

# VRV-Q benefits to increase your profit

## Optimise your business

### Tackle more projects in less time

Due to faster installation, VRV-Q is more profitable than replacing the full system with new piping.

### Lower installation costs

Offer customers the most cost-effective solution and improve your competitive edge.

### Easy as one-two-three

A simple solution: Daikin VRV-Q enables you to handle more projects for more customers in less time and offer them the best price! Everybody wins.

## Compare installation steps

### Conventional solution

- 1 Recover refrigerant
- 2 Remove units
- 3 Remove refrigerant pipes
- 4 Install new piping & wiring
- 5 Install new units
- 6 Leak test
- 7 Vacuum drying
- 8 Refrigerant charging
- 9 Collect contamination
- 10 Test operation

### VRV-Q

- 1 Recover refrigerant
- 2 Remove units
- Re-use existing piping and wiring**
- 3 Install new units
- 4 Leak test
- 5 Vacuum drying
- 6 Automatic refrigerant charging, cleaning and testing

↓

Up to 45% shorter installation time

## Automatic pipe cleaning

There is no need to clean inside piping as this is handled automatically by the VRV-Q unit. Finally the test operation is performed automatically to save time.



### One touch convenience:

- > Measure and charge refrigerant
- > Automatic pipe cleaning
- > Test operation

## Automatic refrigerant charge

The unique automatic refrigerant charge eliminates the need to calculate refrigerant volume and ensures that the system will operate perfectly. Not knowing the exact piping lengths because of changes or mistakes in case you didn't do the original installation or replacing a competitor installation no longer poses a problem.

# Key guidelines for a quality replacement with VRV-Q

## Refrigerant branch pipes

Refrigerant branch pipes, including those from other manufacturers, Y-refnets, T-refnets and headers, can be reused under the following conditions:

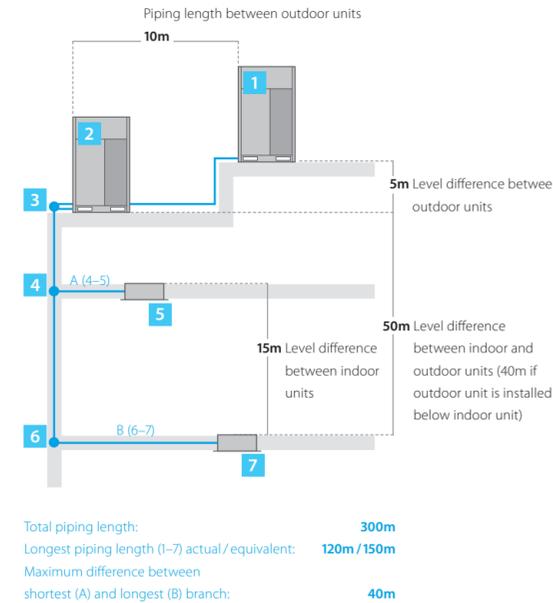
- ✓ Pipes are corrosion-free
- ✓ Pipes are insulated
- ✓ Pipes can withstand a pressure up to 3.3 MPa
- ✓ There are no special components that implement decompression (e.g. oil trap)
- ✓ Installed copper pipework is in suitable condition (piping thickness will generally meet specifications, since the unique Daikin VRV solution operates at lower pressure levels)

## Refrigerant oil

Refrigerant piping can be reused if one of the following oils was used: Barrel Freeze, Ethereal, Ester, Ferreol, HAB, MS, Suniso.

## Maximum piping lengths and level distances

VRV-Q can be installed for piping systems with a total length up to 300m. See the illustration below for further requirements.



Download the detailed data book and replacement VRV comparator tool from our extranet to calculate operating costs.

If you have questions or require further information, please contact your local sales specialist for expert support.

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Replacement technology for installers



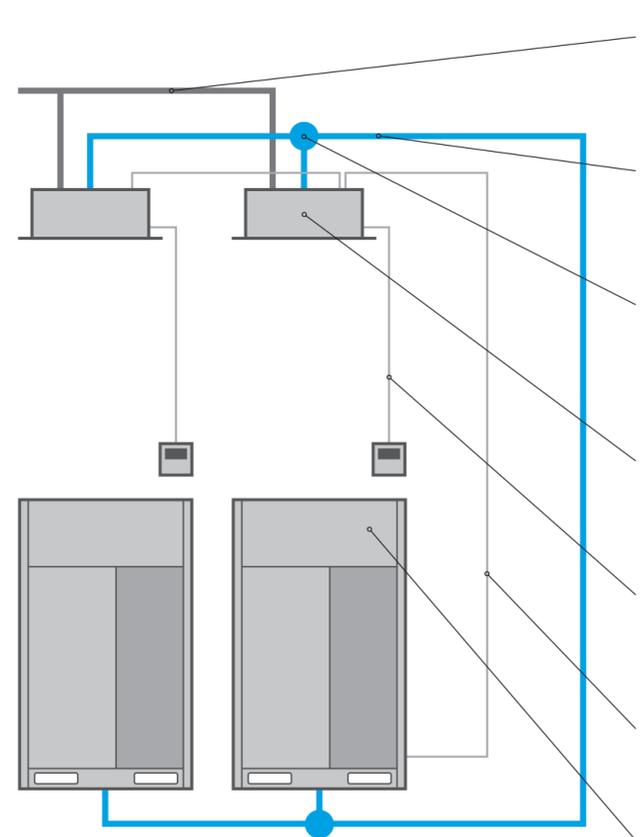
The quick, quality way to upgrade R-22 and R-407C systems

# The phase-out period for R-22 is over. Act now!

## R-22 ban in Europe

Service and maintenance with R-22 will be prohibited after 31 December 2014, meaning repairs will be impossible to R-22 systems. Avoid unexpected disruption for your customers and replace these systems now!

## The Daikin low-cost upgrade solution



### ✓ Reuse drain pipes

Durable PVC pipes can be easily reused. Only flow tests are required.

### ✓ Reuse refrigerant pipes

Pipes used for R-22 will also work with VRV-Q, thanks to lower operating pressures of the system.

### ✓ Reuse refrigerant branch pipes

There are no restrictions when upgrading from a Daikin VRV system. Other VRF systems require branch pipes to withstand pressure up to 3.3 MPa.

### ! Replace indoor units and BS boxes

Contact your local dealer to check compatibility in case you need to keep the indoor units.

### ✓ Reuse remote control wiring

Reuse wiring when upgrading from a Daikin VRV system. In other cases, this will depend on the cable type.

### ✓ Reuse indoor-outdoor wiring

Restrictions: see remote control wiring.

### ! Replace outdoor units

# Success stories with VRV-Q

## Palace of Westminster, United Kingdom

### Why VRV-Q?

"VRV-Q offers a replacement option with the unique ability to reduce operating pressures of R-410A down to R-22 levels, keeping the R-410A performance."

**Mick Langford (All Seasons Climate Control, Daikin D1 dealer)**

- > More than 35% energy savings
- > Over 6 tonnes less CO<sub>2</sub> per year
- > Year of installation: 2012
- > Installed units: 3 VRV-Q outdoor units, 13 indoor units



## Torre Serenissima office tower, Italy

### Why VRV-Q?

"The complete replacement of the 17-years-old R-22 system resulted in only a half-day of missed work for employees. The improved control of the air flow by the user significantly enhanced comfort, while reducing energy consumption by 25%."

**Maurizio Casarola (Property Manager)**

- > 25% energy savings
- > Year of installation: 2013
- > Installed units: 39 VRV-Q outdoor units, 250 indoor units, 35 VAM 500, 4 intelligent Touch Controllers
- > Full installation done during weekends



## Bloomsbury Hotel, London

### Why VRV-Q?

The hotel manager estimates that the VRV system uses 55% of the hotel's entire energy, so savings compared with the previous system are between 27% to 42% – an average of 32%, exceeding his original 30% energy savings target.

- > Year of installation: 2013
- > Installed units: 56 VRV-Q outdoor units, 209 indoor units

System is 40% more efficient in heating and 25% higher in cooling than R22 refrigerant systems.



# These benefits will convince your customer

## Always operational

### Avoid loss of business

Replacing now prevents unplanned, lengthy disruption of air conditioning systems. It also avoids loss of business for shops, complaints from guests in hotels, lower working efficiency and loss of tenants in offices.

### Quick and easy installation

No interruption of daily business while replacing the system thanks to phased-in, fast installation.

## A future-proof, high-quality solution

Customers can replace systems cost effectively from other manufacturers with highly-efficient and flexible Daikin VRV technology, featuring higher quality indoor units that deliver enhanced comfort and superior performance.

## Lower long-term costs

EU Directives prohibit system repairs with R-22 after 31 December 2014. Delaying the required R-22 replacement until an unplanned system breakdown is a losing game. Replacement day will come. Installing a technically advanced system lowers energy consumption and maintenance costs from day one.

## A cost saving decision

### Reduce costs

System upgrades cost less, because only the outdoor and indoor units need to be replaced. This is also the easiest and fastest way to comply with regulations for buildings.

### Environment protection

Improved efficiency saves energy and lowers CO<sub>2</sub> emissions as well as reducing your energy costs.

EER / COP	8HP	10HP
RXYQQ-T (R-410A)	4.30 / 4.54	3.84 / 4.45
RSXYP-L7 (R-407C)	3.10 / 3.14	3.10 / 3.10
RSXY-KA7 (R-22)	2.37 / 2.95	2.37 / 3.00

## Reduced energy consumption

