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VAM-FC

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1 Features

Ventilation with heat recovery as standard

- Energy saving ventilation using indoor heating, cooling and moisture recovery
- Ideal solution for shops, restaurants or offices requiring maximum floor space for furniture, decorations and fittings
- Free cooling possible when outdoor temperature is below indoor temperature (e.g. during nighttime)
- Reduced energy consumption thanks to specially developed DC fan motor
- Prevent energy losses from over-ventilation while improving indoor air quality with optional CO2 sensor
- 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
- Optional medium and fine dust filters M6, F7, F8 to meet customer request or legislation
- 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)
- 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
## Specifications

### 2-1 Technical Specifications

<table>
<thead>
<tr>
<th>Power input - 50Hz</th>
<th>Nom.</th>
<th>Ultra high kW</th>
<th>High kW</th>
<th>Low kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat exchange mode</td>
<td>kW</td>
<td>0.132</td>
<td>0.111</td>
<td>0.058</td>
</tr>
<tr>
<td>Bypass mode</td>
<td>kW</td>
<td>0.132</td>
<td>0.111</td>
<td>0.058</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature exchange efficiency - 50Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra high %</td>
</tr>
<tr>
<td>High %</td>
</tr>
<tr>
<td>Low %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enthalpy exchange efficiency - 50Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling %</td>
</tr>
<tr>
<td>Heating %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operation mode</th>
<th>Ultra high m³/h</th>
<th>High m³/h</th>
<th>Low m³/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat exchange mode</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bypass mode</td>
<td></td>
<td></td>
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<tr>
<td>External static pressure - 50Hz</td>
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<table>
<thead>
<tr>
<th>Fan motor</th>
<th>Quantity</th>
<th>2</th>
<th>4</th>
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<tbody>
<tr>
<td>Output 50 Hz</td>
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<td>80</td>
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</table>

<table>
<thead>
<tr>
<th>Sound pressure level - 50Hz</th>
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</thead>
<tbody>
<tr>
<td>Heat exchange mode</td>
</tr>
<tr>
<td>Bypass mode</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operation range</th>
<th>Min. °CDB</th>
<th>Max. °CDB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling</td>
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<td>50</td>
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<tr>
<td>Heating</td>
<td>-15</td>
<td>50</td>
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<table>
<thead>
<tr>
<th>Connection duct diameter mm</th>
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<th>150</th>
<th>200</th>
<th>250</th>
<th>350</th>
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<tbody>
<tr>
<td>Insulation material</td>
<td>Self-extinguishable urethane foam</td>
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</table>
## Specifications

### 2-1 Technical Specifications

<table>
<thead>
<tr>
<th>General</th>
<th>Supplier/Manufacturer details</th>
<th>Name or trademark</th>
<th>Daikin Europe N.V.</th>
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</thead>
<tbody>
<tr>
<td>Product description</td>
<td>Model identifier</td>
<td>VAM150FCVE</td>
<td>VAM250FCVE</td>
</tr>
<tr>
<td>Specific energy consumption (SEC)</td>
<td>Cold climate (kW/m².a)</td>
<td>-56.0 (6)</td>
<td>-60.5 (6)</td>
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<tr>
<td></td>
<td>Average climate (kW/m².a)</td>
<td>-22.1 (6)</td>
<td>-27.0 (6)</td>
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<tr>
<td></td>
<td>Warm climate (kW/m².a)</td>
<td>-0.100 (6)</td>
<td>-5.30 (6)</td>
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<tr>
<td>SEC class</td>
<td>D / (6)</td>
<td>B / (6)</td>
<td>-</td>
</tr>
<tr>
<td>Type of product</td>
<td>Bidirectional RVU / (7)</td>
<td>Bidirectional NRVU / (7)</td>
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</tr>
<tr>
<td>Type of drive</td>
<td>Multi-speed drive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat recovery system</td>
<td>recuperative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal efficiency</td>
<td>%</td>
<td>73.6 (3)</td>
<td>72.2 (3)</td>
</tr>
<tr>
<td>Maximum flow rate at 100 Pa ESP</td>
<td>Flow rate (m³/h)</td>
<td>130 (5)</td>
<td>207 (5)</td>
</tr>
<tr>
<td></td>
<td>Electric power input (W)</td>
<td>129</td>
<td>160</td>
</tr>
<tr>
<td>Sound power level (Lwa)</td>
<td>dB</td>
<td>40</td>
<td>43</td>
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<tr>
<td>Nominal flow rate (m³/h)</td>
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<td>0.025</td>
<td>0.040</td>
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<tr>
<td>Reference flow rate (m³/h)</td>
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<td>0.097</td>
<td>0.139</td>
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<tr>
<td>Reference pressure difference (Pa)</td>
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<td>50.0</td>
<td>-</td>
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<tr>
<td>Effective electric power input (kW)</td>
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<td>0.055</td>
<td>0.121</td>
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<tr>
<td>Specific power input (W/m³/h)</td>
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<td>0.626 (6)</td>
<td>0.445 (6)</td>
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<tr>
<td>Internal specific fan power (W/m³/s)</td>
<td>-</td>
<td>350</td>
<td>644</td>
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<tr>
<td>Ventilation control</td>
<td>Type</td>
<td>Clock control</td>
<td>-</td>
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<tr>
<td></td>
<td>Factor</td>
<td>0.950 (6)</td>
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<tr>
<td>Maximum external leakage</td>
<td>%</td>
<td>7.42</td>
<td>4.66</td>
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<tr>
<td>Maximum internal leakage</td>
<td>%</td>
<td>4.50</td>
<td>8.10</td>
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<tr>
<td>Filter energy performance (kWh)</td>
<td>-</td>
<td>279 (7)</td>
<td>-</td>
</tr>
<tr>
<td>Filter service warning</td>
<td>Displayed on controller / (5)</td>
<td>-</td>
<td></td>
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<tr>
<td>Instructions for pre-disassembly</td>
<td><a href="http://www.daikineurope.com/energylabel">www.daikineurope.com/energylabel</a></td>
<td>-</td>
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</table>

### 2-2 Electrical Specifications

<table>
<thead>
<tr>
<th>Power supply</th>
<th>VAM150FC</th>
<th>VAM250FC</th>
<th>VAM350FC</th>
<th>VAM500FC</th>
<th>VAM650FC</th>
<th>VAM800FC</th>
<th>VAM1000FC</th>
<th>VAM1500FC</th>
<th>VAM2000FC</th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
<td>Phase</td>
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<td>-</td>
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<tr>
<td>Frequency</td>
<td>Hz</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Voltage</td>
<td>V</td>
<td>220-240/220</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Voltage range</td>
<td>Min. %</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max. %</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Current</td>
<td>Minimum circuit amps (MCA) A</td>
<td>0.900</td>
<td>1.30</td>
<td>1.60</td>
<td>2.50</td>
<td>3.00</td>
<td>5.00</td>
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<td>-</td>
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<tr>
<td></td>
<td>Maximum fuse amps (MFA) A</td>
<td>15.0</td>
<td>16.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Fan motor rated output kW</td>
<td>0.03x2</td>
<td>0.08x2</td>
<td>0.106x2</td>
<td>0.210x2</td>
<td>0.210x4</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Full load amps (FLA)</td>
<td>Fan motor A</td>
<td>0.400</td>
<td>0.600</td>
<td>0.700</td>
<td>1.10</td>
<td>1.30</td>
<td>1.30</td>
<td>2.20</td>
<td>2.20</td>
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<tr>
<td></td>
<td>Fan motor 2 A</td>
<td>0.400</td>
<td>0.600</td>
<td>0.700</td>
<td>1.10</td>
<td>1.30</td>
<td>1.30</td>
<td>2.20</td>
<td>2.20</td>
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<tr>
<td></td>
<td>Fan motor 3 A</td>
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<td>-</td>
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<td>2.20</td>
<td>2.20</td>
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<td>Fan motor 4 A</td>
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<td>-</td>
<td>2.20</td>
<td>2.20</td>
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</tbody>
</table>
2 Specifications

Notes

(1) Measured on fan curve 15. Refer to fan curves.
(2) Measured according to JIS B 8628
(3) Measured at reference flow rate according to EN13141-7
(4) Measured according to EN308: 1997
(5) Clean the filter when the filter icon appears on the controller screen. Regular filter cleaning is important for delivered air quality and for the unit’s energy efficiency.
(6) In accordance with commission regulation (EU) No 1254/2014
(7) In accordance with commission regulation (EU) No 1253/2014
(8) At reference flow rate in accordance with commission regulation (EU) No 1254/2014
### Options

#### 3 - 1 Options

**Type Ceiling-mounted**

**Installation with duct**

<table>
<thead>
<tr>
<th>Item</th>
<th>VAM09DFC</th>
<th>VAM12DFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote control</td>
<td>BRIC0816</td>
<td>BRIC0816</td>
</tr>
<tr>
<td>Remote control</td>
<td>BRIC0502</td>
<td>BRIC0502</td>
</tr>
<tr>
<td><strong>Control remote control</strong></td>
<td>BRIC0512</td>
<td>BRIC0512</td>
</tr>
<tr>
<td><strong>Uniform ON/OFF controller</strong></td>
<td>DCS010B4</td>
<td>DCS010B4</td>
</tr>
<tr>
<td><strong>Touch Manager</strong></td>
<td>DCM0A41</td>
<td>DCM0A41</td>
</tr>
<tr>
<td><strong>Tilt Controller</strong></td>
<td>DCSAA41</td>
<td>DCSAA41</td>
</tr>
<tr>
<td><strong>Window DR adapter</strong></td>
<td>VDWSARA41</td>
<td>VDWSARA41</td>
</tr>
<tr>
<td><strong>Wiring adapter for electrical operations</strong></td>
<td>KRF24AD (for general) KRF24AD (for EU market)</td>
<td>KRF24AD</td>
</tr>
<tr>
<td><strong>For baffle/fin</strong></td>
<td>KRP2-3</td>
<td>KRP2-3</td>
</tr>
<tr>
<td><strong>Installation box for adaptor PCB</strong></td>
<td>KRP2-2490</td>
<td>KRP2-2490</td>
</tr>
<tr>
<td><strong>For header control box</strong></td>
<td>WP0H002</td>
<td>WP0H002</td>
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<tr>
<td>Replacement air filter</td>
<td>VAF722FS1</td>
<td>VAF722FS1</td>
</tr>
<tr>
<td>High efficiency filter</td>
<td>VAF652FS1</td>
<td>VAF652FS1</td>
</tr>
</tbody>
</table>

**Notes**

1. Included languages are: English, German, French, Spanish, Italian, Greek, Portuguese, Russian, Turkish, and Polish.
2. Included languages are: English, German, Albanian, Croatian, Czech, Hungarian, Romanian, Serbian, Slovak, and Slovenian.
3. To install adaptor PCB: KRF24AD, KRF24AD, KRF2-3, installation box: KRP2-2490 is required.
4. Up to 2 adaptor PCBs can be installed per installation.
5. Only one installation box can be installed per indoor unit.

---

**Type Ceiling-mounted**

**Installation with duct**

<table>
<thead>
<tr>
<th>Item</th>
<th>VAM09DFC</th>
<th>VAM12DFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote control</td>
<td>BRIC0816</td>
<td>BRIC0816</td>
</tr>
<tr>
<td>Remote control</td>
<td>BRIC0502</td>
<td>BRIC0502</td>
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<tr>
<td><strong>Control remote control</strong></td>
<td>BRIC0512</td>
<td>BRIC0512</td>
</tr>
<tr>
<td><strong>Uniform ON/OFF controller</strong></td>
<td>DCS010B4</td>
<td>DCS010B4</td>
</tr>
<tr>
<td><strong>Touch Manager</strong></td>
<td>DCM0A41</td>
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</tr>
<tr>
<td><strong>Tilt Controller</strong></td>
<td>DCSAA41</td>
<td>DCSAA41</td>
</tr>
<tr>
<td><strong>Window DR adapter</strong></td>
<td>VDWSARA41</td>
<td>VDWSARA41</td>
</tr>
<tr>
<td><strong>Wiring adapter for electrical operations</strong></td>
<td>KRF24AD (for general) KRF24AD (for EU market)</td>
<td>KRF24AD</td>
</tr>
<tr>
<td><strong>For baffle/fin</strong></td>
<td>KRP2-3</td>
<td>KRP2-3</td>
</tr>
<tr>
<td><strong>Installation box for adaptor PCB</strong></td>
<td>KRP2-2490</td>
<td>KRP2-2490</td>
</tr>
<tr>
<td><strong>For header control box</strong></td>
<td>WP0H002</td>
<td>WP0H002</td>
</tr>
<tr>
<td>Replacement air filter</td>
<td>VAF722FS1</td>
<td>VAF722FS1</td>
</tr>
<tr>
<td>High efficiency filter</td>
<td>VAF652FS1</td>
<td>VAF652FS1</td>
</tr>
</tbody>
</table>

**Notes**

1. Included languages are: English, German, French, Spanish, Italian, Greek, Portuguese, Russian, Turkish, and Polish.
2. Included languages are: English, German, Albanian, Croatian, Czech, Hungarian, Romanian, Serbian, Slovak, and Slovenian.
3. To install adaptor PCB: KRF24AD, KRF24AD, KRF2-3, installation box: KRP2-2490 is required.
4. Humidifiers and heaters cannot be combined.
5. If you order 1 filter set, you can use it for either supply side or exhaust side. To provide both sides with filters, 2 filter sets are required.
4 Exchange efficiency
4 - 1 Exchange efficiency

![Diagram showing exchange efficiency for different models of VAM-FC units.](image-url)
**NOTE**

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

3TW27874-1

**NOTE**

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

3TW27884-1
5  Dimensional drawings
5 - 1  Dimensional Drawings

NOTES
1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

NOTES
1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.
5 Dimensional drawings
5 - 1 Dimensional Drawings

NOTES
1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

VAM650FC

NOTES
1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

VAM800FC
5 Dimensional drawings
5 - 1 Dimensional Drawings

**NOTES**

1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

---

**VAM1000FC**

- Sealing
- Exhaust air fan
- EA: Exhaust air to outdoors
- OA: Fresh air from outdoors (outdoor air)
- Damper plate
- Inspection hole
- Maintenance space for the heat exchange element, the air filters and fans

**VAM1500FC**

- Sealing
- Exhaust air fan
- EA: Exhaust air to outdoors
- OA: Fresh air from outdoors (outdoor air)
- Damper plate
- Inspection hole
- Maintenance space for the heat exchange element, the air filters and fans

---

**NOTES**

1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.
**5 Dimensional drawings**

**5 - 1 Dimensional Drawings**

---

**NOTES**

1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

3D081168
6 Centre of gravity
6 - 1 Centre of Gravity

VAM350–500FC

<table>
<thead>
<tr>
<th>Unit</th>
<th>AA</th>
<th>AB</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM350*</td>
<td>24</td>
<td>51</td>
<td>10</td>
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<tr>
<td>VAM500*</td>
<td>23</td>
<td>36</td>
<td>9</td>
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4D081262A
6 Centre of gravity
6-1 Centre of Gravity

VAM650–800FC

<table>
<thead>
<tr>
<th>Unit</th>
<th>AA</th>
<th>AB</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM650*</td>
<td>20</td>
<td>42</td>
<td>6</td>
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<tr>
<td>VAM800*</td>
<td>32</td>
<td>58</td>
<td>5</td>
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</table>

4D081263A
6 Centre of gravity
6 - 1 Centre of Gravity
6 Centre of gravity
6 - 1 Centre of Gravity
# Wiring diagrams

## 7 - 1 Wiring Diagrams - Single Phase

### NOTES

1. **** : terminals
2. **** : wire clamp, **** : connector
3. **** : field wiring
4. ** : protective earth
5. Symbols show as follows: BLK: Black, RED: Red, BLU: Blue, WHT: White, YLW: Yellow, ORN: Orange, GRN: Green

### CLEANING PRECAUTIONS:

Clean the heat exchange elements once every two years or more often and the air filter once a year or more often. (Before cleaning, make sure that the unit is not operating).

### Before obtaining access to terminal devices, all power supply circuits must be interrupted.

### Grounding

To prevent electric shock hazards, provide grounding work according to the installation manual.

---

### Wiring Diagrams

#### Power supply

- Single phase
- 220-240V/220V
- 50/60Hz

#### Motor (exhaust fan motor)

- M2F Motor

#### Optional Accessories

- Printed circuit board (Q1L-Q2L)
- Thermo switch (MP1 2 built-in)
- Adapter for wiring (KR050-2)
- Thermostat (indoor air)
- Thermostat (outdoor air)
- Magnetic relay (M1F)
- Magnetic relay (M2F)
- Magnetic relay (M1D)
- Transformer (supply 220-240V/22V)
- Remote Controller
- Selector switch (main/sub)
- Connector (adapter power supply)

#### Terminal Table

<table>
<thead>
<tr>
<th>Terminals</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-RED</td>
<td>Motor (air supply fan motor)</td>
</tr>
<tr>
<td>N-BLU</td>
<td>Motor (exhaust fan motor)</td>
</tr>
<tr>
<td>M1F</td>
<td>Motor (damper motor)</td>
</tr>
<tr>
<td>M2F</td>
<td>Motor (damper motor)</td>
</tr>
<tr>
<td>M1D</td>
<td>Terminal (control)</td>
</tr>
<tr>
<td>X1M</td>
<td>Terminal (power supply)</td>
</tr>
<tr>
<td>X2M</td>
<td>Terminal (power supply)</td>
</tr>
<tr>
<td>X11A</td>
<td>Connector (adapter power supply)</td>
</tr>
</tbody>
</table>

---

### Diagrams

![Wiring Diagram](image-url)
NOTES

1 In case you use the central remote control, connect it to the unit in accordance with the attached manual.
2 When connecting the input wires from outside, fresh-up or on/off control operation can be selected. (Contact with a minimum applicable load of 12V DC, 1mA)
3 For details of connection see the attached manual of the option kit.
4 SS1 (A1P) has already been set to “nor.” at factory set. The unit will not run if the setting is changed.

1 Do not open the EL. Compo. box cover for 10 minutes after the power supply is turned off.
2 After opening the EL. Compo. box, measure the points shown at the right with a tester and confirm that the voltage of the capacitor in the main circuit is less than DC50V
7 Wiring diagrams
7 - 1 Wiring Diagrams - Single Phase

VAM800-1000FC

Caution when performing service inside the EL. Compo. box

1. Do not open the EL. Compo. box cover for 10 minutes after the power supply is turned off.
2. After opening the EL. Compo. box, measure the points shown at the right with a tester and confirm that the voltage of the capacitor in the main circuit is less than DC50V.

NOTE:

1. In case you use the central remote control, connect it to the unit in accordance with the attached manual.
2. When connecting the input wires from outside, fresh-up or on/off control operation can be selected. (Contact with a minimum applicable load of 12V DC, 1mA)
3. For details of connection see the attached manual of the option kit.
4. SS1 (A1P) has already been set to “nor.” at factory set. The unit will not run if the setting is changed.

Printed circuit board
Remote control
Wired remote control (opt. accessory)
Indoor
220-240V/220V ±5%/60Hz
Outside
Connector
See note 1

A1P Printed circuit board
A2P Printed circuit board assy (Fan)
A3P Printed circuit board assy (Fan)
C1 Capacitor (M1F)
F1U Fuse T, 6.3A 250V (A1P)
F3U Fuse T, 6.3A, 250V/(A2P/A3P)
HAP Pilot lamp (Service monitor - green)
K1R Magnetic relay
K2R Magnetic relay
L1R Reactor
L2R Reactor
M1F Motor (Supply air fan)
M2F Motor (Exhaust air fan)

M1D Motor (Damper)
Q1DI Field earth leak detector
R1T Thermistor (Indoor air)
R2T Thermistor (Outdoor air)
S1C Limit switch damper motor
V1R Diode bridge
Z1F Noise filter

NOTE:

1. In case you use the central remote control, connect it to the unit in accordance with the attached manual.
2. When connecting the input wires from outside, fresh-up or on/off control operation can be selected. (Contact with a minimum applicable load of 12V DC, 1mA)
3. For details of connection see the attached manual of the option kit.
4. SS1 (A1P) has already been set to “nor.” at factory set. The unit will not run if the setting is changed.
7 - 1 Wiring Diagrams - Single Phase

VAM1500-2000FC

NOTES

1. Do not open the EL. Compo. box cover for 10 minutes after the power supply is turned off.
2. After opening the EL. Compo. box, measure the points shown at the right with a tester and confirm that the voltage of the capacitor in the main circuit is less than DC50V.

1 In case you use the central remote control, connect it to the unit in accordance with the attached manual.
2 When connecting the input wires from outside, fresh-up or on/off control operation can be selected. (Contact with a minimum applicable load of 12V DC, 1mA)
3 For details of connection see the attached manual of the option kit.
4 SS1 (A1P) has already been set to “nor.” at factory set. The unit will not run if the setting is changed.

A1P Printed circuit board
A2P-A4P Printed circuit board assy (Fan)
A5P Printed circuit board assy (Fan)
C1 Capacitor (M1F)
F1U Fuse T, 6.3A, 250V (A1P)
HAP Pilot lamp (Service monitor - green)
K1R Magnetic relay
K2R,K3R Magnetic relay
K4R-L4R Resistor
M1F Motor (Exhaust air fan) (Bottom)
M2F Motor (Supply air fan) (Bottom)
M3F Motor (Exhaust air fan) (Top)

L: Live
N: Neutral
: Field wiring
: Terminal strip
: Connector
: Connection
: Relay connector
: Protective earth (screw)
: Noiseless earth

Colors: BLK: Black  V1R: Diode bridge
BLU: Blue  Z1F: Noise filter
YEL: Yellow  REMOTE CONTROL
ORG: Orange
GRN: Green

WARNING:
Caution when performing service inside the EL. Compo. box

2D080684B

159
## Sound data

### 8 - 1 Sound Power Spectrum

#### Sound power

<table>
<thead>
<tr>
<th>Model</th>
<th>Fan speed</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
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<th>Total</th>
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<tbody>
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<td>U-H</td>
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<td>57</td>
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<td>48</td>
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<td>25</td>
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<td>23</td>
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</tbody>
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**Notes**

1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744
4. Depending on the operating conditions, reflected sound, and peripheral noise, the operating sound may become higher than this value.
8 Sound data
8-1 Sound Power Spectrum

VAM250FC

Sound power

<table>
<thead>
<tr>
<th>Model</th>
<th>Fan speed</th>
<th>Hz</th>
<th>63</th>
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<th>250</th>
<th>500</th>
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</table>

Notes
1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744
4. Depending on the operating conditions, reflected sound, and peripheral noise, the operating sound may become higher than this value.

4D099266A
8 Sound data
8 - 1 Sound Power Spectrum

### VAM350FC

Power level data (in case of Total Heat Exchange mode)

<table>
<thead>
<tr>
<th>Unit model name</th>
<th>Fan speed</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
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### VAM500FC

Power level data (in case of Total Heat Exchange mode)

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<td>dB</td>
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### VAM650FC

Power level data (in case of Total Heat Exchange mode)

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<tr>
<td>VAM650FB</td>
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### NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity 0dB = 10E-6μW/m²
3. Measured according to ISO 3744.
4. The operating sound level may become higher than this value depending on the operating conditions, reflected sound and peripheral noise.
5. The power levels have been calculated in the assumption that the measuring point is immediately under the source of operating sound.
### Sound data

#### 8.1 Sound Power Spectrum

#### VAM800FC

Power level data (in case of Total Heat Exchange mode)

<table>
<thead>
<tr>
<th>Unit model name</th>
<th>Hz</th>
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<th>125</th>
<th>250</th>
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#### VAM1000FC

Power level data (in case of Total Heat Exchange mode)

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#### VAM1500FC

Power level data (in case of Total Heat Exchange mode)

<table>
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<th>Hz</th>
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<th>125</th>
<th>250</th>
<th>500</th>
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#### VAM2000FC

Power level data (in case of Total Heat Exchange mode)

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</tbody>
</table>

#### NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity 0dB = 10E-6μW/m².
3. Measured according to ISO 3744.
4. The operating sound level may become higher than this value depending on the operating conditions, reflected sound and peripheral noise.
5. The power levels have been calculated in the assumption that the measuring point is immediately under the source of operating sound.
8 Sound data
8 - 2 Sound Pressure Spectrum

VAM150FC

VAM250FC

Notes:
- Data is valid at nominal operation condition.
- 
- Operating noise varies depending on operation, installation, and ambient conditions.
- Measuring location: anechoic chamber

Locations of microphone

30099269

30099270
8 Sound data
8-2 Sound Pressure Spectrum

### NOTES
2. Operation noise is measured in an anechoic chamber.
3. The operation noise level may become higher than this value depending on the operation conditions, reflected sound and peripheral noise.
4. Operation noise differs with operation and ambient conditions.
6. Location of microphone.
8 Sound data

8 - 2 Sound Pressure Spectrum

**NOTES**

2. Operation noise is measured in an anechoic chamber.
3. The operation noise level may become higher than this value depending on the operation conditions, reflected sound and peripheral noise.
4. Operation noise differs with operation and ambient conditions.
6. Location of microphone.
9 Fan characteristics

9 - 1 Fan Characteristics

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

9 - 1 Fan Characteristics

- Indoor Unit • VAM-FC
9  Fan characteristics

9-1  Fan Characteristics

![Diagram showing Fan Characteristics](image_url)
9 Fan characteristics
9 - 1 Fan Characteristics

Notes:
1. The fan speeds are valid for 150% 50 Hz power supply.

3D100385

3D100386
Fan characteristics

9 - 1 Fan Characteristics

- Ultra-high speed
- High speed
- Low speed

Legend:
- L9: Low speed (Vent fan)
- LS: Low speed (Source fan)
- H: High speed (Vent fan)
- HS: High speed (Source fan)
- HRS: High speed (Source fan) setting
- LHS: Low speed (Source fan) setting

Notes:
1. The fan speeds are valid for 205 V, 50 Hz power supply.
10 Air filter characteristics
10 - 1 Air filter characteristics

VAM350-2000FC

High efficiency filter / dust filter for VAM350-2000FC

1 Information for filter selection

1 Choose required airflow
2 Choose the filters
3 Add up all the pressure drops of the duct system on the installation site and the filters
   [For filter characteristics, refer to D-drawings]
4 Compare this with the unit performance characteristics to see resulting airflow & ESP

Download the VAM selection software on the Daikin extranet for easy selection

1 - 1 Choose required airflow

Choose the required airflow based upon the application/information

1 - 2 Choose the filters

Depending on the application prefilters and/or dust filters will be needed.

Filter requirements according to EN779: 2012

Table: Recommended dust filter classes per filter section (definition of filter classes according to EN 779)

<table>
<thead>
<tr>
<th>Outdoor Air Quality</th>
<th>Indoor Air Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IDA 1 (High)</td>
</tr>
<tr>
<td>ODA 1 (pure air)</td>
<td>N/A</td>
</tr>
<tr>
<td>ODA 2 (dust)</td>
<td>N/A</td>
</tr>
<tr>
<td>ODA 3 (very high concentrations of dust)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*) GF = Gas filter (carbon filter) and/or chemical filter

Outdoor air Quality:  
ODA 1 - Pure air  
ODA 2 - High concentration particles air  
ODA 3 - High concentration gas pollution  
ODA 4 - High concentration gas pollution and particles  
ODA 5 - Very high concentration gas pollution and particles

Indoor air Quality:  
IDA 1 - Optimum quality air (hospitals, laboratories, nursery)  
IDA 2 - Good quality air (offices, residences, museum, etc.)  
IDA 3 - Medium quality air (commercial buildings, cinema, theatre, room hotels, restaurants, bars, gym, computer room)

On the image below it is indicated where the standard prefilters and optional dust filters are installed. If 2 optional dust filters are used, the second one replaces the standard filter.

NOTE

1 Prefilters are factory mounted, M6, F7 and F8 dust filters are options
10 - 1 Air filter characteristics

### VAM350-2000FC

1-3 Add up all the pressure drops of the duct system on the installation site and the filters

[For filter characteristics, refer to D-drawings]

<table>
<thead>
<tr>
<th>Unit</th>
<th>Airflow (m³/h)</th>
<th>Filter Pressure Drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM350F</td>
<td>350</td>
<td>F6 52</td>
</tr>
<tr>
<td>VAM500F</td>
<td>500</td>
<td>F7 87</td>
</tr>
<tr>
<td>VAM650F</td>
<td>650</td>
<td>F8 148</td>
</tr>
<tr>
<td>VAM800F</td>
<td>800</td>
<td>F9 121</td>
</tr>
<tr>
<td>VAM1000F</td>
<td>1000</td>
<td>F10 190</td>
</tr>
<tr>
<td>VAM1500F</td>
<td>1500</td>
<td>F11 179</td>
</tr>
<tr>
<td>VAM2000F</td>
<td>2000</td>
<td>F12 160</td>
</tr>
</tbody>
</table>

**NOTES**

1. Table shows values at nominal level, refer to drawings for detailed information
2. Filters according to EN779:2012
3. For more information refer to VAM installation, operation manual or filter manual

To adjust static pressure after filter placement:

<table>
<thead>
<tr>
<th>Setting mode</th>
<th>Setting switch No.</th>
<th>Description of setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 (29)</td>
<td>2</td>
<td>SA fan speed setting</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>EA fan speed setting</td>
</tr>
</tbody>
</table>
10 Air filter characteristics

10 - 1 Air filter characteristics

VAM350-500FC

VAM650-800FC
10 Air filter characteristics

10 - 1 Air filter characteristics

VAM1000FC

VAM1500FC
10 Air filter characteristics

10 - 1 Air filter characteristics

![Graph showing pressure drop vs airflow for different filters and flow rates.]

- EKAFV100F8 x2 (4 filters)
- EKAFV100F7 x2 (4 filters)
- EKAFV100F6 x2 (4 filters)
11 Installation

11-1 Installation Method

Symbols:
- OA = Fresh outdoor air
- EA = Exhaust air
- SA = Supply air to room
- RA = Return air from room
11  Installation

11 - 1  Installation Method

VAM350FC

VAM500FC

Symbols:
- OA = Fresh outdoor air
- EA = Exhaust air
- SA = Supply air to room
- RA = Return air from room
11  Installation
11 - 1  Installation Method
11 Installation

11 - 1 Installation Method

Symbols:
QA = Fresh outdoor air
EA = Exhaust air
SA = Supply air to room
RA = Return air from room

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3D081272A
11 Installation
11 - 1 Installation Method

VAM2000FC

Symbols:
QA = Fresh outdoor air
EA = Exhaust air
SA = Supply air to room
RA = Return air from room

Diagrams illustrating the installation method for the VAM2000FC model.
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