VRV IV heat pump and water cooled systems

High Ambient R-410A
Why choose Daikin

Our promise is to ensure that your customers can depend on Daikin for the ultimate in comfort, so that they are free to focus on their own working and home lives.

We promise to dedicate ourselves to technological excellence, a design focus and the highest quality standards so that your customers can trust and rely on the comfort we deliver.

Our promise to the planet is absolute. Our products are at the forefront of low energy consumption and we continuously innovate to reduce the environmental impact of HVACR solutions further.

We lead where others follow. We will continue our global leadership in HVACR solutions as our specialist expertise in all market sectors combined with 90 years’ experience enable us to deliver added value in long-lasting relationships based on trust, respect and credibility.
# Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRV IV standard &amp; technologies</td>
<td>08</td>
</tr>
<tr>
<td>Benefits</td>
<td>18</td>
</tr>
<tr>
<td>Outdoor units</td>
<td>20</td>
</tr>
<tr>
<td>Indoor units</td>
<td>21</td>
</tr>
<tr>
<td>Ventilation and Air Handling</td>
<td>22</td>
</tr>
<tr>
<td>Control Systems</td>
<td>24</td>
</tr>
<tr>
<td>Specifications</td>
<td>36</td>
</tr>
</tbody>
</table>
Over 30 years of VRV History

1987
Introduction the original VRV air conditioning system to Europe, invented by Daikin in 1982
- Up to 6 indoor units connected to 1 outdoor unit

1991
Introduce VRV heat recovery
- Simultaneous cooling and heating

1994
Awarded ISO9001 certification

1998
Launch inverter series with R-407C
- Up to 16 indoor units connected to 1 outdoor unit

1998
Launch inverter series with R-407C
- Available in 4, 5, 6HP capacities
- 1 system can be installed in up to 9 rooms

2003
Introduce VRVII – the first R-410A VRF system
- Available in cooling, heat pump and heat recovery
- 40 units connected to single refrigerant circuit

2004
Expand to light commercial sector with VRVII-S
- Available in 4, 5, 6HP capacities
- 1 system can be installed in up to 9 rooms

2005
Extend VRVII inverter range with water cooled VRV-WIII
- Available in heat pump and heat recovery

2008
Launch of heat pump system optimised for heating (VRV III-C)
- Extended operation down to -15°C
- 2-stage compressor systems

2003
Introduce VRVII – the first R-410A VRF system
- Available in cooling, heat pump and heat recovery
- 40 units connected to single refrigerant circuit
2006-2007
Launch the extensively re-engineered VRVIII
› Available in cooling, heat pump and heat recovery
› Automatic charging and testing
› Up to 94 units connected to 1 system

2007
Launch of VRV VIII (VRVII-Q)
› Upgrade to replace older VRV units using R-22 refrigerant

2008
2009
Extends VRVIII range with water cooled VRV VIII
› Geothermal version available
› Operate down to -10°C in heating mode

2009
Launch total solution concept
› Integrate hot water production and Biddle air curtains into VRV system
› Connectable to Daikin Emura and Nexura
› 400,000 outdoors units sold
› 22 million indoor units sold

2010
Launch of replacement VRV (VRVIII-Q)
› Upgrade to replace older VRV units using R-22 refrigerant

2011
2012-2014
Setting new standards with the launch of VRV IV
› 28% improved seasonal efficiency
› Continuous heating on heat pumps
› Available in heat pump, heat recovery, water-cooled and replacement series

2015
Launch total solution concept
› Integrate hot water production and Biddle air curtains into VRV system
› Connectable to Daikin Emura and Nexura
› 400,000 outdoors units sold
› 22 million indoor units sold

2015
Launch of VRV IV S-series
› Most compact unit in the market
› Widest range in the market

2015
Launch of VRV IV i-series
› The invisible VRV
› Unique product concept
VRV IV High Ambient
VRV IV standard & technologies

Our new VRV IV systems set pioneering standards in all-round climate comfort performance. Total design simplicity, offering rapid installation, full flexibility as well as absolute efficiency and comfort. Find out about all these revolutionary changes at www.daikinmea.com
VRV IV =

3 revolutionary standards

› Variable Refrigerant Temperature
› Refrigerant-cooled PCB
› VRV configurator

+ unique VRV IV core technologies

› Newly developed inverter compressor
› 4-side heat exchanger
› Predictive control
› Outer rotor DC fan motor
Variable refrigerant temperature

Customise your VRV for best seasonal efficiency and comfort

Thanks to its revolutionary variable refrigerant temperature technology (VRT), VRV IV continuously adjusts both the inverter compressor speed and the refrigerant temperature, providing the necessary capacity to meet the building load with the highest seasonal efficiency at all times!

- Seasonal efficiency increased by 28%
- The first weather compensating control on the market
- Customer comfort is assured thanks to higher outblow temperatures (preventing cold draughts)

How does it work?

VRF standard
Capacity is controlled only with the variance of the inverter compressor

Daikin VRV IV
Variable Refrigerant Temperature control for energy saving in partial load condition. The capacity is controlled by the inverter compressor AND variation of the evaporating (Te) and condensing (Tc) temperature of the refrigerant in order to achieve the highest seasonal efficiency.

A higher refrigerant temperature results in a higher seasonal efficiency and higher comfort
Different modes to maximise efficiency and comfort

For maximum energy efficiency and customer satisfaction, the outdoor unit needs to adapt the evaporating/condensing temperature at the optimum point for the application.

How to set the different modes?

<table>
<thead>
<tr>
<th>Set up the main operation mode of the system</th>
<th>Define how the system reacts to changing loads</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td><strong>Step 2</strong></td>
</tr>
<tr>
<td><strong>Automatic</strong></td>
<td>Where a quick increase of load is expected such as conference rooms: Quick reaction speed to changing load has priority, with temporarily colder outblow as a result:</td>
</tr>
<tr>
<td>Quick reaction speed</td>
<td>Powerful</td>
</tr>
<tr>
<td>Top efficiency</td>
<td>Quick</td>
</tr>
<tr>
<td>Achieves top efficiency throughout the year, reacts quickly on the hottest days</td>
<td>Mild</td>
</tr>
<tr>
<td>Mild *</td>
<td>Same as above but slower response than the powerful mode.</td>
</tr>
<tr>
<td>High sensible</td>
<td>This mode would be suitable for most office applications and it is the factory set mode. The perfect balance: Slower reaction speed with top efficiency</td>
</tr>
<tr>
<td>(User selection)</td>
<td>Powerful</td>
</tr>
<tr>
<td>Quick reaction speed</td>
<td>Quick</td>
</tr>
<tr>
<td>Top efficiency</td>
<td>Mild</td>
</tr>
<tr>
<td>Year round top efficiency</td>
<td>Eco</td>
</tr>
<tr>
<td><strong>Basic</strong></td>
<td>Coil temperature would not change due to fluctuating load. Suitable for computer rooms. Suitable for low ceiling rooms.</td>
</tr>
<tr>
<td>Current VRF standard</td>
<td>No submodes</td>
</tr>
<tr>
<td>* Factory setting</td>
<td>This is how most other VRF systems work and can be used for all general type of applications. Suitable for computer rooms. Suitable for low ceiling rooms.</td>
</tr>
</tbody>
</table>
Software for simplified commissioning, configuration and customisation
VRV configurator software

- Graphical interface
- Manage systems over multiple sites in exactly the same way
- Retrieve initial settings

Simplified commissioning

The VRV configurator is an advanced software solution that allows for easy system configuration and commissioning:
- Less time is required on the roof to configure the outdoor unit
- Multiple systems at different sites can be managed in exactly the same way, providing simplified commissioning for key accounts
- Initial settings on the outdoor unit can be easily retrieved

Simplified servicing

The user-friendly display for outdoor units simplifies basic servicing tasks:
- Easy-to-read error report
- Easy-to-understand menu indicates quick and easy on-site settings
- Easy-to-follow parameters for checking basic functions: high pressure, low pressure, frequency and operation time, compressor history, temperature of discharge/suction pipe

User-friendly interface instead of push buttons

Connect directly to your laptop

Pre configured settings from office

3-digit 7-segment display
Unique VRV IV core technologies

Newly developed compressor

Full inverter
- Enabling variable refrigerant temperature and low start-up currents
- Stepless capacity control

Reluctance brushless DC motor
- Increased efficiency compared to AC motors by simultaneously using normal and reluctance torque
- Powerful neodymium magnets efficiently generate high torque
- High-pressure oil reduces thrust losses

High efficiency J-type 6-pole motor
- 50% stronger magnetic field and higher rotation efficiency

Refrigerant-cooled PCB
- Reliable cooling because it is not influenced by ambient air temperature
- Smaller switchbox for smoother air flow through the heat exchanger increasing heat exchange efficiency by 5%

4-sided, 3-row condenser coil
- Condenser coil surface up to 50% larger (up to 235m²), leading to 30% more efficiency

37 patents

6 patents

10 patents
UNIQUE

Predictive Control Function (PCF)

› Reaches the target capacity/refrigerant temperature faster
› Reaches the target without overshooting, so there is no waste, leading to improved efficiency
› Three capacity settings give more precise control for user comfort

The large number of Daikin systems already in operation and which are monitored by our Intelligent Network software put us in the unique position of being able to analyse this data and develop the predictive compressor control function.

DC fan motor

UNIQUE

Outer rotor DC motor for higher efficiency

› Larger rotor diameter results in greater force for the same magnetic field, leading to better efficiency
› Better control, resulting in more fan steps to match the actual capacity

Sine wave DC inverter

Optimizing the sine wave curve results in smoother motor rotation and improved motor efficiency.

DC fan motor

The use of a DC fan motor offers substantial improvements in operating efficiency compared to conventional AC motors, especially during low speed rotation.

E-Pass Heat Exchanger

Optimising the heat exchanger’s path layout prevents heat being transferred from the overheated gas section to the sub-cooled liquid section which is a more efficient way to use the heat exchanger.

I-demand function

Limit maximum power consumption.

The newly introduced current sensor minimizes the difference between the actual power consumption and the predefined power consumption.
Heavy Corrosion Protection Options & Recommendations

Depending on the location from the coast line and wind direction, Daikin recommends different types of anti-corrosion protection to guard the equipment and guarantee optimal life span and performance.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Distance from Sea Shore</th>
<th>Standard</th>
<th>Heavy</th>
<th>Service Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect</td>
<td>&gt; 2 Km</td>
<td>✓</td>
<td>✓</td>
<td>Recommended</td>
</tr>
<tr>
<td>Mild Coastal</td>
<td>500M - 2 Km</td>
<td>✓</td>
<td></td>
<td>Recommended</td>
</tr>
<tr>
<td>Severe Coastal</td>
<td>0 - 500M</td>
<td>✓</td>
<td>Highly Recommended</td>
<td>Highly Recommended</td>
</tr>
<tr>
<td>Direct</td>
<td>&gt; 2 Km</td>
<td>✓</td>
<td></td>
<td>Recommended</td>
</tr>
<tr>
<td>Mild Coastal</td>
<td>500M - 2 Km</td>
<td>✓</td>
<td>Highly Recommended</td>
<td>Highly Recommended</td>
</tr>
<tr>
<td>Severe Coastal</td>
<td>0 - 500M</td>
<td>✓</td>
<td>MUST</td>
<td>MUST</td>
</tr>
</tbody>
</table>

Disclaimer: Any Daikin unit installed within 500 meters from coastal area or water body is not supported or covered by Daikin standard warranty. Contact a Daikin representative for options.

### Components for Outdoor

<table>
<thead>
<tr>
<th></th>
<th>Standard Treatment</th>
<th>Heavy Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Exchanger</td>
<td>Blue fin or Polyethylene</td>
<td>Hydrophobic epoxy resin Blend 5,000 hours salt spray**</td>
</tr>
<tr>
<td>Top Panel</td>
<td>Galvanized powder-coated steel</td>
<td>Hydrophobic epoxy resin Blend 5,000 hours salt spray**</td>
</tr>
<tr>
<td>Side Panel</td>
<td>Galvanized powder-coated steel</td>
<td>Hydrophobic epoxy resin Blend 5,000 hours salt spray**</td>
</tr>
<tr>
<td>Outer Panel</td>
<td></td>
<td>Galvanized powder-coated steel</td>
</tr>
<tr>
<td>Bottom / Base Frame</td>
<td></td>
<td>Hydrophobic epoxy resin Blend 5,000 hours salt spray**</td>
</tr>
<tr>
<td>(Applicable to non-powder coat component)</td>
<td></td>
<td>Galvanized powder-coated steel</td>
</tr>
<tr>
<td>Fan Motor Support Assy (Applicable to non-powder coat component)</td>
<td></td>
<td>Hydrophobic epoxy resin Blend 5,000 hours salt spray**</td>
</tr>
<tr>
<td>Stop Valve and other support of Bracket Assy (Applicable to non-powder coat component)</td>
<td></td>
<td>Hydrophobic epoxy resin Blend 5,000 hours salt spray**</td>
</tr>
<tr>
<td>Partition Plate (Applicable to non-powder coat component)</td>
<td></td>
<td>Hydrophobic epoxy resin Blend 5,000 hours salt spray**</td>
</tr>
<tr>
<td>Self Tapping Screw</td>
<td>Zinc alloy coating</td>
<td>Stainless steel (SS316)</td>
</tr>
<tr>
<td>Circuit Board</td>
<td>Three-proof layer SMT sealing technology</td>
<td>Three-proof layer SMT sealing technology</td>
</tr>
</tbody>
</table>

**Based on ASTM B117 test conditions**
Daikin Anti-Corrosion Solutions for maximum peace of mind

For prolonged lifespan of the condenser coil and other components with Anti-Corrosion Protection coating, the following recommendations for care and maintenance should be followed:

**The Do’s**

- Regular washing of the condenser coil with fresh water (bi-monthly)
- Clear all unwanted debris and dirt deposits within the unit
- Touch up any rusty parts / components
- Escalate the maintenance frequency when equipment is near the vicinity of a cooling tower
- Handle equipment with care to prevent scratches on the protection coating

**The Don’ts**

- Use unknown chemical or acidic based solution
- Scratches or crack the anti-corrosion protection coating
- Direct contact with sea water or coastal sand
- Leave any debris on the bottom tray

Installation and Precaution

- It is important that the equipment is not installed directly exposed to sea water
- Avoid sandy location, i.e. near the shore and windy areas
- Select a well-drained location
- Extra care is needed during hoisting and handling to prevent any scratches on the anti-corrosion protection coating
- No sharp material to be used during the handling
- Clear all unwanted debris/drilling metal particles on the bottom tray and base leg after installation work to prevent any scratches or cracks onto the anti-corrosion protection coating that will cause rust formation

In case of prolong storage at site before operation, we suggest to protect the equipment with the existing packing box material prior to handing over.

In situation where the unit is installed close to coastal area and exposed to strong breeze, it is important to install a windbreaker or retaining wall to prolong the life span of the equipment protection coating.

Example of Condenser Unit Installed at Poor Site Condition

**Sandy Location**
Coastal sand stuck in between the fins causes damage to the protection coating.

**Rooftop with Strong Sea Breeze**
Strong sea breeze blowing directly to coil can shorten the life of the coil.

**Enclosed Area and Sea Water Splashing Condition**
Sea water splashing directly to the coil causes solid salt forming on the fins coating.
Anti Corrosion Treatment

Special anti corrosion treatment of the heat exchanger provides 5 to 6 times greater resistance against acid rain and salt corrosion. The provision of rust proof steel sheet on the underside of the unit gives additional protection.

Performed tests:

- VDA Wechseltest
- Contents of 1 cycle (7 days):
- 24 hours salt spray test SS DIN 50021
- 96 hours humidity cycle test KfW DIN 50017
- 48 hours room temperature & room humidity testing period: 5 cycles

Kesternich test (SO2)

- contents of 1 cycle (48 hours) according to DIN50018 (0.21)
- testing period: 40 cycles

The total solution

Typically, many buildings today rely on several separate systems for heating, cooling & air curtain. As a result energy is wasted. To provide a much more efficient alternative, VRV technology has been developed into a total solution managing up to 70% of a buildings energy consumption giving large potential to cost saving.

- Heating and cooling for year round comfort
- Ventilation for high quality environments
- Controls for maximum operating efficiency
One system, multiple applications for hotels, offices, retail, home …

Heating and cooling

- Combine VRV indoor units (13 line-ups)
- New round flow cassette sets the standard for efficiency and comfort with presence sensor.
- New slim medium static pressure duct unit.

Intelligent control systems

- Mini BMS with connects Daikin and third-party equipment
- Integrate intelligent control solutions with energy management tools to reduce running costs

Ventilation

- Widest range in DX ventilation – AHU units
- Provides a fresh, healthy and comfortable environment
What does a VRV IV installation mean to you?

See how you can profit from Daikin’s highly flexible and efficient product range.

Consultants

Daikin’s VRV IV technology maximises flexibility and leads the way in customisation to match individual building requirements in comfort and energy, with reduced running costs.

- Technical design support
- Ecological design meets and exceeds legal requirements
- Maximum flexibility to meet customer requirements
- Advanced software tools assist with system design
- Complies with ESMA UAE regulations
- Complies with MEW-Kuwait regulations
- Complies with SASO Saudi regulations

Building owners

VRV IV is the ultimate in customised comfort and intelligent control tailored to your individual needs and to maximise energy efficiency. Annual cost savings up to 28% (compared to VRV III).

- Up to 40% energy consumption saving over conventional AC System
- Single point of contact for the design and maintenance of your climate system
- Integrated system, combining air conditioning, ventilation, etc. allows maximum energy efficiency
- Multiple systems can be managed in exactly the same way for the key accounts
- Dedicated after-sales service to ensure fast on-site support

Installers

Daikin VRV IV sets the standard with state-of-the-art technology and time-saving commissioning and servicing.

- Simplified and time-saving commissioning with VRV configurator
- Wide range of outdoor units (up to 48HP)
- One supplier = one point of contact
- Maximum flexibility to meet customer requirements
- Customised training to maximise expertise
Out door units can be single units or combined in multiple units as a module for larger capacity applications
### Products overview

<table>
<thead>
<tr>
<th>Model</th>
<th>Product name</th>
<th>Outdoor units VRV IV S series</th>
<th>Water cooled VRV IV W series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daikin’s solution for comfort &amp; low energy consumption</td>
<td>Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation, air handling units</td>
<td>Incorporates VRV IV standards &amp; technologies such as Variable Refrigerant temperature.</td>
<td></td>
</tr>
<tr>
<td>Space saving solution without compromising on efficiency</td>
<td>Connect VRV indoor units</td>
<td>Connect either VRV Indoor</td>
<td>2 analogue input signals allowing external control</td>
</tr>
<tr>
<td>Ideal for high rise buildings, using water as heat source</td>
<td>Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation, hot water, air handling units</td>
<td>Incorporates VRV IV standards &amp; technologies such as Variable Refrigerant temperature</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compact &amp; lightweight design can be stacked for maximum space saving</td>
<td>Variable Water Flow control option increases flexibility and control</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No need for an external heating or cooling source when used in geothermal mode</td>
<td>Connect either VRV Indoor</td>
<td></td>
</tr>
</tbody>
</table>

**Capacity (HP)**

| Product name | 8  | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 |
|--------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| RXYTQ-T      |    | *  |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |    |
| VRV IV       |    | *  |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |    |
| (50/60Hz)    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| RXYSQ-TY1    |    | *  |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |    |
| VRV IV S series |    | *  |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |    |
| (50Hz)       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| RWEYQ-T      |    | *  |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |    |
| VRV IV W series |    | *  |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |    |
| (50Hz)       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| RWEYQ-P      |    | *  |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |    |
| VRV III W series |    | *  |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |  * |    |
| (60Hz)       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
### Indoor units

#### Products overview

<table>
<thead>
<tr>
<th>Type Model</th>
<th>Product name</th>
<th>Capacity class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling mounted cassette</td>
<td>FXFQ-A</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>Fully flat cassette</td>
<td>FXZQ-A</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>Slim concealed ceiling unit</td>
<td>FXDQ-A</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>Conceived ceiling unit</td>
<td>FXSQ-A</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>Conceived ceiling unit</td>
<td>FXMLQ-P</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>Conceived ceiling unit</td>
<td>FXMQQ-MA</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>Wall mounted unit</td>
<td>FXMLQ-PVE</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>Ceiling suspended unit</td>
<td>FXHQZ-A</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>4-Way blow ceiling suspended unit</td>
<td>FXUQZ-A</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>Floor standing unit</td>
<td>FXLQ-P</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
<tr>
<td>NEW Concealed floor standing unit</td>
<td>FXNQ-A</td>
<td>15 20 25 30 40 50 60 70 80 90 100 125 150 200 250 300 500</td>
</tr>
</tbody>
</table>

#### Cooling capacity (kW)

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FXFQ-A</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXZQ-A</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXDQ-A</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXSQ-A</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXMLQ-P</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXMQQ-MA</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXMLQ-PVE</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXHQZ-A</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXUQZ-A</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXLQ-P</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXNQ-A</td>
<td>1.7 2.2 2.8 3.6 4.5 5.6 7.1 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
</tbody>
</table>

#### Heating capacity (kW)

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FXFQ-A</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXZQ-A</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXDQ-A</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXSQ-A</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXMLQ-P</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXMQQ-MA</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXMLQ-PVE</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXHQZ-A</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXUQZ-A</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXLQ-P</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
<tr>
<td>FXNQ-A</td>
<td>1.9 2.5 3.2 4.0 5.0 6.3 8.0 9.0 10.2 12.0 16.0 22.4 28.0 35.0 45.0 56.0</td>
</tr>
</tbody>
</table>

(1) Nominal cooling capacities are based on: indoor temperature: 27°C/DB, 19°C/CW; outdoor temperature: 35°C/DB, equivalent refrigerant piping: 5m, level difference: 0m
(2) Nominal heating capacities are based on: indoor temperature: 20°C/DB, outdoor temperature: 7°C/DB, 6°C/CW; equivalent refrigerant piping: 5m, level difference: 0m
Ventilation range

Overview

Five components of indoor air quality

- **Ventilation**: ensures the provision of fresh air
- **Heat recovery**: recovers heat and moisture from the outgoing air to maximise comfort and efficiency
- **Air processing**: heats or cools incoming fresh air, maximising comfort and minimising the load on the air conditioning installation
- **Humidification**: optimises the balance between indoor and outdoor humidity
- **Filtration**: removes dust, pollution and odours from the air

<table>
<thead>
<tr>
<th>Type</th>
<th>Product name</th>
<th>Components of indoor air quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat reclaim</td>
<td>VAM-FC</td>
<td>&gt;Ventilation, &gt;Heat recovery</td>
</tr>
<tr>
<td>Heat reclaim</td>
<td>VKM-GB (50Hz only)</td>
<td>&gt;Ventilation, &gt;Heat recovery</td>
</tr>
<tr>
<td>Heat reclaim</td>
<td>VKM-GBM (50Hz only)</td>
<td>&gt;Ventilation, &gt;Heat recovery, &gt;Air processing</td>
</tr>
<tr>
<td>Air handling</td>
<td>FXMQ-MFV1 (50Hz only)</td>
<td>&gt;Ventilation, &gt;Heat recovery</td>
</tr>
<tr>
<td>units</td>
<td>DX total fresh air package</td>
<td>&gt;Ventilation, &gt;Heat recovery, &gt;Air processing, &gt;Humidification, &gt;Filtration</td>
</tr>
</tbody>
</table>

Air flow rate (m³/hr)
Air handling unit applications

Why use VRV condensing units for connection to air handling units?

High Efficiency
The majority of the time the AHU will be in cooling mode. By combining a heat wheel with the AHU, energy bills can be reduced by recovering the cool air exhausted to the atmosphere. Where heating is required in winter condition we can simply package with a Daikin heat pumps which are renowned for their high efficiency. Fresh air can be heated in cases where the air is too cold to be supplied untreated.

Fast response to changing loads resulting in high comfort levels
Daikin VRV units respond rapidly to fluctuations in supply air temperature, resulting in a steady indoor temperature and resultant high comfort levels for the end user. The ultimate is the VRV range combined with an AHU designed to provide the perfect indoor condition while reducing running cost with the Middle East year round cooling demand.

Easy Design and Installation
The system is easy to design and install since no additional water systems such as boilers, chillers, buffer, tanks and gas connections etc. are required. This also reduces both the total system investment and running cost.

Daikin Fresh air package

Capacity:
Up to 269 kW (Nominal Capacity) - by 4x24 HP OU.

Expansion Valve Sizes: 50 - 63 - 80 - 100 - 125 - 140 - 200 - 250 - 400 - 500 (single or multi)
In order to maximize installation flexibility, 4 types of control systems are offered

Control w: Off the shelf control of air temperature (discharge temperature, suction temperature, room temperature) via any DDC controller using a proportional 0–10V algorithm for capacity control

Control x: Precise control of air temperature (discharge temperature, suction temperature, room temperature) requiring a preprogrammed DDC controller (for special applications) using a proportional 0–10V algorithm for capacity control

Control y: Control of refrigerant (Te/Tc) temperature via Daikin control (no DDC controller needed) with 3rd party thermostat (Daikin control for field settings and error indication)

Control z: Control of air temperature (suction temperature, room temperature) via Daikin control (no DDC controller needed)

### Possibility W (Td/Tr control):

**Air temperature control via DDC controller**

Room temperature is controlled as a function of the air handling unit suction or discharge air (customer selection). The DDC controller is translating the temperature difference between set point and air suction temperature (or air discharge temperature or room temperature) into a proportional 0-10V signal which is transferred to the Daikin control box (EKEQFCBA). This voltage controls the compressor frequency.

### Possibility X (Td/Tr control):

**Precise air temperature control via DDC controller**

Room temperature is controlled as a function of the air handling unit suction or discharge air (customer selection). The DDC controller is translating the temperature difference between set point and air suction temperature (or air discharge temperature or room temperature) into a reference voltage (0-10V) which is transferred to the Daikin control box (EKEQFCBA). This reference voltage will be used as the main input value for the compressor frequency control.

### Possibility Y (Te/Tc control):

**By fixed evaporating /condensing temperature**

A fixed target evaporating temperature of between 3°C and 12°C can be set by the customer. In this case, room temperature is only indirectly controlled. The cooling load is determined from the actual evaporating temperature (i.e. load to the heat exchanger). A Daikin infrared remote control (BRC1DS2 or BRC1ES2A/B - optional) can be connected for error indication.

### Possibility Z (Ts/Tr control):

**Control your AHU just like a VRV indoor unit with 100% fresh air**

(BRC1DS2 or BRC1ES2A/B - optional)

Set point can be fixed via standard Daikin infrared remote control. Remote ON/OFF can be achieved by an optional adapter KRP4A51.

No external DDC controller should be connected. The cooling load is determined from the air suction temperature and set point on the Daikin controller.

---

<table>
<thead>
<tr>
<th>Option kit</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possibility w</td>
<td>EKEQFCBA</td>
</tr>
<tr>
<td>Possibility x</td>
<td>EKEQFCBA</td>
</tr>
<tr>
<td>Possibility y</td>
<td>EKEQDCB EKEQMCBA*</td>
</tr>
<tr>
<td>Possibility z</td>
<td>EKEQDCB EKEQMCBA</td>
</tr>
</tbody>
</table>

* EKEQMCB (for ‘multi’ application)
Controllers

Wired remote control
BRC1E53A

Intelligent touch manager
DCM601A51

Infrared remote controller
Individual control systems

**BRC4*/BRC7**

**Infrared remote control**

Operation buttons: ON / OFF, timer mode start / stop, timer mode on / off, programme time, temperature setting, air flow direction (1), operating mode, fan speed control, filter sign reset (2), inspection (2) / test indication (2)

Display: Operating mode, battery change, set temperature, air flow direction (1), programmed time, fan speed, inspection / test operation (2)

For all features of the remote control, refer to the operation manual.

**BRC1D52**

**Wired remote control for Sky Air and VRV**

- Schedule timer:
  - Five day actions can be set as follows:
    - set point: unit is switched ON and normal operation is maintained
    - Off: unit is switched OFF
  - Limits: unit is switched ON and min. / max. control (c.f. Limit operation for more details)
- Home leave (frost protection): during absence, the indoor temperature can be maintained at a certain level. This function can also switch the unit ON / OFF
- User friendly HRV function, thanks to the introduction of a button for ventilation mode and fan speed
- Immediate display of fault location and condition
- Reduction of maintenance time and costs

**Display**

- Operating mode
- Heat Recovery Ventilation (HRV) in operation
- Cool / heat changeover control
- Centralised control indication
- Group control indication
- Set temperature
- Air flow direction
- Programmed time
- Inspection test / operation
- Fan speed
- Clean air filter
- Defrost / hot start
- Malfunction

**NEW BRC1E53A**

**User friendly remote control with contemporary design for Sky Air and VRV**

A series of energy saving functions that can be individually selected

- Temperature range limit
- Setback function
- Presence & floor sensor connection
  (available on round flow and fully flat cassette)
- Set temperature auto reset
- Off timer

Temperature range limit avoids excessive heating or cooling

Save energy by constraining the lower temperature limit in cooling and upper temperature limit in heating mode.

Note: Also available in auto cooling / heating change over mode.

Other functions

- Up to 3 independent schedules can be set, so the user can easily change the schedule himself throughout the year (e.g. Summer, Winter, Mid-season)
- Possibility to individually restrict menu functions
- Easy to use: all main functions directly accessible
- NEW Choice of display between symbol or text
- Easy setup: clear graphical user interface for advanced menu settings
- NEW Remote control save mode: screen turns off when no person is changing mode or adjusting settings
- Real time clock with auto update to daylight saving time
- Built-in backup power: when a power failure occurs all settings remain stored up to 48 hours
- Supports multiple languages:
  - BRC1E53A: English, German, French, Dutch, Spanish, Italian, Portuguese
  - Czech, Croatian, Hungarian, Romanian, Slovenian, Bulgarian
  - Greek, Russian, Turkish, Polish, Slovak, Albanian
**Centralised control systems**

Centralised control of the Sky Air and VRV system can be achieved via 3 user friendly compact remote controllers. These controls may be used independently or in combination with 1 group = several (up to 16) indoor units in combination and 1 zone = several groups in combination.

A centralised remote control is ideal for use in tenanted commercial buildings subject to random occupation, enabling indoor units to be classified in groups per tenant (zoning). The schedule timer programmes the schedule and operation conditions for each tenant and the control can easily be reset according to varying requirements.

**Residential central remote controller* (Option)**

**DCS303A51**

Max. 16 groups of indoor units can be easily controlled with the large LCD panel

- Max. 16 groups (128 indoor units) controllable
- Backlight and large LCD panel for easy readability
- ON/OFF, temperature settings and scheduling can be controlled individually for indoor units.
- All indoor units can be turned on or off at once with "ALL" button.
- Each group has a dedicated button for convenience.
- Outside temperature display

* For residential use only. Cannot be used with other centralised control equipment.

**DCS302C51**

**Centralised remote control**

Providing individual control of 64 groups (zones) of indoor units.

- a maximum of 64 groups (128 indoor units, max. 10 outdoor units) can be controlled
- a maximum of 128 groups (128 indoor units, max. 10 outdoor units) can be controlled via 2 centralised remote controls in separate locations
- zone control
- group control
- malfunction code display
- maximum wiring length of 1,000m (total: 2,000m)
- air flow direction and air flow rate of HRV can be controlled
- expanded timer function
DST301B51

Schedule timer

Enabling 64 groups to be programmed.
› a maximum of 128 indoor units can be controlled
› 8 types of weekly schedule
› a maximum of 48 hours back up power supply
› a maximum wiring length of 1,000m (total: 2,000m)

DCS301B51

Unified ON/OFF control

Providing simultaneous and individual control of 16 groups of indoor units.
› a maximum of 16 groups (128 indoor units) can be controlled
› 2 remote controls in separate locations can be used
› operating status indication (normal operation, alarm)
› centralised control indication
› maximum wiring length of 1,000m (total: 2,000m)

Centralised control systems

DTA113B51

Basic solution for control of Sky Air and VRV

› Rotation function
› Backup operation function.
DCS601C51

Detailed & easy monitoring and operation of VRV systems (max. 64 indoor units groups).

Languages
- English
- French
- German
- Italian
- Spanish
- Dutch
- Portuguese

System layout
- Up to 64 indoor units can be controlled
- Touch panel (full colour LCD via icon display)

Control
- Individual control (set point, start/stop, fan speed)
- (max. 64 groups/indoor units)
- Set back schedule
- Enhanced scheduling function
- (8 schedules, 17 patterns)
- Flexible grouping in zones
- Yearly schedule
- Fire emergency stop control
- Interlocking control
- Increased HRV monitoring and control function
- Automatic cooling / heating change-over
- Heating optimization
- Temperature limit
- Password security: 3 levels (general, administration & service)
- Quick selection and full control
- Simple navigation

Monitoring
- Visualisation via Graphical User Interface (GUI)
- Icon colour display change function
- Indoor units operation mode
- Indication filter replacement
- Multi PC

Cost performance
- Free cooling function
- Labour saving
- Easy installation
- Compact design: limited installation space
- Overall energy saving

Open interface
- Communication to any third party controller (domotics, BMS, etc.) is possible via open interface (http option DCS007A51)

Connectable to
- VRV
- HRV
- Sky Air
- Split (via interface adapter)
Advanced centralised controller with Cloud connection

2 solutions:
Local solution
- Offline centralised control
- Stylish optional screen fits any interior

Cloud solution
- Flexible online control from any device (Laptop, tablet...)
- Monitor & control one or multiple sites
- Benchmark the energy consumption of different installations (1)
- Energy consumption follow-up to comply with local regulations

System layout

Online control from any device

Daikin supplied screen (optional) (for local control) Z380C1A023A
Local network
Daikin supplied router (optional) 4G-N12

Split, SkyAir, VRV, VAM, ventilation, air curtains

(1) For VRV
**Centralised control systems**

**Total solution**
- Total solution thanks to a large integration of Daikin products and 3rd party equipment
- Connect a wide range of units (Split, Sky Air, VRV, Ventilation, Biddle air curtains)
- Simply control your entire building centrally
- Increased customer shopping experience by better management of your shop comfort level

**Daikin Cloud Services**
- Control your building no matter where you are
- Monitor and control multiple sites
- Installer or technical manager can remotely login to the cloud for first troubleshooting
- Benchmark the energy consumption of different installations
- Manage & track your energy use

**User friendly touch control**
- Stylish Daikin supplied optional screen for local control fits any interior
- Intuitive and user-friendly interface
- Full solution with simple control
- Easy commissioning

**Flexible**
- Inputs via digital and pulse input for 3rd party equipment such as kWh meters, emergency input, window contact, ...
- Modular concept allows your cloud to grow with your business
- Control up to 32 indoor unit (groups)

**Functions overview**

<table>
<thead>
<tr>
<th>Languages</th>
<th>Local solution</th>
<th>Cloud solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN, DE, FR, NL, ES, IT, EL, PT, RU, TR, DA, SV, NO, CS, HR, HU, PL, RO, SI, BG, SK,</td>
<td>Depends on local device</td>
<td>EN, DE, FR, NL, ES, IT, EL, PT, RU, TR, DA, SV, NO, CS, HR, HU, PL, RO, SI, BG, SK,</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>System layout</th>
<th>N° of connectable indoor units</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple sites</td>
<td>control</td>
<td>32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitoring &amp; control</th>
<th>Basic control functions (ON/OFF, mode, filter sign, setpoint, fan speed, ventilation mode, room temperature, ...)</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remote control prohibition</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>All devices ON/OFF</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Zone control</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Group control</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Weekly schedule</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Yearly schedule</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Interlock control</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Set point limitation</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Visualisation of energy use per operation mode</td>
<td>32</td>
</tr>
</tbody>
</table>

| Connectable to | DX split, Sky Air, VRV | 32 |
|               | VAM, VKM ventilation | 32 |
|               | Air curtains | 32 |

For available Daikin Cloud Service options refer to the option list

---

**From one to ∞ sites**
- Connectable to DX split, Sky Air, VRV
- VAM, VKM ventilation
- Air curtains

**Languages overview**

**System layout**
- N° of connectable indoor units
- Multiple sites control

**Monitoring & control**
- Basic control functions (ON/OFF, mode, filter sign, setpoint, fan speed, ventilation mode, room temperature, ...)
- Remote control prohibition
- All devices ON/OFF
- Zone control
- Group control
- Weekly schedule
- Yearly schedule
- Interlock control
- Set point limitation
- Visualisation of energy use per operation mode

**Connectable to**
- DX split, Sky Air, VRV
- VAM, VKM ventilation
- Air curtains
Mini BMS
with full integration across all product pillars

- Price competitive mini BMS
- Cross-pillar integration of Daikin products
- Integration of third party equipment

System overview

Integration of third party equipment

- Fire alarm
- kWh meter

Full control of Daikin HVAC-R portfolio

- DCM601A51
- Max 7 adapters
- Di/Pi port
- ITM plus adaptor line

Direct plug & play connection!

Networks and protocols:
- BACnet protocol
- WAGO interface

Sensors and actuators:
- Lighting
- Fan
- Pump
- Sensor
- Multi state objects
- Elevator
- Air handling unit
- Alarm

Web Access

Internet
Extranet
LAN
3G
**User friendliness**

- Intuitive user interface
- Visual lay out view and direct access to indoor unit main functions
- All functions direct accessible via touch screen or via web interface

**Smart energy management**

- Monitoring if energy use is according to plan
- Helps to detect origins of energy waste
- Powerful schedules guarantee correct operation throughout the year
- Save energy by interlocking A/C operation with other equipment such as heating

**Flexibility**

- Cross-pillar integration (heating, air conditioning, applied systems, refrigeration, air handling units)
- BACnet protocol for 3rd party products integration
- I/O for integration of equipment such as lights, pumps… on WAGO modules
- Modular concept for small to large applications
- Control up to 512 indoor unit groups via one ITM and combine multiple ITM via the web interface

**Easy servicing and commissioning**

- Remote refrigerant containment check preventing on site visit
- Simplified troubleshooting
- Save time on commissioning thanks to the pre-commissioning tool
- Auto registration of indoor units

**Functions overview**

- **Languages**
  - English
  - French
  - German
  - Italian
  - Spanish
  - Dutch
  - Portuguese
- **System layout**
  - Up to 2,360 unit groups can be controlled
  - (ITM plus Integrator + 7 IPUs incl. ITM adaptor)
  - Ethernet TCP/IP
- **Management**
  - Web access
  - Power Proportional Distribution (option)
  - Operational history
  - Smart energy management
  - Sliding temperature
- **Control**
  - Individual control
  - Schedule setting (Weekly schedule, yearly calendar, seasonal schedule)
  - Interlock control
  - Setpoint limitation
- **Connectable to**
  - DX Split, Sky Air, VRV
  - Chillers (via POL 138.70 controller)
  - Dakin AHU
  - Fan coils
  - Dakin Altherma Flex type
  - LT and HT hydoboxes
  - Air curtains
  - WAGO I/O, AO and PI

- **WAGO Interface**
  - Modular integration of 3rd party equipment
  - WAGO coupler (interface between WAGO and Modbus)
  - DI module
  - Do module
  - AI module
  - Thermistor module
What is Intelligent Network?
A service based on our global remote monitoring technology, keeping your system trouble-free and working with top efficiency.

What does Intelligent Network offer you
Safeguarding the lifelong optimum operation of your air conditioning system means getting geared up to operate the system in energy efficient way and reduce unexpected breakdowns and costs to the absolute minimum. This is where Intelligent Network helps to improve the effectiveness of your building management.

Intelligent Network is about ‘being connected’ with Daikin, the Internet-based link between you, your air conditioning system and Daikin’s Remote Monitoring Centre. This allows you to monitor your energy consumption and Daikin’s expert service engineers to monitor your entire system’s status non-stop, all year round. Through predicting malfunctions and offering technical advice from data analysis, you can maximise equipment uptime, as well as controlling energy costs with no sacrifice in comfort levels. By doing this, Intelligent Network will prevent problems, prolong your system’s service life while reducing the energy bill.

Intelligent Network Services
Intelligent Network consists of 2 main services: The VRV Cloud and Intelligent Network performance monitoring and analysis.

VRV Cloud
The VRV Cloud puts you in the driving seat of your energy management. The easy-to-use energy data trending and analytic tools puts you in control and shows your CO2 footprint reduction opportunities and energy savings of up to 15%.

Saving starts by measuring. Enhance your company’s sustainability!

Intelligent Network performance monitoring and analysis
Focus on your core business and hand the HVAC over to Daikin. Daikin Intelligent Network connects your system continuously with Daikin. It notifies alarms and early warnings of system deviations to maximise system uptime and the comfort of the people in the building. Service providers have web based access to operation data so that they are fully prepared when they arrive on-site. Specialists run trend analyses. All of which boosts your system’s reliability by ensuring that it is running at optimum efficiency.
Daikin VRV Cloud

Helps you manage your energy through Daikin technology.
› Intelligent energy visualization tool that helps you with your energy management
› 24/7 online monitoring by the customer from any location.
› User friendly visualization of VRV energy management (kWh)
› Analysis support of waste operation
› Multiple site monitoring

Performance monitoring

Daikin’s unique Intelligent Network Service aims to prevent the equipment coming to an unexpected stop or needing emergency repair.

Fast response, better prepared
› If an alarm does occur, the service provider is immediately alerted and receives all crucial information.
› Early fault indication (predictions): operation data are 24/7 checked by Intelligent Network prediction algorithms to act as early as possible, averting unscheduled breakdowns.

Analysis

Be connected with Daikin’s experts, this gives you a clear overview of operability and use of the air conditioning system.
› Daikin continuously monitors energy, operation and comfort data. Thanks to periodic analysis of the data, Daikin can suggest ways of improving performance.
› If there is a problem, Daikin specialists will analyse the operation data history to provide remote support.
### VRV IV heat pump

<table>
<thead>
<tr>
<th>Model</th>
<th>RXYTQ8T7YF</th>
<th>RXYTQ10T7YF</th>
<th>RXYTQ12T7YF</th>
<th>RXYTQ14T7YF</th>
<th>RXYTQ16T7YF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cooling T1</strong> (Nominal)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity Ton</td>
<td>6.4</td>
<td>8.0</td>
<td>9.5</td>
<td>11.4</td>
<td>12.8</td>
</tr>
<tr>
<td>Capacity kW</td>
<td>22.4</td>
<td>28.0</td>
<td>33.5</td>
<td>40.0</td>
<td>45.0</td>
</tr>
<tr>
<td>Capacity Btu/h</td>
<td>76,450</td>
<td>95,550</td>
<td>114,350</td>
<td>136,500</td>
<td>153,550</td>
</tr>
<tr>
<td>EER (Btu/h) / W</td>
<td>12.1</td>
<td>12.8</td>
<td>11.8</td>
<td>11.0</td>
<td>11.0</td>
</tr>
<tr>
<td>PI kW</td>
<td>6.33</td>
<td>7.47</td>
<td>9.68</td>
<td>12.4</td>
<td>14.0</td>
</tr>
<tr>
<td><strong>Cooling T2</strong> 46°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity kW</td>
<td>20.2</td>
<td>25.2</td>
<td>28.5</td>
<td>32.0</td>
<td>35.1</td>
</tr>
<tr>
<td>Capacity Btu/h</td>
<td>68,950</td>
<td>86,000</td>
<td>97,250</td>
<td>109,200</td>
<td>119,800</td>
</tr>
<tr>
<td>EER (Btu/h) / W</td>
<td>9.28</td>
<td>9.90</td>
<td>9.72</td>
<td>9.45</td>
<td>9.18</td>
</tr>
<tr>
<td>PI kW</td>
<td>7.43</td>
<td>8.69</td>
<td>10.0</td>
<td>11.6</td>
<td>13.0</td>
</tr>
<tr>
<td>PI out kW</td>
<td>6.57</td>
<td>8.29</td>
<td>8.64</td>
<td>10.17</td>
<td>11.63</td>
</tr>
<tr>
<td><strong>Cooling T3</strong> 48°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity kW</td>
<td>16.8</td>
<td>22.4</td>
<td>24.0</td>
<td>25.1</td>
<td>28.4</td>
</tr>
<tr>
<td>Capacity Btu/h</td>
<td>57,350</td>
<td>76,450</td>
<td>81,900</td>
<td>85,650</td>
<td>96,950</td>
</tr>
<tr>
<td>Efficiency kW/Ton</td>
<td>1.30</td>
<td>1.30</td>
<td>1.30</td>
<td>1.28</td>
<td>1.29</td>
</tr>
<tr>
<td>EER (Btu/h) / W</td>
<td>9.21</td>
<td>9.35</td>
<td>9.21</td>
<td>9.35</td>
<td>9.28</td>
</tr>
<tr>
<td>PI kW</td>
<td>6.22</td>
<td>8.29</td>
<td>8.89</td>
<td>9.16</td>
<td>10.4</td>
</tr>
<tr>
<td>PI out kW</td>
<td>5.93</td>
<td>7.80</td>
<td>8.43</td>
<td>8.65</td>
<td>8.87</td>
</tr>
<tr>
<td><strong>Heating (nominal)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity kW</td>
<td>22.4</td>
<td>28.0</td>
<td>33.5</td>
<td>40.0</td>
<td>45.0</td>
</tr>
<tr>
<td>Capacity Btu/h</td>
<td>76,450</td>
<td>95,550</td>
<td>114,350</td>
<td>136,500</td>
<td>153,550</td>
</tr>
<tr>
<td>COP (Btu/h) / W</td>
<td>13.2</td>
<td>12.7</td>
<td>12.0</td>
<td>12.2</td>
<td>11.8</td>
</tr>
<tr>
<td>PI kW</td>
<td>5.20</td>
<td>6.67</td>
<td>8.54</td>
<td>9.98</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>Sound level (nominal)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound power dBA</td>
<td>78</td>
<td>81</td>
<td>81</td>
<td>86</td>
<td>86</td>
</tr>
<tr>
<td>Sound pressure dBA</td>
<td>58</td>
<td>61</td>
<td>61</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>H x W x D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1680x930x765</td>
<td>1680 x 1240 x 765</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) indoor temperature: 26.7°C B, 19.4°C CB, outdoor temperature: 35°C DB, AHRI 1230:2010, power input indoor units (duct type) included. As per AHRI/ SASHI

(2) Outdoor energy efficiency rating and power input based on Euronet testing and listing of the 50Hz models only. As per Estidama

(3) indoor temperature: 29.0°C D, 19.0°C CB, AHRI 1230:2010, power input indoor units (duct type) included. As per ESMA

(4) indoor temperature: 26.6°C D, 19.4°C CB, AHRI 1230:2010, power input indoor units (duct type) included. As per MEW

(5) Heating capacities are based on: indoor temperature: 20°C CB, outdoor temperature: 7°C DB, 6°C CB, Euronet 2015, equivalent refrigerant piping: 5m, level difference: 0m.

(6) Independently tested by 3rd party laboratory (Intertek- USA)
VRV IV S-series heat pump

Space saving solution without compromising on efficiency

› Space saving trunk design for flexible installation
› Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation, air handling units.
› Wide range of indoor units:
› Incorporates VRV IV standards & technologies: Variable Refrigerant Temperature and full inverter compressors
› Possibility to limit peak power consumption between 30 and 80%, for example during periods with high power demand
› Contains all standard VRV features

Specifications

VRV IV-S heat pump

<table>
<thead>
<tr>
<th>Model</th>
<th>RXYSQ-TMY1B</th>
<th>8TMY1B</th>
<th>10TMY1B</th>
<th>12TMY1B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling T1 (35°C)</td>
<td>Capacity (Ton)</td>
<td>8</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Capacity (kW)</td>
<td>22.4</td>
<td>28</td>
<td>33.5</td>
</tr>
<tr>
<td></td>
<td>Capacity (Btu/h)</td>
<td>76,400</td>
<td>95,500</td>
<td>114,300</td>
</tr>
<tr>
<td></td>
<td>EER (Btu/h) / W</td>
<td>11.3</td>
<td>11.2</td>
<td>11.2</td>
</tr>
<tr>
<td></td>
<td>Pi</td>
<td>6.78</td>
<td>8.54</td>
<td>10.2</td>
</tr>
<tr>
<td>T1-Eurovent</td>
<td>EER out</td>
<td>3.66</td>
<td>3.4</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>Pi out (kW)</td>
<td>6.12</td>
<td>8.24</td>
<td>10.2</td>
</tr>
<tr>
<td>Cooling T3 (46°C)</td>
<td>Capacity (kW)</td>
<td>17</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Capacity (Btu/h)</td>
<td>58,000</td>
<td>68,200</td>
<td>81,850</td>
</tr>
<tr>
<td></td>
<td>EER (Btu/h) / W</td>
<td>10</td>
<td>9.72</td>
<td>9.52</td>
</tr>
<tr>
<td></td>
<td>Pi</td>
<td>5.8</td>
<td>7.02</td>
<td>8.6</td>
</tr>
<tr>
<td>Cooling T2 (48°C)</td>
<td>Capacity (kW)</td>
<td>15.0</td>
<td>17.0</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td>Capacity (Btu/h)</td>
<td>51,150</td>
<td>58,000</td>
<td>68,200</td>
</tr>
<tr>
<td></td>
<td>Efficiency (kW/Ton)</td>
<td>1.25</td>
<td>1.40</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td>EER (Btu/h) / W</td>
<td>9.58</td>
<td>8.53</td>
<td>8.56</td>
</tr>
<tr>
<td></td>
<td>Pi</td>
<td>5.34</td>
<td>6.8</td>
<td>7.97</td>
</tr>
<tr>
<td>Heating (nominal)</td>
<td>Capacity (kW)</td>
<td>22.4</td>
<td>28.0</td>
<td>33.5</td>
</tr>
<tr>
<td></td>
<td>Capacity (Btu/h)</td>
<td>76,400</td>
<td>95,500</td>
<td>114,300</td>
</tr>
<tr>
<td></td>
<td>COP</td>
<td>14.7</td>
<td>14.5</td>
<td>14.0</td>
</tr>
<tr>
<td></td>
<td>Pi</td>
<td>5.2</td>
<td>6.6</td>
<td>8.19</td>
</tr>
<tr>
<td>Sound Level (nominal)</td>
<td>Sound Power (dBA)</td>
<td>73</td>
<td>74</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Sound Pressure (dBA)</td>
<td>55</td>
<td>55</td>
<td>57</td>
</tr>
<tr>
<td>Dimensions</td>
<td>H x W x D</td>
<td>1,430 x 940 x 320</td>
<td>1,615 x 940 x 460</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Unit Kg</td>
<td>144</td>
<td>178</td>
<td>180</td>
</tr>
<tr>
<td>Operation Range Cooling</td>
<td>Outdoor</td>
<td><del>5</del>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indoor</td>
<td><del>14</del>25 CBW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation Range Cooling</td>
<td>Outdoor</td>
<td><del>20</del>15.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indoor</td>
<td><del>15</del>27 CBW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connection Ratio</td>
<td>VRV Indoor Unit only</td>
<td>50~130 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VRV Indoor + AHU</td>
<td>50~110 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHU only</td>
<td>75~110 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerant</td>
<td>Type</td>
<td>R-410A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe Connections</td>
<td>Liquid</td>
<td>9.52</td>
<td>9.52</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td>Gas</td>
<td>19.1</td>
<td>22.2</td>
<td>25.4</td>
</tr>
<tr>
<td>Total Piping Length</td>
<td>System</td>
<td>Actual m</td>
<td>300(100,120 actual 8,10,12 Hz)</td>
<td></td>
</tr>
<tr>
<td>Max. Connectable Indoor Units</td>
<td>17</td>
<td>21</td>
<td>26</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1) Indoor temperature 26.7 °CDB, 19.4 °CWB, Outdoor temperature 35 °CDB, AHRI 1238:2010, power input indoor units (duct type) included. As per AHRI' S500.
2) Outdoor energy efficiency rating and power input based on Eurovent testing and listing of the 50 Hz models only. As per Eurovent.
3) Indoor temperature 29 °CDB, 19 °CWB, outdoor temperature 46 °CDB, ISO15930-2:2011, power input indoor units (duct type) included. As per ISMA.
4) Indoor temperature 26.6 °CDB, 19.4 °CWB, outdoor temperature 48 °CDB, AHRI 1238:2010, power input indoor units (duct type) included. As per MEW.
5) Heating capacities are based on indoor temperature 20 °CDB, outdoor temperature 7 °CDB, 6 °CWB, Eurovent 2015, equivalent refrigerant piping 1m, level difference 0m.
VRV IV water cooled series

Ideal for high rise buildings, using water as heat source

- Unified range for standard and geothermal series simplifies stock.
- Geothermal series reduce CO₂ emissions thanks to the use of geothermal energy as a renewable energy source.
- No need for an external heating or cooling source when used in geothermal mode.
- Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation, air handling units, Biddle air curtains and hot water.
- Wide range of indoor units: either connect VRV or stylish indoor units such as Daikin Emura, Nexura, ...
- Compact & lightweight design can be stacked for maximum space saving.
- Incorporates VRV IV standards & technologies: Variable Refrigerant Temperature and full inverter compressors.
- 2-stage heat recovery: first stage between indoor units, second stage between outdoor units thanks to the storage of energy in the water circuit.
- Available in heat pump and heat recovery version.
- Variable Water Flow control option increases flexibility and control.
- 2 analogue input signals allowing external control.
- Contains all standard VRV features.

### Outdoor unit

<table>
<thead>
<tr>
<th>Outdoor unit</th>
<th>RWEYQ</th>
<th>8T9</th>
<th>10T9</th>
<th>12T9</th>
<th>14T9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling capacity Nom.</td>
<td>35°CDB</td>
<td>kW</td>
<td>22.4</td>
<td>28.0</td>
<td>33.5</td>
</tr>
<tr>
<td>Heating capacity Nom.</td>
<td>6°CWB</td>
<td>kW</td>
<td>25.0</td>
<td>31.5</td>
<td>37.5</td>
</tr>
<tr>
<td>EER at nom. capacity</td>
<td>35°CDB</td>
<td>kW/W</td>
<td>6.40</td>
<td>5.75</td>
<td>5.65</td>
</tr>
<tr>
<td>COP at nom. capacity</td>
<td>6°CWB</td>
<td>kW/W</td>
<td>6.50</td>
<td>6.40</td>
<td>6.10</td>
</tr>
<tr>
<td>Indoor index connection</td>
<td>Min.</td>
<td>Nom.</td>
<td>Max.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Unit kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>Unit Height x Width x Depth mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation range</td>
<td>Inlet water temperature</td>
<td>Min. - Max. °C</td>
<td>10 - 45</td>
<td>12.7</td>
<td></td>
</tr>
<tr>
<td>Liquid OD mm</td>
<td></td>
<td>9.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas OD mm</td>
<td></td>
<td>19.1</td>
<td>22.2</td>
<td>286</td>
<td></td>
</tr>
<tr>
<td>Discharge gas OD mm</td>
<td></td>
<td>15.9 (1) / 19.1 (2)</td>
<td>19.1 (1) / 22.2 (2)</td>
<td>19.1 (1) / 28.6 (2)</td>
<td>22.2 (1) / 28.6 (2)</td>
</tr>
<tr>
<td>Piping connections</td>
<td>Total piping length System Actual m</td>
<td></td>
<td>300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>Phase/Frequency/Voltage Hz/V</td>
<td></td>
<td>3~/50/380-415</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Outdoor system

<table>
<thead>
<tr>
<th>System</th>
<th>Outdoor unit module 1</th>
<th>RWEYQ</th>
<th>16T9</th>
<th>18T9</th>
<th>20T9</th>
<th>22T9</th>
<th>24T9</th>
<th>26T9</th>
<th>28T9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outdoor unit module 2</td>
<td>RWEYQ</td>
<td>8T9</td>
<td>10T9</td>
<td>12T9</td>
<td>14T9</td>
<td>8T9</td>
<td>10T9</td>
<td>12T9</td>
</tr>
<tr>
<td>Capacity range HP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling capacity 35°CDB kW</td>
<td></td>
<td>44.8</td>
<td>50.4</td>
<td>55.9</td>
<td>61.5</td>
<td>67</td>
<td>73.5</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>EER at nom. Capacity 35°CDB kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heating capacity 6°CWB kW</td>
<td></td>
<td>6.4</td>
<td>6.08</td>
<td>5.98</td>
<td>5.65</td>
<td>5.55</td>
<td>5.30</td>
<td>5.04</td>
<td></td>
</tr>
<tr>
<td>COP at nom. Capacity 6°CWB kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Outdoor system

<table>
<thead>
<tr>
<th>System</th>
<th>Outdoor unit module 1</th>
<th>RWEYQ</th>
<th>30T9</th>
<th>32T9</th>
<th>34T9</th>
<th>36T9</th>
<th>38T9</th>
<th>40T9</th>
<th>42T9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outdoor unit module 2</td>
<td>RWEYQ</td>
<td>8T9</td>
<td>10T9</td>
<td>12T9</td>
<td>14T9</td>
<td>8T9</td>
<td>10T9</td>
<td>12T9</td>
</tr>
<tr>
<td></td>
<td>Outdoor unit module 3</td>
<td>RWEYQ</td>
<td>8T9</td>
<td>10T9</td>
<td>12T9</td>
<td>14T9</td>
<td>8T9</td>
<td>10T9</td>
<td>12T9</td>
</tr>
<tr>
<td>Capacity range HP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling capacity 35°CDB kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EER at nom. Capacity 35°CDB kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heating capacity 6°CWB kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COP at nom. Capacity 6°CWB kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: blue cells contain preliminary data

(1) in case of heat recovery
(2) in case of heat pump
# VRV III water cooled series - 60 Hz

## OUTSIDE UNITS

### Heat Pump/Heat Recovery

<table>
<thead>
<tr>
<th>MODEL</th>
<th>WYEYQ10PYL</th>
<th>WYEYQ20PYL</th>
<th>WYEYQ30PYL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Combination units</td>
<td>YL: 3-phase, 4-wire system, 380 V, 60 Hz</td>
<td>(WYEYQ10PYL) X 2</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>kW</td>
<td>kW</td>
<td>kW</td>
</tr>
<tr>
<td><strong>Cooling capacity</strong></td>
<td>kcal/h</td>
<td>kcal/h</td>
<td>kcal/h</td>
</tr>
<tr>
<td>(*1)</td>
<td>23,200</td>
<td>46,400</td>
<td>69,700</td>
</tr>
<tr>
<td>(*2)</td>
<td>92,100</td>
<td>184,000</td>
<td>276,000</td>
</tr>
<tr>
<td><strong>Heating capacity</strong></td>
<td>kcal/h</td>
<td>kcal/h</td>
<td>kcal/h</td>
</tr>
<tr>
<td></td>
<td>27,0</td>
<td>54,0</td>
<td>81,0</td>
</tr>
<tr>
<td></td>
<td>26.7</td>
<td>53.4</td>
<td>80.1</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>kW</td>
<td>kW</td>
<td>kW</td>
</tr>
<tr>
<td><strong>Cooling</strong></td>
<td>6.05</td>
<td>12.1</td>
<td>18.2</td>
</tr>
<tr>
<td><strong>Heating</strong></td>
<td>6.05</td>
<td>12.1</td>
<td>18.2</td>
</tr>
<tr>
<td><strong>Casing colour</strong></td>
<td>Ivory white (SY7.5/1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions (H x W x D)</strong></td>
<td>1,000 x 780 x 550</td>
<td>(1,000 x 780 x 550) x 2</td>
<td>(1,000 x 780 x 550) x 3</td>
</tr>
<tr>
<td><strong>Motor output</strong></td>
<td>kW</td>
<td>kW</td>
<td>kW</td>
</tr>
<tr>
<td><strong>Compressor</strong></td>
<td>4.2</td>
<td>4.2 x 2</td>
<td>4.2 x 3</td>
</tr>
<tr>
<td><strong>Refrigerant pipe connections</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Liquid</strong></td>
<td>mm</td>
<td>mm</td>
<td>mm</td>
</tr>
<tr>
<td><strong>Suction gas</strong></td>
<td>ø19.1 (Flare)</td>
<td>ø15.9 (Flare)</td>
<td>ø19.1 (Flare)</td>
</tr>
<tr>
<td><strong>High and low pressure gas</strong></td>
<td>ø22.3 (Brazing)</td>
<td>ø26.6 (Brazing)</td>
<td>ø34.3 (Brazing)</td>
</tr>
<tr>
<td><strong>Water inlet</strong></td>
<td>PT1 1/4B internal thread</td>
<td>(PT1 1/4B) x 2 internal thread</td>
<td>(PT1 1/4B) x 3 internal thread</td>
</tr>
<tr>
<td><strong>Water outlet</strong></td>
<td>PT1 1/4B internal thread</td>
<td>(PT1 1/4B) x 2 internal thread</td>
<td>(PT1 1/4B) x 3 internal thread</td>
</tr>
<tr>
<td><strong>Drain outlet</strong></td>
<td>PS1/2B internal thread</td>
<td>(PS1/2B) x 2 internal thread</td>
<td>(PS1/2B) x 3 internal thread</td>
</tr>
<tr>
<td><strong>Sound level</strong></td>
<td>dBA</td>
<td>dBA</td>
<td>dBA</td>
</tr>
<tr>
<td><strong>Operation range (Inlet water temp.)</strong></td>
<td>10 to 45</td>
<td>10 to 45</td>
<td>10 to 45</td>
</tr>
<tr>
<td><strong>Capacity control</strong></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Refrigerant</strong></td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>R-410A</td>
<td>R-410A</td>
<td>R-410A</td>
</tr>
<tr>
<td><strong>Charge</strong></td>
<td>4.2</td>
<td>4.2</td>
<td>4.2</td>
</tr>
</tbody>
</table>

**Notes:**
1. Specifications are based on the following conditions:
   - Cooling: (*1) Indoor temp.: 27°C, 19.5°C/CWB/Inlet water temp.: 30°C
     (*2) Indoor temp.: 27°C/CWB, 19.0°C/CWB/Inlet water temp.: 30°C
   - Heating: Indoor temp.: 20°C/CWB/Inlet water temp.: 30°C
   - Equivalent piping length: 7.5 m
   - Level difference: 0 m
2. (*)1. In the case of heat pump system, suction gas pipe is not used.
3. (*)2. In the case of heat recovery system.
4. This unit cannot be installed in the outdoors. Install indoors (Machine room, etc).
5. Connectable to closed type cooling tower only.

- Please be sure to refer to the Engineering Data for facility design.