Ventilation
Product catalogue 2020 for professionals

Fresh air for the residential and commercial sector
Heat recovery ventilation and air handling applications
Advantages

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Navigation

Sidebar links
The different chapters in the catalogue are shown at the side. You will be taken directly to the index page of the with a single click.

All page numbers clickable
Click any page number you see and you will go directly to the page.

HRV - Heat recovery ventilation
- High efficiency
- High indoor air quality
- Maximum flexibility
- Specifications

Links to technical documentation
On the pages with technical drawings you can click the button above to get access to all technical drawings available for the product.

VIEW ALL TECHNICAL DRAWINGS ON MY.DAIKIN.EU
# Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The widest ventilation range on the market</td>
<td>4</td>
</tr>
<tr>
<td>ERV / HRV - Energy/Heat recovery ventilation units</td>
<td>9</td>
</tr>
<tr>
<td>› Modular L Smart (ALB-RBS/LBS)</td>
<td></td>
</tr>
<tr>
<td>› VAM-FC9 / J</td>
<td></td>
</tr>
<tr>
<td>› VKM-GB(M)</td>
<td></td>
</tr>
<tr>
<td>Condensing units for AHU</td>
<td>29</td>
</tr>
<tr>
<td>Options &amp; accessories</td>
<td>42</td>
</tr>
<tr>
<td>Tools and platforms</td>
<td>49</td>
</tr>
<tr>
<td>Technical drawings</td>
<td>57</td>
</tr>
</tbody>
</table>
**ARGUE CARDS**

5 reasons why Daikin’s ventilation range is unique in the market

1. **Market leading controls & connectivity**
   - Interlock of ventilation and air conditioning system
     - Control ERV/HRV and air conditioning from the same controller
     - Aligns the operation mode between the systems to save energy
   - Easy integration in the total solution
     - Online control and monitoring via the Daikin Cloud Service
     - Full portfolio integration in the intelligent Touch Manager, Daikin’s cost-effective mini BMS
   - User-friendly controller with premium design
     - Intuitive touch button control

2. **Unique installation benefits**
   - Integrates seamlessly in the Daikin total solution, ensuring a single point of contact
   - Total fresh air solution with Daikin supplying both the VAM/Modular L Smart and the electrical heater
   - Daikin AHU and condensing unit connect Plug & Play thanks to same pipe diameters, factory mounted controls, expansion valves, etc.
3 High energy efficiency

- Energy recovery of up to 92%, reducing running costs
- Free nighttime cooling using fresh outside air
- Inverter driven centrifugal fans
- ErP compliant

4 Best comfort

- Wide range of units to control fresh air and humidity
- Wide range of optional filters to suit the application available up to ePM, 80% (F9)
- Special paper heat exchanger recovers heat and moisture from extract air to warm up and humidify fresh air to comfortable levels (VAM, VKM)

5 Top reliability

- Most extensive testing before new units leave the factory
- Widest support network and after sales service
- All spare parts available in Europe

**Did you know?**

CO₂ levels and ventilation rates all have significant, independent impacts on cognitive function:

- + 61% in Green Building Conditions
- + 101% in Enhanced Green Building Conditions
Daikin offers a variety of solutions from small energy recovery ventilation to large-scale air handling units for the provision of fresh air ventilation to homes, or commercial premises.

Ventilation solutions

Daikin offers state-of-the-art ventilation solutions that can easily be integrated into any project:
› Unique portfolio within DX manufacturers
› High-quality solutions complying with the highest Daikin quality standards
› Seamless integration of all products to provide the best indoor climate
› All Daikin products connected to a single controller for complete control of the HVAC system.

Energy Recovery Ventilation

Our energy recovery units recover sensible energy (Modular L Pro / Modular L Smart) or total (sensible + latent) energy (VAM/VKM), substantially reducing the load on the air conditioning system up to 40%.

Ventilation with DX connection - Control over fresh air temperature

Daikin offers a range of inverter condensing units to be used in combination with Daikin AHUs for ultimate control over the fresh air. There are 4 control possibilities when combining AHU and Daikin outdoor units hence offering all the required flexibility for any installation. Indoor units can be combined to the same outdoor unit to reduce the installation costs. For false-ceiling installations where space is a constraint, the VKM can fit perfectly to deliver fresh air at a comfortable temperature and it has an optional humidification element.
Five components of indoor air quality

- **Ventilation**: Ensures the provision of fresh air
- **Energy recovery**: Delivers energy savings by transferring heat and moisture between airflows
- **Air processing**: Delivers the right supply temperature to decrease the indoor unit load
- **Humidification**: Ensures relative indoor humidity levels are respected
- **Filtration**: Separates pollen, dust and pollution odours that are harmful to individuals’ health

### Fresh air portfolio

#### D-AHU MODULAR L (SMART)
- Compact size
- High energy efficient paper recovering sensible and latent heat
- EC fan motors
- Filter clogging alarm based on pressure
- With DX coil for post-treated fresh air
- Increased comfort
- Humidifier option

#### VAM-FC9 / VAM-J
- High efficiency counterflow heat exchanger
- Free-cooling operation
- EC centrifugal fan
- Wide range of options
- Smart version connects Plug & Play to Sky Air / VRV systems

#### VKM-GB(M)
- High efficiency aluminium plate heat exchanger
- Pre-configured sizes
- Plug & Play pre-configured controls
- With DX or water coil option

#### D-AHU MODULAR P
- Rotary heat exchanger (sorption and sensible technology)
- Pre-configured sizes
- Plug & Play pre-configured controls
- With DX or water coil option

#### D-AHU MODULAR R
- Fully customizable
- Plug & Play
- 4 types of control
- With DX or water coil option

#### D-AHU Professional
- Fully customizable
Direct integration into the Sky Air or VRV control solution

› Saves up to 40% in running costs
› Unified control point for the complete air conditioning and ventilation installation

Wide range of decentralised ERV/HRV units to suit the building needs
Energy / Heat Recovery Ventilation

- Premium efficiency heat recovery unit
  Modular L (Smart) (ALB-(RBS/LBS))
  - Heat recovery unit
  - Counter flow plate heat exchanger
  - ESP up to 600 Pa
  - Operates as stand-alone or combined with Sky Air or VRV systems

- Energy recovery ventilation (VAM-FC9/J)
  - Heat and moisture recovery
  - Achieve free cooling with fresh outdoor air
  - Operates as stand-alone or combined with Sky Air or VRV systems

- Energy recovery ventilation with humidification and air processing (VKM-GB(M))
  - Heat and moisture recovery
  - Humidification and air processing (preconditioning) of fresh air
  - Achieve free cooling with fresh outdoor air
  - Plug & Play piping and wiring connection with Daikin VRV unit(s)
Benefits of Daikin ERV/HRV systems
Interlock of the ventilation operation with the air conditioner operation

Interlock of the ventilation operation with the air conditioner operation greatly simplifies overall system control. The same remote controller provides air conditioning and ventilation functions. By incorporating a variety of centralised control equipments, the user can build a large, high grade centralised control system.

Madoka
User-friendly wired remote controller with premium design

- Sleek and elegant design
- Intuitive touch button control
- 3 color versions
- Advanced settings and monitoring can be easily done via your smartphone
- Flat back for easy wall installation
- Compact to fit standard size socket boxes

Plug & Play - integrated ventilation

- One-stop shop for all system components, which results in streamlined design and business solutions.
- Efficient project follow-up, installation and subsequent commissioning and maintenance.
- Ventilation easily interlocked to air conditioner operation thanks to simplified system control.
Easy and flexible installation

High Static Pressure

External static pressure (ESP) up to 600 Pa (ALB) facilitates the use of ducts of varying lengths.

Automatic Airflow Adjustment function

Automatically selects the most appropriate fan curve to achieve the unit’s nominal air flow within ±10%.

Why?

After installation the real ducting will frequently differ from the initially calculated air flow resistance → the real air flow may be much lower or higher than designed.

The airflow Adjustment function will automatically adapt the unit’s fan speed to any ducting automatically (45 fan curves are available on every model (ALB/VAM)), making installation much faster.

Wide operation range

The ERV/HRV unit can be installed practically anywhere. The standard operation range (outdoor temperature) is from -15°C to 40°CDB for VKM units, from -10°C (+5°C in case of upside-down installation) to 46°CDB for VAM units, and can be extended down if a Daikin heater is installed.

1 Contact your local dealer for more information and restrictions
Flexible installation

Slim Design

At just 280 mm high, the slim design of the HRV unit enables it to be mounted in narrow ceiling cavities and irregularly shaped spaces.

Flexible

Compared to a standard air handling unit, the HRV models provide much greater flexibility to match the actual building use, in case of a multi-tenant installation. Additionally, the renovation of a building can be carried out in phases.

“Super Wiring” System

A Super Wiring system is used to enable the shared use of wiring between indoor units, outdoor units and the centralised remote control. This system makes it easy for the user to retrofit the existing system with a centralised remote control, simply by connecting it to the outdoor units. Thanks to a non-polarity wiring system, incorrect connections are avoided and installation time is reduced.

Connection to field-supplied booster fan increases flexibility even more

- Longer ducting or use of central duct possible
- Overcomes actual field situation when ducting is different from calculation
- Lower cost by using the booster fan instead of replacing with a larger unit when the ESP is not matched

Example when HRV ESP is not high enough or field situation differs from calculation

<table>
<thead>
<tr>
<th>No booster fan</th>
<th>with booster fan</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRV</td>
<td>HRV</td>
</tr>
<tr>
<td>Comfort</td>
<td>Comfort</td>
</tr>
<tr>
<td>Comfort</td>
<td>Comfort</td>
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<tr>
<td>Discomfort</td>
<td>Comfort</td>
</tr>
</tbody>
</table>
High efficiency

Energy saving ventilation via heat recovery of both heat and humidity

Daikin’s ERV/HRV solutions prevent energy being wasted by recovering up to 92% waste heat from the extract air instead of simply expelling the heat, offering high energy efficiency.

Reduce the load on the air conditioning system by up to 40%

› 24% by using heat recovery ventilation (in comparison with normal ventilation fans)
› 6% by switching over to auto-ventilation mode
› 2% by using the pre-cool, pre-heat control (reduces air conditioning load by running the HRV unit after the air conditioning is switched on)
› 5% by enabling the free cooling operation overnight
› 3% by preventing over-ventilation with the optional CO₂ sensor

Different operation modes of ERV/HRV units

Heat exchange mode

Exhaust fan Damper Heat exchanger element (heat recovery)

Air supply fan

Bypass mode

EA: Exhaust air  RA: Return air (from room)  OA: Outdoor air  SA: Supply air (to room)
Nighttime free cooling

Nighttime free cooling operation is an energy saving function operating at night when the air conditioning is switched off. By ventilating rooms containing office equipment that increases room temperature, free cooling reduces the cooling load when air conditioning is switched on in the morning, reducing the daily running costs.

The VAM and Modular L Smart can also perform nighttime free cooling in stand alone operation. The set temperature is a field setting at installation.

Nighttime free cooling operation is an energy saving function operating at night when the air conditioning is switched off. By ventilating rooms containing office equipment that increases room temperature, free cooling reduces the cooling load when air conditioning is switched on in the morning, reducing the daily running costs.

Heat recovery ventilation

Up to 75% less energy consumed for ventilation in Herten building

A two-year test at a ‘netZero Energy Building’ in Herten has revealed that a huge energy saving is possible by using CO₂ sensors in conjunction with the Daikin VAM systems.
Best Comfort

- High quality indoor air
- Whisper quiet

Optional medium and fine dust filters available

Optional filters up to ePM, 70% (F8) for VAM and ePM, 80% (F9) for ALB are available to meet your customer request or the local legislation.

Can operate in over and underpressure to prevent unpleasant odours

The user can select 2 fresh-up modes via the remote control for a more comfortable air environment:

1. Supply rich mode (overpressure):

A higher air supply than air exhaust maintains proper room pressure to prevent back-flow of toilet/kitchen odours or moisture inflow.

eg. Office
Preventing that toilet odours flow to the office.

2. Exhaust fresh-up (underpressure):

A higher exhaust air than air supply decreases room pressure to prevent the leaking of odours or floating bacteria and viruses into other rooms.

eg. Hospital
No bacteria can flow from the patient room to the hallway.

Low operation sound level

Continuous research by Daikin into reducing operation sound levels has resulted in sound pressure levels down to 20.5dBA (VAM150).

Daikin ERV/HRV unit
Modular L Smart
Premium Efficiency Heat Recovery Unit

**Highlights**

- Connects Plug&Play into the Sky Air and VRV control network
- Easy installation and commissioning
- Internal pre-filter stage (up to ePM, 50% (F7) + ePM, 80% (F9)) making the unit reach highest indoor air quality requirements.
- Wide air flow coverage from 150m³/h to 3,450m³/h
- Exceeding ErP 2018 requirements
- Best choice when compactness is needed (only 280 mm height up to 550 m³/h)
- 50 mm double skin panel (120 kg/m³) for a maximum sound and thermal insulation

**Heat exchanger**

- Premium quality counter flow plate heat exchanger
- Up to 92% of the thermal energy recovered
- High grade aluminum allowing optimum corrosion protection

**EC centrifugal fan**

- Maximum ESP available 600 Pa (depending on model sizes and airflow)
- Inverter driven with IE4 premium efficiency motor
- High-efficient blade profiling
- Reduced energy consumption
- Optimized SFP (Specific Fan Power) for an efficient unit operation

**ALB-RBS/LBS**

Energy recovery
Ventilation
Humidification
Filtration
Air processing

ErP COMPLIANT
Heat exchanger

- Premium quality counterflow plate heat exchanger
- Up to 92% of the thermal energy recovered
- High grade aluminium that allows best corrosion protection
- Completely joint sealing
- No screws or rivets in any part

Filters

- Easy replaceable compact filters with large surface area, which can be removed from bottom access
- Up to ePM1, 50% (F7) + ePM1, 80% (F9) filtration efficiency
- No tools are needed to change the filters
- Fresh air filters* (ePM1, 50% (F7) efficiency as standard)
- Return filters* (ePM10, 75% (M5) efficiency as standard)

*Optional additional filter and pre-filter stage coarse 35% (G4), ePM10, 75% (MS), ePM1, 50% (F7), ePM1, 80% (F9)

Supply/Return fan

- Fan/motor combination with very low noise level
- Reduced energy consumption
- Inverter driven with IE4 motor efficiency
- Infinitely variable speed
- Ultra-efficient blade profiling
- Maintenance-free ball bearings
- No screws or rivets in any part
Rectangular duct flange

The standard dimensions are:

- 250x150 mm (Size 2)
- 400x200 mm (Size 3)
- 500x300 mm (Size 4/5)
- 700x400 mm (Size 6/7)
- Optional rectangular to circular transition

Bypass damper

- 100% automatic bypass damper with proportional opening for antifreeze function and free cooling operation

Unit structure

- External pre-painted metal sheet
- Internal Aluzinc metal sheet
- 50 mm Double skin panel thickness
- Mineral wool insulated
- Great sound absorption
- Hinged or fully removable bottom doors make the unit easily accessible for service and maintenance
- Unit is accessible from bottom panels
- Best choice when compactness is needed (only 280 mm height for up to 550 m³/h of air flow)

Full integration in the DIII network (Sky Air and VRV)
Control logic

- Air quality analysis with the capability of monitoring and control of the actual level of CO₂ through optional sensor (option)
- Full automatic bypass to manage free cooling
- Filter alarm in accordance with the EU Reg 1253
- DIII-net integration through Daikin building air conditioning control systems (D-BACS)
- BMS integration through dedicated interfaces (Modbus, BACnet)

Air flow range

Modular L Smart is available in 6 sizes covering a wide range of applications such as hotels, offices, schools and light commercial buildings.
### Technical details

<table>
<thead>
<tr>
<th>D-AHU Modular L Smart</th>
<th>ALB-RBS/LBS</th>
<th>02</th>
<th>03</th>
<th>04</th>
<th>05</th>
<th>06</th>
<th>07</th>
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<tr>
<td><strong>Airflow</strong> (m³/h)</td>
<td>300</td>
<td>600</td>
<td>1200</td>
<td>1500</td>
<td>2300</td>
<td>3000</td>
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<tr>
<td><strong>Heat exchanger thermal efficiency</strong>¹</td>
<td>%</td>
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<td>91</td>
<td>90</td>
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<td>100</td>
<td>100</td>
<td>100</td>
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<td><strong>Temperature after heat exchanger</strong>¹ (Nom. °C)</td>
<td>°C</td>
<td>19.4</td>
<td>19.5</td>
<td>19.4</td>
<td>19.2</td>
<td>19.8</td>
<td>19.5</td>
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<td><strong>Max ESP @ nom. airflow</strong></td>
<td>Pa</td>
<td>400</td>
<td>450</td>
<td>260</td>
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<td><strong>Current</strong> (Nom. A)</td>
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<td>1.91</td>
<td>2.48</td>
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<td><strong>Power input</strong> (Nom. kW)</td>
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<td><strong>SFPv</strong>²</td>
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<td>1.32</td>
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<td><strong>ERP compliant</strong></td>
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<td></td>
<td></td>
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<td>ERP 2018 Compliant</td>
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<td><strong>Electrical supply</strong></td>
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<td></td>
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<tr>
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<td><strong>Frequency</strong> (Hz)</td>
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<td>50/60</td>
<td>50/60</td>
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<tr>
<td><strong>Voltage</strong> (V)</td>
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<td>220/240 Vac</td>
<td>220/240 Vac</td>
<td>220/240 Vac</td>
<td>220/240 Vac</td>
<td>220/240 Vac</td>
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<tr>
<td><strong>Main unit dimensions</strong></td>
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<td>1800</td>
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<td><strong>Rectangular duct flange</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Unit Sound Power Level</strong>³ (dB)</td>
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<td>54</td>
<td>57</td>
<td>53</td>
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<tr>
<td><strong>Unit Sound Pressure Level</strong>³ (dBA)</td>
<td></td>
<td>34</td>
<td>39</td>
<td>41</td>
<td>37</td>
<td>44</td>
<td>41</td>
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<tr>
<td><strong>Weight unit</strong></td>
<td>kg</td>
<td>125</td>
<td>180</td>
<td>270</td>
<td>280</td>
<td>355</td>
<td>360</td>
</tr>
</tbody>
</table>

1. Winter design condition: Outdoor: -5°C, 90% Indoor: 22°C,50%
2. SFPv is a parameter that quantifies the fan efficiency (the lower it is the better will be). This reduces if airflow decreases.
3. According to EN3744. Surrounding, Directivity (Q) = 2, @ 1.5m distance
ERV
energy recovery ventilation

Heat recovery ventilation, air processing and humidification

High efficiency
• Energy saving ventilation via enthalpy recovery of both heat and humidity
• Reduce the load on the air conditioning system by up to 40%
• Nighttime free cooling
• Prevent energy losses from over-ventilation with CO₂ sensor

High indoor air quality & whisper quiet operation
• Optional medium and fine dust filters (VAM-FC9/J only)
• Can operate in over and underpressure to prevent unpleasant odours
• Low operation sound level

Maximum flexibility
• Plug & Play - integrated ventilation
• Flexible installation
• Wide range of units
• High static pressure
• Wide operation range
• Connection to field-supplied booster fan increases flexibility even more (VAM-FC9/J only)
• No drain needed (VAM-FC9/J only)
Energy saving ventilation via enthalpy recovery of both heat and humidity

Daikin’s ERV solutions prevent energy being wasted by recovering up to 85% waste heat from the extract air instead of simply expelling the heat, offering high energy efficiency.

Specially developed heat exchange element
The heat exchange element rapidly recovers heat contained in latent heat (vapour).

Operation of the high efficiency paper.
Cross flow of air to exchange heat and moisture.

High indoor comfort
Thanks to the heat and moisture exchange, the hot and humid outside air is brought to levels close to indoor conditions saving on the air conditioning running cost and maintaining comfort.

Can be installed horizontally, upside down or vertically
The VAM models do not require a drain, giving greater flexibility for the installation of the units.

In case of upside down or vertical installation the minimum fresh air temperature is +5°C instead of -10°C.

Add a heater to reach this condition, if necessary.
Creating a high quality environment

Maintain a comfortable indoor environment without fluctuations in room temperature.

How do the VKM units work?

In heating

1. Cold outside air is crossed with hot inside air. In the example the fresh air is heated up from 0 to 16°CDB while keeping the same relative humidity. This is the effect of the heat and moisture exchange.

2. The DX coil further heats up the air to prevent cold draught. In the example the fresh air is further heated from 16 to 34°CDB. Because the air is heated up the relative humidity decreases.

3. To counter negative effects of dry air the air passes the humidifier which adds moisture in case needed. In the example the relative humidity rises from 22 to a comfortable 42%.

The result is fresh air with the same humidity and slightly higher temperature for perfect comfort.

In cooling

1. Hot outside air is crossed with cold inside air. In the example the fresh air is cooled down from 34 to 27°CDB while keeping the same relative humidity. This is the effect of the heat and moisture exchange.

2. The DX coil further cools down the air to prevent hot indoor temperatures and reduce the load on the air conditioning system. In the example the fresh air is further cooled down from 27 to 20°CDB.

3. No humidification is needed in cooling as the air is not dried out.

The result is fresh air with a slightly lower temperature for perfect comfort.
Humidification

Operation example: humidification & air processing (heating mode)

Humidifier element:
Utilizing the principle of capillary action, water is permeated throughout the humidifier element. The heated air from the DX coil passes through the humidifier and absorbs the moisture.

1 VKM-GM example
Ventilation with heat recovery as standard

- Thinnest High Efficiency Enthalpy Heat Exchanger in the market (J-series)
- Energy saving ventilation using indoor heating, cooling and moisture recovery
- Free cooling possible when outdoor temperature is below indoor temperature (eg. during nighttime)
- Prevent energy losses from over-ventilation while improving indoor air quality with optional CO₂ sensor
- Possibility to change ESP via wired remote control allows optimisation of the supply air volume (J - series)
- Can be used as stand alone or integrated in the Sky Air or VRV system
- Wide range of units: air flow rate from 150 up to 2,000 m³/h
- Shorter installation time thanks to easy adjustment of nominal air flow rate, so less need for dampers compared with traditional installation
- No drain piping needed
- Can operate in over- and under pressure
- Total solution for fresh air with Daikin supply of both VAM / VKM and electrical heaters

### Ventilation with heat recovery

#### Energy recovery ventilation

- Possibility to change ESP via wired remote control allows
- Can be used as stand alone or integrated in the Sky Air or VRV system
- Thinnest High Efficiency Enthalpy Heat Exchanger
- Total solution for fresh air with Daikin supply
- Prevent energy losses from over-ventilation while improving indoor air quality with optional CO₂ sensor
- No drain piping needed
- Can operate in over- and under pressure
- Total solution for fresh air with Daikin supply of both VAM / VKM and electrical heaters

#### Ventilation with heat recovery

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<thead>
<tr>
<th>Ventilation</th>
<th>VAM/VAM</th>
<th>150CF9</th>
<th>250CF9</th>
<th>350J</th>
<th>500J</th>
<th>650J</th>
<th>800J</th>
<th>1000J</th>
<th>1500J</th>
<th>2000J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power input - 50Hz</td>
<td>kW</td>
<td>0.012/0.015/0.018</td>
<td>0.015/0.020/0.024</td>
<td>0.027/0.034/0.042</td>
<td>0.042/0.056/0.073</td>
<td>0.081/0.103/0.130</td>
<td>0.146/0.170/0.205</td>
<td>0.245/0.294/0.345</td>
<td>0.402/0.489/0.584</td>
<td>0.634/0.764/0.923</td>
</tr>
<tr>
<td>Heat exchange mode</td>
<td>Nom.</td>
<td>Ultra high</td>
<td>High</td>
<td>Low</td>
<td>kW</td>
<td>0.001/0.002/0.003</td>
<td>0.002/0.003/0.005</td>
<td>0.004/0.006/0.008</td>
<td>0.008/0.012/0.016</td>
<td>0.008/0.012/0.016</td>
</tr>
<tr>
<td>Bypass mode</td>
<td>Nom.</td>
<td>Ultra high</td>
<td>High</td>
<td>Low</td>
<td>kW</td>
<td>0.001/0.002/0.003</td>
<td>0.002/0.003/0.005</td>
<td>0.004/0.006/0.008</td>
<td>0.008/0.012/0.016</td>
<td>0.008/0.012/0.016</td>
</tr>
</tbody>
</table>

#### Heat exchange system

- Air to air cross flow total heat (sensible + latent heat) exchange
- Specially processed non-flammable paper

#### Operation mode

<table>
<thead>
<tr>
<th>Operation mode</th>
<th>Heat exchange mode, bypass mode, fresh-up mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>Unit Height×Width×Depth mm 285×776×525 301×1,113×886 368×1,354×920 368×1,354×1,172 731×1,354×1,172</td>
</tr>
<tr>
<td>Weight</td>
<td>Unit kg 24.0 46.5 61.5 79.0 157</td>
</tr>
<tr>
<td>Casing Material</td>
<td>Galvanised steel plate</td>
</tr>
</tbody>
</table>

#### Fan

<table>
<thead>
<tr>
<th>Fan Airflow rate - 50Hz</th>
<th>kW/202.3</th>
<th>Halfpipe Ultra high</th>
<th>Low</th>
<th>m³/h 150/140/150 250/230/155</th>
<th>350/300/200 500/425/350</th>
<th>650/550/400 800/680/500</th>
<th>1,000/850/680</th>
<th>1,500/1,275/925</th>
<th>2,000/1,700/1,300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bypass mode</td>
<td>kW/202.3</td>
<td>Halfpipe Ultra high</td>
<td>Low</td>
<td>m³/h 150/140/150 250/230/155</td>
<td>350/300/200 500/425/350</td>
<td>650/550/400 800/680/500</td>
<td>1,000/850/680</td>
<td>1,500/1,275/925</td>
<td>2,000/1,700/1,300</td>
</tr>
</tbody>
</table>

#### External static pressure - 50Hz

<table>
<thead>
<tr>
<th>External static pressure Ultra high</th>
<th>High</th>
<th>Low</th>
<th>kW/202.3</th>
<th>90</th>
<th>176/240/225</th>
</tr>
</thead>
<tbody>
<tr>
<td>kBa</td>
<td>87/440</td>
<td>70/163/25</td>
<td>90</td>
<td>70.0/70.0/70.0</td>
<td></td>
</tr>
</tbody>
</table>

#### Air filter

<table>
<thead>
<tr>
<th>Air filter Type</th>
<th>Multidirectional fibrous fibres</th>
<th>Multidirectional fibrous fibres (G3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound pressure level - 50Hz</td>
<td>kW/202.3</td>
<td>230/26.0 /203.5</td>
</tr>
<tr>
<td>Bypass mode</td>
<td>kW/202.3</td>
<td>230/26.5 /203.5</td>
</tr>
</tbody>
</table>

#### Operation range

<table>
<thead>
<tr>
<th>Operation range</th>
<th>Around unit °CDB</th>
<th>0°C~40°C DB, 80% RH or less</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection duct diameter</td>
<td>mm 100 150 200 250 2x250</td>
<td></td>
</tr>
<tr>
<td>Power supply Phase/Frequency/Voltage</td>
<td>Hz/V 1~ 50/60 220/240/220</td>
<td></td>
</tr>
<tr>
<td>Current Maximum fuse amps (MFA)</td>
<td>A 15.0 16.0</td>
<td></td>
</tr>
<tr>
<td>Specific energy consumption (SEC)</td>
<td>Cold climate kWh/m³ 86.0 (5) 86.0 (5) 86.0 (5)</td>
<td></td>
</tr>
<tr>
<td>Average climate kWh/m³ 22.0 (5) 22.0 (5) 22.0 (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warm climate kWh/m³ 0.040 (5) 0.040 (5) 0.040 (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEC class</td>
<td>See note 5/8</td>
<td>See note 5/8</td>
</tr>
<tr>
<td>Maximum flow rate Flow rate</td>
<td>m³/h 130 207 250 250 2x250</td>
<td></td>
</tr>
<tr>
<td>at 100 Pa ESP Electric power input</td>
<td>kW 129 160 139 139 139</td>
<td></td>
</tr>
<tr>
<td>Sound power level (Lwa)</td>
<td>dB 40 43 51 54 58 61 62 65</td>
<td></td>
</tr>
<tr>
<td>Annual electricity consumption kWh/a 18.9 (5) 18.9 (5) 18.9 (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual heating saved kWh/a 0.25 (5) 0.25 (5) 0.25 (5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Measured according to ISO 8571-1 (2) Measured at reference flow rate according to EN13141-7 (3) As reference flow rate in accordance with commission regulation (EU) No 1254/2014
Energy recovery ventilation, humidification and air processing

Post heating or cooling of fresh air for lower load on the air conditioning system

- Energy saving ventilation using indoor heating, cooling and moisture recovery
- Creates a high quality indoor environment by pre conditioning of incoming fresh air
- Humidification of the fresh air results in comfortable indoor humidity level, even during heating
- Free cooling possible when outdoor temperature is below indoor temperature (eg. during nighttime)
- Low energy consumption thanks to DC fan motor
- Prevent energy losses from over-ventilation while improving indoor air quality with optional CO₂ sensor
- Shorter installation time thanks to easy adjustment of nominal air flow rate, so less need for dampers compared with traditional installation
- Specially developed heat exchange element with High Efficiency Paper (HEP)
- Can operate in over- and under pressure

<table>
<thead>
<tr>
<th>Ventilation</th>
<th>50GB</th>
<th>80GB</th>
<th>100GB</th>
<th>50GBM</th>
<th>80GBM</th>
<th>100GBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power input - 50Hz</td>
<td>Nom.</td>
<td>Ultra high/High/Low</td>
<td>kW</td>
<td>0.27/0.23/0.170</td>
<td>0.33/0.28/0.230</td>
<td>0.41/0.36/0.310</td>
</tr>
<tr>
<td>Bypass mode</td>
<td>Nom.</td>
<td>Ultra high/High/Low</td>
<td>kW</td>
<td>0.27/0.23/0.170</td>
<td>0.33/0.28/0.230</td>
<td>0.41/0.36/0.310</td>
</tr>
<tr>
<td>Fresh air conditioning load</td>
<td>Cooling</td>
<td>kW</td>
<td>4.71/1.91/3.5</td>
<td>7.46/2.96/5.6</td>
<td>11.32/3.52/7.0</td>
<td>7.46/2.96/5.6</td>
</tr>
<tr>
<td>Temperature exchange efficiency - 50Hz</td>
<td>Ultra high/High/Low</td>
<td>%</td>
<td>76/76/77.5</td>
<td>78/78/79</td>
<td>80/80/80.5</td>
<td>76/76/77.5</td>
</tr>
<tr>
<td>Heating</td>
<td>Ultra high/High/Low</td>
<td>%</td>
<td>67/67/69</td>
<td>71/71/73</td>
<td>65/65/69</td>
<td>67/67/69</td>
</tr>
<tr>
<td>Operation mode</td>
<td>Heat exchange mode</td>
<td>Bypass mode</td>
<td>Fresh-up mode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat exchange system</td>
<td>Air to air cross flow total heat (sensible + latent heat) exchange</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidifier system</td>
<td>Specially processed non-flammable paper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>HeightxWidthxDepth mm</td>
<td>387x1,764x832</td>
<td>387x1,764x1,214</td>
<td>387x1,764x832</td>
<td>387x1,764x1,214</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Unit kg</td>
<td>94</td>
<td>110</td>
<td>112</td>
<td>100</td>
<td>119</td>
</tr>
<tr>
<td>Casing</td>
<td>Material</td>
<td>Galvanised steel plate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fan-Air flow rate - 50Hz</td>
<td>Ultra high/High/Low m³/h</td>
<td>500/500/440</td>
<td>750/750/640</td>
<td>950/950/820</td>
<td>500/500/440</td>
<td>750/750/640</td>
</tr>
<tr>
<td>Bypass mode</td>
<td>Ultra high/High/Low m³/h</td>
<td>500/500/440</td>
<td>750/750/640</td>
<td>950/950/820</td>
<td>500/500/440</td>
<td>750/750/640</td>
</tr>
<tr>
<td>Fan-External static pressure - 50Hz</td>
<td>Ultra high/High/Low Pa</td>
<td>210/170/140</td>
<td>210/170/140</td>
<td>150/100/70</td>
<td>200/150/120</td>
<td>205/155/105</td>
</tr>
<tr>
<td>Air flow type</td>
<td>Multidirectional fibrous fleece</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sound pressure level - 50Hz</td>
<td>Ultra high/High/Low dBA</td>
<td>39/37/35</td>
<td>41.5/39/37</td>
<td>41.5/39/35</td>
<td>39/37/35</td>
<td>41.5/39/37</td>
</tr>
<tr>
<td>Operation range</td>
<td>Around unit</td>
<td>°CDB</td>
<td>0°C~40°C, 80% RH or less</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply air</td>
<td>°CDB</td>
<td>0°C~40°C, 80% RH or less</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return air</td>
<td>°CDB</td>
<td>0°C~40°C, 80% RH or less</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On coil temperature</td>
<td>Cooling/Max./Heating/Min. °CDB</td>
<td>-15/43</td>
<td>-15/43</td>
<td>-15/43</td>
<td>-15/43</td>
<td>-15/43</td>
</tr>
<tr>
<td>Refrigerant</td>
<td>Type</td>
<td>R-410A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connection duct size</td>
<td>mm</td>
<td>200</td>
<td>250</td>
<td>200</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Piping connections</td>
<td>Liquid OD mm</td>
<td>6.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas OD mm</td>
<td>12.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water supply</td>
<td>mm</td>
<td>6.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drain</td>
<td>PT3/4 external thread</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>Phase/Frequency/Voltage Hz/V</td>
<td>1~/50/220-240</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>Maximum fuse amps (MFA) A</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For small to large commercial spaces Daikin offers a range of inverter condensing units for use in conjunction with air handling units. In situations where Daikin commercial range ventilation units cannot satisfy the ventilation requirement due to building constraints (large atriums, banquet halls etc), air handling units represent the ideal solution. Air handling units provide large fresh air volumes (up to 140,000 m³/h) and high ESPs enabling the use of extensive ductwork runs.

An air handler or air handling unit provides a tailor-made solution for optimising air conditions throughout multiple spaces. An air handling unit can be customised to your building - with no installation restrictions or design limitations - as Daikin air handling units are based on a completely unique modular design, so they can be sized (in increments of 1 cm) to your exact requirements.
**Daikin**

**air handling units**

---

**Air handling unit applications**

Why choose Daikin air handling units with a DX connection?  
Why use VRV and ERQ condensing units for connection to air handling units?  
In order to maximise installation flexibility,  
4 types of control systems are offered  
VRV - for larger capacities (from 8 to 54 HP)  
ERQ - for smaller capacities (from 100 to 250 class)  
Integration of VRV and ERQ in third party air handling units  
Pair and multi application selection
Daikin’s
air handling units solutions
You will find your match

Why choose Daikin air handling units with a DX connection?

Simplifying business
The unique total solution approach by Daikin helps businesses to propose better cross-pillar solutions, to increase their success ratio by providing unmatchable product combinations to the end-user and to simplify the life of installers by supplying high-quality products coming from the same manufacturer. Contrary to other manufacturers, Daikin does not use OEM products in its AHU with DX offer. Many competitors are either offering OEM DX outdoor units or OEM AHU which create additional problems when warranties or faults arise. Having a single interface for your business makes Daikin the right choice.

One-stop shop
Daikin is the only global manufacturer in the market capable of offering a true Plug & Play solution where Daikin AHUs manufactured by Daikin Applied Europe and certified by Eurovent, offer off-the-shelf compatibility with Daikin’s unique VRV outdoor unit range for the best performance in the market. This unique integration of cross-pillar products under the same umbrella, gives the customer both peace-of-mind and added value when promoting a total solution approach.

Complete range of possibilities
Thanks to the most complete offer in the market, Daikin has the solution for all types of commercial applications requiring fresh air. Daikin provides ventilation solutions based on AHU from 2,500 m³/h up to 140,000 m³/h either with natural heat recovery or more advanced ventilation solutions where a VRV outdoor unit can be connected to the Daikin AHU for ultimate climate control. The harmonized control, between the VRV outdoor unit and the AHU, offer outstanding reliable operation of the system when connected to an iTM.

Advantages
› Unique manufacturer offering a complete range
› Plug & Play solution
› Direct iTM compatibility

You will find your match

Why choose Daikin air handling units with a DX connection?
Daikin's fresh air solution

Highly efficient EC fan

Factory fitted and tested DX heat exchanger

Efficient filtration

Heat wheel for energy recovery
Why use VRV and ERQ condensing units for connection to air handling units?

High Efficiency

Daikin heat pumps are renowned for their high energy efficiency. Integrating the AHU with a heat recovery system is even more effective since an office system can frequently be in cooling mode while the outdoor air is too cold to be brought inside in an unconditioned state. In this case heat from the offices is merely transferred to heat up the cold fresh air.

![Diagram of heat recovery system](image)

Outside air = 10°C

Fresh air supplied at 21°C.
The temperature difference with the outdoor air is heated up efficiently by heat recovery via A/C system

Indoor temperature 22°C, needs cooling because of solar radiation.
The excessive heat can be transferred to the AHU

Fast response to changing loads resulting in high comfort levels

Daikin ERQ and 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 which improves comfort even more by offering continuous heating, also during defrost.

Easy Design and Installation

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

Daikin Fresh air package

- Plug & Play connection between VRV/ERQ and the entire D-AHU modular range.
- Factory fitted and welded DX coil control and expansion valve kits.
In order to maximise installation flexibility, 4 types of control systems are offered

**W control**: Off the shelf control of air temperature (discharge temperature, suction temperature, room temperature) via any DDC controller, easy to setup

**X control**: Precise control of air temperature (discharge temperature, suction temperature, room temperature) requiring a preprogrammed DDC controller (for special applications)

**Y control**: Control of refrigerant (Te/Tc) temperature via Daikin control (no DDC controller needed)

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

### 1. W control (TS/TR/TROOM 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 modulates the capacity requirements of the outdoor unit.

### 2. X control (TS/TR/TROOM 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.

### 3. Y control (TE/TC control):

By fixed evaporating /condensing temperature

A fixed target evaporating or condensing temperature can be set by the customer. In this case, room temperature is only indirectly controlled. A Daikin wired remote control (BRC1* - optional) have to be connected for initial set-up but not required for operation.

### 4. Z control (TS/TROOM control):

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

Allows the possibility to control the AHU just like a VRV indoor unit. Meaning temperature control will be focused on return air temperature from the room into the AHU. Requires BRC1* for operation. The only control that allows the combination of other indoor units to the AHU at the same time.

---

**Option kit**

<table>
<thead>
<tr>
<th>Possibility</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Off-the-shelf DDC controller that requires no pre-configuration</td>
</tr>
<tr>
<td>X</td>
<td>Pre-configured DDC controller required</td>
</tr>
<tr>
<td>Y</td>
<td>Using fixed evaporating temperature, no set point can be set using remote control</td>
</tr>
<tr>
<td>Z</td>
<td>Using Daikin infrared remote control BRC1* Temperature control using air suction temperature or room temperature (via remote sensor)</td>
</tr>
</tbody>
</table>

* EKEQMCB (for ‘multi’ application)
An advanced solution for both pair and multi application

- Inverter controlled units
- Heat recovery, heat pump
- R-410A
- Control of room temperature via Daikin control
- Large range of expansion valve kits available
- BRC1H* is used to set the set point temperature (connected to the EKEQMCBA).
- Connectable to all VRV heat recovery and heat pump systems

---

**Daikin Fresh air package - VRV connections**

- for larger capacities (from 8 to 54HP)

**W, X, Y control for VRV IV heat pump**

**Z control for all VRV outdoor units**
ERQ - for smaller capacities
(from 100 to 250 class)

A basic fresh air solution for pair application

› Inverter controlled units
› Heat pump
› R-410A
› Wide range of expansion valve kits available
› Perfect for the Daikin Modular air handling unit

The “Daikin Fresh Air Package” provides a complete Plug & Play Solution including AHU, ERQ or VRV Condensing Unit and all unit control (EKEQ, EKEX, DDC controller) factory mounted and configured. The easiest solution with only one point of contact.

### Ventilation

<table>
<thead>
<tr>
<th>ERQ</th>
<th>100AV1</th>
<th>125AV1</th>
<th>140AV1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity range HP</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Cooling capacity Nom. kW</td>
<td>11.2</td>
<td>14.0</td>
<td>15.5</td>
</tr>
<tr>
<td>Heating capacity Nom. kW</td>
<td>12.5</td>
<td>16.0</td>
<td>18.0</td>
</tr>
<tr>
<td>Power input Cooling Nom. kW</td>
<td>2.81</td>
<td>3.51</td>
<td>4.53</td>
</tr>
<tr>
<td>Heating Nom. kW</td>
<td>2.74</td>
<td>3.86</td>
<td>4.57</td>
</tr>
<tr>
<td>EER</td>
<td>3.99</td>
<td>4.15</td>
<td>3.94</td>
</tr>
<tr>
<td>COP</td>
<td>4.56</td>
<td>4.15</td>
<td>3.94</td>
</tr>
<tr>
<td>Dimensions Unit HeightxWidthxDepth mm</td>
<td>1,345x930x320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight Unit kg</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casing Material Painted galvanized steel plate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fan-Air flow rate Cooling Nom. m³/min</td>
<td>106</td>
<td></td>
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</tr>
<tr>
<td>Heating Nom. m³/min</td>
<td>102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound power level Cooling Nom. dBA</td>
<td>66</td>
<td></td>
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</tr>
<tr>
<td>Heating Nom. dBA</td>
<td>67</td>
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<tr>
<td>Operation range Cooling Min./Max. °CDB</td>
<td>5/46</td>
<td></td>
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</tr>
<tr>
<td>Heating Min./Max. °CWB</td>
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<tr>
<td>Refrigerant Type</td>
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<tr>
<td>Charge kg</td>
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<tr>
<td>GWP</td>
<td>2.0875</td>
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</tr>
<tr>
<td>Piping connections Liquid OD mm</td>
<td>9.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas OD mm</td>
<td>15.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drain OD mm</td>
<td>26x3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply Phase/Frequency/Voltage Hz/V</td>
<td>1N~/50/220-240</td>
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<tr>
<td>Current Maximum fuse amps (MFA) A</td>
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### Ventilation

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<thead>
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<th>125AW1</th>
<th>200AW1</th>
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<tbody>
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<tr>
<td>Cooling capacity Nom. kW</td>
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<td>22.4</td>
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<td>Heating capacity Nom. kW</td>
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<td>Power input Cooling Nom. kW</td>
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<td>Heating Nom. kW</td>
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<tr>
<td>EER</td>
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<td>3.77</td>
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<td>COP</td>
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<td>Dimensions Unit HeightxWidthxDepth mm</td>
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<td>Fan-Air flow rate Cooling Nom. m³/min</td>
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<td>Heating Nom. m³/min</td>
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<tr>
<td>Sound pressure level Nom. dBA</td>
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<td>Operation range Cooling Min./Max. °CDB</td>
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<td>Heating Min./Max. °CWB</td>
<td>20/15</td>
<td></td>
<td></td>
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<td>On coil temperature Heating/Min./Cooling/Max. °CDB</td>
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<td>Charge kg</td>
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<tr>
<td>GWP</td>
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<tr>
<td>Piping connections Liquid OD mm</td>
<td>9.52</td>
<td></td>
<td></td>
</tr>
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<td>Gas OD mm</td>
<td>15.9</td>
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<tr>
<td>Drain OD mm</td>
<td>26x3</td>
<td></td>
<td></td>
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<tr>
<td>Power supply Phase/Frequency/Voltage Hz/V</td>
<td>1N~/50/220-400</td>
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<td>Current Maximum fuse amps (MFA) A</td>
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Integration with third party air handling units

Integration of ERQ and VRV in third party air handling units
a wide range of expansion valve kits and control boxes

**Combination table**

<table>
<thead>
<tr>
<th>Control box</th>
<th>Expansion valve kit</th>
<th>Mixed connection with VRV indoor units</th>
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<tbody>
<tr>
<td>Z control</td>
<td>Z control</td>
<td>-</td>
</tr>
<tr>
<td>W,X,Y control</td>
<td>P</td>
<td>-</td>
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<tr>
<td>1-phase ERQ100</td>
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<td>P</td>
</tr>
<tr>
<td>ERQ255</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>ERQ450</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>3-phase ERQ200</td>
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<td>P</td>
</tr>
<tr>
<td>ERQ255</td>
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<tr>
<td>VRV III</td>
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<td>n1</td>
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**Capacity table**

<table>
<thead>
<tr>
<th>EKEXV Class</th>
<th>Allowed heat exchanger capacity (kW)</th>
<th>Allowed heat exchanger volume (dm³)</th>
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<tr>
<td></td>
<td>Minimum</td>
<td>Standard</td>
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<tr>
<td>50</td>
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<td>5.6</td>
</tr>
<tr>
<td>63</td>
<td>6.3</td>
<td>7.1</td>
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<tr>
<td>80</td>
<td>7.9</td>
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<td>100</td>
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<td>11.2</td>
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<tr>
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**Cooling**

<table>
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<th>Minimum</th>
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<th>Maximum</th>
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<td>400</td>
<td>35.4</td>
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<tr>
<td>500</td>
<td>49.6</td>
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**Heating**

<table>
<thead>
<tr>
<th>EKEXV Class</th>
<th>Minimum</th>
<th>Standard</th>
<th>Maximum</th>
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<tbody>
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<td>6.3</td>
<td>7.0</td>
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<td>7.1</td>
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<tr>
<td>80</td>
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<td>10.0</td>
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<td>12.5</td>
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<td>125</td>
<td>13.9</td>
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<td>140</td>
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**EKEQ - Expansion valve kit for air handling applications**

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<th>Ventilation</th>
<th>EKEXV</th>
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<th>63</th>
<th>80</th>
<th>100</th>
<th>125</th>
<th>140</th>
<th>200</th>
<th>250</th>
<th>400</th>
<th>500</th>
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<tbody>
<tr>
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<td>Unit</td>
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<tr>
<td>Refrigerant</td>
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</tr>
<tr>
<td>Piping connections</td>
<td>Liquid OD mm</td>
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<td>15.9</td>
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**EKEQ - Control box for air handling applications**

<table>
<thead>
<tr>
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<th>EKEQ</th>
<th>FCBA</th>
<th>DCB</th>
<th>MCBA</th>
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<tr>
<td>Application</td>
<td>See note</td>
<td>Pair</td>
<td>Multi</td>
<td></td>
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<tr>
<td>Outdoor unit</td>
<td>ERQ / VRV</td>
<td>ERQ</td>
<td>VRV</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>Unit</td>
<td>mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Unit</td>
<td>kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>Phase/Frequency/Voltage Hz/V</td>
<td>1~/50/230</td>
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<td></td>
</tr>
</tbody>
</table>

The combination of EKEQFCBA and ERQ is in pair application. The EKEQFCBA can be connected to some type of VRV IV outdoor units with a maximum of 3 control boxes. The combination with DX indoor units, hydroboxes, RA outdoor units... is not allowed. Refer to the combination table drawing of the outdoor unit for details.

Saturated evaporating temperature: 6°C
Air temperature: 27°C DB / 19°C WB

Saturated condensing temperature: 46°C
Air temperature: 20°C DB

(1) The temperature of the air entering the coil in heating mode can be reduced to -5°CDB. Contact your local dealer for more information. (2) 45% Relative humidity.
Pair application selection

› the outdoor unit is connected to ONE COIL (with single circuit or maximum 3 interlaced circuits) using up to 3 control boxes
› indoor unit combination is not allowed
› only works with X, W, Y control

Step 1: Required AHU capacity

An AHU with double flow, heat recovery and 100% fresh air is to be installed in Europe where the outdoor sizing temperature is 35 ºCDB and the target supply air temperature for fresh air is 25 ºCDB. Load calculations point to a required capacity of 45kW. By checking on the EKEXV capacity table, for cooling operation, 40kW falls within the 400 class valve. Since 40kW is not the nominal capacity, a class adjustment has to be done: 40/45=0,89 and 0,89x400=356. So the capacity class of the expansion valve kit is 356.

Step 2: Outdoor unit selection

For this AHU, a VRV IV heat pump model with continuous heating is going to be used (RYYQ-T series). For a capacity of 40kW at 35 ºCDB, an outdoor of 14HP (RYYQ14T) is selected. The capacity class of the 14 HP outdoor unit is 350.

Total connection ratio of the system is 356/350=102% hence it falls within the range 90-110%.

Multi application selection

› the outdoor unit can be connected to MULTIPLE COILS (and their control boxes)
› indoor units are also connectable but not mandatory
› only works with Z control

Step 1: Required AHU capacity

An AHU with double flow, heat recovery and 100% fresh air is to be installed in Europe where the outdoor sizing temperature is 35 ºCDB and the target supply air temperature for fresh air is 25 ºCDB. On top of this, for this building, 5 round-flow cassette units FXFQ50A will also be connected to this OU. Load calculations point to a required capacity of 20kW for the AHU and 22.5 kW for the indoor units. By checking on the EKEXV capacity table, for cooling operation, 20kW falls within the 200 class valve. Since 22.4 kW is the nominal capacity, a class adjustment has to be done: 20/22.4=0,89 and 0,89x200=178. So the capacity class of the expansion valve kit is 178. Total capacity class of the indoor unit system is 178+250=428.

Step 2: Outdoor unit selection

For this system where a AHU is connected with indoor units, it is mandatory to use a heat recovery unit. By consulting the engineering databook for REYQ-T, the total required capacity of 42.5 kW requires a 16HP model REYQ16T. Which will deliver 45kW at the design temperature of 35 ºCDB. This unit has a capacity class of 400. Total connection ratio of the system is 428/400=107% hence it falls within the range 50-110%.

Step 3: Control box selection

In this particular case, the control will work with precise air temperature control. Only W or X control allow this. Since the consultant wants to use an "off-the-shelf" DDC module, the EKEQFCBA box with W control allows easy set-up due to pre-set factory values.
Air handling application

Pair application examples

Pair application layout #1: Example for W or X control with EKEQFCBA box

Outdoor unit compatibility

- RYYQ8T > RYYQ54T
- RXYQ8T > RXYQ54T
- RWEYQ8T9 > RWEYQ30T9
- ERQ100 > ERQ250

(1) Only available in 1 to 1 combination

Connection restrictions

Connection Ratio VRV: between 90-110%

Connection Ratio ERQ: between 50-110%

\[
CR = \frac{\sum IU CC}{\sum OU CC} = \frac{\sum (CF \times EKEV CC)_{1-3}}{\sum OU CC}
\]

CF is the correction factor
CC is the capacity class

More than 3 control boxes connected to same outdoor

Two control boxes connected to Outdoor 1 to circuits 1 and 2 of coil A. Control box 3 connected to outdoor 2 and circuit 3 of coil A.

Two control boxes on coil A (2 circuits) and another control box on coil B (1 circuit). Both connected to same outdoor
Pair application layout #2: Example for Y control with EKEQFCBA box

Outdoor unit compatibility
RYYQ8T > RYYQ54T
RXYQ8T > RXYQ54T
RWEYQ8T9 > RWEYQ30T9
ERQ100 > ERQ250

(1) Only available in 1 to 1 combination

Connection restrictions
Connection Ratio between 90-110%
Connection Ratio ERQ: between 50-110%

\[
CR = \frac{\sum IU CC}{\sum OU CC} = \frac{\sum (CF \times EKEXV CC)}{\sum OU CC}
\]

CF is the correction factor
CC is the capacity class

More than 3 control boxes connected to same outdoor

Two control boxes connected to Outdoor 1 to circuits 1 and 2 of coil A. Control box 3 connected to outdoor 2 and circuit 3 of coil A.

Two control boxes on coil A (2 circuits) and another control box on coil B (1 circuit). Both connected to same outdoor
Air handling application

Multi application examples

Multi application layout #1: Example for Z control with EKEQMCBA box and no VRV indoor units

Outdoor unit compatibility
RYQ8T > RYYQ54T
RXYQ8T > RXYQ54T
RWEYQ8T9 > RWEYQ30T9

EKEQMCBA control box
ERQ100 > ERQ250

EKEQDCB control box
(1) Only available in 1 to 1 combination

Connection restrictions
Connection Ratio between 90-110%
Connection Ratio ERQ: between 50-110%

CR = \( \frac{\sum IU CC}{\sum OU CC} = \frac{\sum (CF \times EKEXV CC)_{st}}{\sum OU CC} \)

CF is the correction factor
CC is the capacity class

More than 3 control boxes connected to same outdoor
Two control boxes connected to Outdoor 1 to circuits 1 and 2 of coil A. Control box 3 connected to outdoor 2 and circuit 3 of coil A.
Two control boxes on coil A (2 circuits) and another control box on coil B (1 circuit). Both connected to same outdoor

Digital signal to steer EEV
Mandatory
Input signal from sensors

DX coil

KRCS01-1B

ROOM
Multi application layout #2: Example for Z control with EKEQMCBA box and VRV indoor units

Outdoor unit compatibility
Not mandatory to have VRV DX indoors:
RYYQ8T > RYYQ54T
RXYQ8T > RXYQ54T
RWEYQ8T9 > RWEYQ30T9
Mandatory to have VRV DX indoors:
REYQ8T > REYQ54T

Connection restrictions
Connection Ratio between 50-110%  
\[ CR = \frac{\sum IU \text{ CC}}{\sum OU \text{ CC}} = \frac{\sum (CF \times EKEXV \text{ CC})}{\sum OU \text{ CC}} \]

RULES:  
\[ \sum EKEXV \text{ CC}: 0-60\% \quad \sum IU \text{ CC}: 50-110\% \]

CF is the correction factor
CC is the capacity class

More than 3 control boxes connected to same outdoor

Two control boxes connected to Outdoor 1 to circuits 1 and 2 of coil A. Control box 3 connected to outdoor 2 and circuit 3 of coil A.

Two control boxes on coil A (2 circuits) and another control box on coil B (1 circuit). Both connected to same outdoor
Options & accessories

VH ELECTRICAL HEATER FOR VAM

CONTROLS

FILTERS
DIRECT INTEGRATION
WITH DAIKIN VENTILATION PRODUCTS

Madoka
User-friendly wired remote controller with premium design

BRC1H519W7/S7/K7
› Sleek and elegant design
› Intuitive touch button control
› 3 color versions
› Advanced settings and monitoring can be easily done via your smartphone
› Flat back for easy wall installation
› Compact to fit standard size socket boxes

Advanced user settings
Field settings
# Heat Recovery Ventilation - Modular L (Smart)

<table>
<thead>
<tr>
<th>Model</th>
<th>ALB02LBS/RBS</th>
<th>ALB03LBS/RBS</th>
<th>ALB04,05LBS/RBS</th>
<th>ALB06,07LBS/RBS</th>
<th>VAM 150FC9</th>
<th>VAM 250FC9</th>
<th>VAM 350J</th>
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<td>● ● ● ● ● ●</td>
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<td>● ● ● ● ● ●</td>
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## Individual control systems

<table>
<thead>
<tr>
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<th>ALB02LBS/RBS</th>
<th>ALB03LBS/RBS</th>
<th>ALB04,05LBS/RBS</th>
<th>ALB06,07LBS/RBS</th>
<th>VAM 150FC9</th>
<th>VAM 250FC9</th>
<th>VAM 350J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madoka</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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</tbody>
</table>

## Centralised control systems

<table>
<thead>
<tr>
<th>Model</th>
<th>ALB02LBS/RBS</th>
<th>ALB03LBS/RBS</th>
<th>ALB04,05LBS/RBS</th>
<th>ALB06,07LBS/RBS</th>
<th>VAM 150FC9</th>
<th>VAM 250FC9</th>
<th>VAM 350J</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM 150FC9</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
<tr>
<td>VAM 250FC9</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
<tr>
<td>VAM 350J</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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## Building Management System & Standard protocol interface

<table>
<thead>
<tr>
<th>Model</th>
<th>ALB02LBS/RBS</th>
<th>ALB03LBS/RBS</th>
<th>ALB04,05LBS/RBS</th>
<th>ALB06,07LBS/RBS</th>
<th>VAM 150FC9</th>
<th>VAM 250FC9</th>
<th>VAM 350J</th>
</tr>
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<tbody>
<tr>
<td>EKMBDXA</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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</table>

## Filters

<table>
<thead>
<tr>
<th>Model</th>
<th>ALB02LBS/RBS</th>
<th>ALB03LBS/RBS</th>
<th>ALB04,05LBS/RBS</th>
<th>ALB06,07LBS/RBS</th>
<th>VAM 150FC9</th>
<th>VAM 250FC9</th>
<th>VAM 350J</th>
</tr>
</thead>
<tbody>
<tr>
<td>ePM1, 75% (G4)</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
<tr>
<td>ePM1, 70% (M6)</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
<tr>
<td>ePM1, 50% (F7)</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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<tr>
<td>ePM1, 55% (F7)</td>
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<td>● ● ● ● ● ●</td>
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<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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<tr>
<td>ePM1, 70% (F8)</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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<tr>
<td>ePM1, 80% (F9)</td>
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<td>● ● ● ● ● ●</td>
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## Mechanical accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>ALB02LBS/RBS</th>
<th>ALB03LBS/RBS</th>
<th>ALB04,05LBS/RBS</th>
<th>ALB06,07LBS/RBS</th>
<th>VAM 150FC9</th>
<th>VAM 250FC9</th>
<th>VAM 350J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
<tr>
<td>Rectangular to round duct transition</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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<td>● ● ● ● ● ●</td>
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## CO2 sensor

<table>
<thead>
<tr>
<th>Model</th>
<th>ALB02LBS/RBS</th>
<th>ALB03LBS/RBS</th>
<th>ALB04,05LBS/RBS</th>
<th>ALB06,07LBS/RBS</th>
<th>VAM 150FC9</th>
<th>VAM 250FC9</th>
<th>VAM 350J</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRYMA200</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
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## Electrical accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>ALB02LBS/RBS</th>
<th>ALB03LBS/RBS</th>
<th>ALB04,05LBS/RBS</th>
<th>ALB06,07LBS/RBS</th>
<th>VAM 150FC9</th>
<th>VAM 250FC9</th>
<th>VAM 350J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiring adapter for external monitoring/control (controls 1 entitre system)</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
<tr>
<td>Adapter PCB for humidifier</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
<tr>
<td>Adapter PCB for third party heater</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
<tr>
<td>External wired temperature sensor</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
<td>● ● ● ● ● ●</td>
</tr>
</tbody>
</table>

## Notes

1. Do not connect the system to DI-series devices LONWorks interface, BACnet interface, … (Intelligent Touch Manager, EKMBDXA are allowed)
2. Installation box KRP3BA101 needed
3. Adapter PCB mounting plate needed, applicable model can be found in the table above
4. 3rd party heater and 3rd party humidifier cannot be combined
5. Installation box KRP3BA100 needed
6. Contains 1 plenum and can be used for half side of the unit (up to 4 plenums can be used on 1 unit)
7. Available only with optional plenum
<table>
<thead>
<tr>
<th>Energy recovery ventilation - VAM</th>
<th>Energy recovery ventilation VKM</th>
<th>Air handling unit applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM 500J</td>
<td>VAM 650J</td>
<td>EKEQ FCBA (1)</td>
</tr>
<tr>
<td>VAM 800J</td>
<td>VAM 1000J</td>
<td>EKEQ DCB (1)</td>
</tr>
<tr>
<td>VAM 1500J</td>
<td>VAM 2000J</td>
<td>EKEQ MCBA (1)</td>
</tr>
</tbody>
</table>

### Individual control systems
- BRC301B61
- Madoka BRC1H519W7, BRC1H519S7, BRC1H519K7
- User-friendly wired remote controller with premium design
- BRC1E53A/B/C
- Wired remote control with full-text interface and back-light
- BRC1D52
- Standard wired remote control with weekly timer

### Centralised control systems
- DCC601A51
- DCS601C51
- DCS302C51
- DCS301B51
- DST301B51

### Building Management System & Standard protocol interface
- DCM601A51
- EKMBDXA
- DMS502A51
- DMS504B51

### Filters
- Coarse 55% (G4) ALF02G4A, ALF03G4A, ALF05G4A, ALF07G4A
- ePM10 75% (M5) ALF02M5A, ALF03M5A, ALF05M5A, ALF07M5A
- ePM10 70% (M6) EKAFVJ50F6, EKAFVJ65F6, EKAFVJ100F6
- ePM1 50% (F7) ALF02F7A, ALF03F7A, ALF05F7A, ALF07F7A
- ePM1 55% (F7) EKAFVJ50F7, EKAFVJ65F7, EKAFVJ100F7
- ePM1 70% (F8) EKAFVJ50F8, EKAFVJ65F8, EKAFVJ100F8
- ePM1 80% (F9) ALF02F9A, ALF03F9A, ALF05F9A, ALF07F9A
- High efficiency filter KAF242H80M, KAF242H100M
- Replacement air filter KAF241H80M, KAF241H100M

### Mechanical accessories
- Rail ALA02RLA, ALA03RLA, ALA05RLA, ALA07RLA
- Rectangular to round duct transition ALA02RCA, ALA03RC, ALA05RCA, ALA07RCA
- Separate plenum EKPLEN200

### CO2 sensor
- BRYMA200

### Electrical heater
- ALD02HEFB, ALD03HEFB, ALD05HEFB, ALD07HEFB
- GSIEKA10009, GSIEKA15018, GSIEKA20024

### Silencer (900mm depth)
- ALS0290A, ALS0390A, ALS0590A, ALS0790A

### Electrical accessories
- Wiring adapter for external monitoring/control (controls 1 entire system) KRP2A51
- Adapter PCB for humidifier KRP50-2
- Adapter PCB for third party heater BRP4A50
- External wired temperature sensor KRCS01-1

### Notes
1. Do not connect the system to DIII-net devices LONWorks interface, BACnet interface, ...; intelligent Touch Manager, EKMBDXA are allowed
2. Installation box KRP1BA101 needed
3. Adapter PCB mounting plate needed, applicable model can be found in the table above
4. 3rd party heater and 3rd party humidifier cannot be combined
5. Installation box KRP50-2A90 needed
6. Contains 1 plenum and can be used for half side of the unit (up to 4 plenums can be used on 1 unit)
7. Available only with optional plenum
Electrical heater for Modular L Smart

- Total solution for fresh air with Daikin supply of both Modular L Smart and electrical heaters
- Increase comfort in low outdoor temperature thanks to the heated outdoor air
- Integrated electrical heater concept (no additional accessories required)
- Standard dual flow and temperature sensor
- Heater only consumes what is required to pre-heat to the desired minimum fresh air temperature; thus saving energy

<table>
<thead>
<tr>
<th>Electrical heater for Modular L Smart (ALD)</th>
<th>02HEFB</th>
<th>03HEFB</th>
<th>05HEFB</th>
<th>07HEFB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (kW)</td>
<td>1.5</td>
<td>3</td>
<td>7.5</td>
<td>15</td>
</tr>
<tr>
<td>Connectable Modular L Smart size</td>
<td>02</td>
<td>03</td>
<td>04, 05</td>
<td>06, 07</td>
</tr>
<tr>
<td>Supply voltage (V)</td>
<td>230V, 1ph</td>
<td>400V, 3ph</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output current (maximum) (A)</td>
<td>6.6</td>
<td>13.1</td>
<td>10.9</td>
<td>21.7</td>
</tr>
<tr>
<td>Temperature sensor</td>
<td>15k ohms at -20 °C, 10k ohms at +10 °C</td>
<td>16k ohms at -20 °C, 10k ohms at +10 °C</td>
<td>17k ohms at -20 °C, 10k ohms at +10 °C</td>
<td>18k ohms at -20 °C, 10k ohms at +10 °C</td>
</tr>
<tr>
<td>Temperature control range</td>
<td>-20 °C to 10 °C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Fuse</td>
<td>Mini Circuit Breaker 6 A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LED indicators</td>
<td>&quot;Yellow = Airflow fault, Red = Heat ON&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting holes</td>
<td>Depends on duct size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum ambient adjacent to terminal box</td>
<td>30 °C (during operation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto high temperature cutout</td>
<td>75 °C Pre-set</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Manual reset high temperature cutout</td>
<td>120 °C Pre-set</td>
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<td></td>
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</tr>
<tr>
<td>Width (mm)</td>
<td>470</td>
<td>620</td>
<td>720</td>
<td>920</td>
</tr>
<tr>
<td>Depth (mm)</td>
<td>370</td>
<td>370</td>
<td>370</td>
<td>370</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>193</td>
<td>243</td>
<td>343</td>
<td>443</td>
</tr>
</tbody>
</table>
NEW GSIEKA

Electrical heater for VAM

- Total solution for fresh air with Daikin supply of both VAM and electrical heaters
- Increased comfort in low outdoor temperature thanks to the heated outdoor air
- Integrated electrical heater concept (no additional accessories required)
- Standard dual flow and temperature sensor
- Flexible setting with adjustable setpoint
- Increased safety with 2 cut-outs: manual & automatic

<table>
<thead>
<tr>
<th>GSIEKA</th>
<th>Capacity kW</th>
<th>Duct diameter mm</th>
<th>Connectable VAM</th>
</tr>
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<tbody>
<tr>
<td>10009</td>
<td>0.9</td>
<td>100</td>
<td>VAM150FC9</td>
</tr>
<tr>
<td>15018</td>
<td>1.8</td>
<td>150</td>
<td>VAM250FC9</td>
</tr>
<tr>
<td>20024</td>
<td>2.4</td>
<td>200</td>
<td>VAM350,500J</td>
</tr>
<tr>
<td>25030</td>
<td>3.0</td>
<td>250</td>
<td>VAM650J, VAM800J</td>
</tr>
<tr>
<td>35530°</td>
<td>3.0</td>
<td>355</td>
<td>VAM1000J, VAM1500J</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Height mm</th>
<th>Depth mm</th>
<th>Width mm</th>
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</thead>
<tbody>
<tr>
<td>GSIEKA10009</td>
<td>171</td>
<td>100</td>
<td>370</td>
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<tr>
<td>GSIEKA15018</td>
<td>221</td>
<td>150</td>
<td>370</td>
</tr>
<tr>
<td>GSIEKA20024</td>
<td>271</td>
<td>200</td>
<td>370</td>
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<tr>
<td>GSIEKA25030</td>
<td>321</td>
<td>250</td>
<td>373</td>
</tr>
<tr>
<td>GSIEKA35530</td>
<td>426</td>
<td>355</td>
<td>373</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minimum air velocity / airflow</th>
<th>m/s</th>
<th>m³/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSIEKA10009</td>
<td>1.5</td>
<td>45</td>
</tr>
<tr>
<td>GSIEKA15018</td>
<td>1.0</td>
<td>100</td>
</tr>
<tr>
<td>GSIEKA20024</td>
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<tr>
<td>GSIEKA25030</td>
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<td>265</td>
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<tr>
<td>GSIEKA35530</td>
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<td>355</td>
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<table>
<thead>
<tr>
<th>Power supply</th>
<th>1~230 VAC/50Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal current</td>
<td>A</td>
</tr>
<tr>
<td>Heating power</td>
<td>kW</td>
</tr>
<tr>
<td>Connection duct diameter</td>
<td>mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operation range</th>
<th>Min. °C</th>
<th>Max. °C</th>
<th>Rel. Humidity %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature sensor</td>
<td>10 kΩ at +25°C / TJ-K10K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature sensor range</td>
<td>-30°C to 105°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature set point range</td>
<td>-10°C to 50°C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LED indicators</th>
<th>LED 1 flashing every 5 seconds</th>
<th>LED 2 flashing every second</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>heater is starting up</td>
<td></td>
</tr>
<tr>
<td></td>
<td>flashing every second</td>
<td>OFF no power supply or no flow</td>
</tr>
<tr>
<td></td>
<td>airflow detected, heating allowed</td>
<td>ON problem with duct temperature sensor, set point potentiometer or PTC airflow sensor</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>ON heater is not operation</td>
</tr>
<tr>
<td></td>
<td>heater is operating</td>
<td>ON heater is operating</td>
</tr>
</tbody>
</table>

| Ambient temperature adjacent to controller | 0°C to +50°C |
| Auto high temperature cut-out | 50°C |
| Manual reset high temperature cut-out | 100°C |
We’re here to help you!
Online and offline

http://literature.daikinpromoshop.eu
Tools and platforms

Literature overview 50
Supporting tools, software and apps 52
### Commercial market - literature overview

#### for professional network

<table>
<thead>
<tr>
<th>Solution guides:</th>
</tr>
</thead>
<tbody>
<tr>
<td>542</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference books:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image 103x281 to 155x333]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product profiles:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image 407x176 to 457x246]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Focus topics:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image 408x304 to 437x345]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product flyers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image 213x525 to 275x553]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product catalogues:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image 460x496 to 507x543]</td>
</tr>
</tbody>
</table>

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#### Clear installer benefits

**VRV IV i-series**
Main benefits, application examples and specs of VRV IV i-series product range

**VRV IV S-series**
Main benefits, application examples and specs of VRV IV S-series product range

**Sky Air A-series**
Main benefits and specs

**Water-to-air heat pump**
Detailed info on VRV IV/W-series, application examples, technical system design background

---

#### Infrastructure cooling

**Infrastrucure cooling**
Clear installer benefits why to choose Daikin for infrastructure cooling

---

#### F-gas phase down

**F-gas phase down**
Clear explanation of the phase down targets and how Daikin takes the lead in meeting these

---

#### Replacement Technology

**Replacement Technology**
Clear installer benefits of VRV replacement technology

---

#### Madoka

**Madoka**
Detailed info on the Madoka wired remote controllers

---

#### Daikin Cloud Service

**Daikin Cloud Service**
Detailed info on the Daikin Cloud Service packages

---

#### Mini Sky Air Alpha-series

**Mini Sky Air Alpha-series**
Detailed info on the RZAG-A outdoor unit

---

#### Sky Air Alpha-series

**Sky Air Alpha-series**
Detailed info on the RZAG-NV1/NV1 outdoor units

---

#### Sky Air Advance-series

**Sky Air Advance-series**
Detailed info on the RZA-D outdoor units

---

#### Sky Air Catalogue

**Sky Air Catalogue**
Detailed technical information & benefits on Sky Air/Ventilation/Control systems/AHU

---

#### VRV Catalogue

**VRV Catalogue**
Detailed technical information & benefits of the VRV total solution

---

#### Ventilation Catalogue

**Ventilation Catalogue**
Detailed info on Ventilation products
for your customers

Commercial Solutions
Daikin offers solutions for commercial applications

Green Building Solutions
Clear building owner/investor benefits why to choose Daikin for a green building, with emphasis on BREEAM

Hotel Solutions
Clear building owner/investor benefits why to choose Daikin for a hotel

Reference catalogue
Daikin commercial and industrial references

Compressor retrofit
VRV retrofit services

DCC601AS1
Detailed benefits of DCC601AS1 and Daikin Cloud Service

Technical documentation:
All latest Daikin catalogues are available in a convenient library on the internet:
www.daikineurope.com/support-and-manuals/catalogues
Supporting tools, software and apps

Web based Xpress selection software

Making selection easy, anytime, anywhere

› Web & cloudbased access to your projects from anywhere, at any time…
› Platform (Windows, Mac, …) and hardware (laptop, desktop, tablet) independent
› Re-engineered GUI for maximum easy of use
› No need to do local installation
› No tool updates required (always latest version available)
› Possibility to copy / share projects

Main functions

Easy selection, anytime, anywhere

Toolbox

Working area

Detailed properties

Import / Export / Delete indoors

Easy editing of piping

Intuitive interface

Clear wiring overview, easy to make control groups

Clear overview of control groups and central controls
Other selection software

VRV Pro

Enables VRV air conditioning systems to be engineered in a precise and economical way, taking into account the complex piping rules. Moreover, it ensures optimum operating cycles and maximum energy efficiency.
› Accurate heat load calculation
› Precise selection based on peak loads
› Energy consumption indication

Ventilation Xpress

Selection tool for ventilation devices (VAM, VKM). The selection is based on given supply/extract airflows (including fresh up and given ESP of supply/extract ducting):
› Determines size of electrical heaters
› Visualisation of psychrometric chart
› Visualisation of selected configuration
› Required field settings mentioned in the report

Webbased ASTRA selection for air handling units

A powerful tool to select the right Air Handling Units for your needs.
› 3D interface
› quick selection procedures
› new print-out possibilities and report shapes

WAGO selection tool

The WAGO Selection Tool is specifically designed to select the optimal WAGO I/O system for your needs.
› Easy selection of WAGO materials
› Material list creation
› Time saving
  • Includes wiring schemes
  • Contains commissioning/preset data for
Plug-ins and third-party software tools

Building Information Modelling (BIM) support

› BIM improves efficiency of design and build phase
› Daikin is among the first to supply a full library of BIM objects for its VRV products

VRV CAD 2D

› Displays VRV pipe design on an AutoCAD 2D floorplan
› Improves project management
› Accurately calculates the pipe dimensions and refrigerant charge
› Determines the outdoor unit size
› Validates VRV pipe rules
› Accounts for the extra refrigerant charge, including a max room concentration check

Energy simulation and design aid tools

Seasonal simulator

› The Seasonal Simulator is an innovative software tool that calculates and compares potential seasonal efficiency ratings.
› This user-friendly tool compares various Daikin systems, annual power consumption, CO₂ emissions, and much more, to present an accurate ROI calculation in a matter of minutes.

Psychrometrics diagram

› The Psychrometrics Diagram Viewer demonstrates the changing properties of moist air.
› With this tool, users can choose two points with specific conditions, plot them on the diagram and select actions to change the conditions, i.e. heat, cool and mix air.
Service tools

Error code app

Quickly know the meaning of fault codes, for each product family and the potential cause.

D-Checker

D-checker is a software application used to record and monitor operation data of Daikin applied, split, Multi-split, Sky-air units, Daikin Altherma LT, ground source heat pump, Hybrid, ZEAS, Conveni-pack & R410A Booster unit.

Bluetooth adaptor

Monitoring of Split, Sky Air and VRV data via any bluetooth device
  - No need to access the outdoor unit
    - Connects with D-Checker software (for laptops)
    - Connects with monitoring app (for tablets or smartphones)

VRV Service-Checker

- Connected via F1/F2 bus to check multiple systems at the same time
- Connection of external pressure sensors possible

Online support

Business portal

- Experience our new extranet that thinks with you at my.daikin.eu
- Find information in seconds via a powerful search
- Customise the options so you see only info relevant for you
- Access via mobile device or desktop

my.daikin.eu

Internet

Find our solution for different applications:

- Get more commercial details on our flagship products via our dedicated minisites
- See our references

www.daikineurope.com/references
Technical drawings

ALB-RBS / LBS  58
VAM-FC9/J  64
VKM-GB(M)
Detailed technical drawings

**ALB02RBS/LBS**

![ALB02RBS/LBS Top View](image1)
![ALB02RBS/LBS Bottom View](image2)

**ALB03RBS/LBS**

![ALB03RBS/LBS Top View](image3)
![ALB03RBS/LBS Bottom View](image4)
Detailed technical drawings

ALB04RBS/LBS

TOP VIEW

ELECTRIC SWITCH BOX

CONDENSATE OUTLET 1/4"G

BOTTOM VIEW

ALB05RBS/LBS

TOP VIEW

ELECTRIC SWITCH BOX

CONDENSATE OUTLET 1/4"G

BOTTOM VIEW
**ALB02RBS/LBS**

The diagram shows the available external pressure for the duct system given an airflow.

$\text{SFPv} = \text{Specific Fan Power (W/m}^3\text{/s)}$

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

- Nominal working point

**ALB03RBS/LBS**

The diagram shows the available external pressure for the duct system given an airflow.

$\text{SFPv} = \text{Specific Fan Power (W/m}^3\text{/s)}$

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

- Nominal working point
The diagram shows the available external pressure for the duct system given an airflow.

**SFPv** = Specific Fan Power (W/m³/s)

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

- **Nominal working point**

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- **Nominal working point**
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**SFPv = Specific Fan Power (W/m³/s)**

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

- **Nominal working point**
Detailed technical drawings

VAM150FC9

NOTE
1 Be sure to provide the inspection hole (450x450 mm) to inspect the air filters, the exchange elements and fans.

3TW27874-1

VAM250FC9

NOTE
1 Be sure to provide the inspection hole (450x450 mm) to inspect the air filters, the exchange elements and fans.

3TW27884-1
VAM350-500J

Notes:
1. To allow for the inspection of the air filters, heat exchangers, and fans, be sure to provide the inspection hole.

VAM650J

Notes:
1. To allow for the inspection of the air filters, heat exchangers, and fans, be sure to provide the inspection hole.
To perform maintenance on the air filter, it is required to provide a service access panel.

Notes:

1. To allow for the inspection of the air filters, heat exchangers, and fans, be sure to provide the inspection hole.
VAM150FC9

Notes
1. The fan speeds are valid for 230V, 50Hz power supply.

VAM250FC

Notes
1. The fan speeds are valid for 230V, 50Hz power supply.
Detailed technical drawings

VAM350J

Notes
1. The fan curves are determined with 1/3 of the ESP on the outdoor side (EA & OA), and 2/3 of the ESP on the indoor side (RA & SA).

Legend
L1 = Low speed lower limit
L8 = Low speed factory setting
L15 = Low speed upper limit
H1 = High speed lower limit
H8 = High speed factory setting
H15 = High speed upper limit
UH1 = Ultra-high speed lower limit
UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit

VAM500J

Notes
1. The fan curves are determined with 1/3 of the ESP on the outdoor side (EA & OA), and 2/3 of the ESP on the indoor side (RA & SA).
VAM650J

Notes
1. The fan curves are determined with 1/3 of the ESP on the outdoor side (EA & OA), and 2/3 of the ESP on the indoor side (RA & SA).
2. Measured according to JIS B 8628 - 2003

VAM800J

Notes
1. The fan curves are determined with 1/3 of the ESP on the outdoor side (EA & OA), and 2/3 of the ESP on the indoor side (RA & SA).
2. Measured according to JIS B 8628 - 2003
Notes
1. The fan curves are determined with \(\frac{1}{3}\) of the ESP on the outdoor side (\(EA \& OA\)), and \(\frac{2}{3}\) of the ESP on the indoor side (\(RA \& SA\)).

\[ EA = Exhaust \ air \]
\[ OA = Outdoor \ air \]
\[ RA = Room \ air \]
\[ SA = Supply \ air \]

2. Measured according to \(JIS \ B \ 8628 \ - \ 2003\)
Notes

1. The fan curves are determined with \( \frac{1}{3} \) of the ESP on the outdoor side (\( \text{EA} \& \text{OA} \)) and \( \frac{2}{3} \) of the ESP on the indoor side (\( \text{RA} \& \text{SA} \)).

EA = Exhaust air
OA = Outdoor air
RA = Room air
SA = Supply air

Legend

2 Measured according to \( \text{JIS B 8628 - 2003} \):

L1 = Low speed lower limit
L8 = Low speed factory setting
L15 = Low speed upper limit
H1 = High speed lower limit
H8 = High speed factory setting
H15 = High speed upper limit
UH1 = Ultra-high speed lower limit
UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit
Detailed technical drawings

VKM50GB

NOTES
1. Leave space for servicing the unit and include inspection hatch. (Always open a hole on the side of the control box so that the air filters, heat exchange elements, and fans can easily be inspected and serviced)
2. Install the two outdoor ducts with down slope (slope of 1/30 or more) to prevent entry of rainwater, also, provide insulation for three ducts (outdoor ducts and indoor supply air duct) to prevent dew condensation. (Material: glass wool of 25mm thick)
3. Do not turn the unit upside down.
4. Make sure to install drain piping, and insulate drain piping to prevent dew condensation.
5. Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air from forming.
6. Do not use a bent cap or a round hood as the outdoor hood if they might get rained on directly (we recommend using a deep hood) (optional accessory).
7. In areas where freezing may occur, always take steps to prevent the pipes from freezing.
8. Do not place something which shouldn’t get wet at the bottom of this unit. The dew would fall at following case, where humidity is 80% more, or the exit of drain socket is choked up, or the air filter is very dirty.
NOTES

1. Leave space for servicing the unit and include inspection hatch. (Always open a hole on the side of the control box so that the air filters, heat exchange elements, and fans can easily be inspected and serviced.)
2. Install the two outdoor ducts with down slope (slope of 1/30 or more) to prevent entry of rain water, also, provide insulation for three ducts (outdoor ducts and indoor supply air duct) to prevent dew condensation. (Material: glass wool of 25mm thick)
3. Do not turn the unit upside down.
4. Use city water or clean water.
   Include water supply piping with strainer, a water supply shut-off valve, and a drain valve (both locally procured) somewhere along the water supply piping that can be reached from the inspection. 
5. It is impossible to connect the water supply piping directly to public piping. Use a cistern tank (of the approved type), if you need to get your water supply from public piping.
6. Make sure the supply water is between 5°C and 40°C in temperature.
7. Make sure the supply water is between 0.02MPa to 0.49MPa (0.2 kg/cm² to 5 kg/cm²)
8. Make sure to install drain piping, and insulate drain piping to prevent dew condensation.
9. Insulate the water supply piping to prevent condensation from forming.
10. Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air from forming.
11. Install in a location where the air around the unit or taken into the humidifier will not drop below 0°C.
12. Do not use a bent cap or a round hood as the outdoor hood if they might get rained on directly (we recommend using a deep hood) (optional accessory).
13. In areas where freezing may occur, always take steps to prevent the pipes from freezing.
14. Do not place something which shouldn’t get wet at the below of this unit. The dew would fall at following case, where humidity is 80% more, or the exit of drain socket is choked up, or the air filter is very dirty.
15. Feed clean water. If the supply water is hard water, use a water softener because of short life.
   Life of humidifying element is about 3 years (4,000 hours), under the supply water conditions of hardness: 150 mg/L. (Life of humidifying element is about 1 years (1500 hours), under the supply water conditions of hardness: 400 mg/L.)

3D083011
NOTES

1. Leave space for servicing the unit and include inspection hatch. (Always open a hole on the side of the control box so that the air filters heat exchange elements, and fans can easily be inspected and serviced.)

2. Install the two outdoor ducts with down slope (slope of 1/30 or more) to prevent entry of rain water, also, provide insulation for three ducts (outdoor ducts and indoor supply air duct) to prevent dew condensation. (Material: glass wool of 25mm thick)

3. Do not turn the unit upside down.

4. Make sure to install drain piping, and insulate drain piping to prevent dew condensation.

5. Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air from forming.

6. Do not use a bent cap or a round hood as the outdoor hood if they might get rained on directly (we recommend using a deep hood) (optional accessory).

7. In areas where freezing may occur, always take steps to prevent the pipes from freezing.

8. Do not place something which shouldn’t get wet at the below of this unit. The dew would fall at following case, where humidity is 80% more, or the exit of drain socket is choked up, or the air filter is very dirty.
NOTES

1. Leave space for servicing the unit and include inspection hatch. (Always open a hole on the side of the control box so that the air filters, heat exchange elements, and fans can easily be inspected and serviced.)

2. Install the two outdoor ducts with down slope (slope of 1/30 or more) to prevent entry of rain water, also, provide insulation for three ducts (outdoor ducts and indoor supply air duct) to prevent dew condensation. (Material: glass wool of 25mm thick)

3. Do not turn the unit upside down.

4. Use city water or clean water. Include water supply piping with strainer, a water supply shut-off valve, and a drain valve (both locally procured) somewhere along the water supply piping that can be reached from the inspection hatch.

5. It is impossible to connect the water supply piping directly to public piping. Use a cistern tank (of the approved type), if you need to get your water supply from public piping.

6. Make sure the water supply is 0.02MPa to 0.49MPa (0.2 kg/cm2 to 5 kg/cm2).

7. Make sure the supply water temperature is between 5°C and 40°C.

8. Insulate the water supply piping to prevent condensation from forming.

9. Make sure to install drain piping, and isolate drain piping to prevent dew condensation.

10. Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air from forming.

11. Install in a location where the air around the unit or taken into the humidifier will not drop below 0°C.

12. Do not use a bent cap or a round hood as the outdoor hood if they might get rained on directly (we recommend using a deep hood) (optional accessory).

13. In areas where freezing may occur, always take steps to prevent the pipes from freezing.

14. Do not place something which shouldn’t get wet at the bottom of this unit. The water or condensate may cause damage to the unit, or the air filter is very dirty.

15. Feed clean water. If the supply water is hard water, use a water softener because of short life.

Life of humidifying element is about 3 years (4000 hours), under the supply water conditions of hardness: 150 mg/L. (Life of humidifying element is about 1 year (1500 hours), under the supply water conditions of hardness: 400 mg/L.)

Life of humidifying element is about 3 years (4000 hours), under the supply water conditions of hardness: 150 mg/L. (Life of humidifying element is about 1 year (1500 hours), under the supply water conditions of hardness: 400 mg/L.)

3D083012
1. Leave space for servicing the unit and include inspection hatch. (Always open a hole on the side of the control box so that the air filters, heat exchange elements, and fans can easily be inspected and serviced.)
2. Install the two outdoor ducts with down slope (slope of 1/30 or more) to prevent entry of rain water, also, provide insulation for three ducts (outdoor ducts and indoor supply air duct) to prevent dew condensation. (Material: glass wool of 25mm thick)
3. Do not turn the unit upside down.
4. Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air from forming.
5. Do not use a bent cap or a round hood as the outdoor hood if they might get rained on directly (we recommend using a deep hood) (optional accessory).
6. In areas where freezing may occur, always take steps to prevent the pipes from freezing.
7. Do not place something which shouldn’t get wet at the bottom of this unit. The dew would fall at following case, where humidity is 80% more, or the exit of drain socket is choked up, or the air filter is very dirty.
NOTES

1. Leave space for servicing the unit and include inspection hatch. (Always open a hole on the side of the control box so that the air filters, heat exchange elements, fans and humidifier elements can easily be inspected and serviced.)

2. Install the two outdoor ducts with down slope (slope of 1/30 or more) to prevent entry of rain water. Also, provide insulation for three ducts (outdoor ducts and indoor supply air duct) to prevent dew condensation. (Material: glass wool of 25mm thick)

3. Do not turn the unit upside down.

4. Use city water or clean water.

Include water supply piping with strainer, a water supply shut-off valve, and a drain valve (both locally procured) somewhere along the water supply piping that can be reached from the inspection.

5. It is impossible to connect the water supply piping directly to public piping. Use a cistern tank (of the approved type), if you need to get your water supply from public piping.

6. Make sure the supply water is between 5°C and 40°C in temperature.

7. Make sure the supply water is between 5°C and 40°C in temperature.

8. Insulate the water supply piping to prevent condensation from forming.

9. Make sure to install drain piping, and insulate drain piping to prevent dew condensation.

10. Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air from forming.

11. Install in a location where the air around the unit or taken into the humidifier will not drop below 0°C.

12. Do not use a bent cap or a round hood as the outdoor hood if they might get rained on directly (we recommend using a deep hood) (optional accessory).

13. In areas where freezing may occur, always take steps to prevent the pipes from freezing.

14. Do not place something which shouldn’t get wet at the below of this unit. The dew would fall at following case, where humidity is 80% more, or the exit of drain socket is choked up, or the air filter is very dirty.

15. Feed clean water. If the supply water is hard water, use a water softener because of short life.

Life of humidifying element is about 3 years (4,000 hours), under the supply water conditions of hardness: 150 mg/L. (Life of humidifying element is about 1 years (1500 hours), under the supply water conditions of hardness: 400 mg/L.)
1) For example: 19(29)-07
Mode no.: 19(29)
First code: Supply \( \text{Exhaust} \)
Second code no.: 07
2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.

---

1) For example: 19(29)-07
Mode no.: 19(29)
First code: Supply \( \text{Exhaust} \)
Second code no.: 07
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[Reading of Performance Characteristics]
1) For example: 19(29)-07
   Mode no. : 19(29)
   First code: (Supply)
   Second code no. : 07

2) Rated point: ●
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[Reading of Performance Characteristics]
1) For example: 19(29)-07
   Mode no. : 19(29)
   First code: (Supply)
   Second code no. : 07

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3) The characteristic of each tap becomes a setup of the characteristic of the same code number.
VKM100GB

50Hz, 220V-240V

[Reading of Performance Characteristics]

1) For example: 19(29)-07
Mode no.: 19(29)
First code: (Supply) [2 2] Exhaust [3 3]
Second code no.: 07

2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.

VKM100GBM

50Hz, 220V-240V

[Reading of Performance Characteristics]

1) For example: 19(29)-07
Mode no.: 19(29)
First code: (Supply) [2 2] Exhaust [3 3]
Second code no.: 07

2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.
Premium quality to meet the most demanding needs

› Best possible Indoor Air Quality thanks to optional pre-filters from Coarse 55% (G4) up to ePM1 50% (F7) and second step filtration up to ePM1 80% (F9)
› Plug & Play connectable to Sky Air and VRV for integrated control
› High efficiency aluminium counter flow heat exchanger (up to 93%)
› Maximum ESP available up to 600 Pa
› Air flow from 150 up to 3,450 m³/h
› Optional CO₂ sensor saves energy while improving indoor air quality
› Optional factory tested heater available to extend operation range
› Low sound level
› 6 standard sizes available from stock