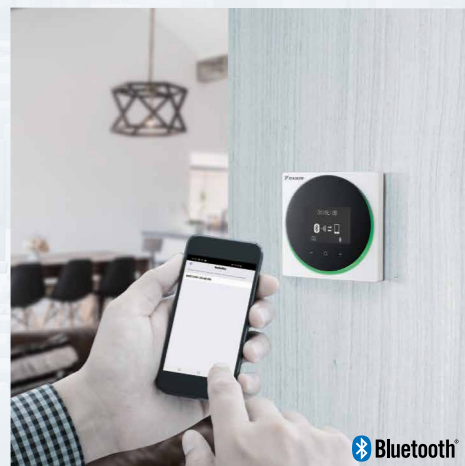


Black
BRC1H63K



reddot design award

- ✓ Two attractive colors to match any interior
- ✓ Compact, measures only 85 x 85 mm
- ✓ Timer functions (OFF timer, Weekly schedule timer)
- ✓ Easy setting via smartphone application using Bluetooth® wireless technology (for Installer/Facility manager)
- ✓ Improved setback function to keep hotel room comfortable





Lifecycle Cost & Comfort

Large-capacity Single Module

- Installation space and cost are reduced by large-capacity casing for max. 24 class.



Energy Saving Technology

- Further improvement of energy saving by high efficiency compressor and VRT Smart II control.
- Achieves high TCSPF/HSPF, that reduces running cost.



Software Technology
VRT Smart II control

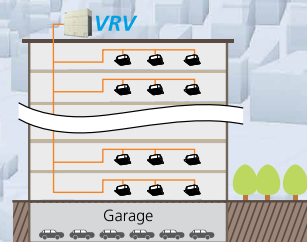
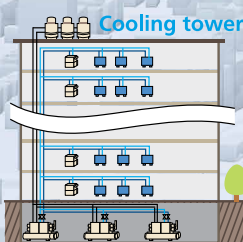


Comfort

- Defrost operation before the equipment is shut down speeds up the increase of discharge air temperature of the next heating operation.
- If defrost operation time is short, the system will optimise defrost conditions, extending the heating operation 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.





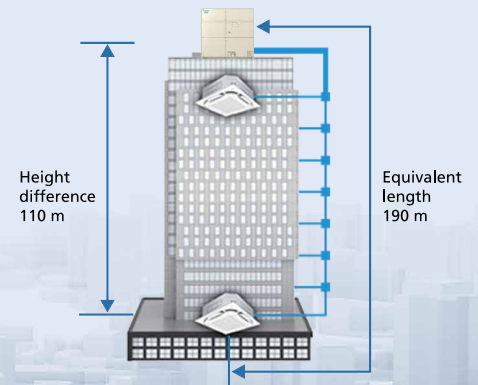
For CONSULTANTS



Flexible Design & Engineering Supports

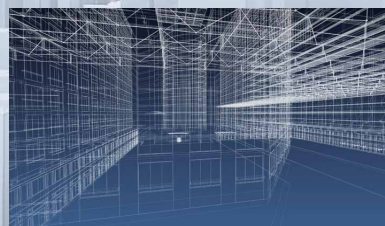
Long Refrigerant Piping

- Equivalent length extension max. 190 m
- Height difference extension max. 110 m (20 m longer than conventional models)
- By applying for both extensions at the same time, supports a wide range of applications.



Engineering Support Software

- Strongly supports for facility design, offering model selection assistance, energy saving and IEQ simulations, drawing support, etc.



Model Selection

Drawing Supports

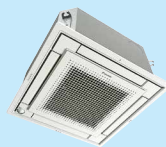
Analysis and Simulation

Varied Lineup of Indoor Units

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



Round Flow
Cassette



Compact Multi
Flow Cassette

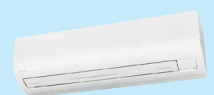


Slim Duct

Middle Static
Pressure Duct



Ceiling Suspended



Wall Mounted



Easy Installation

Slimmer Main Piping

- For gas pipe of up to 20 class, the main piping diameter size can be reduced from standard size. It enables lowering installation cost.

Electrical Component Service Window

- Easy access to the main PCB without removing the front panel.
- Quick field setting and trial operation.



Process visualization (Test run only)

- A progress rate (0% to 99%) is indicated on the PC board for Easy arrangement for on-site work.



Simple Piping, Easy Wiring

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



For BUILDING MANAGERMENTS

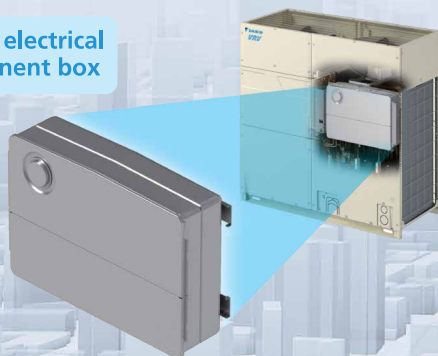


Reliability & Comfort

IP55 Sealed Component Box

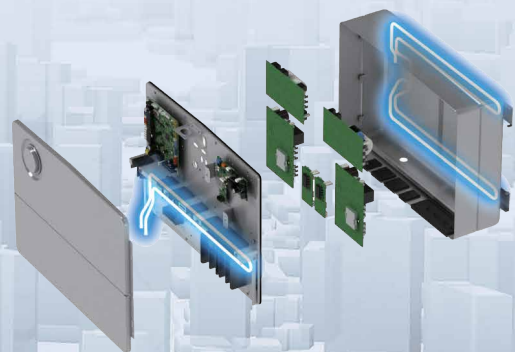
- Sealed electrical component box (IP55) blocks the ingress of debris or water, that leads to unexpected failures.

Sealed electrical component box



Refrigerant Piping Cooling System

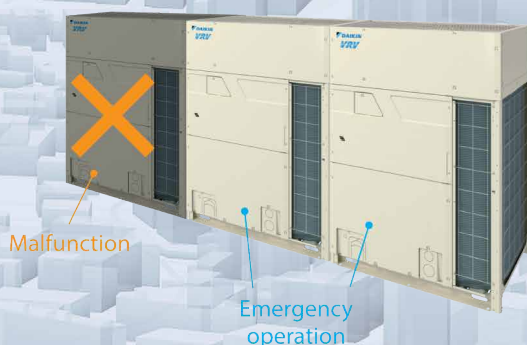
- Refrigerant cooling circuit enables operation in high outdoor temperatures.



Double Backup Operation Functions

- Unit backup & Compressor backup ensure continuous operation.

Unit backup operation function



Compressor backup operation function



Wide Variety of Series Models to Supply Total Air Solutions



REYQ-B

3-phase 4-wire system,
380-415 V/380 V, 50/60 Hz

VRV R SERIES

Heat Recovery

Featuring unique functions in a new large capacity casing

The VRV R series enables simultaneous operation of cooling and heating within a single refrigerant circuit. By utilising advanced technologies, VRV R series achieves further valuable functions.

Lineup

class	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																						●	●	●	●	●	●



RXYQ-B

3-phase 4-wire system,
380-415 V/380 V, 50/60 Hz

VRV H SERIES

Heat Pump

Significant improvement in total performance

The VRV H series unites a variety of advanced technologies in providing high efficiency and comfort to cooling and heating.

Lineup

class	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																						●	●	●	●	●	●



RSUYQ-A(2)

8 class: 3-phase, 380-415 V/380 V, 50/60 Hz

VRV S High Seasonal Efficiency SERIES

Heat Pump

Especially designed for residential houses, small office and shops

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

class	8
Heat Pump	●



RXYMQ-A(2)/B2

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

VRV IV S SERIES

Heat Pump

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, and offer 6 models to suit your needs.

Lineup

class	4	5	6
Heat Pump	●	●	●

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.



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



Heat Pump

For quick & high quality replacement use



RQCEQ-P
3-phase 4-wire system,
380-415 V, 50 Hz



VRV IV Q series / VRV III 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.

Lineup

class		6	8	10	12	13	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
VRV IV Q series	Heat Pump	Standard Type		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		Space Saving Type							●	●						●		●	●	●	●	●	●	●
VRV III Q series	Heat Recovery			●		●		●	●	●	●	●	●	●	●									



RWEYQ-T(2)
3-phase 4-wire system,
380-415 V/380 V, 50/60 Hz



Heat Pump / Heat Recovery

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°C to 45°C, and outdoor air temperature does not affect cooling capacity. The outside unit is compact and saves space in the machine room.

Lineup

class	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Heat Pump	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Heat Recovery	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●



RWXYQ-A
1-phase, 220V, 50Hz



Heat Pump

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

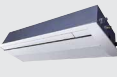
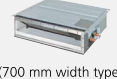
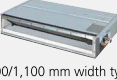
class	3	4	5	6
Heat Pump	●	●	●	●

Wide Range Indoor Unit Lineup

Create Comfortable Airflow

VRV indoor units

 New lineup

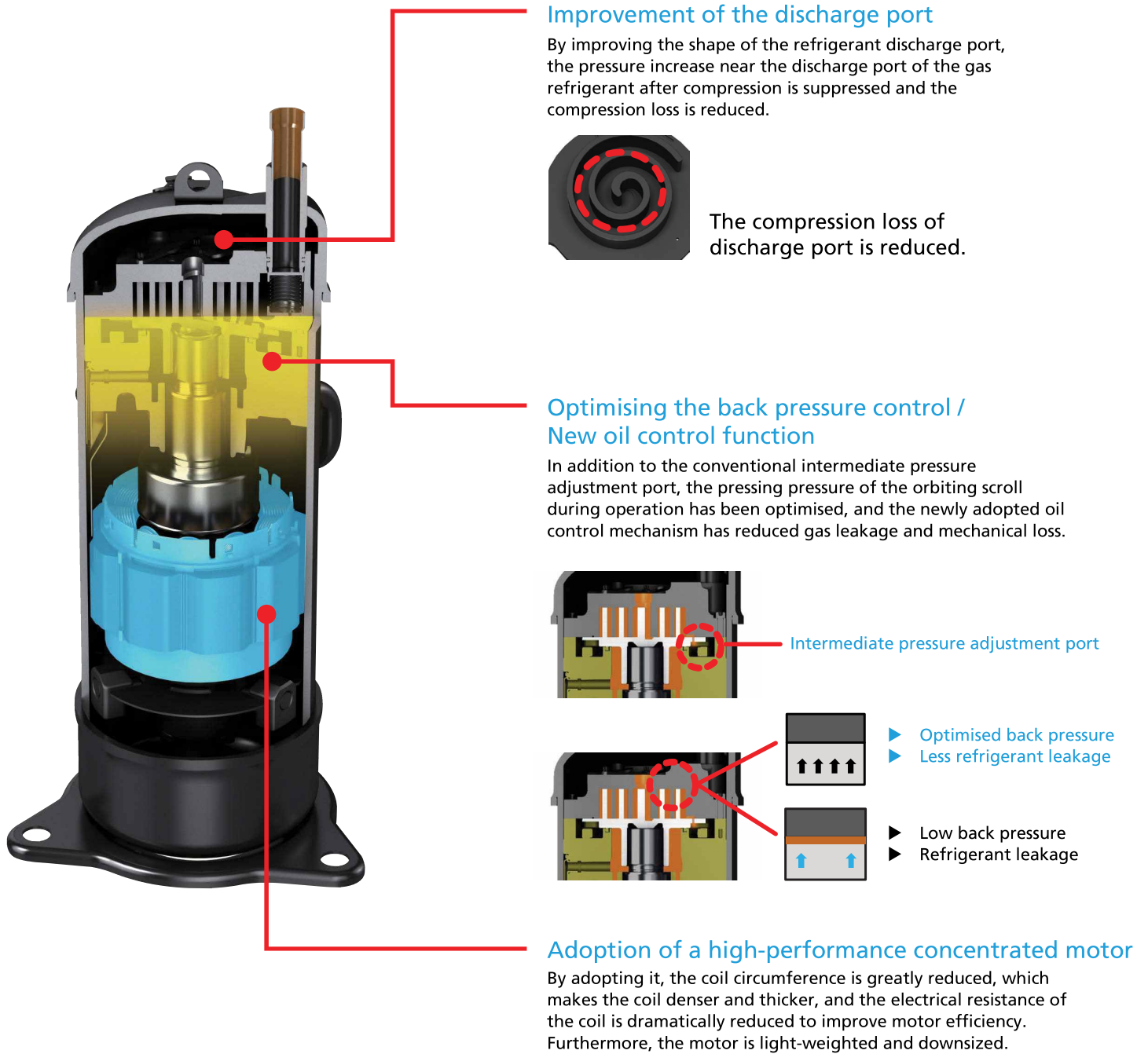
Category	Type	Model Name		20	25	32	40	50	63	71	80	100	125	140	145	160	180	200	250	
				Capacity Range (kW)	2.2	2.8	3.6	4.5	5.6	7.1	8	9	11.2	14	16	16.2	18	20	22.4	28
				Capacity Index	20	25	31.25	40	50	62.5	71	80	100	125	140	145	160	180	200	250
Ceiling Mounted Cassette	Round Flow Cassette with Sensing	FXFSQ-AVM																		
	Compact Multi Flow Cassette	FXZQ-BVM																		
	Double Flow Cassette	FXCQ-BVM																		
	Single Flow Cassette	FXEQ-AV36																		
Ceiling Concealed Duct	Slim Duct (Standard)	FXDQ-PDVE																		
		FXDQ-NDVE																		
	Middle Static Pressure Duct	FXSQ-PAVE																		
	Middle-High Static Pressure Duct	FXMQ-PAVE																		
	Outdoor-Air Processing Unit	FXMQ-AFVM																		
Ceiling Suspended	4-Way Flow Ceiling Suspended	FXUQ-AVEB																		
	Ceiling Suspended	FXHQ-MAVE																		
		FXHQ-BVM																		
New	Wall Mounted	FXAQ-BVM																		
Floor Standing	Floor Standing	FXLQ-MAVE																		
	Concealed Floor Standing	FXNQ-MAVE																		
Heat Reclaim Ventilator		VAM-HVE		Airflow rate 150-2000 m3/h																

Note: For indoor units connectivity, please refer to the indoor unit product lineups under individual outdoor unit series.

Energy Savings

Hardware technology High Efficiency Compressor

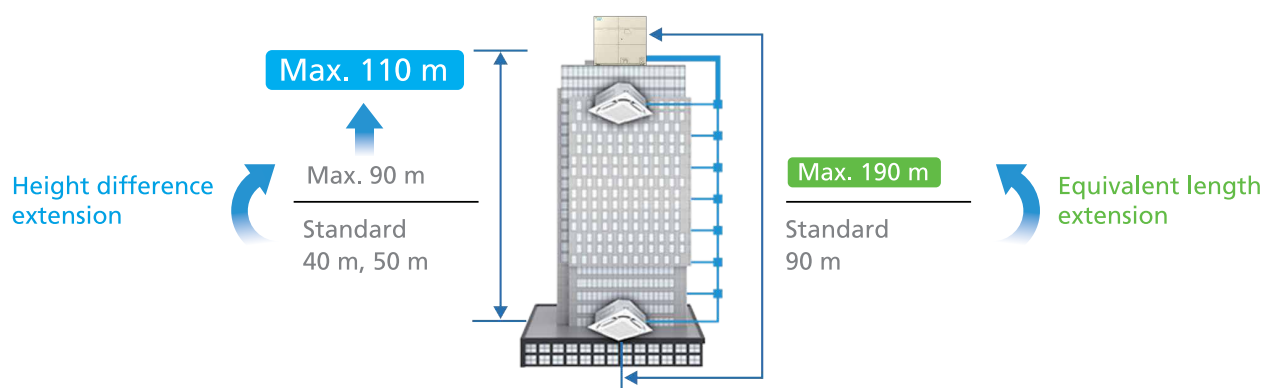
New technologies increase seasonal efficiency and enable a compact design.



Design Flexibility

■ Simultaneous extension of height difference and equivalent length

Design flexibility is further improved by simultaneous extension of height difference, improved from 90 m to 110 m, and equivalent length (up to 190 m).



• Height difference extension **Max. 110 m**

For height differences exceeding 50 m with the outdoor unit above the indoor unit and 40 m with the outdoor unit below, the main piping liquid piping size must be increased.

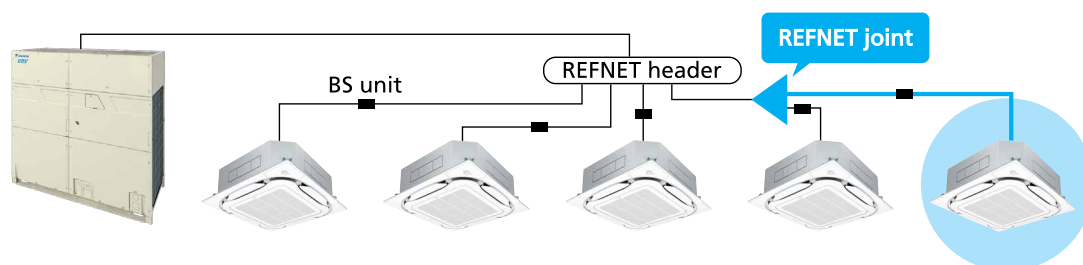
• Equivalent length extension **Max. 190 m**

When the equivalent piping length from outdoor unit to indoor unit is 90 m or more, be sure to increase the main piping liquid piping size.

* In addition to increasing the size of the main pipe, there are other piping restrictions regarding height difference extension and equivalent length extension. Check the Installation Manual for details.

■ REFNET header downstream branching supported

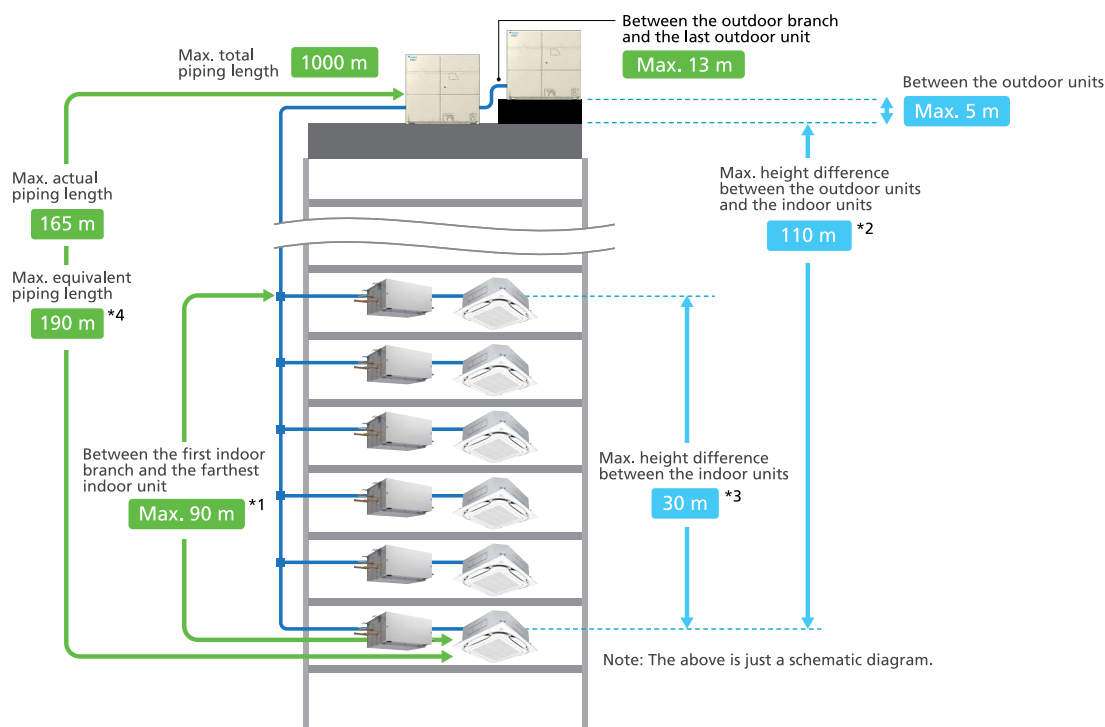
Piping branch by REFNET joint is possible downstream of REFNET header. The indoor unit arrangement can be more flexible.



REFNET header		Indoor unit total capacity at REFNET joint
3 pipes	2 pipes	
KHRP25M33H, KHRP25M72H + KHRP25M72TP	KHRP26M22H, KHRP26M33H, KHRP26M72H	< 50
KHRP25M73H + KHRP25M73TP	KHRP26M73H + KHRP26M73HP	≤ 140

Long piping length

Long piping length enhances design flexibility, enabling support for large buildings.



Maximum allowable piping length	Actual piping length (Equivalent)	165 m (190 m)* ⁴
	Total piping length	1000 m
	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)
Maximum allowable height difference	Between the outdoor units (Multiple use)	5 m
	Between the indoor units	30 m
	Between the outdoor units and the indoor units	110 m* ²

*1. No special requirements up to 40 m. The maximum actual piping length can be 90 m, depending on conditions. Various conditions and requirements have to be met to allow utilisation of 90 m piping length. Be sure to refer to the Engineering Data Book for details of these conditions and requirements.

*2. When Height differences above 50 m if the outdoor unit is above the indoor unit and 40 m if the outdoor unit is below 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.

*3. When Height differences are 15 m or more, maximum actual piping length must be 120 m.

*4. In the case where the equivalent piping length from outdoor unit to indoor unit ≥ 90 m, make sure to up size the liquid pipe of the main pipe. Do not up size the high/low pressure gas pipe and the suction gas pipe.

Connection ratio

Connection capacity at maximum is 200%.

Connection ratio
50%–200%

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

Conditions of VRV indoor unit connection capacity

Applicable VRV indoor units		Indoor units				Other VRV indoor unit models* ¹
		 FXDQ	 FXSQ	 FXMQ-PA	 FXAQ	
Single outdoor units	8 - 20 class	200%				200%
	22, 24 class					180%
Double outdoor units						160%
Triple outdoor units						130%

*1 For the FXF(S)(T)Q25 models, maximum connection ratio is 130 % for the entire range of outdoor units.

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

*Refer to page 33 for outdoor unit combination details.

Benefits of System Replacement

Automatic

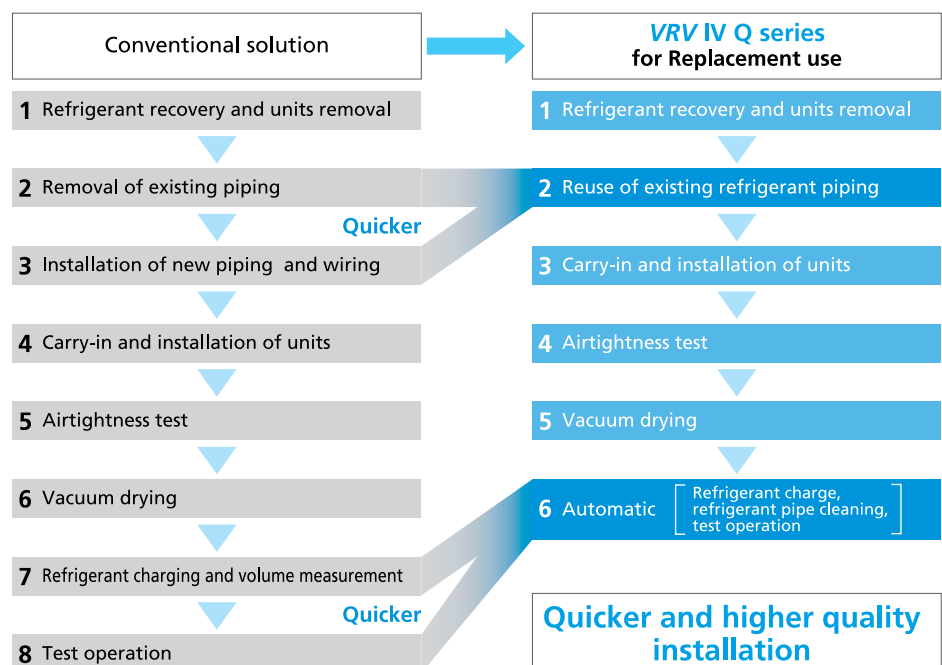
Refrigerant charging, cleaning and test operation done with just a single switch.

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. Furthermore, there is no need to clean inside piping as this is handled automatically by the **VRV IV Q** unit.

* There are conditions in the range (ambient temperature, connection ratio) 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.

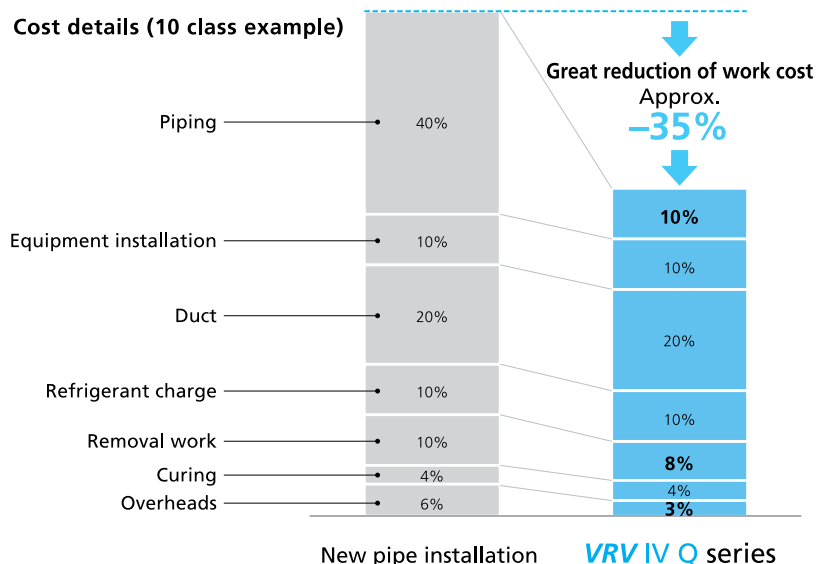
Time saving

Enables smooth replacement of air conditioning with less effect on operations and users in the building.



Cost saving

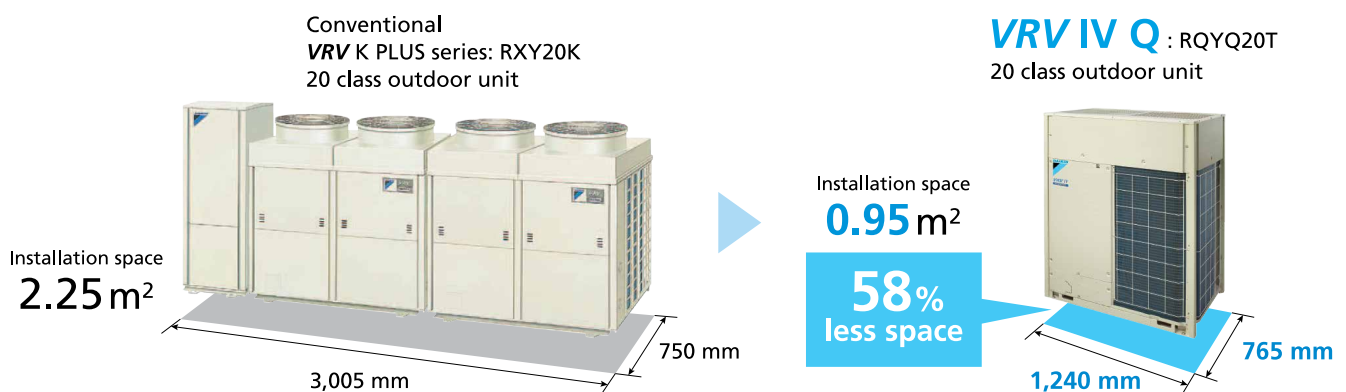
By the reuse of existing piping, 35% of cost down can be realized compared to installing new pipes.



■ Design flexibility

Significantly more compact outdoor unit enables the effective use of limited space!

Compact design enables the effective use of space taken up by existing machinery



■ High external static pressure 78.4 Pa

Conventional
VRV K series

49.0 Pa

VRV IV Q

78.4 Pa

■ System flexibility

An increased number of connectable indoor units in a single system

More indoor units can be connected in a single system, enabling consolidation of existing piping!

Conventional VRV K PLUS series: RXY24-30K

Up to **30** indoor units connectable

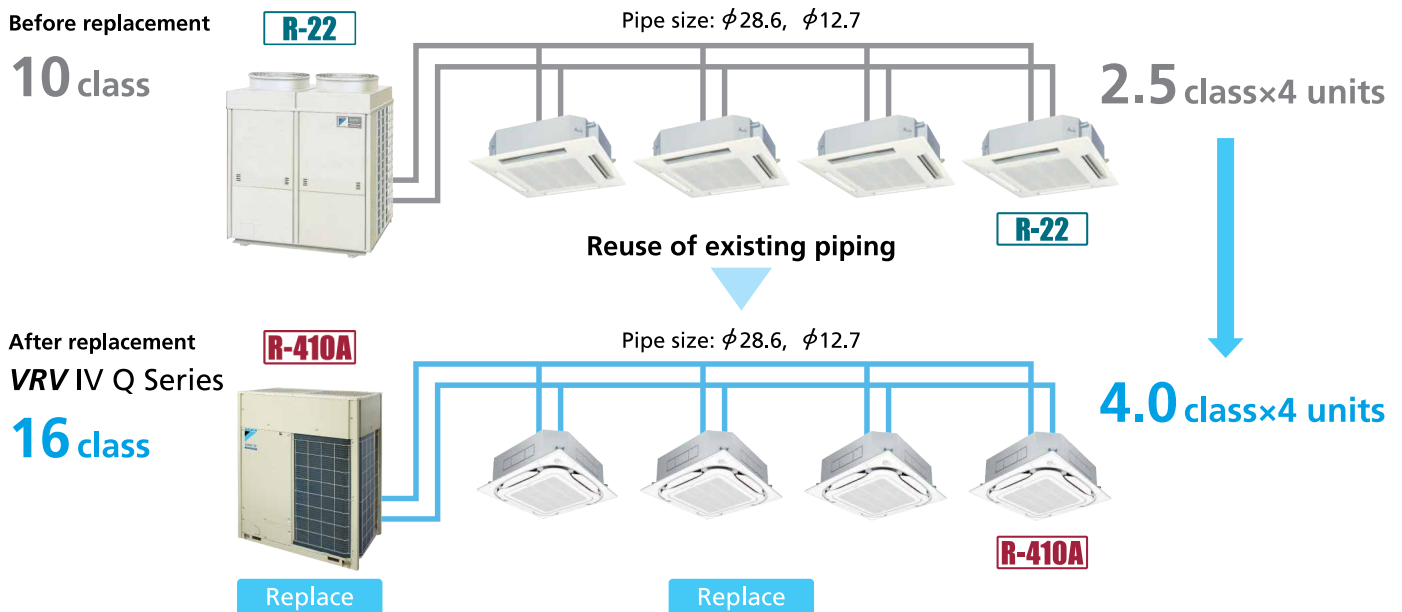
VRV IV Q : RQYQ40-48T

Up to **64** indoor units connectable

Benefits of System Replacement

Enables increased capacity

VRV IV Q series for replacement use enables the system capacity to be increased without changing the refrigerant piping. For example, it is possible to install a 16 class **VRV IV Q series** using the refrigerant piping of an 10 class R-22 system.

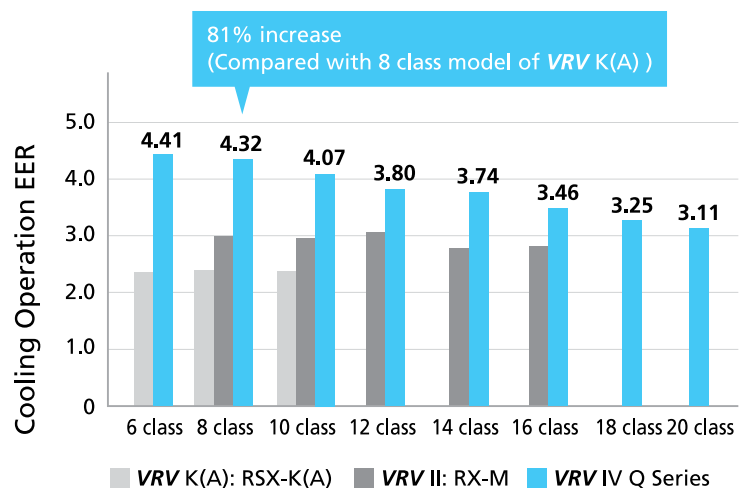


Energy saving

Higher Energy Efficiency Ratio (EER)

VRV IV Q series delivers highly efficient performance, contributing to high energy savings.

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



VRT Control for optimal annual efficiency

VRT automatically adjusts refrigerant temperature to individual building and climate requirement, thus further improving annual energy efficiency and maintaining comfort.



New technology that enables use of existing piping

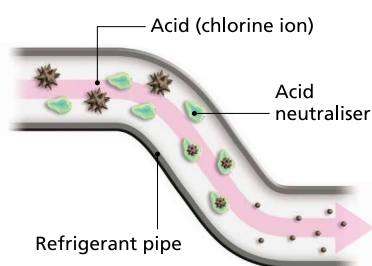
New tested contamination collection method

A new method collects contamination from existing piping, eliminating compressors and electric valves malfunction.

VRV IV Q series only

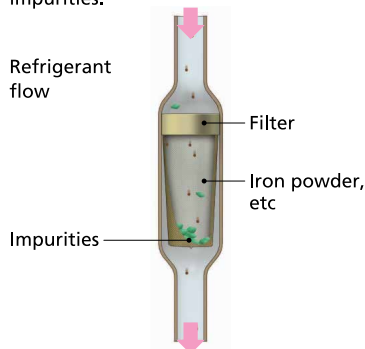
Acid

An acid neutraliser agent is added to disable acids (chlorine ions), which cause corrosion.



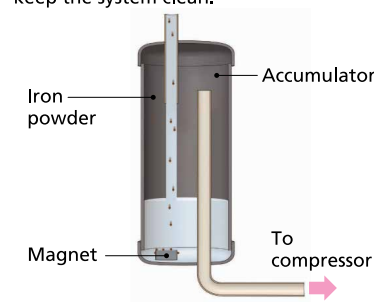
Impurities

A generously sized filter is provided inside the refrigerant circuit which traps impurities.



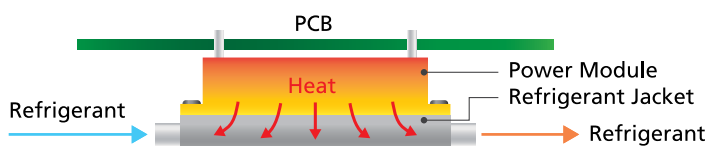
Iron powder

A magnet is installed inside the accumulator where liquid refrigerant accumulates. The magnet attracts iron powder to keep the system clean.



Reliable and stable technology

High reliability at high ambient temperatures



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

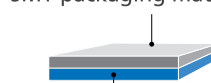
SMT* packaging technology

- 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

SMT packaging material



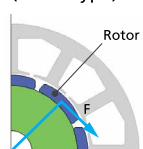
Computer control board



Outer Rotor DC Motor (ODM)

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

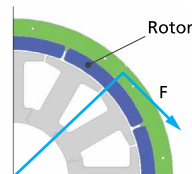
Conventional Motor (Inner Type)



HIGH TORQUE with low energy
MORE efficient

ODM (Outer Type)

UNIQUE



**Warning**

- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- 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.

Notice

- 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.

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.

Contact Us

Online Order Management
my.daikin.co.za

Spares Contact e-mail
spares@daikin.co.za

Johannesburg and Export Sales
Tel: (011) 997 4400 or Fax: (011) 997 4444

Orders & Admin Contact e-mail
orders@daikin.co.za

Head Office and Cape Town Sales
Tel: (021) 528 3500 or Fax: (021) 551 8434

Durban Sales
Tel: (031) 263 2992 or Fax: (031) 263 2730

Applicable Conditions:

- Delivery costs may vary dependant on product, equipment and radius. Please contact your local DAIKIN office to get details
- All prices are exclusive of VAT and installation.
- All pricing subject to our standard terms and conditions as per your dealer agreement.
- Note that should you wish to utilise an alternative controller/s to the standard unit specified, the difference in cost will be charged to the set-price of the associated air conditioning unit/system.
- This Price List supersedes all previous price lists dated.
- Errors and Omissions Excepted.

www.daikin.co.za

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 2023 but subject to change without notice.