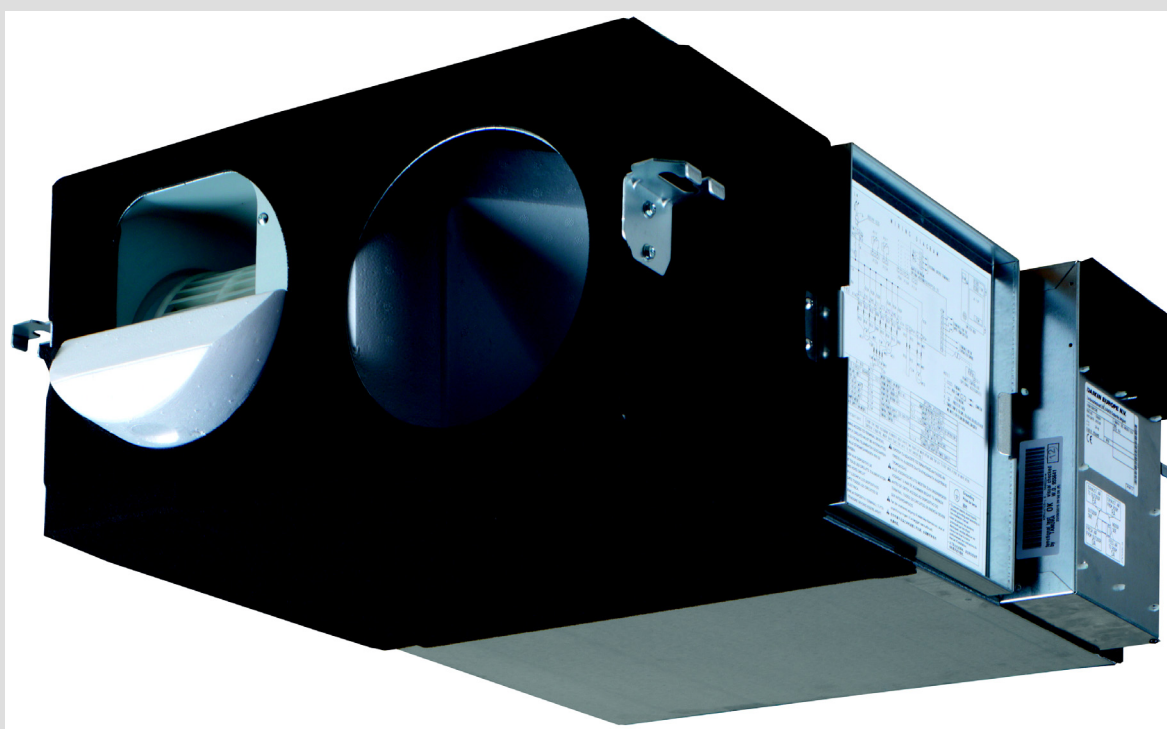


## Ventilation Technical Data

# VAM-FC



- > VAM150FCVE
- > VAM250FCVE
- > VAM350FCVE
- > VAM500FCVE
- > VAM650FCVE
- > VAM800FCVE

- > VAM1000FCVE
- > VAM1500FCVE
- > VAM2000FCVE



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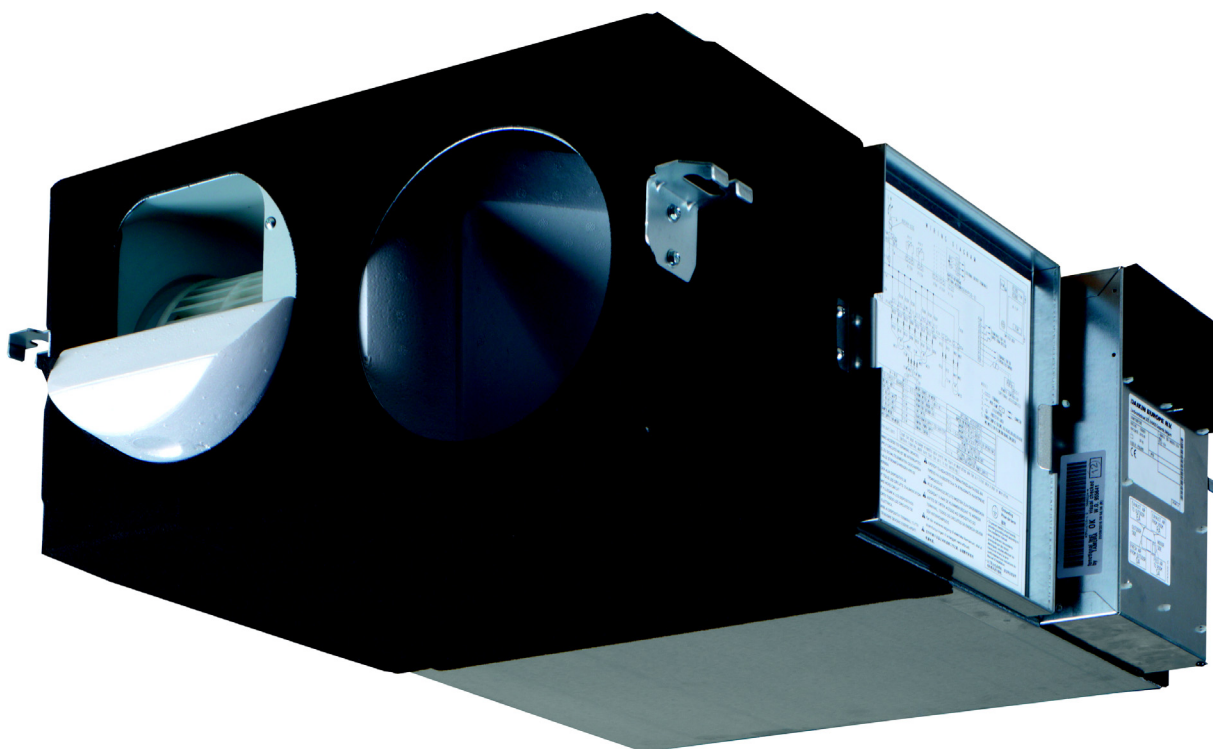
## VAM-FC

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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 (eg. 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



## 2 Specifications

| 2-1 Technical Specifications           |                                 |                    |            |      | VAM150F<br>C                                                       | VAM250F<br>C        | VAM350F<br>C        | VAM500F<br>C        | VAM650F<br>C        | VAM800F<br>C        | VAM1000<br>FC       | VAM1500<br>FC       | VAM2000<br>FC       |  |
|----------------------------------------|---------------------------------|--------------------|------------|------|--------------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|
| Power input - 50Hz                     | Heat exchange mode              | Nom.               | Ultra high | kW   | 0.132                                                              | 0.161               | 0.071 (1)           | 0.147 (1)           | 0.188 (1)           | 0.320 (1)           | 0.360 (1)           | 0.617 (1)           | 0.685 (1)           |  |
|                                        |                                 |                    | High       | kW   | 0.111                                                              | 0.079               | 0.057 (1)           | 0.101 (1)           | 0.114 (1)           | 0.241 (1)           | 0.309 (1)           | 0.463 (1)           | 0.575 (1)           |  |
|                                        |                                 |                    | Low        | kW   | 0.058                                                              | 0.064               | 0.020 (1)           | 0.049 (1)           | 0.063 (1)           | 0.185 (1)           | 0.198 (1)           | 0.353 (1)           | 0.295 (1)           |  |
|                                        | Bypass mode                     | Nom.               | Ultra high | kW   | 0.132                                                              | 0.161               | 0.071 (1)           | 0.147 (1)           | 0.188 (1)           | 0.320 (1)           | 0.360 (1)           | 0.617 (1)           | 0.685 (1)           |  |
|                                        |                                 |                    | High       | kW   | 0.111                                                              | 0.079               | 0.057 (1)           | 0.101 (1)           | 0.114 (1)           | 0.241 (1)           | 0.309 (1)           | 0.463 (1)           | 0.575 (1)           |  |
|                                        |                                 |                    | Low        | kW   | 0.058                                                              | 0.064               | 0.020 (1)           | 0.049 (1)           | 0.063 (1)           | 0.185 (1)           | 0.198 (1)           | 0.353 (1)           | 0.295 (1)           |  |
| Temperature exchange efficiency - 50Hz | Ultra high                      |                    |            | %    | 77.0 (2) / 72.0 (3)                                                | 74.9 (2) / 69.5 (3) | 78.0 (2) / 71.6 (4) | 77.0 (2) / 70.2 (4) | 77.0 (2) / 69.8 (4) | 77.0 (2) / 67.8 (4) | 78.0 (2) / 70.2 (4) | 78.0 (2) / 69.5 (4) | 78.0 (2) / 70.2 (4) |  |
|                                        | High                            |                    |            | %    | 78.3 (2) / 72.3 (3)                                                | 76.0 (2) / 70.0 (3) | 79.3 (2) / 71.9 (4) | 78.8 (2) / 70.7 (4) | 79.1 (2) / 71.2 (4) | 78.2 (2) / 68.8 (4) | 78.6 (2) / 71.1 (4) | 79.6 (2) / 70.3 (4) | 79.6 (2) / 71.3 (4) |  |
|                                        | Low                             |                    |            | %    | 82.8 (2) / 73.2 (3)                                                | 80.1 (2) / 72.0 (3) | 84.1 (2) / 73.0 (4) | 80.9 (2) / 71.3 (4) | 81.1 (2) / 72.9 (4) | 79.1 (2) / 69.6 (4) | 80.2 (2) / 73.4 (4) | 80.8 (2) / 71.0 (4) | 80.6 (2) / 74.6 (4) |  |
| Enthalpy exchange efficiency - 50Hz    | Cooling                         | Ultra high         |            | %    | 60.3 (2)                                                           |                     | 63.4 (2)            |                     | 60.3 (2)            |                     | 62.4 (2)            |                     | 63.4 (2)            |  |
|                                        |                                 | High               |            | %    | 61.9 (2)                                                           |                     | 61.2 (2)            |                     | 65.0 (2)            |                     | 63.4 (2)            |                     | 64.0 (2)            |  |
|                                        |                                 | Low                |            | %    | 67.3 (2)                                                           |                     | 64.5 (2)            |                     | 70.7 (2)            |                     | 66.9 (2)            |                     | 67.3 (2)            |  |
|                                        | Heating                         | Ultra high         |            | %    | 66.6 (2)                                                           |                     | 67.6 (2)            |                     | 64.5 (2)            |                     | 65.5 (2)            |                     | 67.6 (2)            |  |
|                                        |                                 | High               |            | %    | 67.9 (2)                                                           |                     | 67.4 (2)            |                     | 68.9 (2)            |                     | 67.6 (2)            |                     | 67.7 (2)            |  |
|                                        |                                 | Low                |            | %    | 72.4 (2)                                                           |                     | 70.7 (2)            |                     | 73.7 (2)            |                     | 71.1 (2)            |                     | 69.7 (2)            |  |
| Operation mode                         |                                 |                    |            |      | Heat exchange mode, bypass mode, fresh-up mode                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
| Heat exchange system                   |                                 |                    |            |      | Air to air cross flow total heat (sensible + latent heat) exchange |                     |                     |                     |                     |                     |                     |                     |                     |  |
| Heat exchange element                  |                                 |                    |            |      | Specially processed non-flammable paper                            |                     |                     |                     |                     |                     |                     |                     |                     |  |
| Dimensions                             | Unit                            | Height             |            | mm   | 285                                                                |                     | 301                 |                     | 364                 |                     |                     | 726                 |                     |  |
|                                        |                                 | Width              |            | mm   | 776                                                                |                     | 828                 |                     | 1,000               |                     |                     | 1,510               |                     |  |
|                                        |                                 | Depth              |            | mm   | 525                                                                |                     | 816                 |                     | 868                 |                     | 1,160               | 868                 | 1,160               |  |
| Weight                                 | Unit                            |                    |            | kg   | 24.0                                                               |                     | 33.0                |                     | 51.0                | 54.0                | 63.0                | 128                 | 145                 |  |
| Casing                                 | Material                        |                    |            |      | Galvanised steel plate                                             |                     |                     |                     |                     |                     |                     |                     |                     |  |
| Fan                                    | Type                            |                    |            |      | Sirocco fan                                                        |                     |                     |                     |                     |                     |                     |                     |                     |  |
|                                        | Air flow rate - 50Hz            | Heat exchange mode | Ultra high | m³/h | 150 (5)                                                            | 250 (5)             | 350 (1)             | 500 (1)             | 650 (1)             | 800 (1)             | 1,000 (1)           | 1,500 (1)           | 2,000 (1)           |  |
|                                        |                                 |                    | High       | m³/h | 140 (5)                                                            | 230 (5)             | 320 (1)             | 410 (1)             | 545 (1)             | 725 (1)             | 950 (1)             | 1,350 (1)           | 1,880 (1)           |  |
|                                        |                                 |                    | Low        | m³/h | 105 (5)                                                            | 155 (5)             | 210 (1)             | 310 (1)             | 450 (1)             | 665 (1)             | 820 (1)             | 1,230 (1)           | 1,500 (1)           |  |
|                                        |                                 | Bypass mode        | Ultra high | m³/h | 150 (5)                                                            | 250 (5)             | 350 (1)             | 500 (1)             | 650 (1)             | 800 (1)             | 1,000 (1)           | 1,500 (1)           | 2,000 (1)           |  |
|                                        |                                 |                    | High       | m³/h | 140 (5)                                                            | 230 (5)             | 320 (1)             | 410 (1)             | 545 (1)             | 725 (1)             | 950 (1)             | 1,350 (1)           | 1,880 (1)           |  |
|                                        |                                 |                    | Low        | m³/h | 105 (5)                                                            | 155 (5)             | 210 (1)             | 310 (1)             | 450 (1)             | 665 (1)             | 820 (1)             | 1,230 (1)           | 1,500 (1)           |  |
|                                        | External static pressure - 50Hz | Ultra high         |            | Pa   | 90 (5)                                                             | 70 (5)              | 103 (1)             | 83 (1)              | 100 (1)             | 109 (1)             | 147 (1)             | 116 (1)             | 132 (1)             |  |
|                                        |                                 | High               |            | Pa   | 87 (5)                                                             | 63 (5)              | 93 (1)              | 57 (1)              | 73 (1)              | 94 (1)              | 135 (1)             | 97 (1)              | 118 (1)             |  |
|                                        |                                 | Low                |            | Pa   | 40 (5)                                                             | 25 (5)              | 51 (1)              | 35 (1)              | 49 (1)              | 78 (1)              | 100 (1)             | 80 (1)              | 77 (1)              |  |
| Fan motor                              | Quantity                        |                    |            |      | 2                                                                  |                     |                     |                     |                     |                     |                     | 4                   |                     |  |
|                                        | Output                          | 50 Hz              |            | W    | 30                                                                 |                     | 80                  |                     | 106                 | 210                 |                     |                     |                     |  |
| Air filter                             | Type                            |                    |            |      | Multidirectional fibrous fleeces                                   |                     |                     |                     |                     |                     |                     |                     |                     |  |
| Sound pressure level - 50Hz            | Heat exchange mode              | Ultra high         |            | dBA  | 27.0                                                               | 28.0                | 32.0                | 33.0                | 34.5                | 36.0                |                     | 39.5                | 40.0                |  |
|                                        |                                 | High               |            | dBA  | 26.0                                                               |                     | 31.5                |                     | 33.0                | 34.5                | 35.0                | 38.0                |                     |  |
|                                        |                                 | Low                |            | dBA  | 20.5                                                               | 21.0                | 23.5                | 24.5                | 27.0                | 31.0                |                     | 34.0                | 35.0                |  |
|                                        | Bypass mode                     | Ultra high         |            | dBA  | 27.0                                                               | 28.0                | 32.0                | 33.5                | 34.5                | 36.0                |                     | 40.5                | 40.0                |  |
|                                        |                                 | High               |            | dBA  | 26.5                                                               | 27.0                | 31.0                | 32.5                | 34.0                | 34.5                | 35.5                | 38.0                |                     |  |
|                                        |                                 | Low                |            | dBA  | 20.5                                                               | 21.0                | 24.5                | 25.5                | 27.0                | 31.0                |                     | 33.5                | 35.0                |  |
| Operation range                        | Min.                            |                    |            | °CDB | -15                                                                |                     |                     |                     |                     |                     |                     |                     |                     |  |
|                                        | Max.                            |                    |            | °CDB | 50                                                                 |                     |                     |                     |                     |                     |                     |                     |                     |  |
|                                        | Relative humidity               |                    |            | %    | 80% or less                                                        |                     |                     |                     |                     |                     |                     |                     |                     |  |
|                                        | On coil temperature             | Cooling            | Max.       | °CDB | -                                                                  |                     |                     |                     |                     |                     |                     |                     |                     |  |
| Heating                                |                                 | Min.               | °CDB       | -    |                                                                    |                     |                     |                     |                     |                     |                     |                     |                     |  |
| Connection duct diameter               |                                 |                    |            | mm   | 100                                                                | 150                 |                     | 200                 |                     | 250                 |                     | 350                 |                     |  |
| Insulation material                    |                                 |                    |            |      | Self-extinguishable urethane foam                                  |                     |                     |                     |                     |                     |                     |                     |                     |  |

## 2 Specifications

| 2-1 Technical Specifications         |                                   |                   |                                  | VAM150F<br>C       | VAM250F<br>C             | VAM350F<br>C   | VAM500F<br>C   | VAM650F<br>C   | VAM800F<br>C   | VAM1000<br>FC   | VAM1500<br>FC   | VAM2000<br>FC   |
|--------------------------------------|-----------------------------------|-------------------|----------------------------------|--------------------|--------------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| General                              | Supplier/<br>Manufacturer details | Name or trademark |                                  | Daikin Europe N.V. |                          |                |                |                |                |                 |                 |                 |
|                                      | Product description               | Model identifier  |                                  | VAM150<br>FCVE     | VAM250<br>FCVE           | VAM350<br>FCVE | VAM500<br>FCVE | VAM650<br>FCVE | VAM800<br>FCVE | VAM100<br>0FCVE | VAM150<br>0FCVE | VAM200<br>0FCVE |
| Specific energy<br>consumption (SEC) | Cold climate                      | kWh/<br>(m².a)    | -56.0 (6)                        | -60.5 (6)          | -                        |                |                |                |                |                 |                 |                 |
|                                      | Average climate                   | kWh/<br>(m².a)    | -22.1 (6)                        | -27.0 (6)          | -                        |                |                |                |                |                 |                 |                 |
|                                      | Warm climate                      | kWh/<br>(m².a)    | -0.100<br>(6)                    | -5.30 (6)          | -                        |                |                |                |                |                 |                 |                 |
| SEC class                            |                                   |                   | D / (6)                          | B / (6)            | -                        |                |                |                |                |                 |                 |                 |
| Type of product                      |                                   |                   | Bidirectional RVU /<br>(7)       |                    | Bidirectional NRVU / (7) |                |                |                |                |                 |                 |                 |
| Type of drive                        |                                   |                   | Multi-speed drive                |                    |                          |                |                |                |                |                 |                 |                 |
| Heat recovery system                 |                                   |                   | recuperative                     |                    |                          |                |                |                |                |                 |                 |                 |
| Thermal efficiency                   |                                   | %                 | 73.6 (3)                         | 72.2 (3)           | 71.6 (4)                 | 70.2 (4)       | 69.8 (4)       | 69.0 (4)       | 70.2 (4)       | 69.5 (4)        | 70.2 (4)        |                 |
| Maximum flow rate at<br>100 Pa ESP   | Flow rate                         | m³/h              | 130 (5)                          | 207 (5)            | -                        |                |                |                |                |                 |                 |                 |
|                                      | Electric power input              | W                 | 129                              | 160                | -                        |                |                |                |                |                 |                 |                 |
| Sound power level (Lwa)              |                                   | dB                | 40                               | 43                 | 48                       | 50             | 51             | 53             |                | 55              | 57              |                 |
| Nominal flow rate                    |                                   | m³/s              | -                                |                    | 0.097                    | 0.139          | 0.181          | 0.222          | 0.278          | 0.417           | 0.556           |                 |
| Reference flow rate                  |                                   | m³/s              | 0.025                            | 0.040              | -                        |                |                |                |                |                 |                 |                 |
| Reference pressure difference        |                                   | Pa                | 50.0                             |                    | -                        |                |                |                |                |                 |                 |                 |
| Effective electric power input       |                                   | kW                | -                                |                    | 0.055                    | 0.121          | 0.140          | 0.241          | 0.279          | 0.465           | 0.532           |                 |
| Specific power input                 |                                   | W/(m³/<br>h)      | 0.626 (8)                        | 0.445 (8)          | -                        |                |                |                |                |                 |                 |                 |
| Internal specific fan power          |                                   | W/(m³/s)          | -                                |                    | 350                      | 644            | 594            | 845            | 818            | 852             | 811             |                 |
| Ventilation control                  | Type                              | Clock control     |                                  | -                  |                          |                |                |                |                |                 |                 |                 |
|                                      | Factor                            | 0.950 (6)         |                                  | -                  |                          |                |                |                |                |                 |                 |                 |
| Maximum external leakage             |                                   | %                 | 7.42                             | 4.66               | 4.13                     | 2.89           | 3.81           | 3.09           | 6.59           | 3.09            | 6.59            |                 |
| Maximum internal leakage             |                                   | %                 | 4.50                             |                    | 8.10                     | 8.20           | 7.70           |                | 6.50           | 7.70            | 6.50            |                 |
| Filter energy performance            |                                   | kWh               | -                                |                    | 279 (7)                  |                |                |                |                |                 |                 |                 |
| Filter service warning               |                                   |                   | Displayed on controller / (5)    |                    |                          |                |                |                |                |                 |                 |                 |
| Instructions for pre-/disassembly    |                                   |                   | www.daikineurope.com/energylabel |                    |                          |                |                |                |                |                 |                 |                 |
| Annual electricity consumption       |                                   | kWh/a             | 18.9 (6)                         | 13.6 (6)           | -                        |                |                |                |                |                 |                 |                 |
| Annual heating saved                 | Cold climate                      | kWh/a             | 41.0 (6)                         | 40.6 (6)           | -                        |                |                |                |                |                 |                 |                 |
|                                      | Average climate                   | kWh/a             | 80.2 (6)                         | 79.4 (6)           | -                        |                |                |                |                |                 |                 |                 |
|                                      | Warm climate                      | kWh/a             | 18.5 (6)                         | 18.4 (6)           | -                        |                |                |                |                |                 |                 |                 |
| Face velocity                        |                                   | m/s               | -                                |                    | 0.648                    | 0.926          | 1.20           | 1.48           | 1.38           | 1.39            | 1.38            |                 |
| External pressure                    |                                   | Pa                | -                                |                    | 59.7                     | 56.4           | 52.6           | 56.8           | 84.8           | 60.0            | 67.7            |                 |
| Internal pressure drop               |                                   | Pa                | -                                |                    | 94.9                     | 143            | 151            | 210            | 249            | 189             | 160             |                 |
| Fan efficiency                       |                                   | %                 | -                                |                    | 32.9                     |                | 47.2           | 37.1           |                |                 |                 |                 |

| 2-2 Electrical Specifications |                            |             |    | VAM150F<br>C | VAM250F<br>C | VAM350F<br>C | VAM500F<br>C | VAM650F<br>C | VAM800F<br>C | VAM1000<br>FC | VAM1500<br>FC | VAM2000<br>FC |  |
|-------------------------------|----------------------------|-------------|----|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|--|
| Power supply                  | Name                       |             |    | VE           |              |              |              |              |              |               |               |               |  |
|                               | Phase                      |             |    | 1~           |              |              |              |              |              |               |               |               |  |
|                               | Frequency                  |             | Hz | 50/60        |              |              |              |              |              |               |               |               |  |
|                               | Voltage                    |             | V  | 220-240/220  |              |              |              |              |              |               |               |               |  |
| Voltage range                 | Min.                       |             | %  | -10          |              |              |              |              |              |               |               |               |  |
|                               | Max.                       |             | %  | 10           |              |              |              |              |              |               |               |               |  |
| Current                       | Minimum circuit amps (MCA) |             | A  | 0.900        |              |              | 1.30         | 1.60         | 2.50         | 3.00          | 5.00          |               |  |
|                               | Maximum fuse amps (MFA)    |             | A  | 15.0         |              | 16.0         |              |              |              |               |               |               |  |
|                               | Fan motor rated output     |             | kW | 0.03x2       |              | 0.08x2       |              | 0.106x2      | 0.210x2      |               | 0.210x4       |               |  |
|                               | Full load amps<br>(FLA)    | Fan motor   | A  | 0.400        |              |              | 0.600        | 0.700        | 1.10         | 1.30          | 2.20          |               |  |
|                               |                            | Fan motor 2 | A  | 0.400        |              |              | 0.600        | 0.700        | 1.10         | 1.30          | 2.20          |               |  |
|                               |                            | Fan motor 3 | A  | -            |              |              |              |              |              |               |               | 2.20          |  |
|                               |                            | Fan motor 4 | A  | -            |              |              |              |              |              |               |               | 2.20          |  |

## 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

## Options

VAM150-250FC

### Type Ceiling-mounted Installation with duct

| Item            |                                             | Model                                             |            |
|-----------------|---------------------------------------------|---------------------------------------------------|------------|
|                 |                                             | VAM150FCVE                                        | VAM250FCVE |
| Control systems | Remote control                              | BRC301B61                                         |            |
|                 | Remote control   Wired type                 | BRC1D52                                           |            |
|                 |                                             | BRC1E52A / BRC1E52B *                             |            |
|                 |                                             | DCS302C51                                         |            |
|                 | Central remote control                      | DCS301B61 (for General) DCS301B51 (for EU market) |            |
|                 | Unified ON/OFF controller                   | DST301B51                                         |            |
|                 | Schedule timer                              | DCM601A51                                         |            |
|                 | iTouch Manager                              | DCS601C51                                         |            |
|                 | iTouch Controller                           | DCC601A51                                         |            |
|                 | iTab Controller                             | EKMBOXA7V1                                        |            |
|                 | Modbus -DIII- adaptor                       | KRP2A61 (for general) KRP2A51 (for EU market)     |            |
|                 | ** Wiring adaptor for electrical appendices | KRP50-2                                           |            |
|                 | ** For humidifiers                          | KRP50-2A90                                        |            |
|                 | *** Installation box for adaptor PCB        | BRP4A50                                           |            |
| Miscellaneous   | For heater control kit                      |                                                   |            |
|                 | Replacement air filter                      | YAFF323F15                                        | YAFF323F25 |
|                 | High-efficiency filter                      | YAFM323F15                                        | YAFM323F25 |

#### Notes

- \* BRC1E52A Included languages are: English, German, French, Dutch, Spanish, Italian, Greek, Portuguese, Russian, Turkish, and Polish.
- \* BRC1E52B Included languages are: English, German, Albanian, Bulgarian, Croatian, Czech, Hungarian, Romanian, Serbian, Slovak, and Slovenian.
- \*\* To install adaptor PCBs -KRP2A61, KRP2A51, KRP50-2-, installation box -KRP50-2A90- is required.
- \*\*\* Up to 2- adaptor PCBs can be fixed per installation.

Only one installation box can be installed per indoor unit.

3D099234B

VAM350-2000FC

### Type Ceiling-mounted Installation with duct

| Item            |                                          | Model                                  |            |                    |                    |                    |                        |                        |
|-----------------|------------------------------------------|----------------------------------------|------------|--------------------|--------------------|--------------------|------------------------|------------------------|
|                 |                                          | VAM350FCVE                             | VAM500FCVE | VAM650FCVE         | VAM800FCVE         | VAM1000FCVE        | VAM1500FCVE            | VAM2000FCVE            |
| Control systems | Remote control                           | BRC301B61                              |            |                    |                    |                    |                        |                        |
|                 | Remote control   Wired type              | BRC1D52                                |            |                    |                    |                    |                        |                        |
|                 |                                          | BRC1E52A / BRC1E52B *                  |            |                    |                    |                    |                        |                        |
|                 |                                          | DCS302C51                              |            |                    |                    |                    |                        |                        |
|                 | Central remote control                   | DCS301B51                              |            |                    |                    |                    |                        |                        |
|                 | Unified ON/OFF controller                | DTS301B51                              |            |                    |                    |                    |                        |                        |
|                 | Schedule timer                           | DCM601A51                              |            |                    |                    |                    |                        |                        |
|                 | iTouch Manager                           | DCS601C51                              |            |                    |                    |                    |                        |                        |
|                 | iTouch Controller                        | DCC601A51                              |            |                    |                    |                    |                        |                        |
|                 | iTab Controller                          | EKMBOXA7V1                             |            |                    |                    |                    |                        |                        |
|                 | Modbus -DIII- adaptor                    | KRP2A51 + Installation box -KRP1BA101- |            |                    |                    |                    |                        |                        |
|                 | Wiring adaptor for electrical appendices | BRP4A50A                               |            |                    |                    |                    |                        |                        |
|                 | For heaters or humidifiers               | ----                                   |            |                    |                    |                    |                        |                        |
|                 | Mounting plate                           | EKMPVAM **                             |            |                    |                    |                    |                        |                        |
| Miscellaneous   | Silencer                                 | Model                                  | ----       | KDDM248100<br>Ø200 | KDDM248100<br>Ø250 | KDDM248100<br>Ø250 | KDDM248100 x 2<br>Ø250 | KDDM248100 x 2<br>Ø250 |
|                 | Outside diameter (mm)                    | EN779 M6                               | EKAFV50F6  | EKAFV80F6          | EKAFV100F6         | EKAFV80F6 x 2      | EKAFV100F6 x 2         | EKAFV100F6 x 2         |
|                 | High-efficiency filter                   | EN779 F7                               | EKAFV50F7  | EKAFV80F7          | EKAFV100F7         | EKAFV80F7 x 2      | EKAFV100F7 x 2         | EKAFV100F7 x 2         |
|                 |                                          | EN779 F8                               | EKAFV50F8  | EKAFV80F8          | EKAFV100F8         | EKAFV80F8 x 2      | EKAFV100F8 x 2         | EKAFV100F8 x 2         |
| CO2 Sensor      |                                          |                                        | BRYMA65    | BRYMA65            | BRYMA65            | BRYMA100           | BRYMA100               | BRYMA200               |

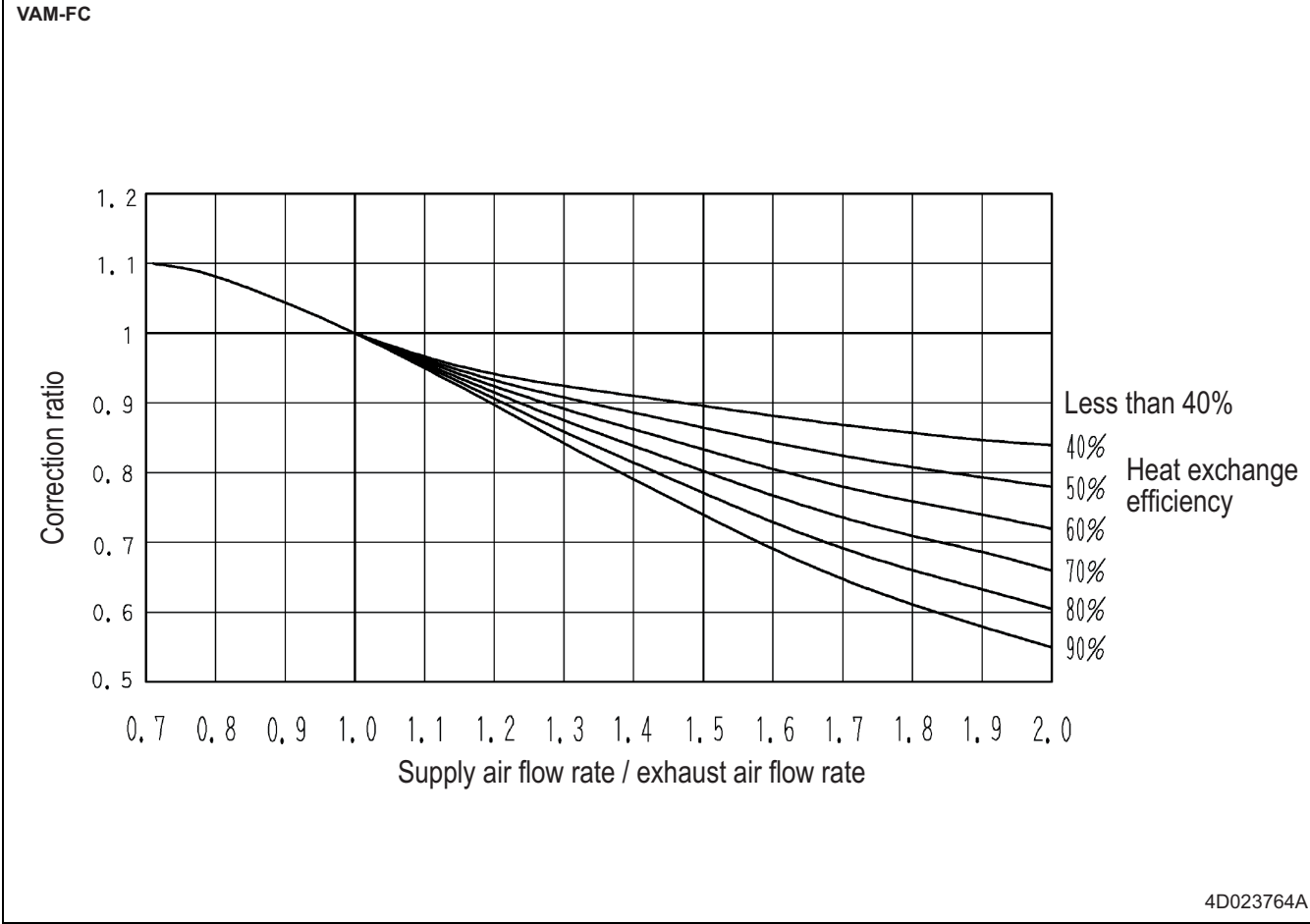
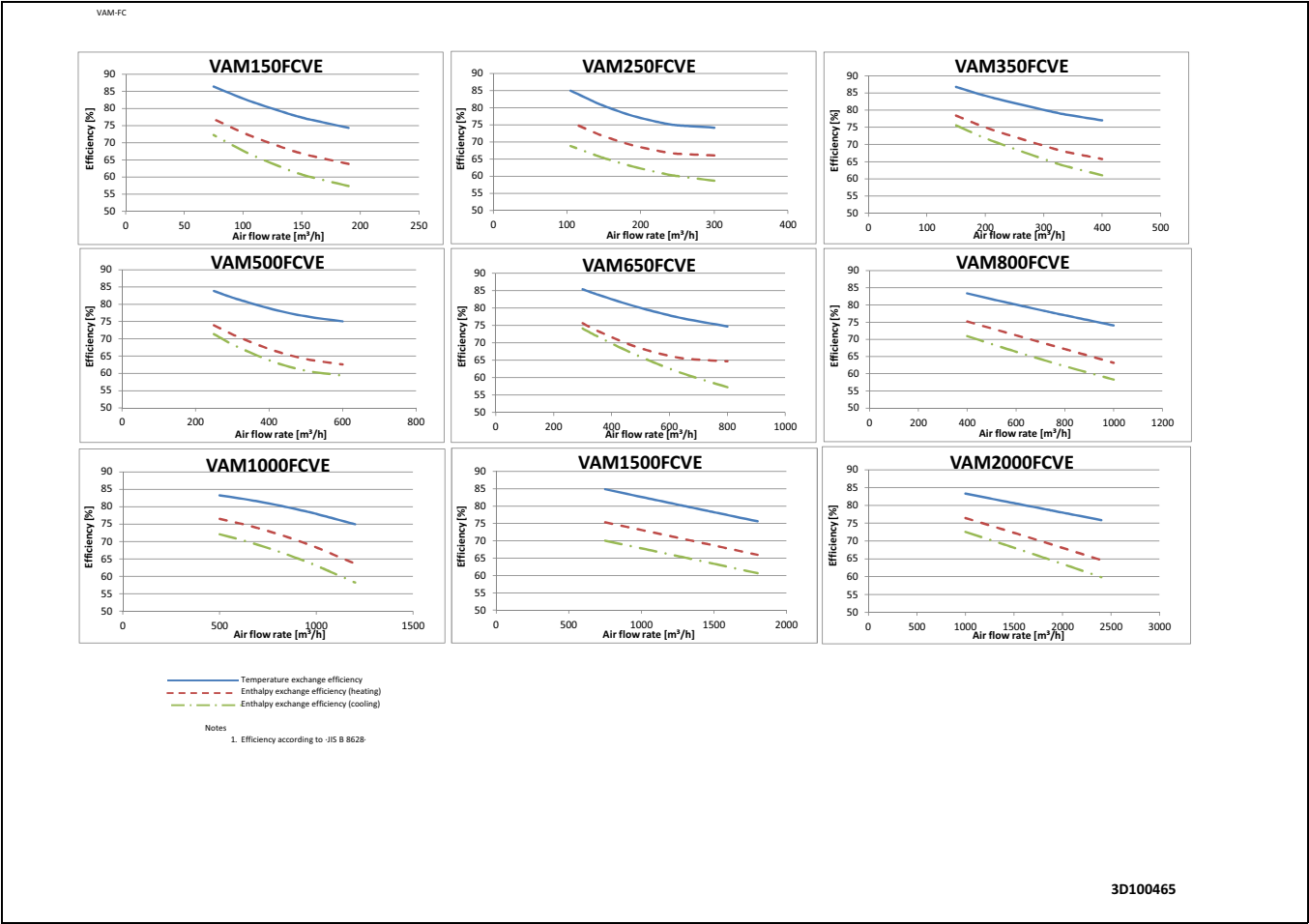
#### Notes

- \* BRC1E52A Included languages are: English, German, French, Dutch, Spanish, Italian, Greek, Portuguese, Russian, Turkish, and Polish.
- \* BRC1E52B Included languages are: English, German, Albanian, Bulgarian, Croatian, Czech, Hungarian, Romanian, Serbian, Slovak, and Slovenian.
- \*\* To install an adaptor PCB on -VAM1500FC/VAM2000FC- units, mounting plate -EKMPVAM- is required.
- Humidifiers and heaters cannot be combined.
- 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.

3D099233B

# 4 Exchange efficiency

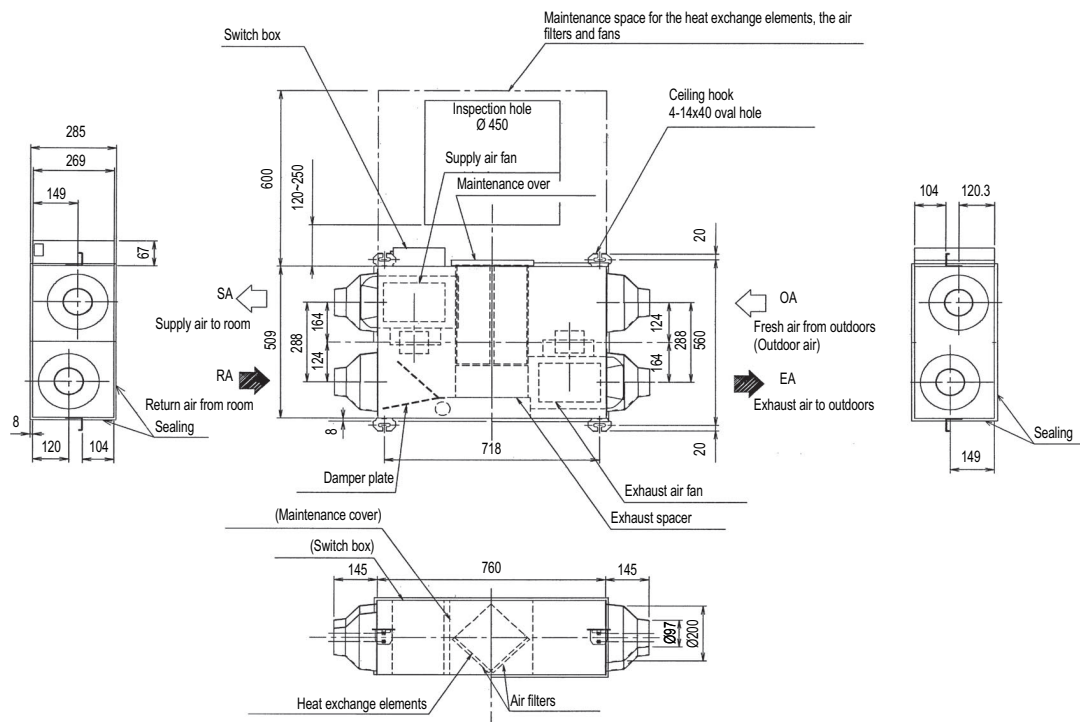
## 4 - 1 Exchange efficiency



## 5 Dimensional drawings

### 5 - 1 Dimensional Drawings

#### VAM150FC

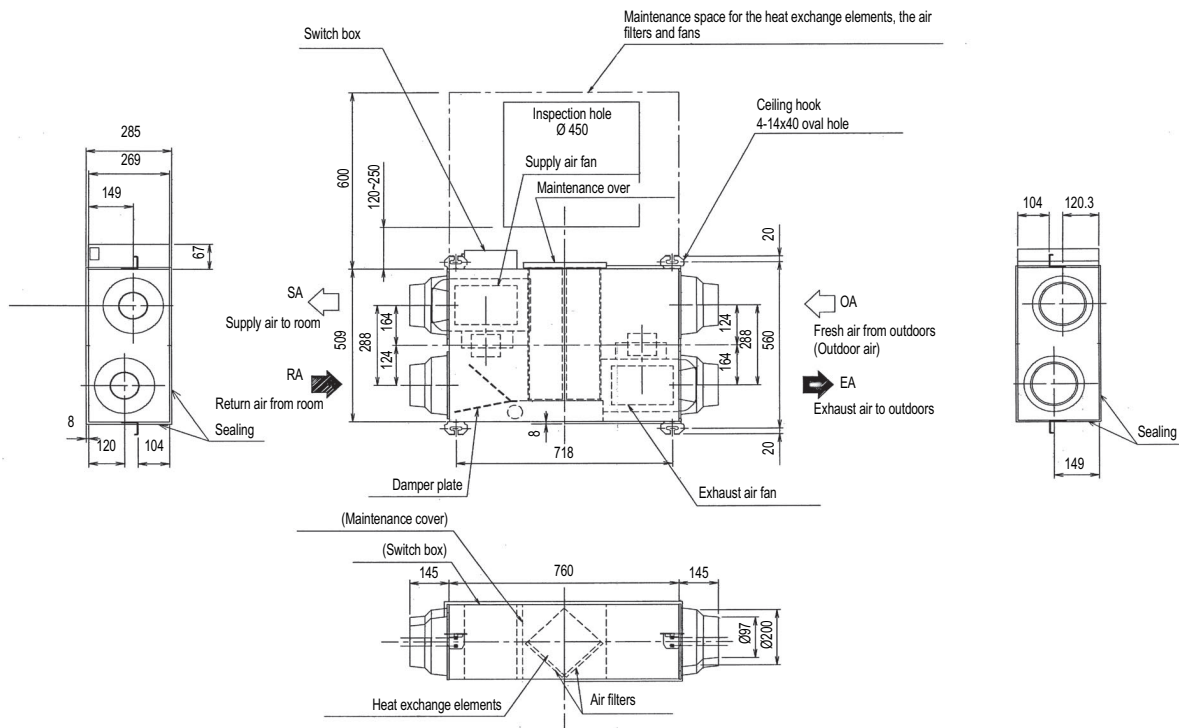


#### NOTE

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

3TW27874-1

#### VAM250FC



#### NOTE

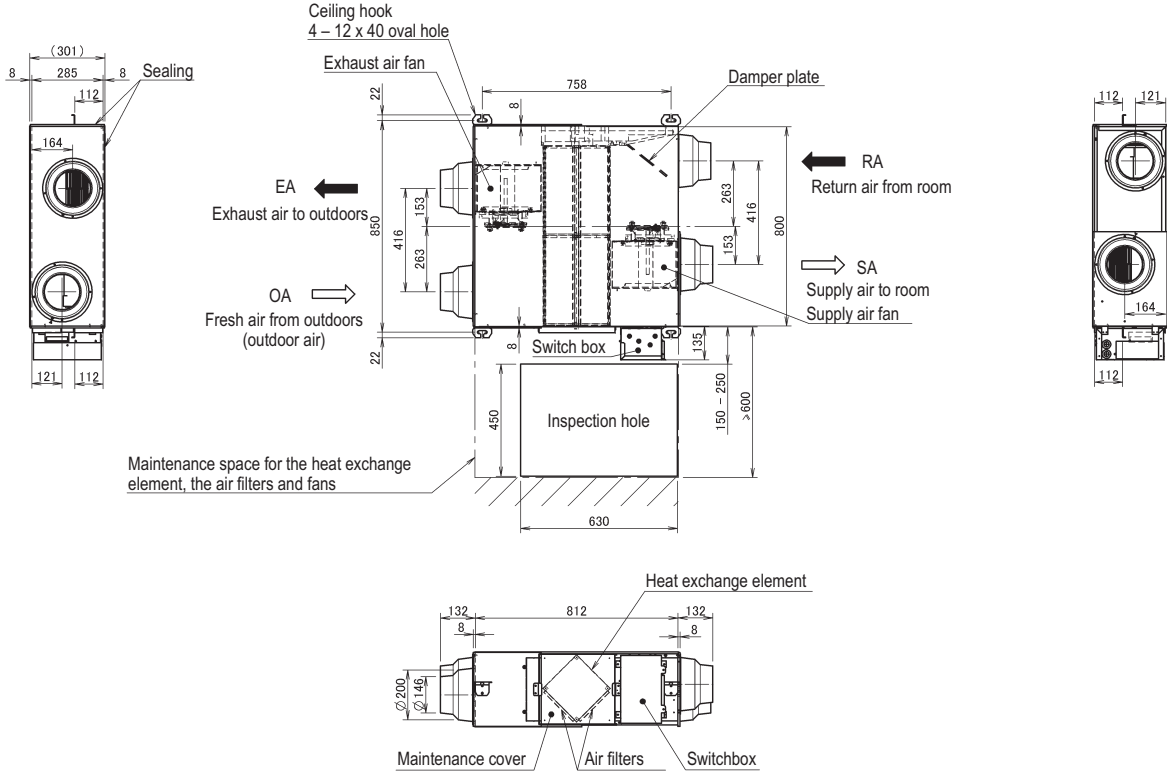
- 1 Be sure to provide the inspection hole (450x450 mm) to inspect the air filters, the exchange elements and fans.

3TW27884-1

# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

### VAM350FC

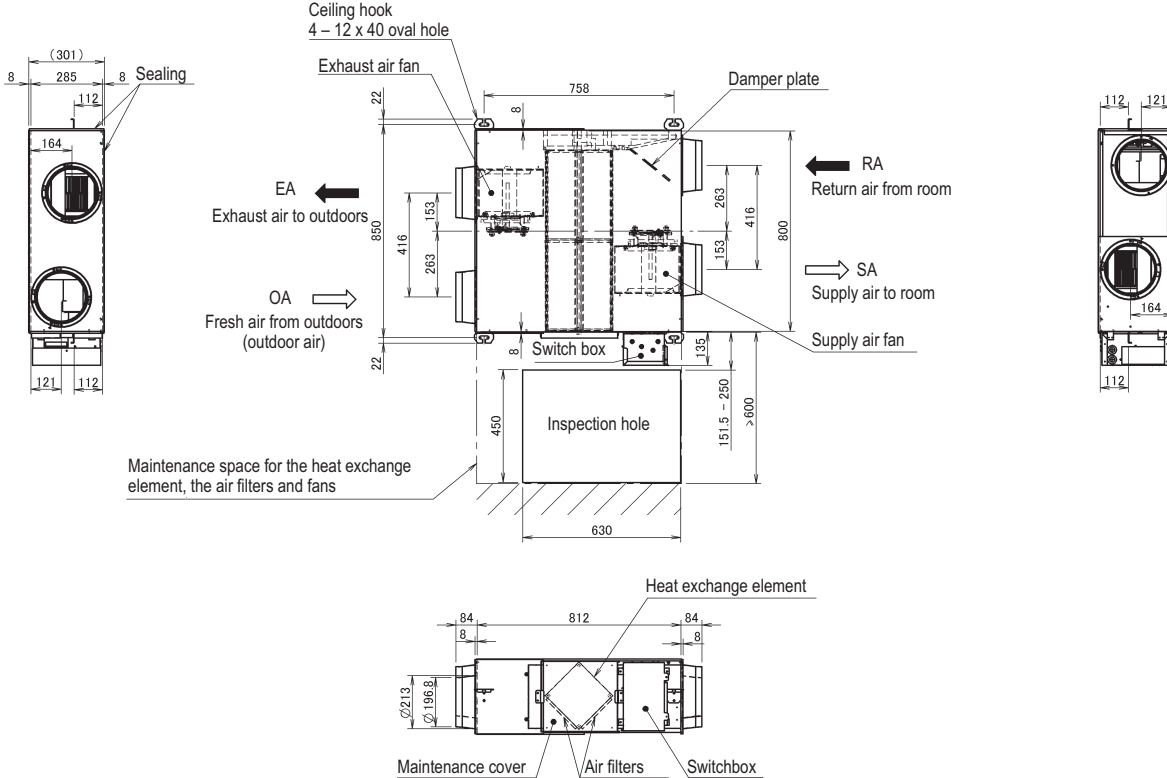


#### NOTES

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

3D081162

### VAM500FC



#### NOTES

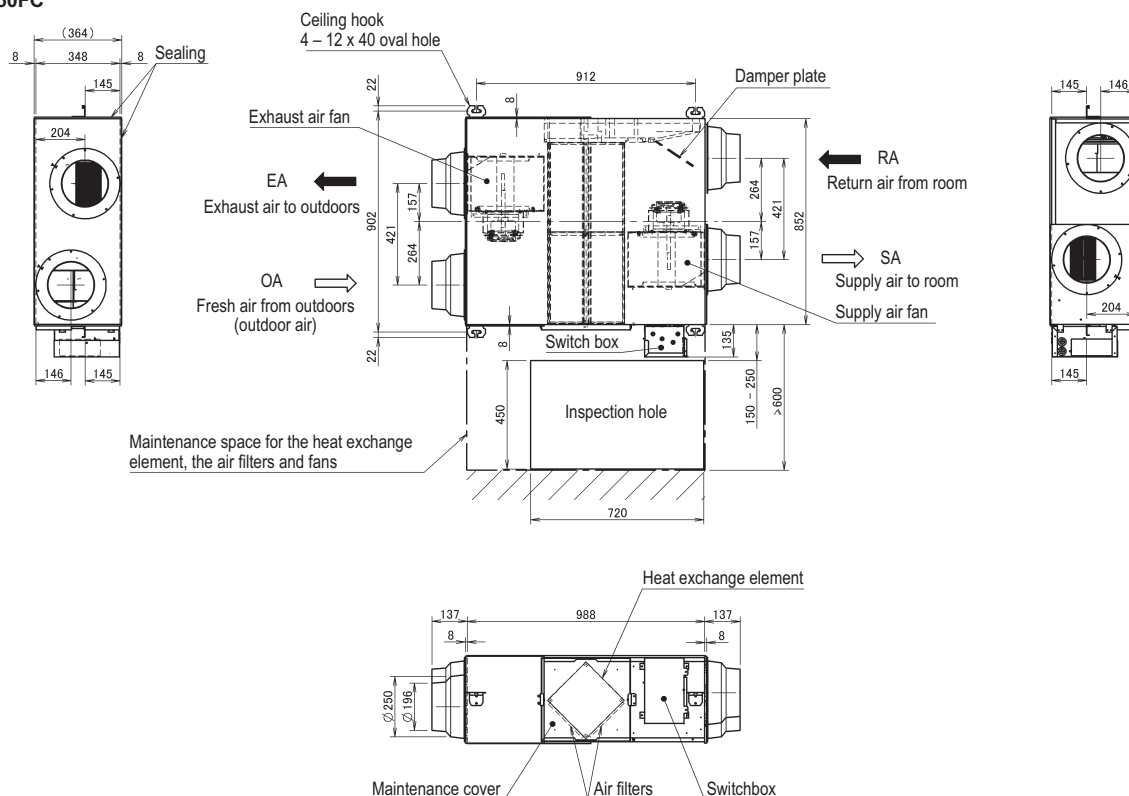
1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

3D081163

## 5 Dimensional drawings

### 5 - 1 Dimensional Drawings

#### VAM650FC

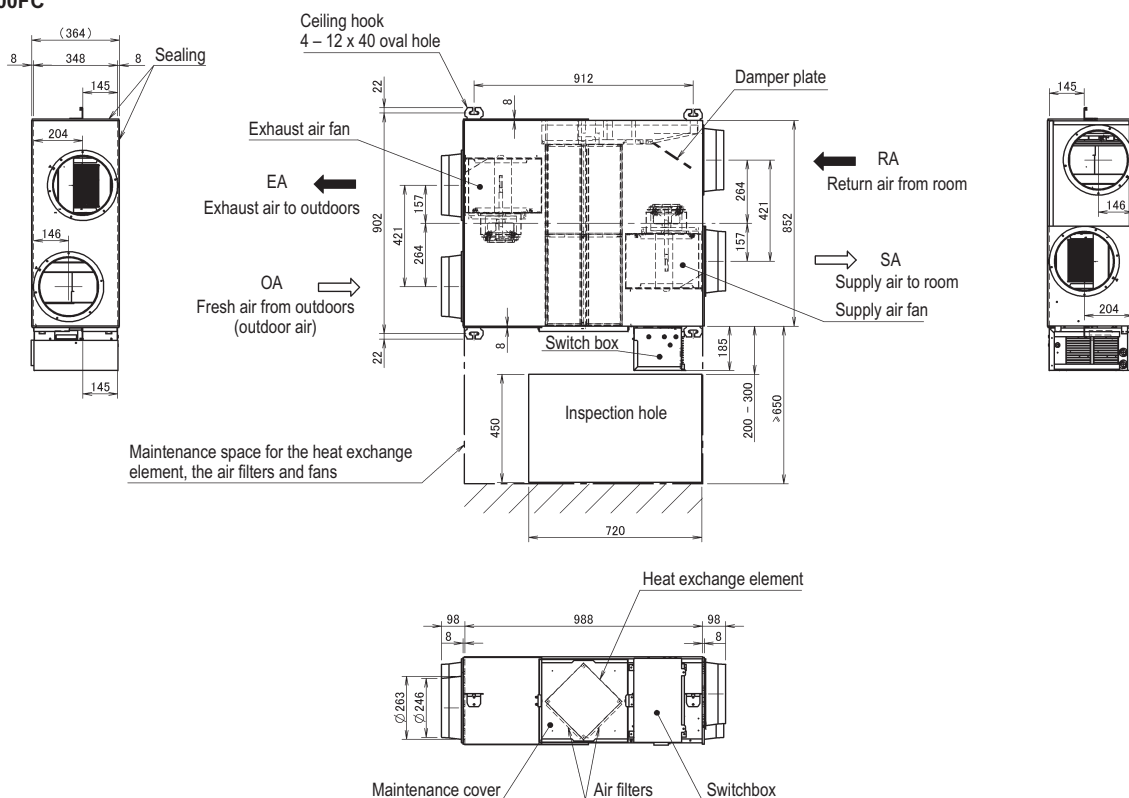


#### NOTES

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

3D081164

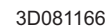
#### VAM800FC



#### NOTES

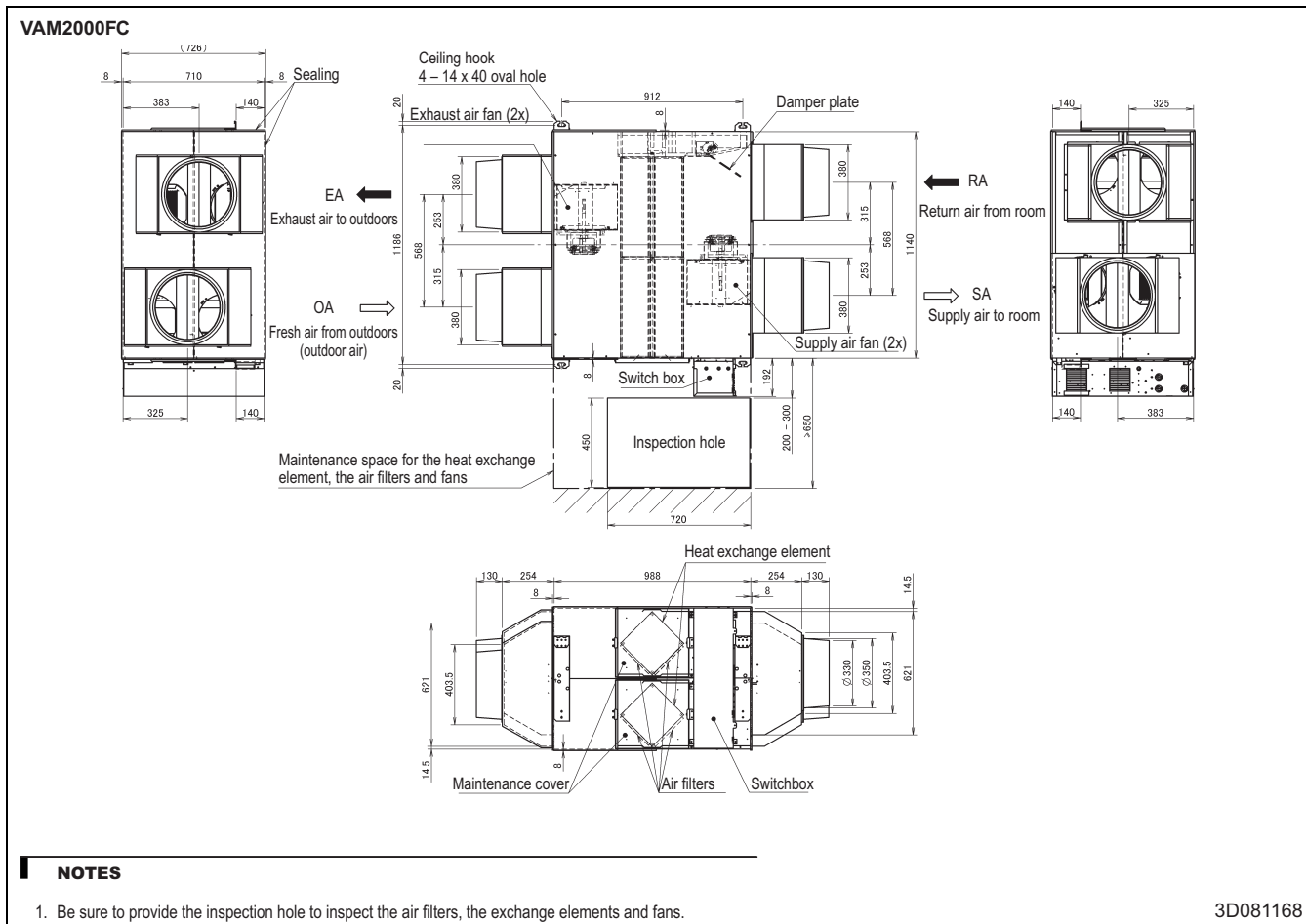
1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

3D081165



## 5 Dimensional drawings

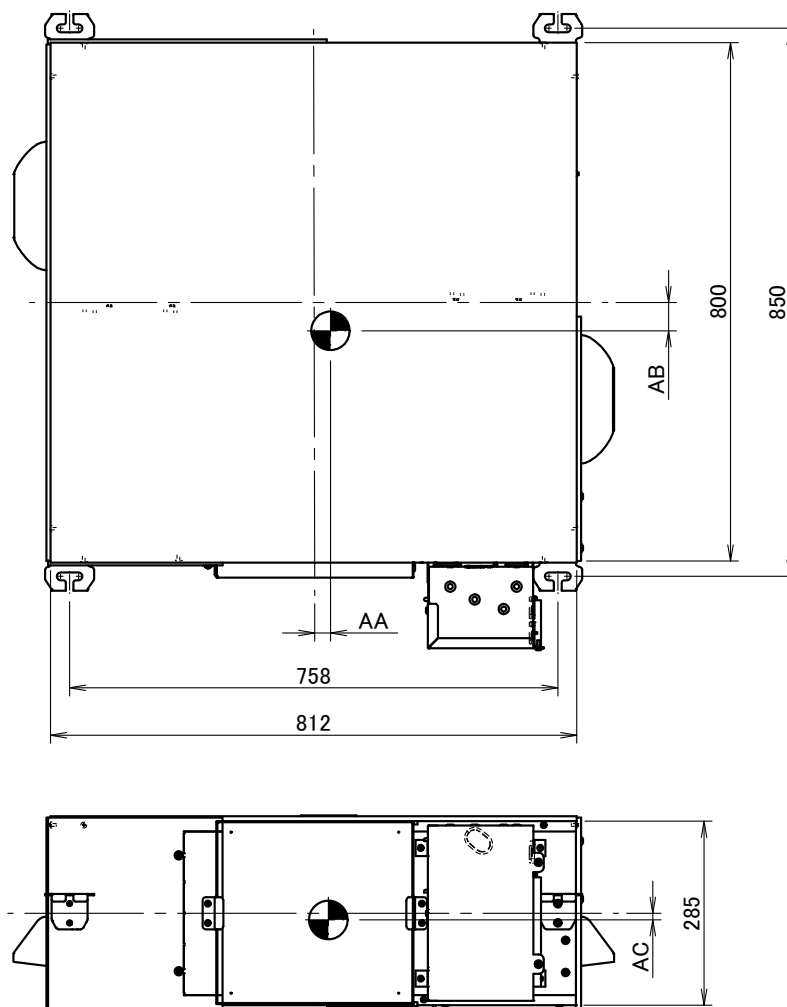
### 5 - 1 Dimensional Drawings



## 6 Centre of gravity

### 6 - 1 Centre of Gravity

#### VAM350-500FC



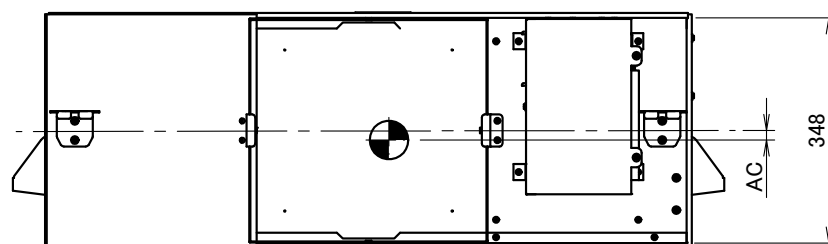
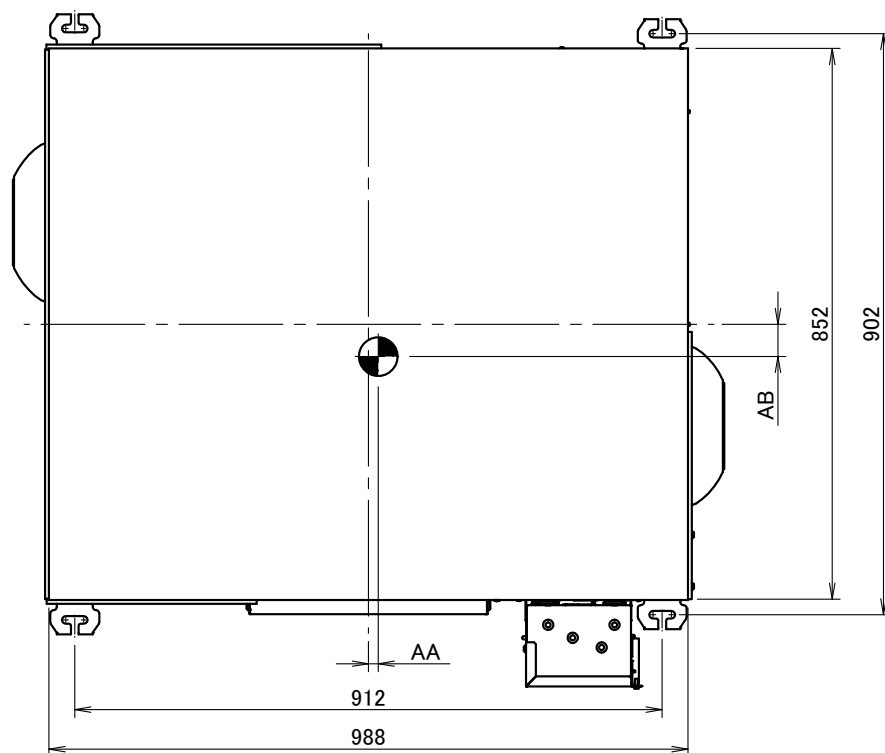
| Unit    | AA | AB | AC |
|---------|----|----|----|
| VAM350* | 24 | 51 | 10 |
| VAM500* | 23 | 36 | 9  |

4D081262A

## 6 Centre of gravity

### 6 - 1 Centre of Gravity

#### VAM650-800FC



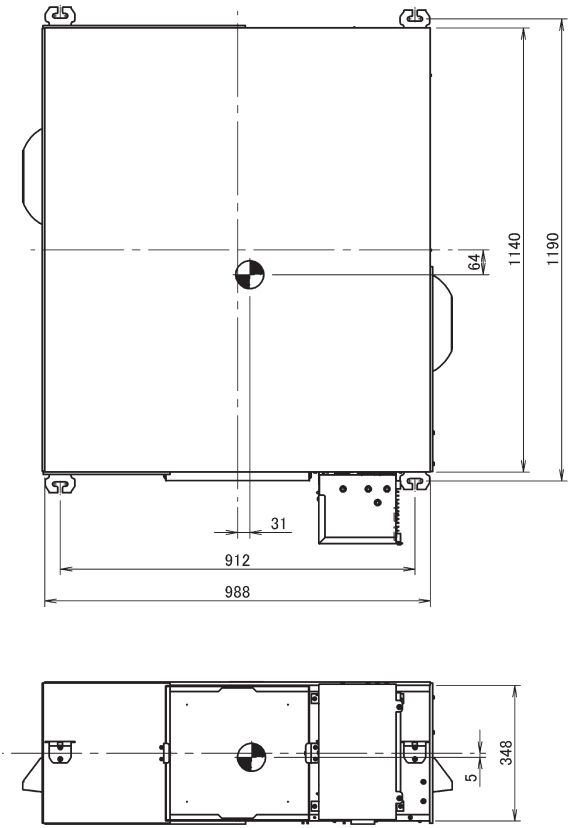
| Unit    | AA | AB | AC |
|---------|----|----|----|
| VAM650* | 20 | 42 | 6  |
| VAM800* | 32 | 58 | 5  |

4D081263A

6 Centre of gravity

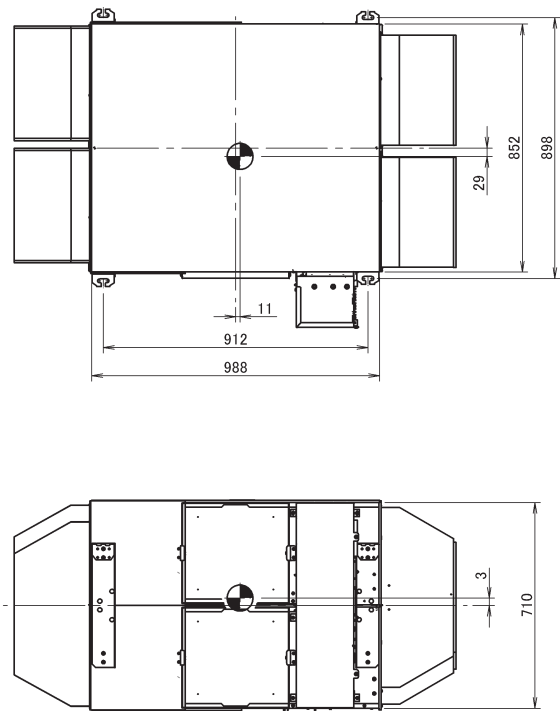
6 - 1 Centre of Gravity

VAM1000FC



4D081264

VAM1500FC

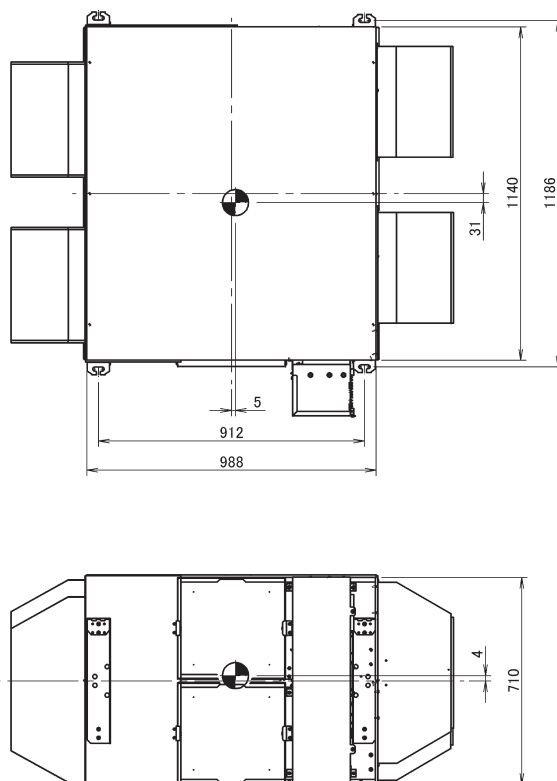


4D081265

## 6 Centre of gravity

### 6 - 1 Centre of Gravity

VAM2000FC

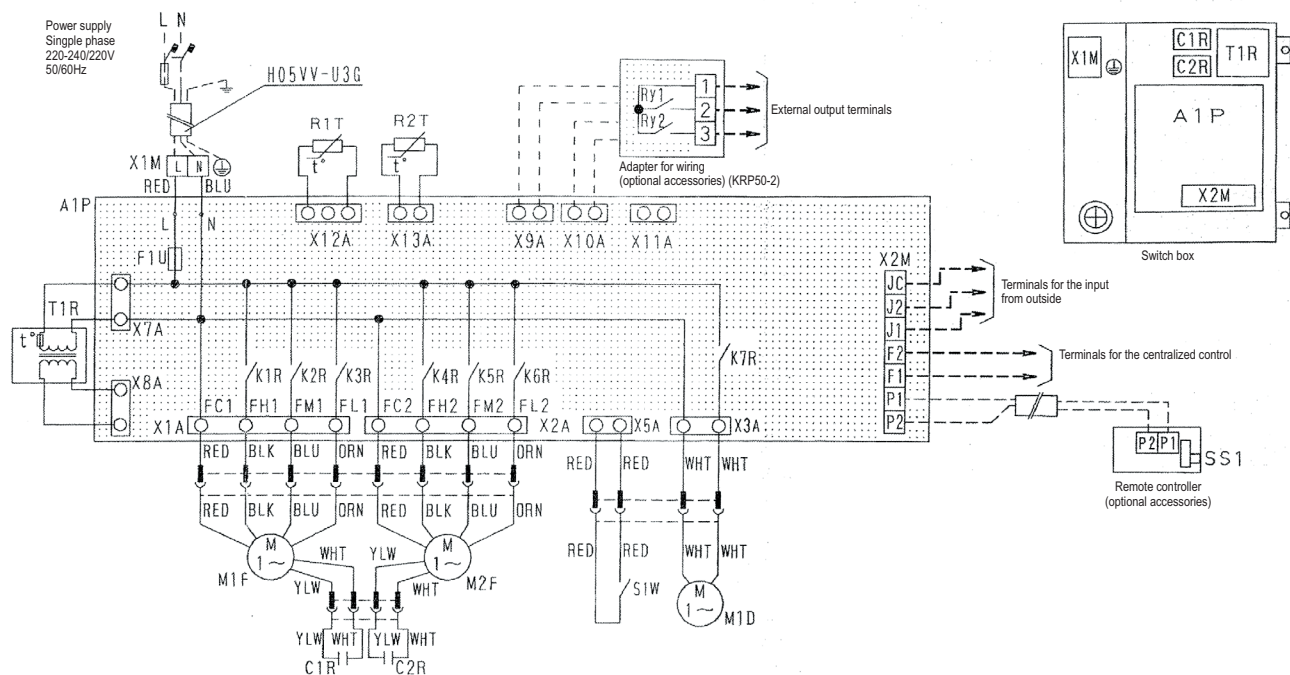


4D081266

## 7 Wiring diagrams

### 7 - 1 Wiring Diagrams - Single Phase

#### VAM150-250FC



| L-RED   |                              | N-BLU | M2F     | Motor (exhaust fan motor)         | Optional Accessories |                                       |
|---------|------------------------------|-------|---------|-----------------------------------|----------------------|---------------------------------------|
| A1P     | Printed circuit board        |       | Q1L-Q2L | Thermo switch (MF1·2 built-in)    |                      | Adapter for wiring (KRP50-2)          |
| C1R-C2R | Capacitor (M1F · M2F)        |       | R1T     | Thermistor (indoor air)           | Ry1                  | Magnetic relay (ON/OFF)               |
| F1U     | Fuse (250V, 10A)             |       | R2T     | Thermistor (outdoor air)          | Ry2                  | Magnetic relay (humidifier operation) |
| K1R-K3R | Magnetic relay (M1F)         |       | S1W     | Limit switch                      | X9A-10A              | Connector (KRP50-2)                   |
| K4R-K6R | Magnetic relay (M2F)         |       | T1R     | Transformer (supply 220-240V/22V) |                      | Remote Controller                     |
| K7R     | Magnetic relay (M1D)         |       | X1M     | Terminal (power supply)           | SS1                  | Selector switch (main/sub)            |
| M1D     | Motor (damper motor)         |       | X2M     | Terminal (control)                |                      | Optional connector                    |
| M1F     | Motor (air supply fan motor) |       |         |                                   | X11A                 | Connector (adapter power supply)      |

#### NOTES

- : terminals
- : wire clamp, □ : connector
- : field wiring
- ⊕ : protective earth
- 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.



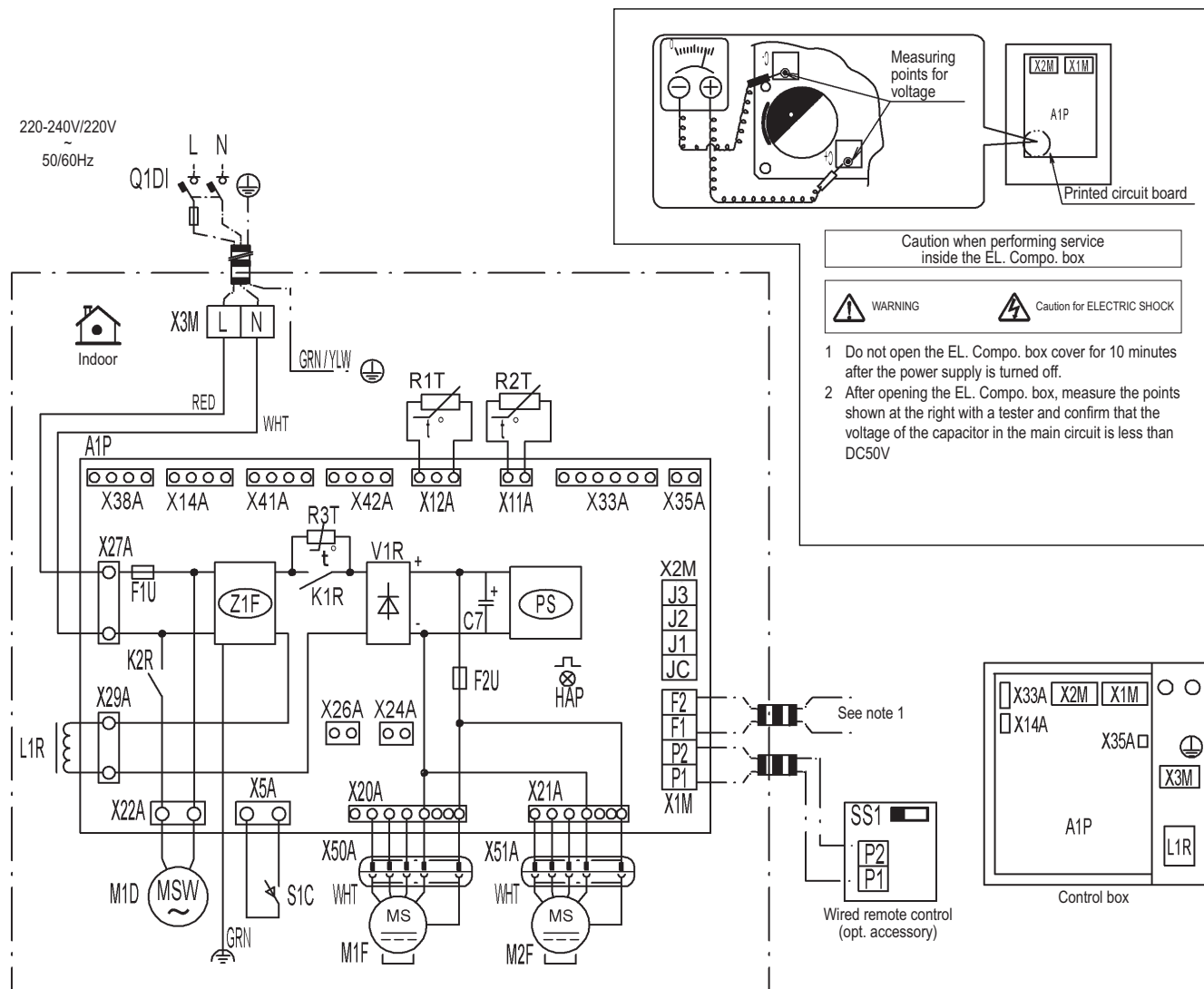
#### Grounding

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

## 7 Wiring diagrams

### 7 - 1 Wiring Diagrams - Single Phase

VAM350-650FC



Caution when performing service inside the EL. Compo. box



WARNING



Caution for ELECTRIC SHOCK

- 1 Do not open the EL. Compo. box 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

|     |                                      |      |                                         |                                   |                                    |
|-----|--------------------------------------|------|-----------------------------------------|-----------------------------------|------------------------------------|
| A1P | Printed circuit board                | Q1DI | Field earth leak detector (Max. 300 mA) | REMOTE CONTROL                    |                                    |
| C1  | Capacitor (M1F)                      |      |                                         | SS1                               | Selector switch                    |
| F1U | Fuse T, 6.3A, 250V (A1P)             | R1T  | Thermistor (Indoor air)                 | CONNECTOR FOR OPTION (See note 3) |                                    |
| F1U | Fuse T, 5A, 250V (A1P)               | R2T  | Thermistor (Outdoor air)                | X14A                              | Connector (CO <sub>2</sub> sensor) |
| HAP | Pilot lamp (Service monitor - green) | R3T  | Thermistor (PTC)                        | X24A                              | Connector (Outside damper)         |
| K1R | Magnetic relay                       | S1C  | Limit switch damper motor               | X28A                              | Connector (Filter sign)            |
| K2R | Magnetic relay                       | X1M  | Terminal (A1P)                          | X33A                              | Connector (Contact PCB)            |
| L1R | Reactor                              | X2M  | Terminal (Outside input) (A1P)          | X35A                              | Connector (Appendices PCB)         |
| M1F | Motor (Supply air fan)               | X3M  | Terminal (Power supply)                 | X41A                              | Connector (Humidity sensor 1)      |
| M2F | Motor (Exhaust air fan)              | V1R  | Diode bridge                            | X42A                              | Connector (Humidity sensor 2)      |
| M1D | Motor (Damper)                       | Z1F  | Noise filter                            |                                   |                                    |
| PS  | Switching power supply (A1P)         |      |                                         |                                   |                                    |

L : Live  
N : Neutral  
Field wiring  
Terminal strip  
Connector

Connection  
Relay connector  
Protective earth (screw)  
Noiseless earth

Colors: BLK: Black  
BLU: Blue  
ORG: Orange  
RED: Red

WHT: White  
YLW: Yellow  
GRN: Green

3D080682C

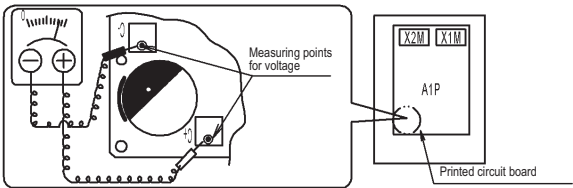
#### NOTES

- 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.

## 7 Wiring diagrams

### 7 - 1 Wiring Diagrams - Single Phase

#### VAM800-1000FC



Measuring points for voltage

Printed circuit board

Caution when performing service inside the EL. Compo. box

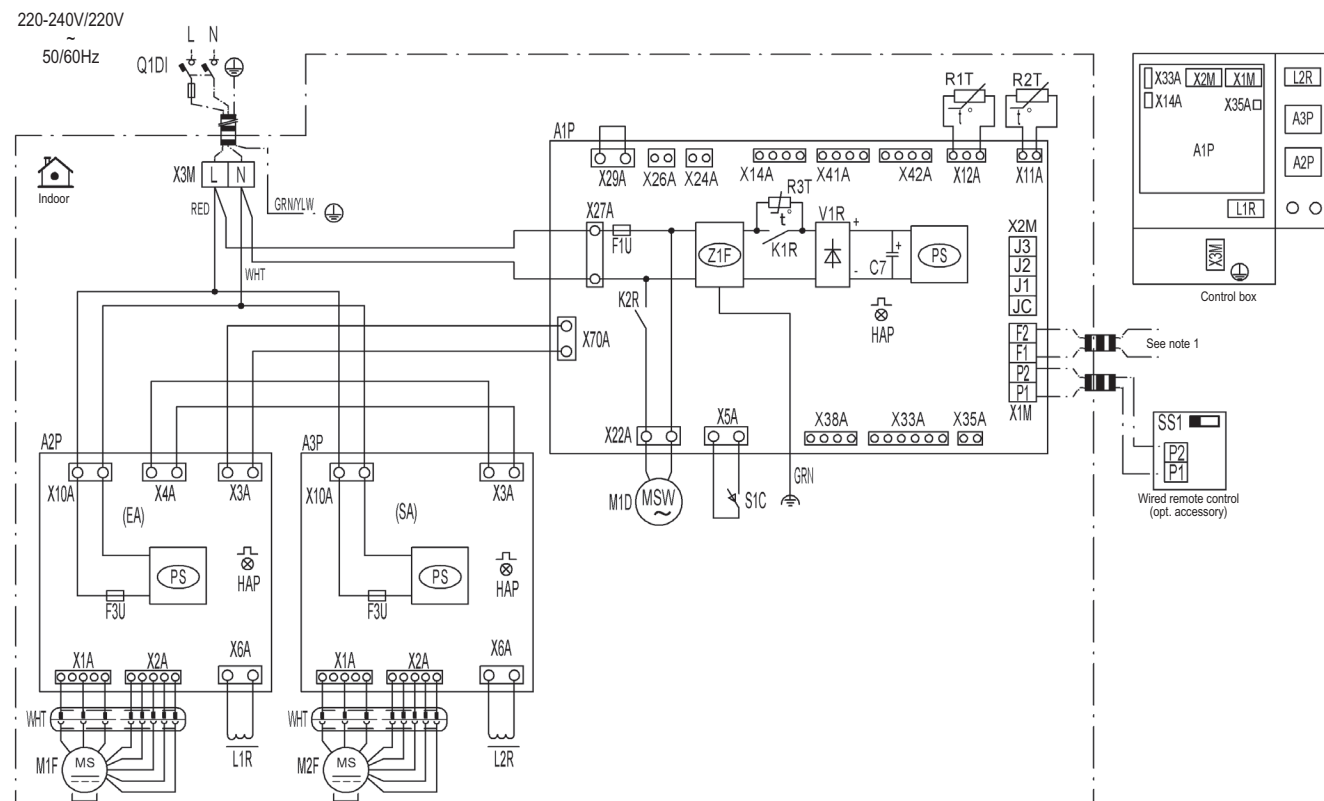


WARNING



Caution for ELECTRIC SHOCK

- 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



|     |                                      |      |                                         |                                   |                                    |
|-----|--------------------------------------|------|-----------------------------------------|-----------------------------------|------------------------------------|
| A1P | Printed circuit board                | M1D  | Motor (Damper)                          | REMOTE CONTROL                    |                                    |
| A2P | Printed circuit board assy (Fan)     | PS   | Switching power supply (A1P)            | SS1                               | Selector switch                    |
| A3P | Printed circuit board assy (Fan)     | Q1DI | Field earth leak detector (Max. 300 mA) | CONNECTOR FOR OPTION (See note 3) |                                    |
| C1  | Capacitor (M1F)                      | R1T  | Thermistor (Indoor air)                 | X14A                              | Connector (CO <sub>2</sub> sensor) |
| F1U | Fuse T, 6.3A 250V (A1P)              | R2T  | Thermistor (Outdoor air)                | X24A                              | Connector (Outside damper)         |
| F3U | Fuse T, 6.3A, 250V (A2P,A3P)         | R3T  | Thermistor (PTC)                        | X26A                              | Connector (Filter sign)            |
| HAP | Pilot lamp (Service monitor - green) | S1C  | Limit switch damper motor               | X33A                              | Connector (Contact PCB)            |
| K1R | Magnetic relay                       | X1M  | Terminal (A1P)                          | X35A                              | Connector (Appendices PCB)         |
| K2R | Magnetic relay                       | X2M  | Terminal (Outside input) (A1P)          | X41A                              | Connector (Humidity sensor 1)      |
| L1R | Reactor                              | X3M  | Terminal (Power supply)                 | X42A                              | Connector (Humidity sensor 2)      |
| L2R | Reactor                              | V1R  | Diode bridge                            |                                   |                                    |
| M1F | Motor (Supply air fan)               | Z1F  | Noise filter                            |                                   |                                    |
| M2F | Motor (Exhaust air fan)              |      |                                         |                                   |                                    |

|                    |                              |                    |             |
|--------------------|------------------------------|--------------------|-------------|
| L : Live           | ⬮ : Connection               | Colors: BLK: Black | WHT: White  |
| N : Neutral        | ⬮ : Relay connector          | BLU: Blue          | YLW: Yellow |
| ⬮ : Field wiring   | ⬮ : Protective earth (screw) | ORG: Orange        | GRN: Green  |
| ⬮ : Terminal strip | ⬮ : Noiseless earth          | RED: Red           |             |
| ⬮ : Connector      |                              |                    |             |

2D080683B

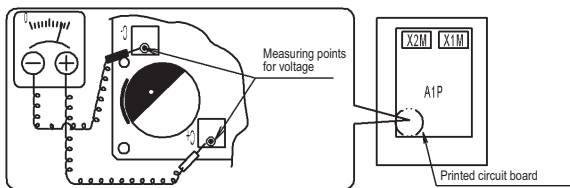
#### NOTES

- 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.

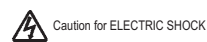
## 7 Wiring diagrams

### 7 - 1 Wiring Diagrams - Single Phase

#### VAM1500-2000FC

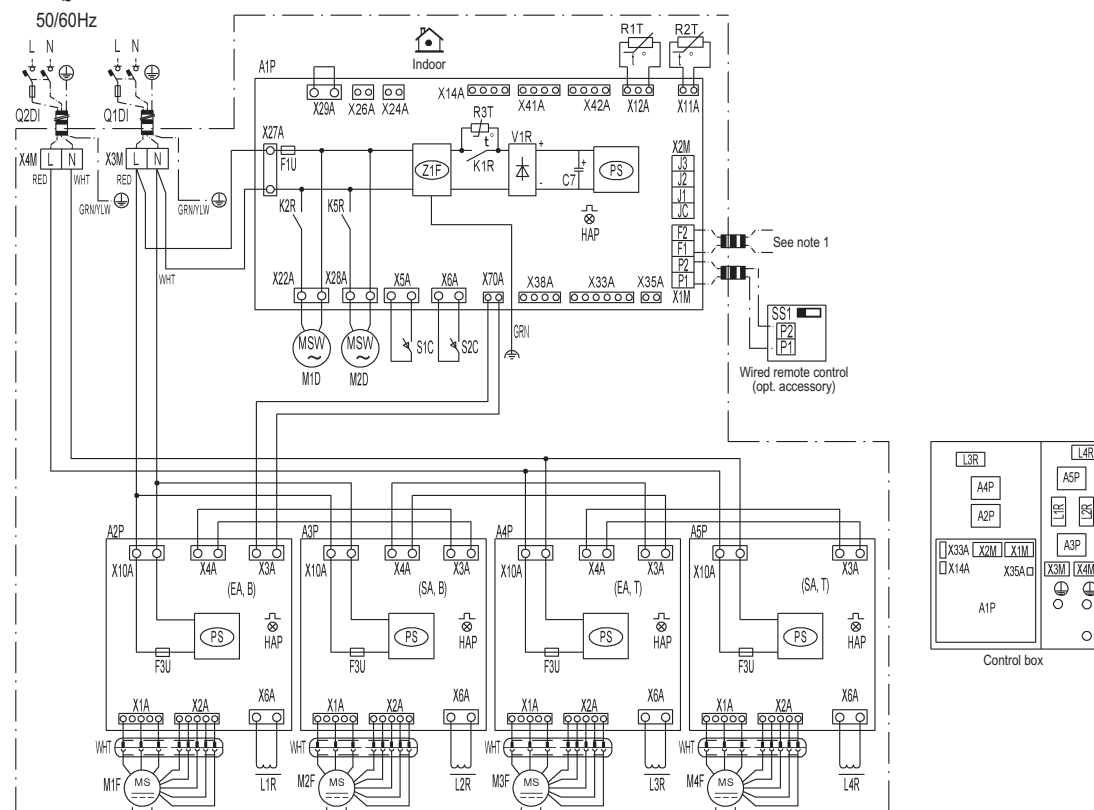


Caution when performing service inside the EL. Compo. box



- 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

220-240V/220V



|          |                                         |            |                                         |                                   |                                    |
|----------|-----------------------------------------|------------|-----------------------------------------|-----------------------------------|------------------------------------|
| A1P      | Printed circuit board                   | M4F        | Motor (Supply air fan) (Top)            | V1R                               | Diode bridge                       |
| A2P-A4P  | Printed circuit board assy (Fan)        | M1D, M2D   | Motor (Damper)                          | Z1F                               | Noise filter                       |
| A5P      | Printed circuit board assy (Fan)        | PS         | Switching power supply (A1P)            | REMOTE CONTROL                    |                                    |
| C1       | Capacitor (M1F)                         | Q1DI, Q2DI | Field earth leak detector (Max. 300 mA) | SS1                               | Selector switch                    |
| F1U      | Fuse T, 6.3A, 250V (A1P)                | R1T, R2T   | Thermistor (Indoor air)                 | CONNECTOR FOR OPTION (See note 3) |                                    |
| F3U      | Fuse T, 6.3A, 250V (A2P, A3P, A4P, A5P) | R3T        | Thermistor (PTC)                        | X14A                              | Connector (CO <sub>2</sub> sensor) |
| HAP      | Pilot lamp (Service monitor - green)    | S1C, S2C   | Limit switch damper motor               | X24A                              | Connector (Outside damper)         |
| K1R      | Magnetic relay                          | X1M        | Terminal (A1P)                          | X26A                              | Connector (Filter sign)            |
| K2R, K5R | Magnetic relay                          | X2M        | Terminal (Outside input) (A1P)          | X33A                              | Connector (Contact PCB)            |
| L1R-L4R  | Reactor                                 | X3M        | Terminal (Power supply)                 | X35A                              | Connector (Appendices PCB)         |
| M1F      | Motor (Exhaust air fan) (Bottom)        |            |                                         | X41A                              | Connector (Humidity sensor 1)      |
| M2F      | Motor (Supply air fan) (Bottom)         |            |                                         | X42A                              | Connector (Humidity sensor 2)      |
| M3F      | Motor (Exhaust air fan) (Top)           |            |                                         |                                   |                                    |

|     |                  |     |                            |
|-----|------------------|-----|----------------------------|
| L   | : Live           | —●— | : Connection               |
| N   | : Neutral        | —●— | : Relay connector          |
| —●— | : Field wiring   | ⊕   | : Protective earth (screw) |
| □□□ | : Terminal strip | ⏏   | : Noiseless earth          |
| □   | : Connector      |     |                            |

|              |        |      |        |
|--------------|--------|------|--------|
| Colors: BLK: | Black  | WHT: | White  |
| BLU:         | Blue   | YLW: | Yellow |
| ORG:         | Orange | GRN: | Green  |
| RED:         | Red    |      |        |

2D080684B

#### 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.

# 8 Sound data

## 8 - 1 Sound Power Spectrum

VAM150FC

### Sound power

| Model      | Fan speed | Hz |     |     |     |      |      |      |      | [dB] | [dBA] |
|------------|-----------|----|-----|-----|-----|------|------|------|------|------|-------|
|            |           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |      |       |
| VAM150FCVE | U-H       | 57 | 55  | 48  | 44  | 41   | 33   | 27   | 22   |      | 46    |
|            | H         | 56 | 54  | 47  | 43  | 40   | 32   | 26   | 22   |      | 45    |
|            | L         | 55 | 49  | 43  | 37  | 33   | 25   | 22   | 23   |      | 40    |

#### Notes

1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity 0dB = 10E-6μW/m<sup>2</sup>
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.

4D099265A

## 8 Sound data

### 8 - 1 Sound Power Spectrum

VAM250FC

#### Sound power

| Model      | Fan speed | Hz |     |     |     |      |      |      |      |       |
|------------|-----------|----|-----|-----|-----|------|------|------|------|-------|
|            |           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | [dB] | [dBA] |
| VAM250FCVE | U-H       | 61 | 59  | 52  | 47  | 44   | 37   | 31   | 26   | 50    |
|            | H         | 60 | 58  | 51  | 46  | 43   | 36   | 29   | 26   | 49    |
|            | L         | 57 | 51  | 45  | 40  | 35   | 27   | 25   | 26   | 42    |

#### Notes

1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity 0dB =  $10E-6\mu W/m^2$
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)

(dB) (dBA)

| Unit model name | Fan speed | Hz   |      |      |      |      |      |      |      |       |
|-----------------|-----------|------|------|------|------|------|------|------|------|-------|
|                 |           | 63   | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 | Total |
| VAM350FB        | U-H       | 57.5 | 53.0 | 49.5 | 45.0 | 42.5 | 39.5 | 31.5 | 25.5 | 48    |
|                 | H         | 58.5 | 51.0 | 46.5 | 43.5 | 40.5 | 35.0 | 26.0 | 26.5 | 46    |
|                 | L         | 58.5 | 45.5 | 41.5 | 38.0 | 33.5 | 24.0 | 25.0 | 27.0 | 41    |

#### NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
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.

4D082464

#### VAM500FC

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

(dB) (dBA)

| Unit model name | Fan speed | Hz   |      |      |      |      |      |      |      |       |
|-----------------|-----------|------|------|------|------|------|------|------|------|-------|
|                 |           | 63   | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 | Total |
| VAM500FB        | U-H       | 57.0 | 54.0 | 51.0 | 48.0 | 45.0 | 37.5 | 27.5 | 25.5 | 50    |
|                 | H         | 54.0 | 51.5 | 49.0 | 46.0 | 42.5 | 36.0 | 26.5 | 26.0 | 48    |
|                 | L         | 50.5 | 47.5 | 44.0 | 39.0 | 33.5 | 25.0 | 23.0 | 24.5 | 41    |

#### NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
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.

4D082465

#### VAM650FC

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

(dB) (dBA)

| Unit model name | Fan speed | Hz   |      |      |      |      |      |      |      |       |
|-----------------|-----------|------|------|------|------|------|------|------|------|-------|
|                 |           | 63   | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 | Total |
| VAM650FB        | U-H       | 62.0 | 58.0 | 52.5 | 48.5 | 45.5 | 41.5 | 34.0 | 26.0 | 51    |
|                 | H         | 61.0 | 56.5 | 51.0 | 47.0 | 44.5 | 39.0 | 30.0 | 26.0 | 50    |
|                 | L         | 53.5 | 50.5 | 46.0 | 42.0 | 37.5 | 32.0 | 24.0 | 25.5 | 44    |

#### NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
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.

4D082466

# 8 Sound data

## 8 - 1 Sound Power Spectrum

8

### VAM800FC

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

| Unit model name | Fan speed | (dB) (dBA) |      |      |      |      |      |      |      |       |
|-----------------|-----------|------------|------|------|------|------|------|------|------|-------|
|                 |           | 63         | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 | Total |
| VAM800FB        | U-H       | 58.0       | 58.0 | 52.5 | 49.5 | 48.5 | 41.5 | 33.5 | 26.0 | 53    |
|                 | H         | 58.5       | 57.0 | 51.5 | 49.5 | 47.0 | 40.5 | 31.0 | 27.5 | 52    |
|                 | L         | 54.5       | 54.5 | 47.5 | 44.5 | 43.0 | 35.5 | 24.5 | 23.5 | 47    |

#### NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
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.

4D082467

### VAM1000FC

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

| Unit model name | Fan speed | (dB) (dBA) |      |      |      |      |      |      |      |       |
|-----------------|-----------|------------|------|------|------|------|------|------|------|-------|
|                 |           | 63         | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 | Total |
| VAM1000FB       | U-H       | 62.0       | 58.5 | 54.0 | 50.5 | 49.0 | 42.0 | 36.5 | 28.0 | 53    |
|                 | H         | 61.0       | 57.0 | 52.0 | 50.0 | 48.0 | 38.5 | 31.0 | 25.5 | 52    |
|                 | L         | 58.0       | 55.0 | 49.0 | 45.5 | 43.5 | 36.5 | 27.5 | 24.0 | 48    |

#### NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
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.

4D082468

### VAM1500FC

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

| Unit model name | Fan speed | (dB) (dBA) |      |      |      |      |      |      |      |       |
|-----------------|-----------|------------|------|------|------|------|------|------|------|-------|
|                 |           | 63         | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 | Total |
| VAM1500FB       | U-H       | 60.5       | 61.0 | 55.5 | 52.5 | 50.5 | 46.0 | 39.5 | 29.5 | 55    |
|                 | H         | 60.5       | 60.0 | 53.5 | 51.5 | 49.5 | 44.5 | 37.0 | 31.0 | 54    |
|                 | L         | 58.5       | 58.0 | 51.0 | 49.0 | 47.0 | 39.5 | 30.5 | 31.0 | 51    |

#### NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
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.

4D082469

### VAM2000FC

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

| Unit model name | Fan speed | (dB) (dBA) |      |      |      |      |      |      |      |       |
|-----------------|-----------|------------|------|------|------|------|------|------|------|-------|
|                 |           | 63         | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 | Total |
| VAM2000FB       | U-H       | 65.0       | 61.5 | 57.0 | 54.0 | 53.0 | 45.0 | 39.5 | 32.5 | 57    |
|                 | H         | 64.0       | 60.0 | 55.0 | 53.0 | 51.0 | 41.5 | 34.5 | 30.5 | 55    |
|                 | L         | 62.0       | 58.0 | 51.5 | 50.0 | 48.5 | 40.5 | 32.5 | 30.5 | 53    |

#### NOTES

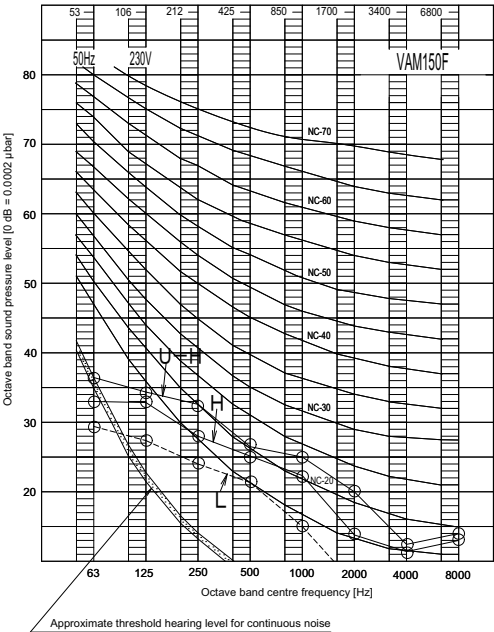
1. dBA = A-weighted sound power level (A-scale according to IEC).
2. Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
3. Measured according to ISO 3744.
4. The operating sound level may become higher than this value depending on the operating conditions, reflected sound and peripheral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

4D082470

# 8 Sound data

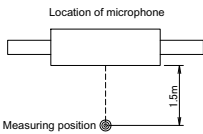
## 8 - 2 Sound Pressure Spectrum

### VAM150FC



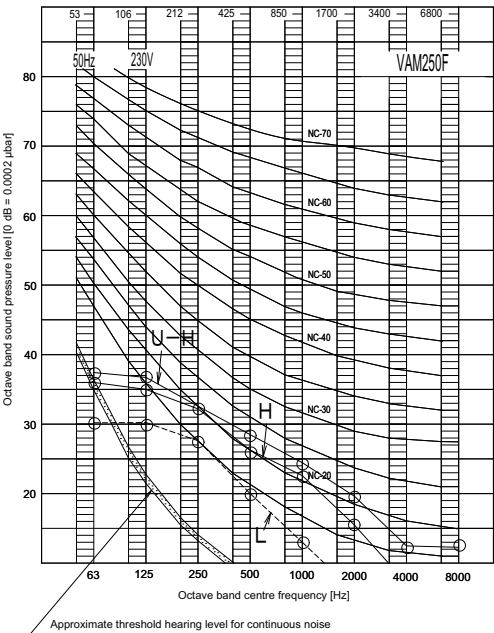
- Notes
- Data is valid at nominal operation condition.
  - dBA = A-weighted sound pressure level (A scale according to IEC).
  - Operating noise varies depending on operation, installation, and ambient conditions.
  - Measuring location: anechoic chamber

| Scale | Total dB      |    |    |
|-------|---------------|----|----|
|       | Air flow rate |    |    |
|       | U-H           | H  | L  |
| A     | 28            | 27 | 21 |



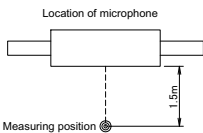
3D099269

### VAM250FC



- Notes
- Data is valid at nominal operation condition.
  - dBA = A-weighted sound pressure level (A scale according to IEC).
  - Operating noise varies depending on operation, installation, and ambient conditions.
  - Measuring location: anechoic chamber

| Scale | Total dB      |      |      |
|-------|---------------|------|------|
|       | Air flow rate |      |      |
|       | U-H           | H    | L    |
| A     | 28.5          | 26.5 | 21.5 |

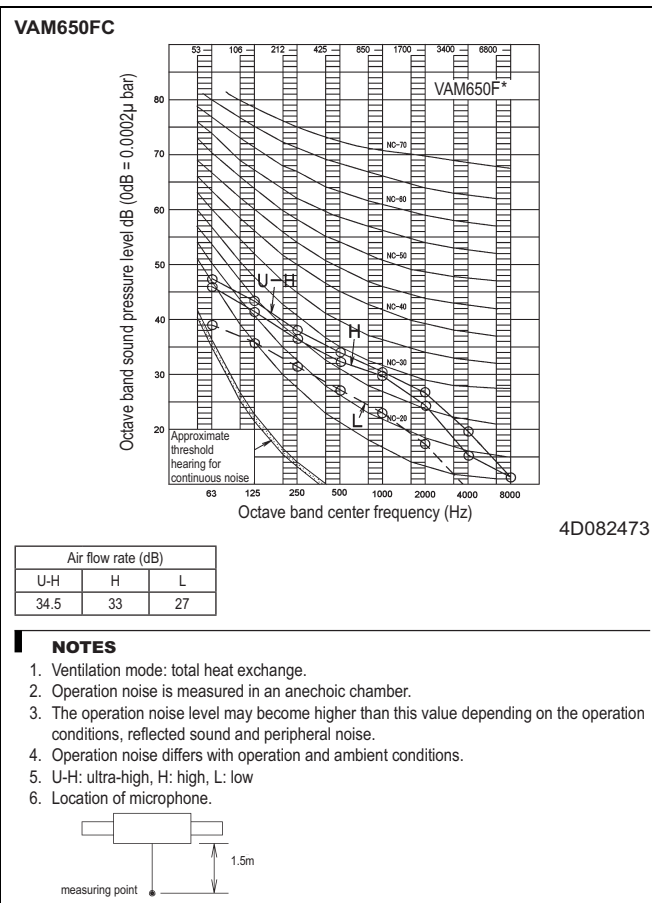
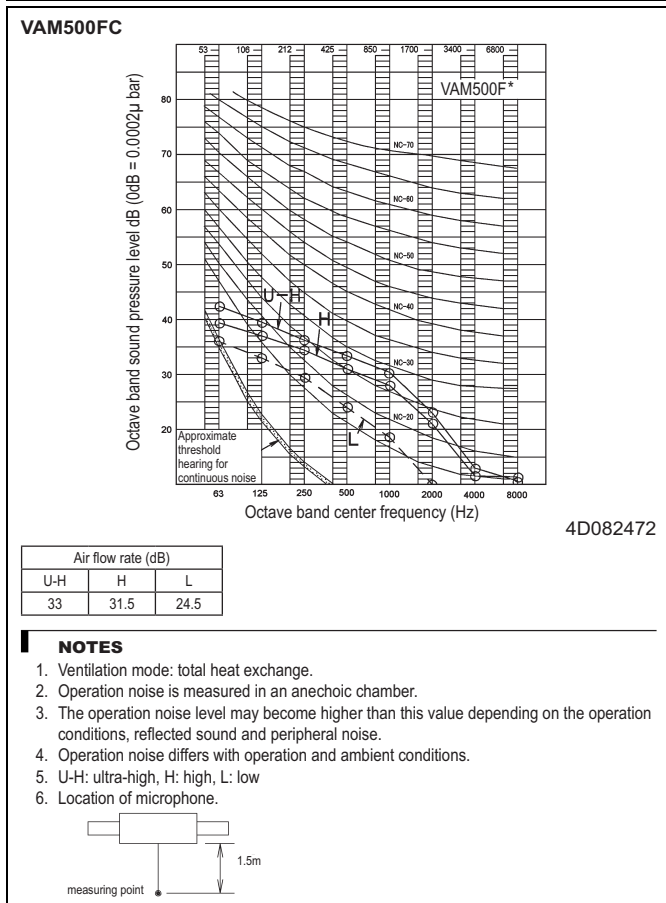
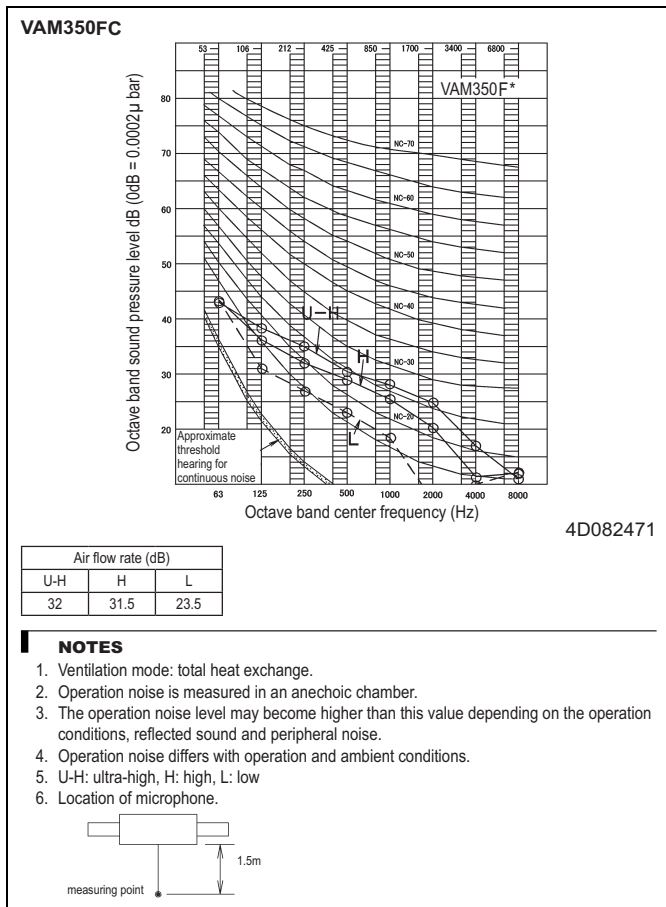


3D099270

## 8 Sound data

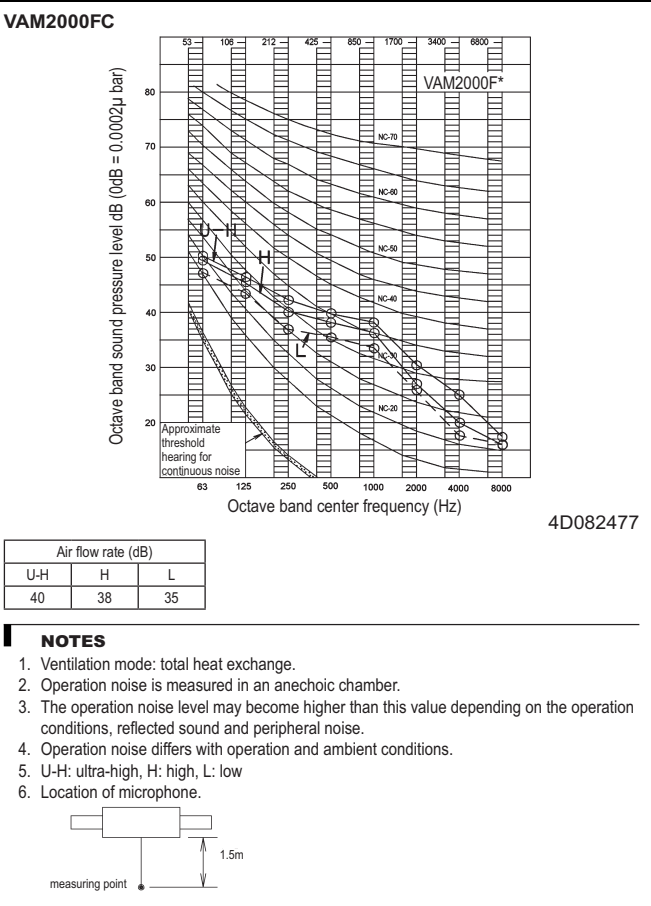
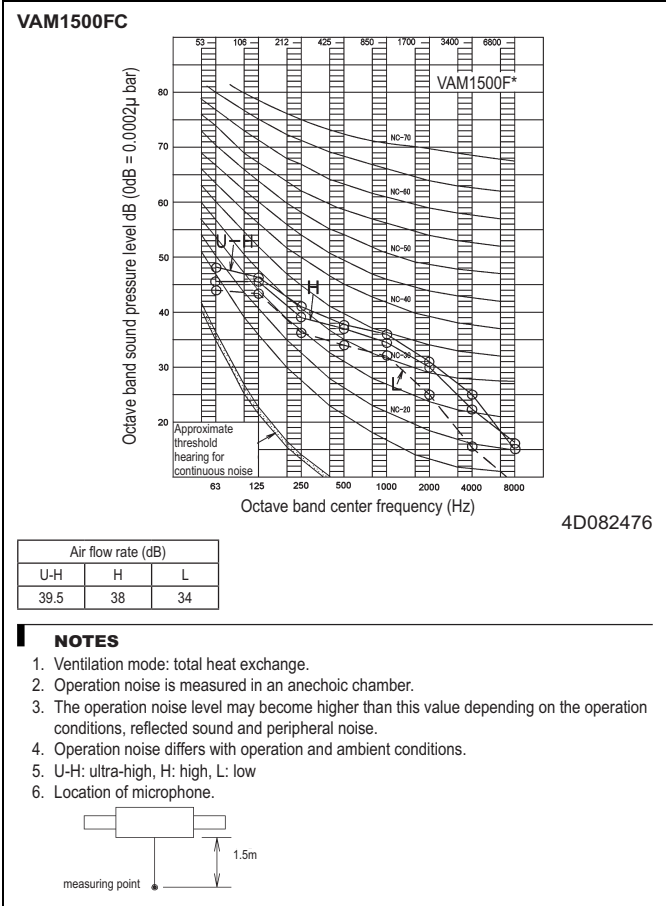
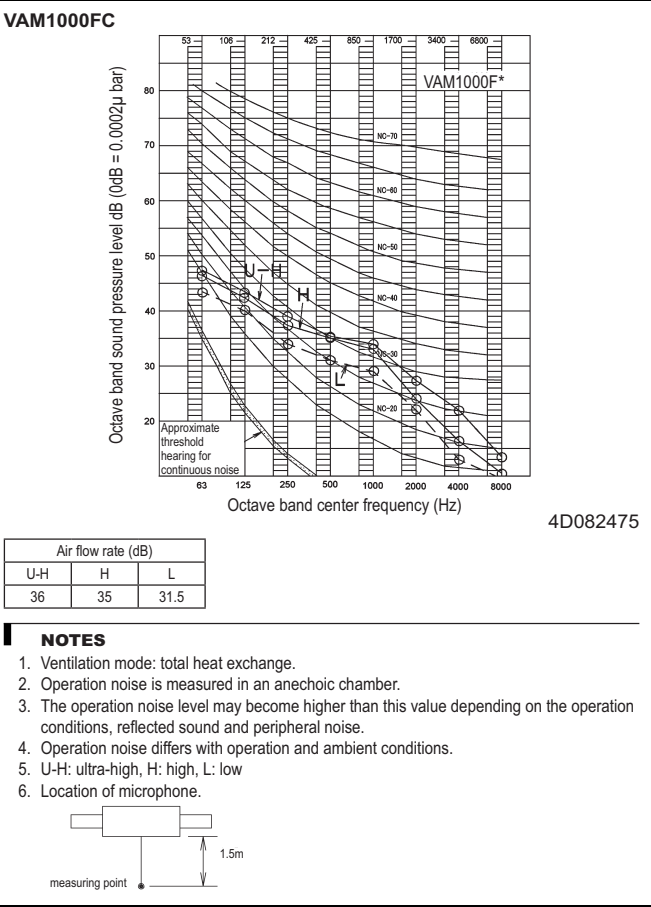
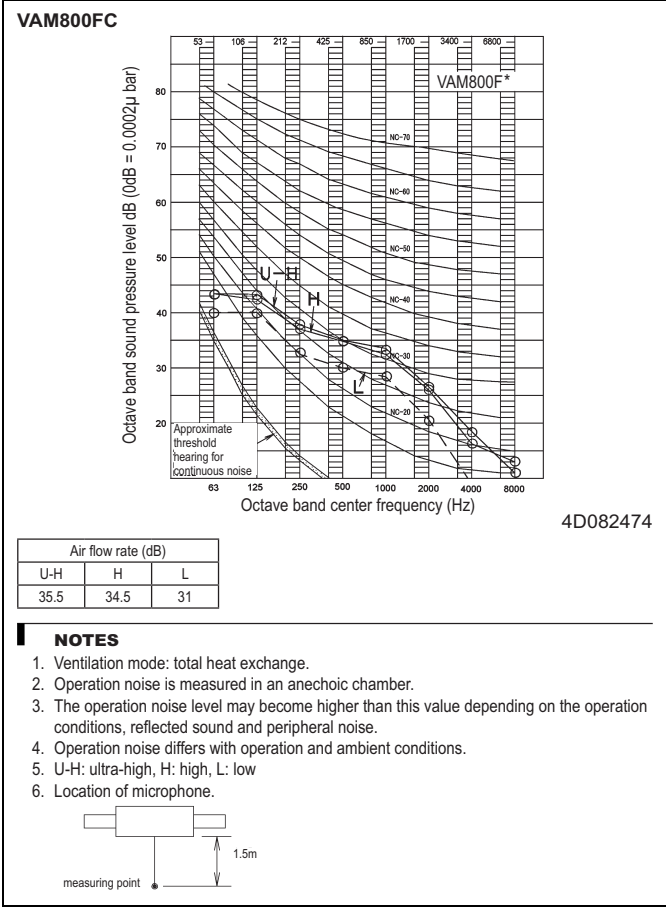
### 8 - 2 Sound Pressure Spectrum

8



# 8 Sound data

## 8 - 2 Sound Pressure Spectrum

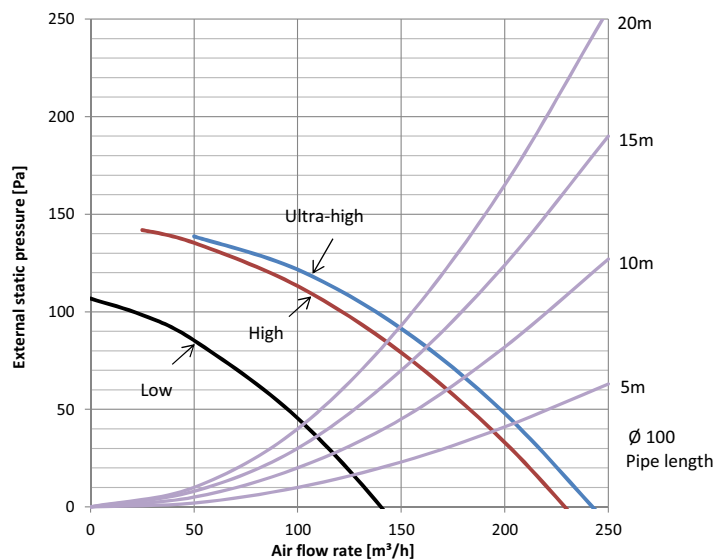


## 9 Fan characteristics

### 9 - 1 Fan Characteristics

9

VAM150FC

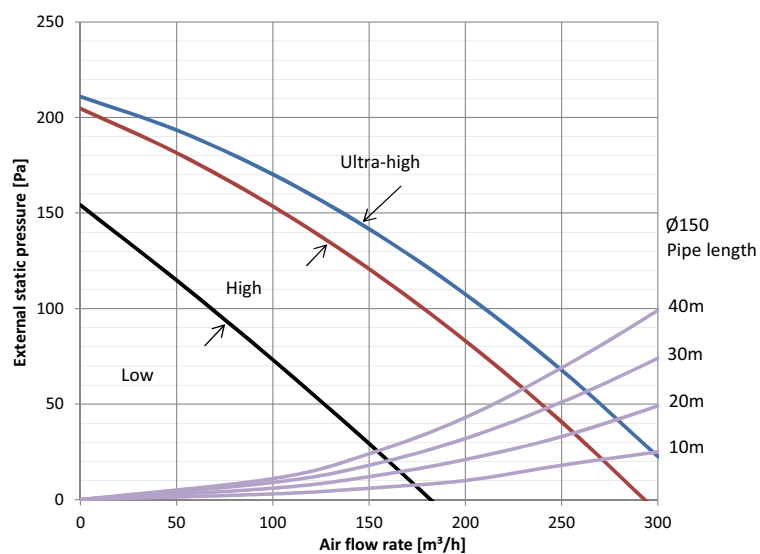


Notes

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

4D100379

VAM250FC



Notes

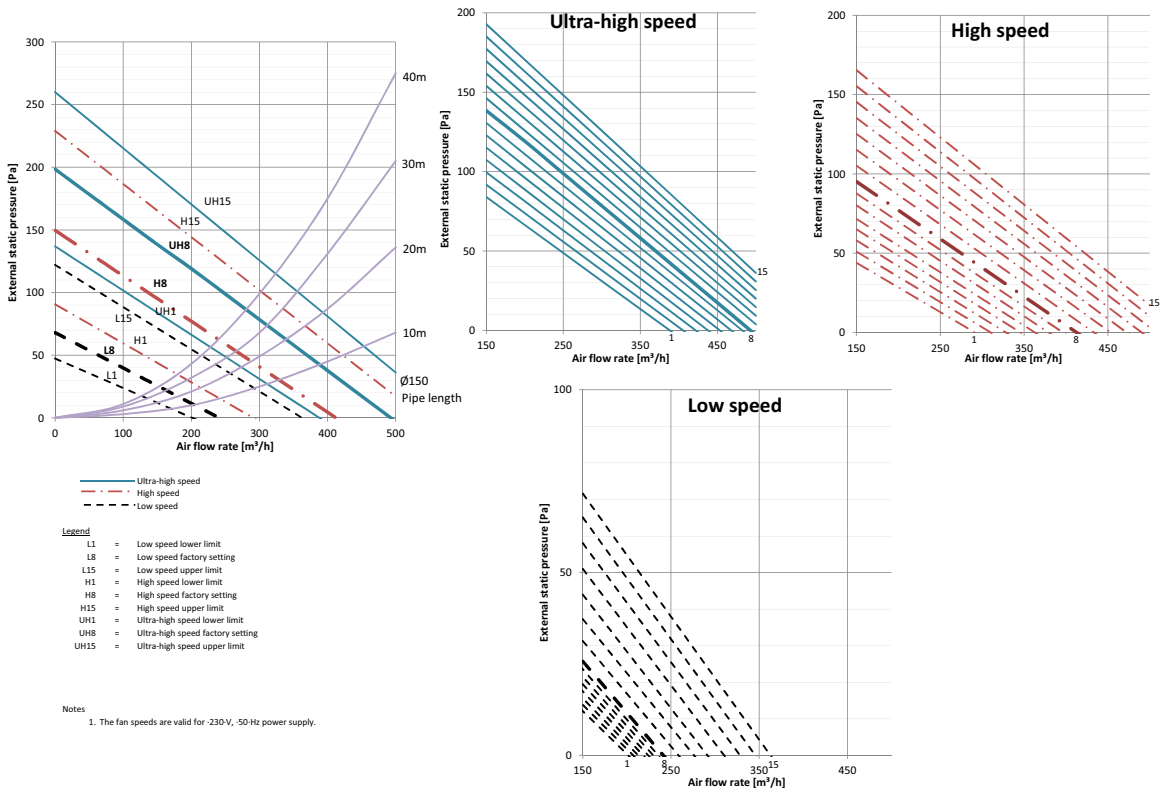
1. The fan speeds are valid for ~230-V, ~50-Hz power supply.

4D100380

# 9 Fan characteristics

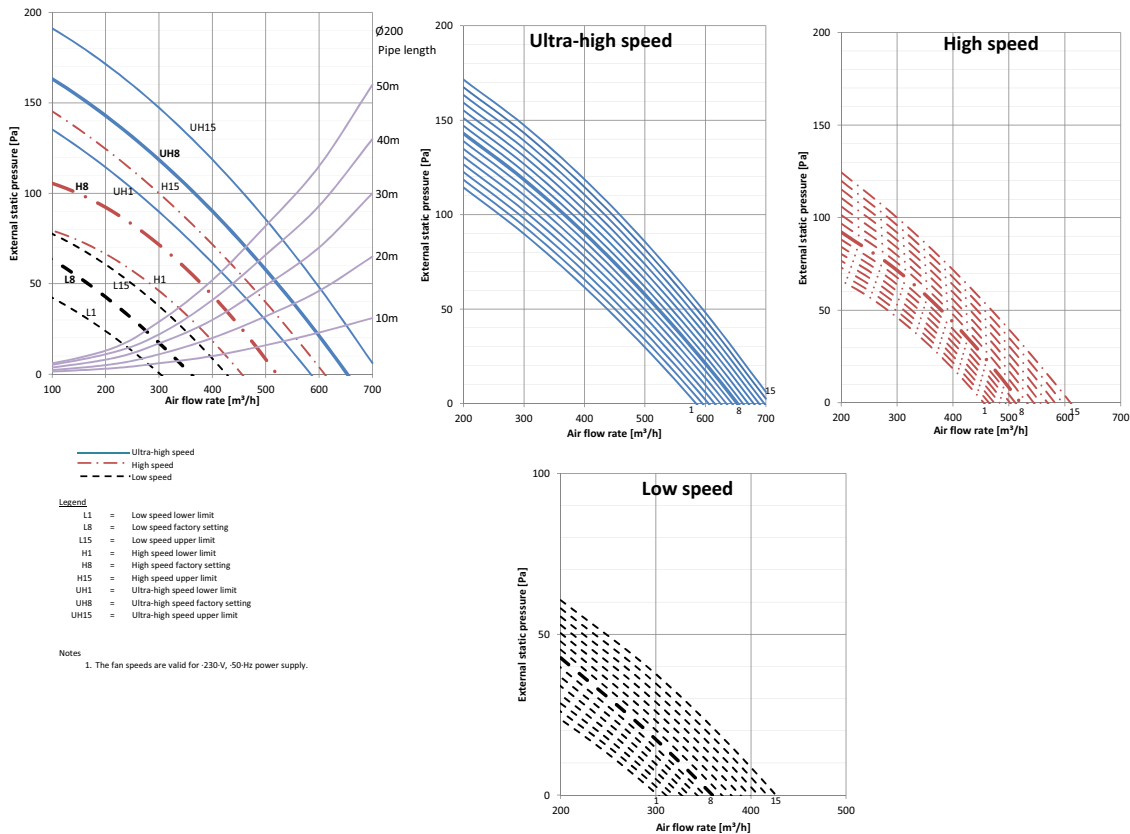
## 9 - 1 Fan Characteristics

VAM350FC



3D100381

VAM500FC

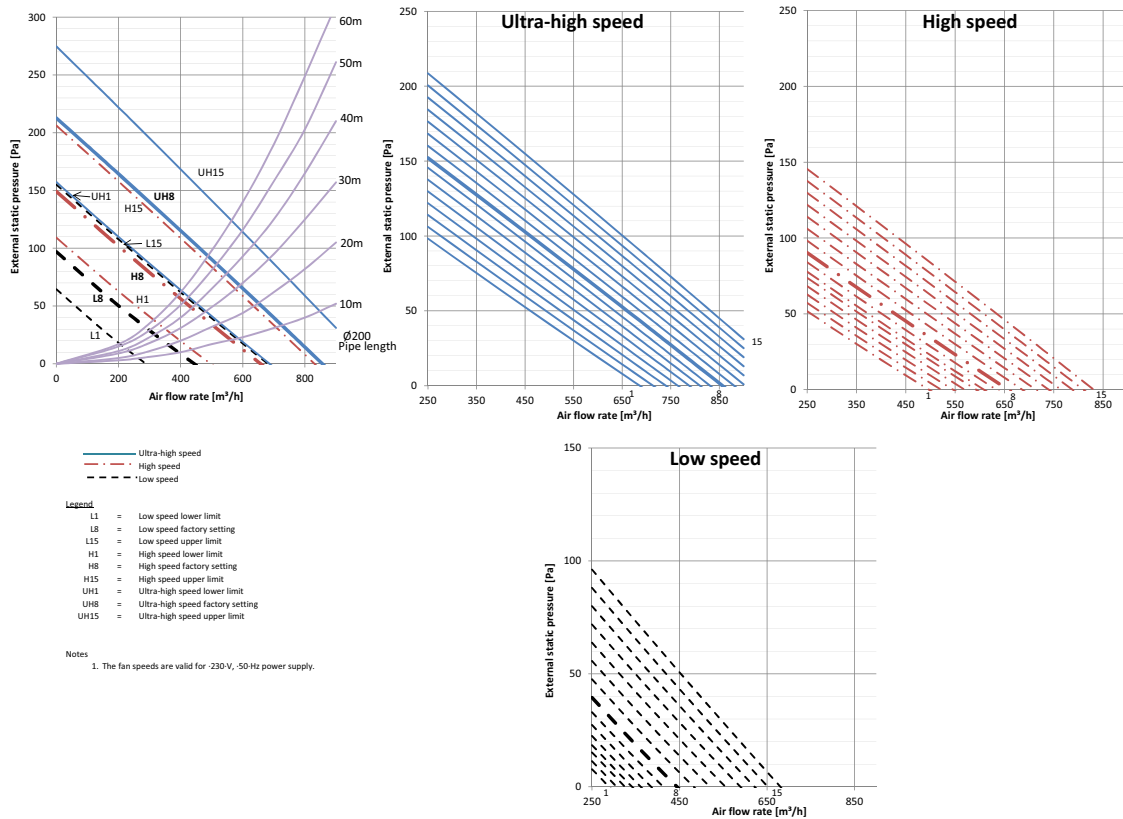


3D100382

## 9 Fan characteristics

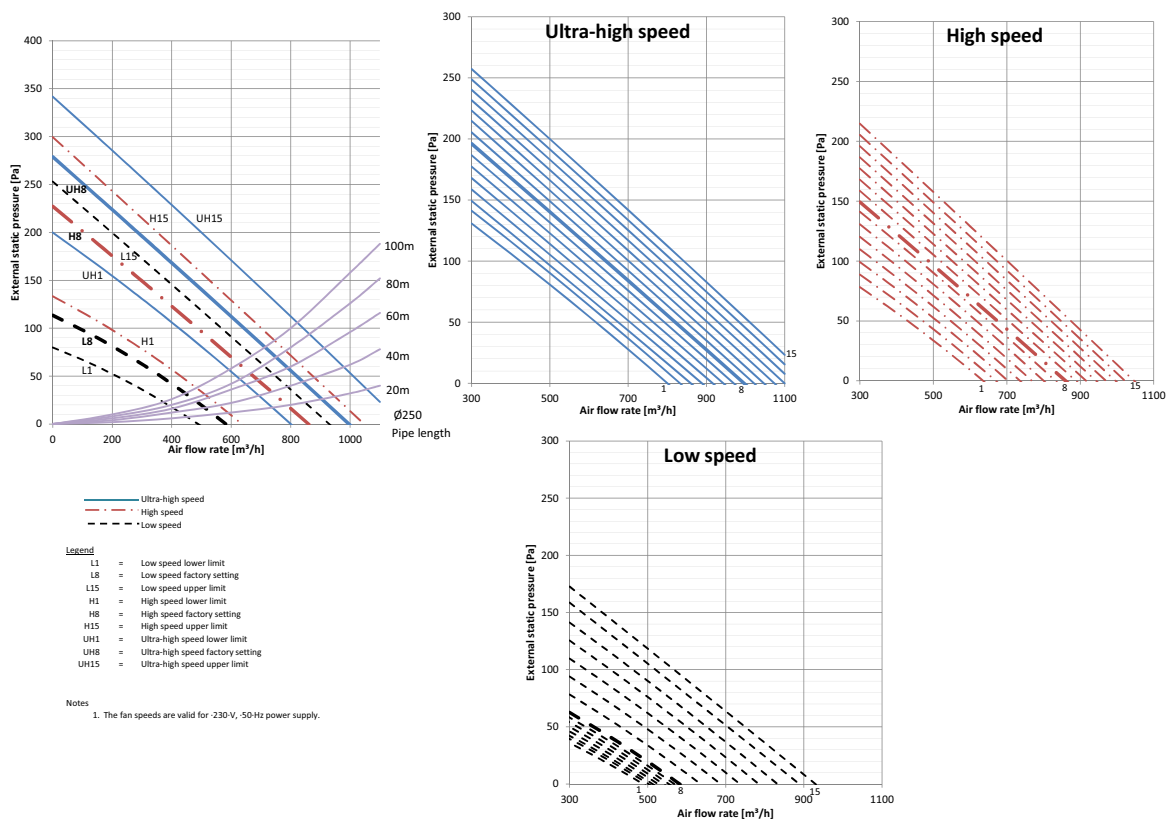
### 9 - 1 Fan Characteristics

VAM650FC



3D100383

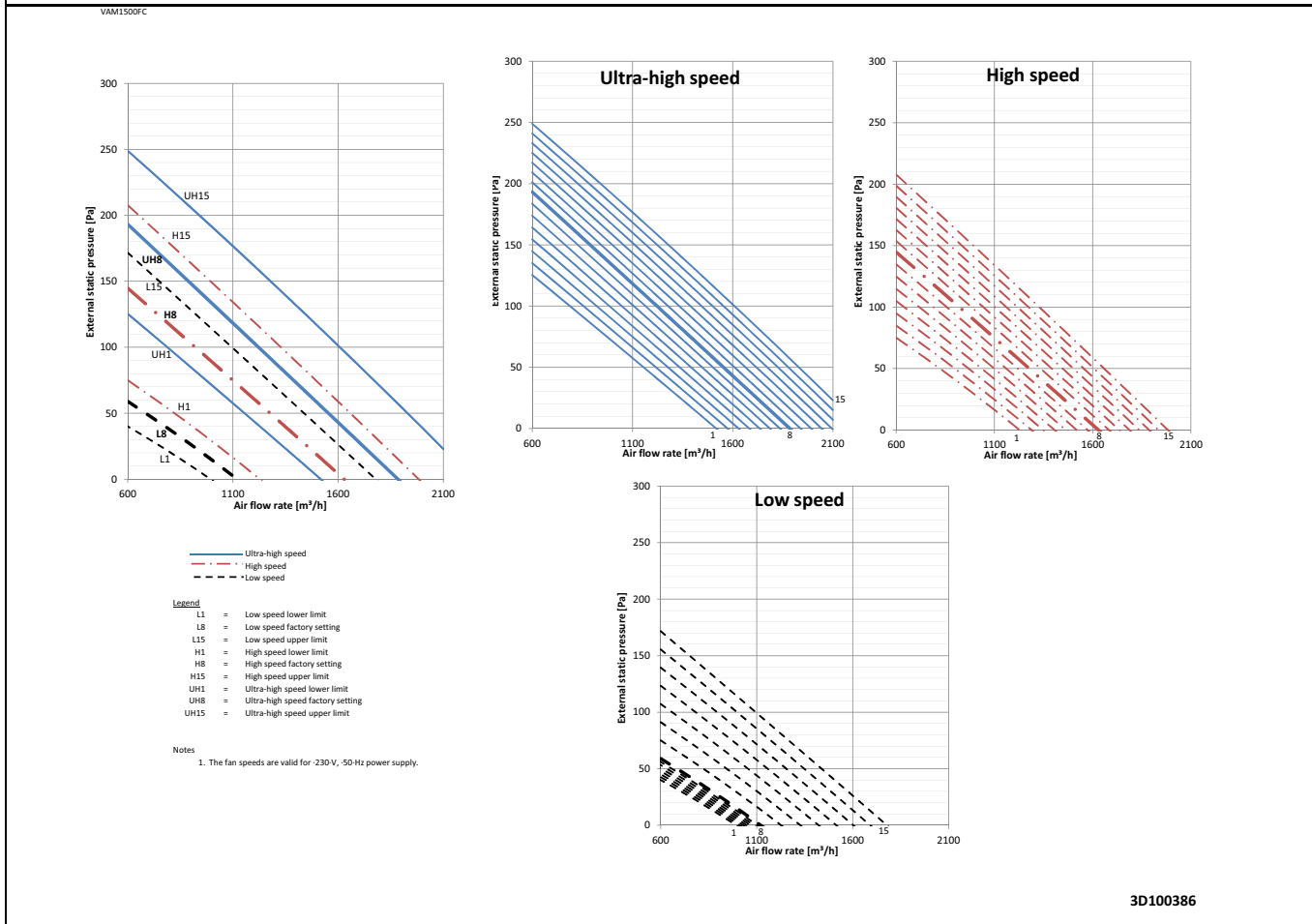
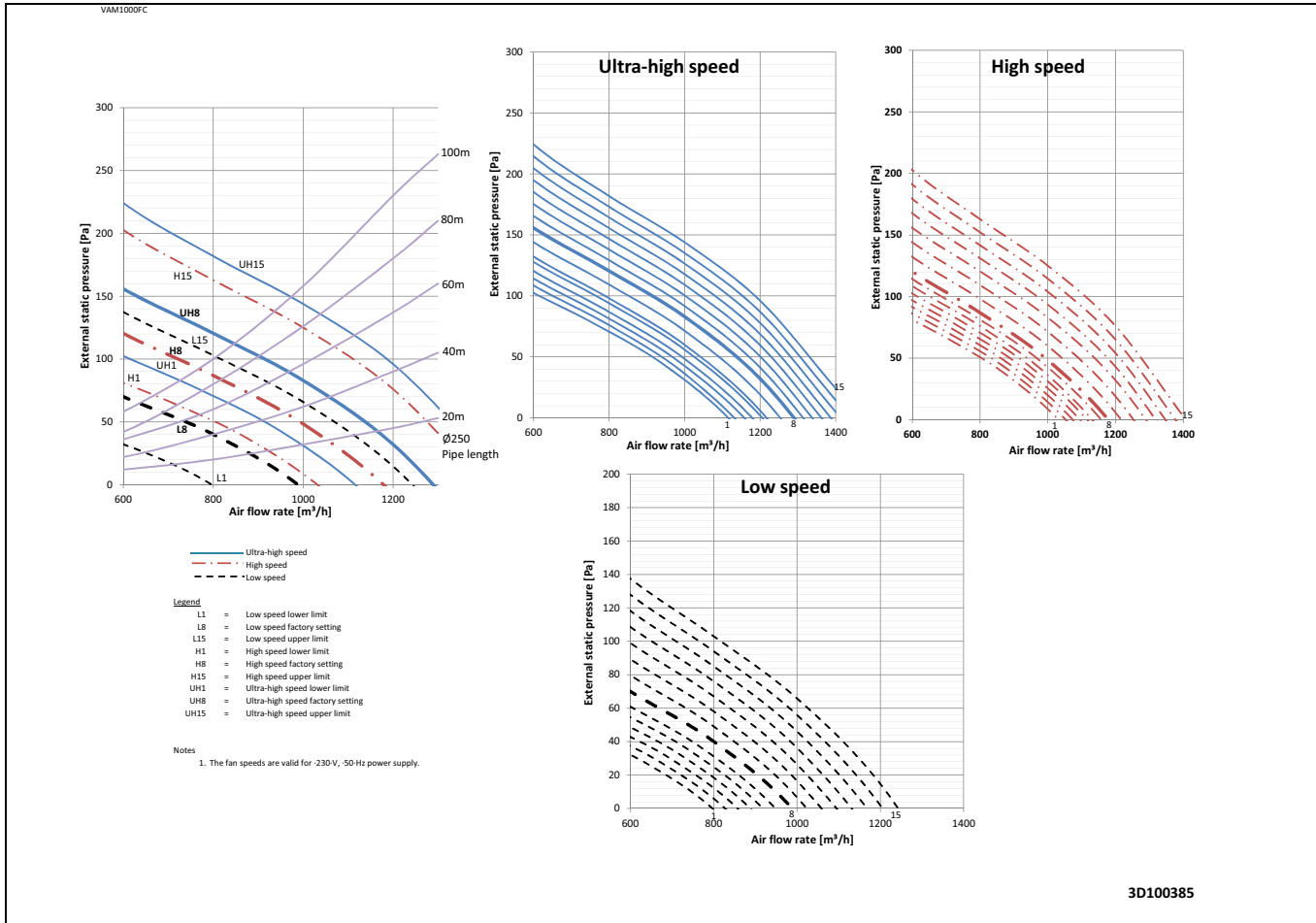
VAM800FC



3D100384

# 9 Fan characteristics

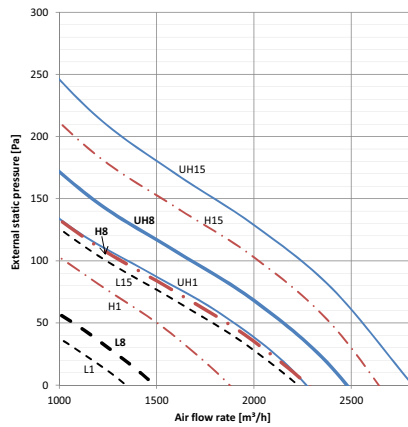
## 9 - 1 Fan Characteristics



## 9 Fan characteristics

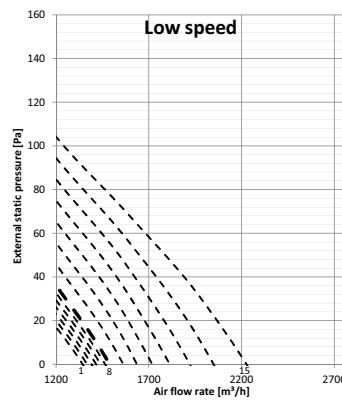
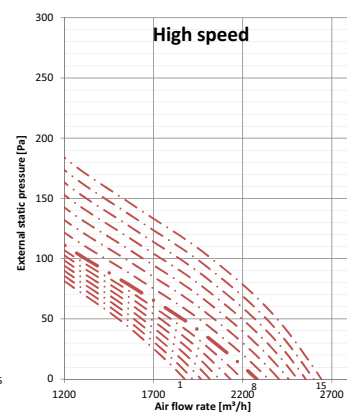
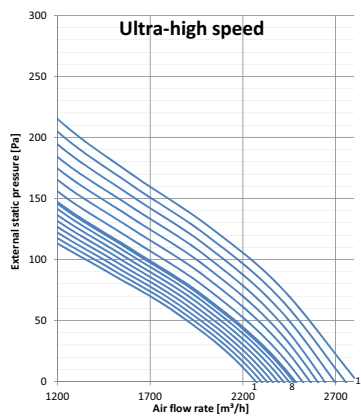
### 9 - 1 Fan Characteristics

VAM2000FC



Notes

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



3D100387

# 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)

| Outdoor Air Quality                               | Indoor Air Quality |                |                  |             |
|---------------------------------------------------|--------------------|----------------|------------------|-------------|
|                                                   | IDA 1 (High)       | IDA 2 (Medium) | IDA 3 (Moderate) | IDA 4 (Low) |
| ODA 1 (pure air)                                  | N/A                | F8             | F7               | F5          |
| ODA 2 (dust)                                      | N/A                | F6+F8          | F5+F7            | F5+F6       |
| ODA 3 (very high concentrations of dust of gases) | N/A                | N/A            | F5+F7            | F5+F6       |

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

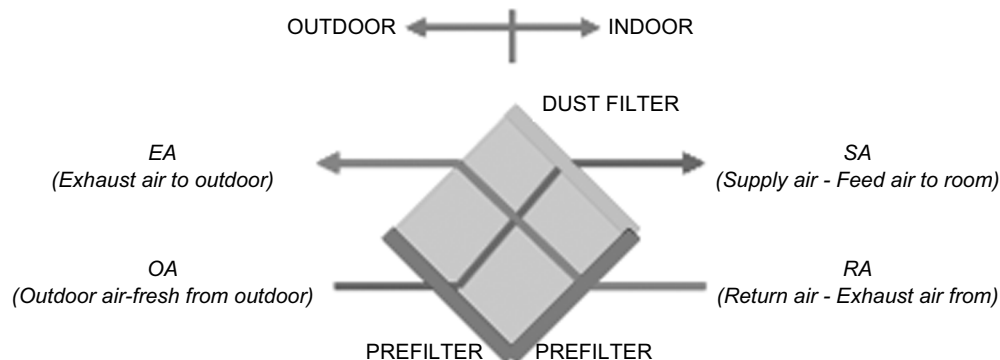
#### Outdoor air Quality:

- 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,...)
- 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 Air filter characteristics

### 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]

| unit     | airflow (m³/h) | filter pressure drop |     |     |
|----------|----------------|----------------------|-----|-----|
|          |                | M6                   | F7  | F8  |
| VAM350F  | 350            | 39                   | 52  | 88  |
| VAM500F  | 500            | 65                   | 87  | 148 |
| VAM650F  | 650            | 61                   | 83  | 140 |
| VAM800F  | 800            | 89                   | 121 | 206 |
| VAM1000F | 1000           | 80                   | 109 | 185 |
| VAM1500F | 1500           | 79                   | 106 | 181 |
| VAM2000F | 2000           | 80                   | 109 | 185 |

#### 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

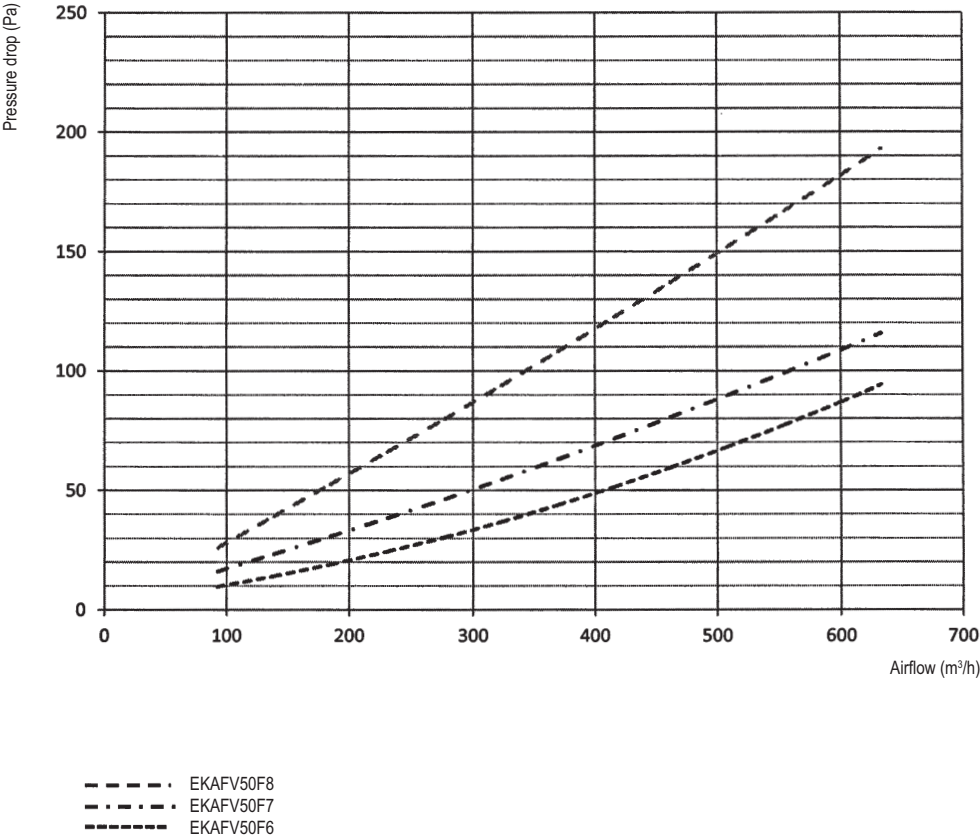
To adjust static pressure after filter placement:

| Setting mode | Setting switch No. | Description of setting |
|--------------|--------------------|------------------------|
| 19 (29)      | 2                  | SA fan speed setting   |
|              | 3                  | EA fan speed setting   |

# 10 Air filter characteristics

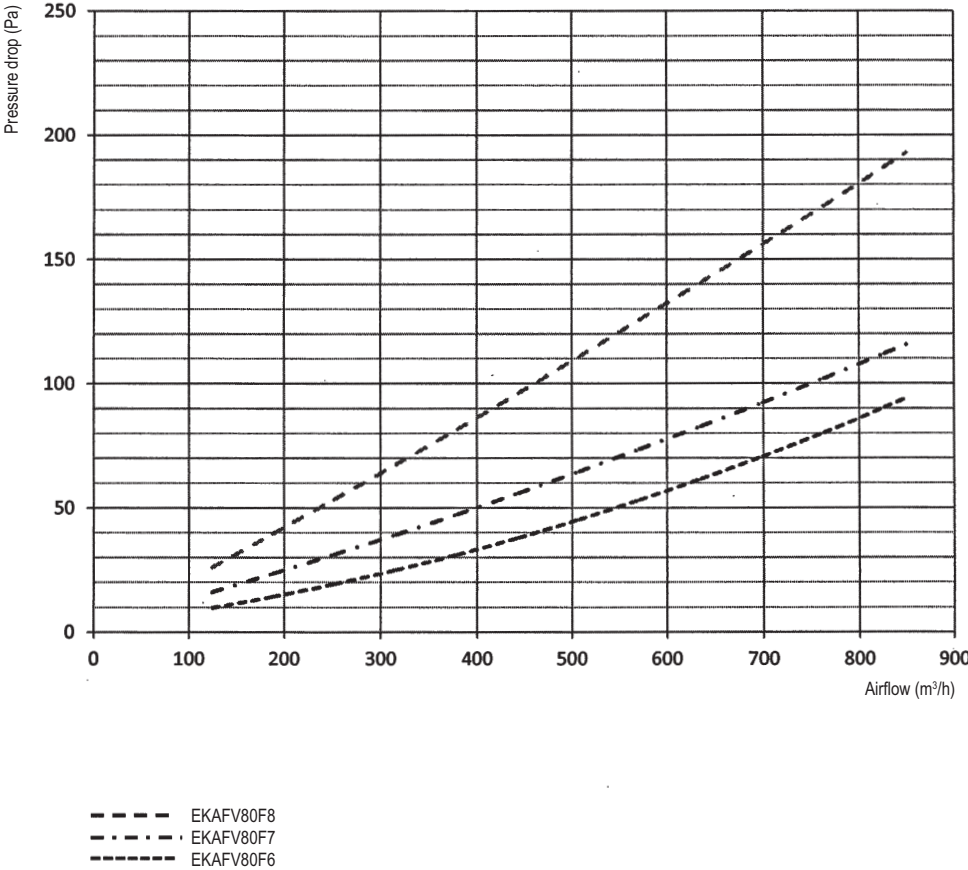
## 10 - 1 Air filter characteristics

VAM350-500FC



4D082449

VAM650-800FC



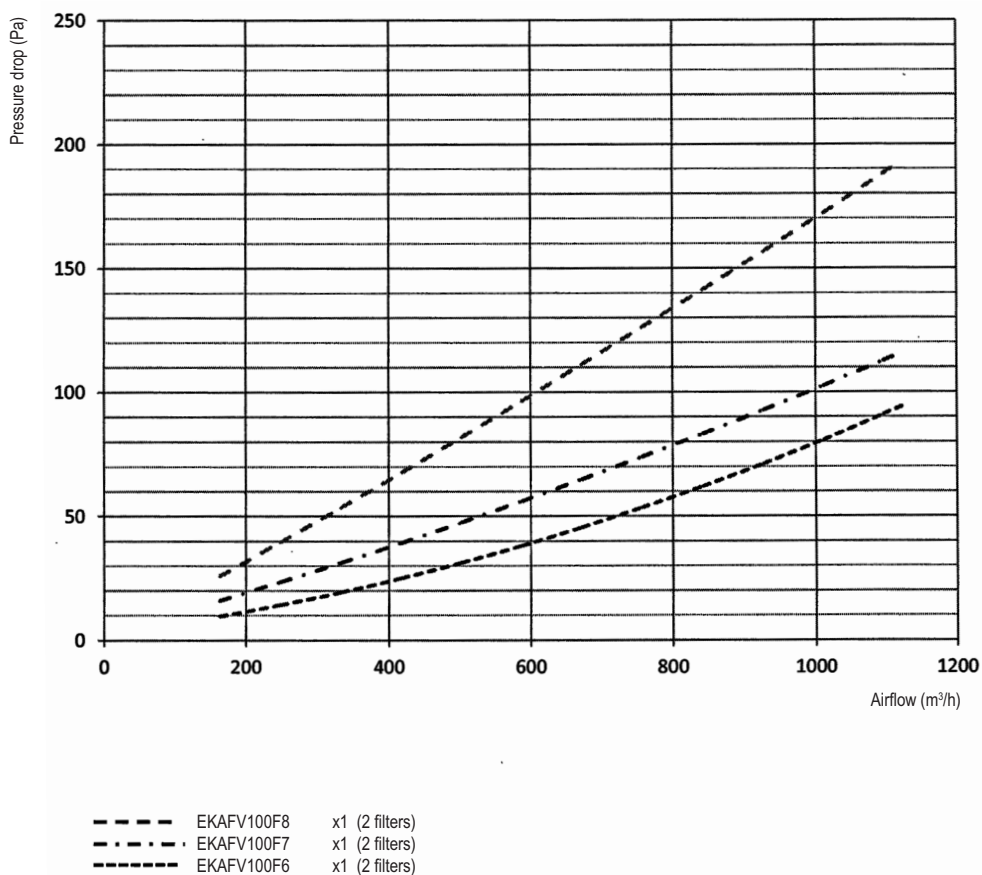
4D082450

## 10 Air filter characteristics

### 10 - 1 Air filter characteristics

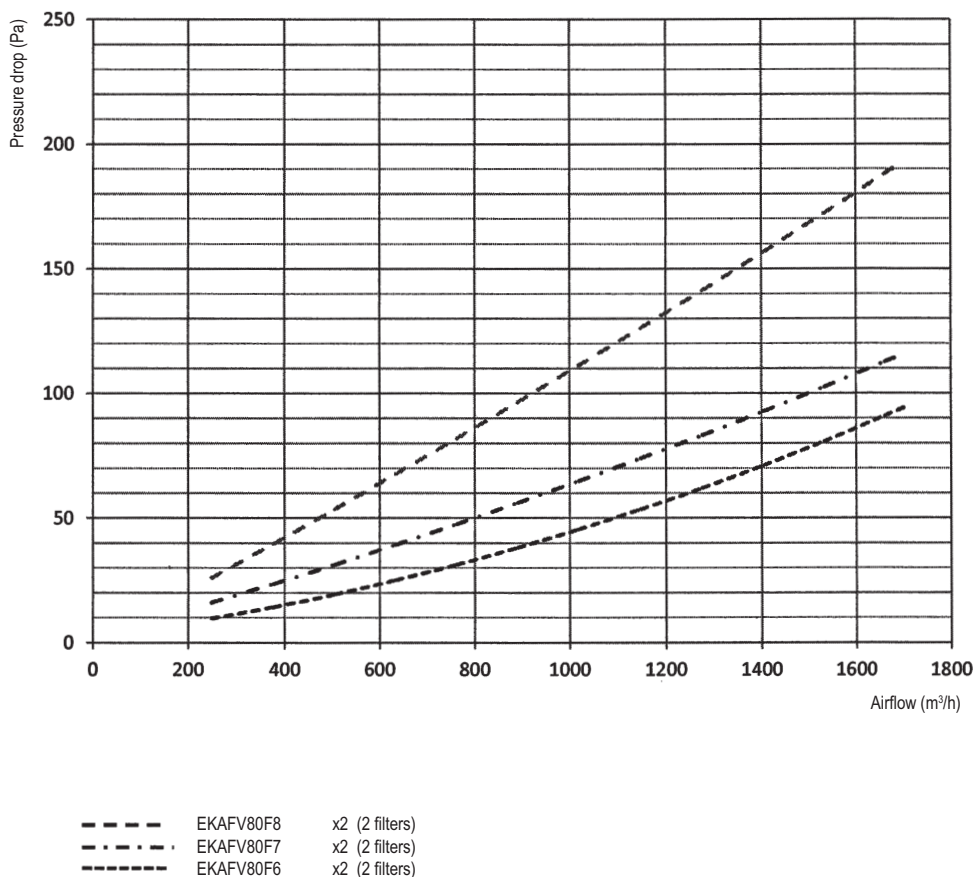
10

VAM1000FC



4D082451

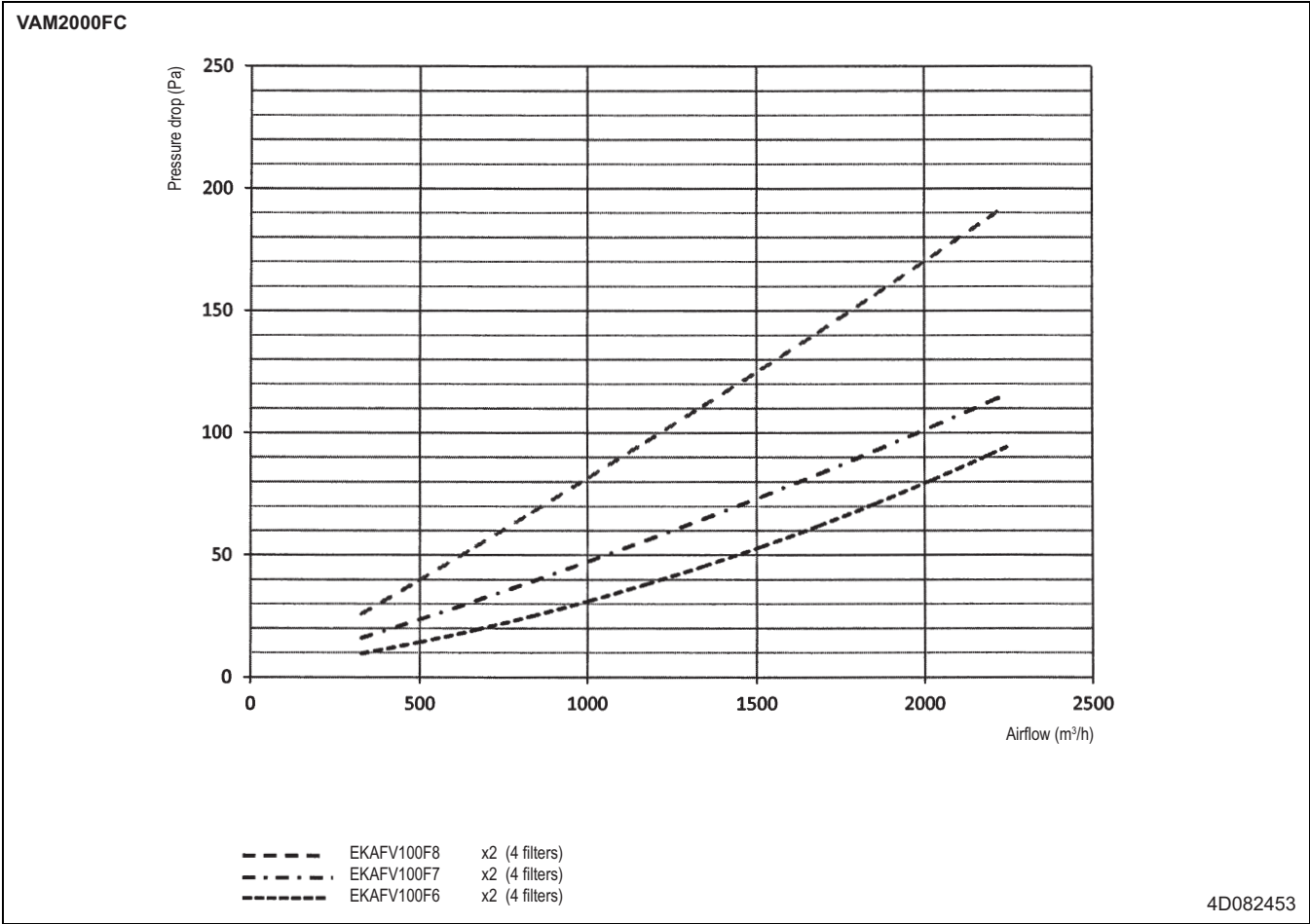
VAM1500FC



4D082452

# 10 Air filter characteristics

## 10 - 1 Air filter characteristics

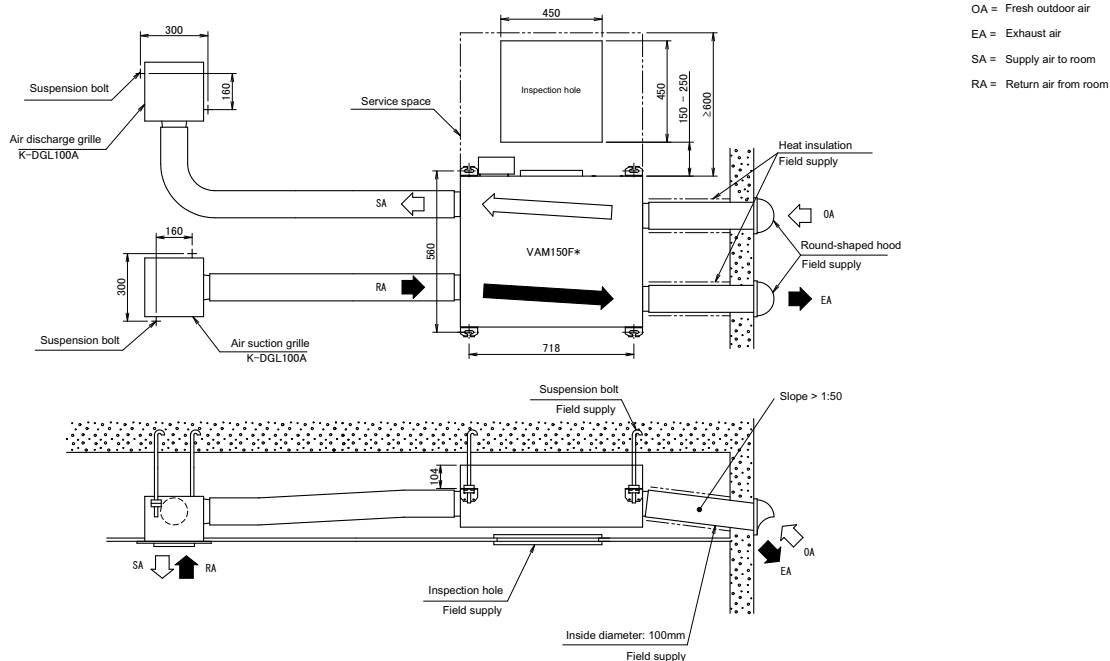


# 11 Installation

## 11 - 1 Installation Method

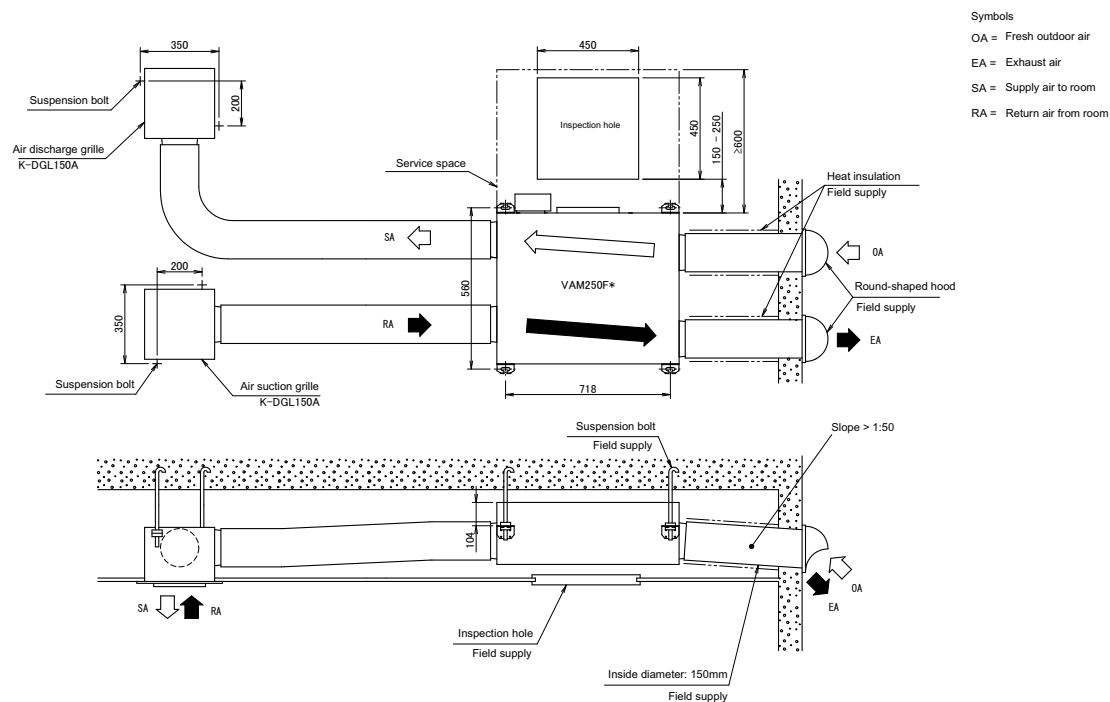
11

### VAM150FC



3D099263

### VAM250FC

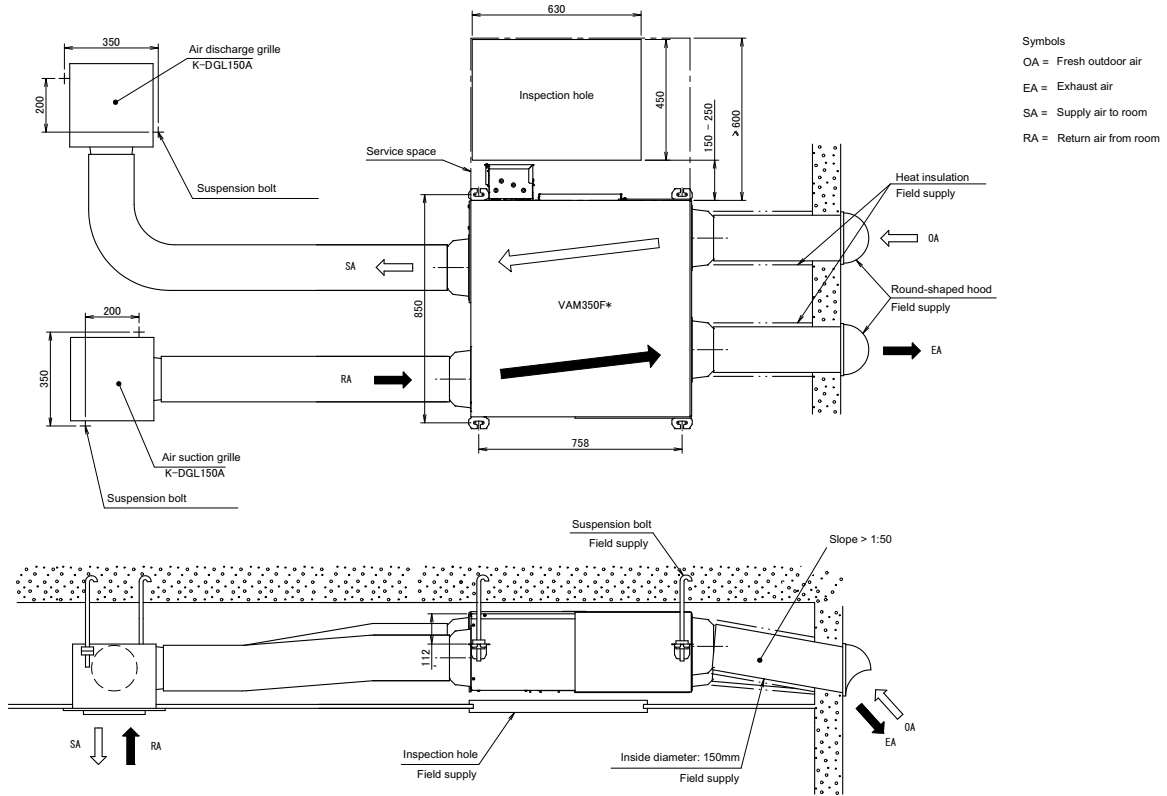


3D099264

# 11 Installation

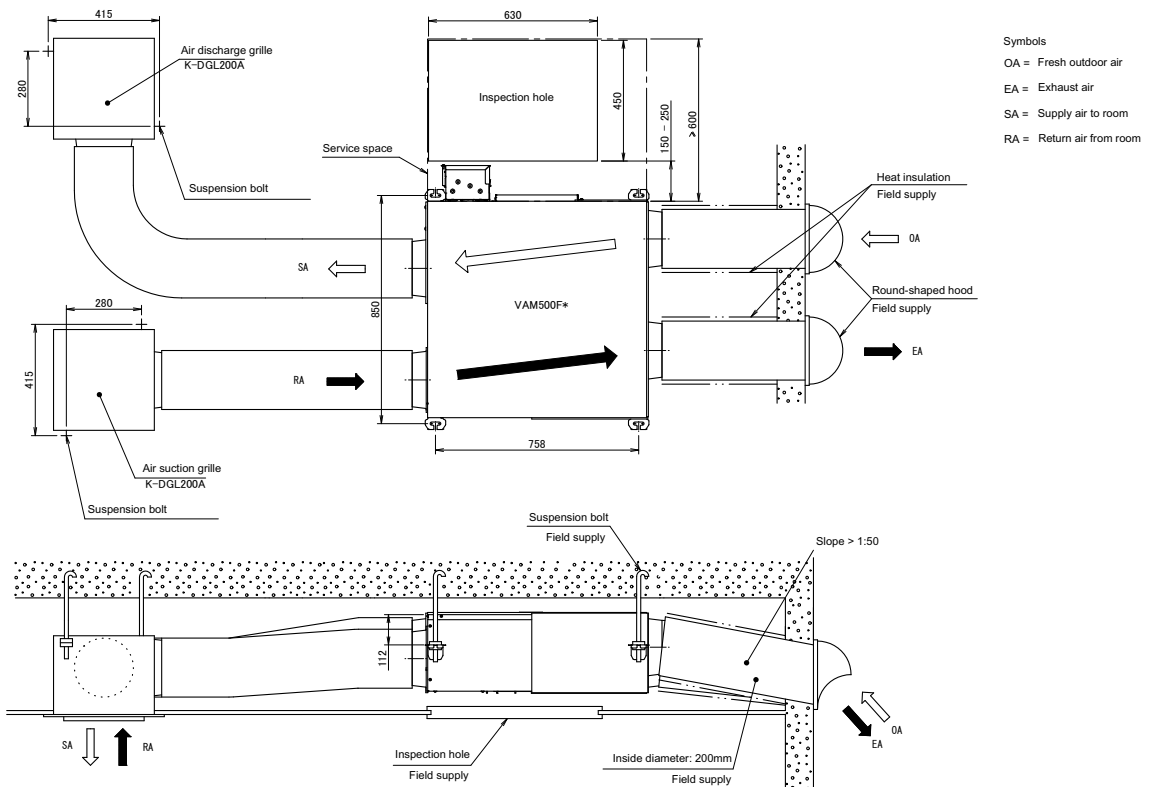
## 11 - 1 Installation Method

### VAM350FC



3D081267A

### VAM500FC



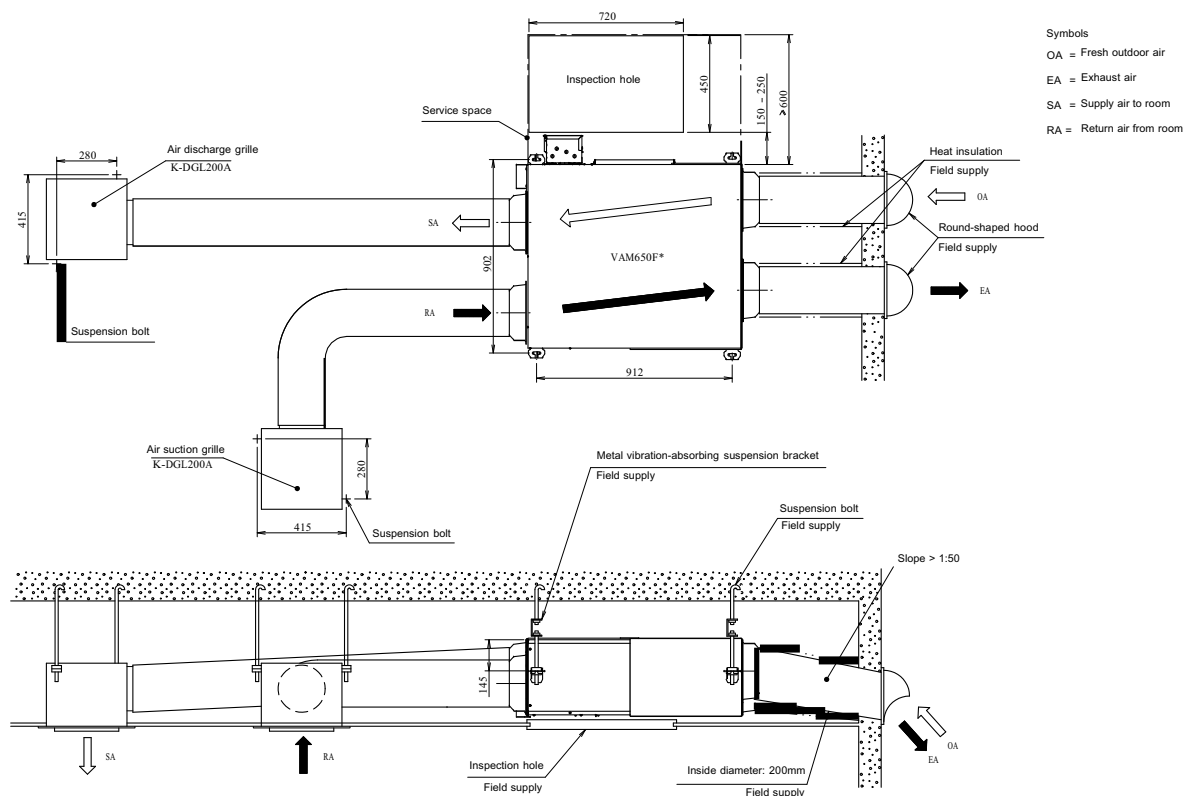
3D081268A

# 11 Installation

## 11 - 1 Installation Method

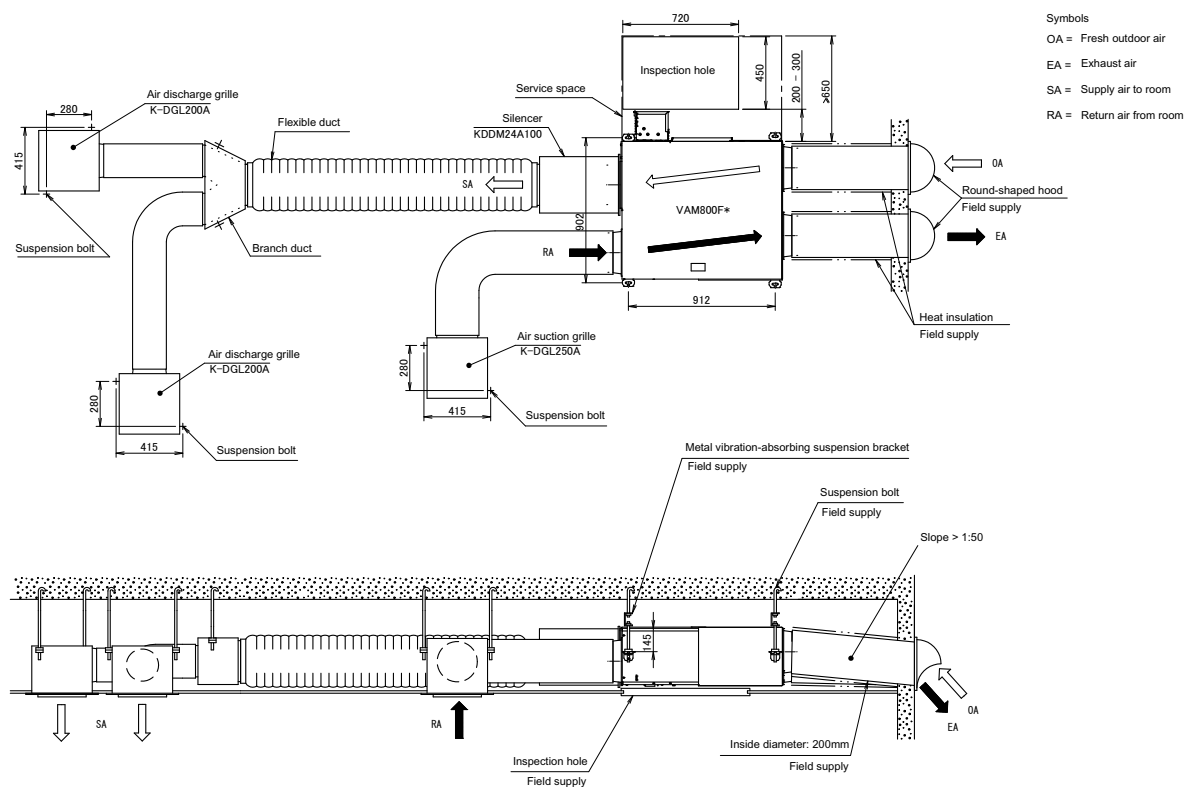
11

VAM650FC



3D081269A

VAM800FC

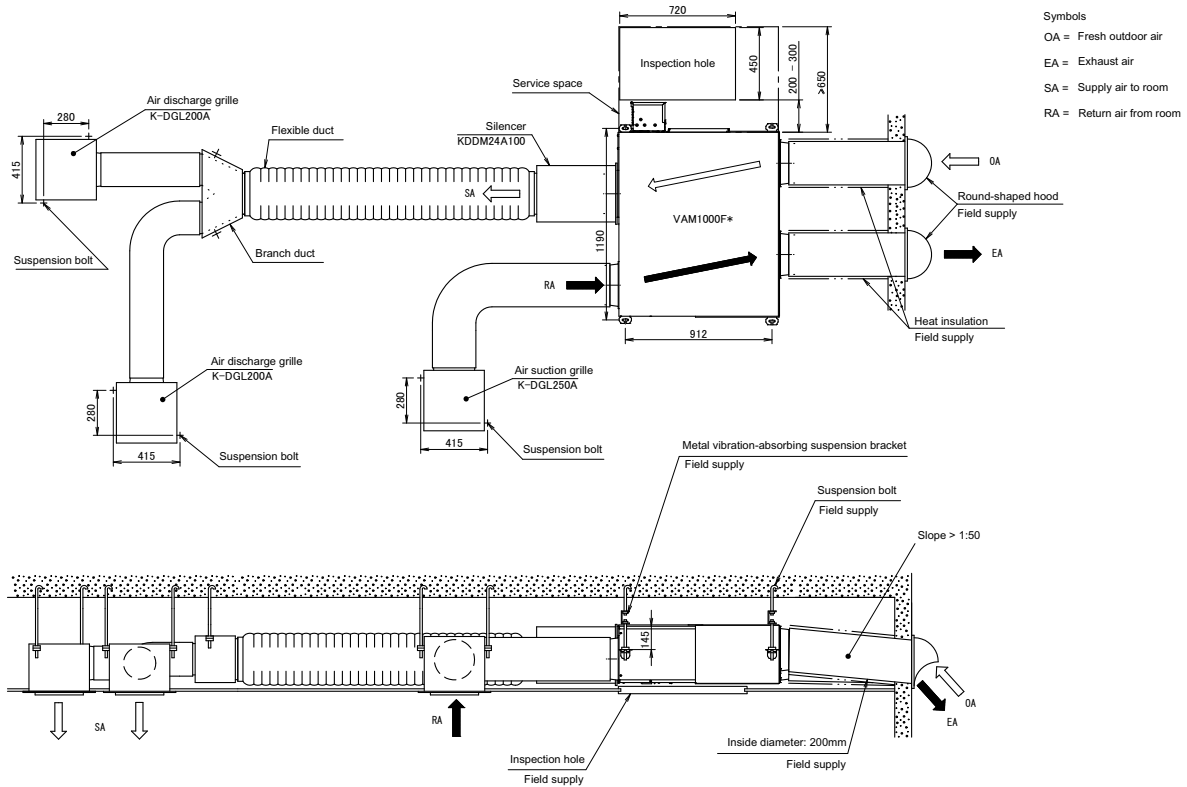


3D081270A

# 11 Installation

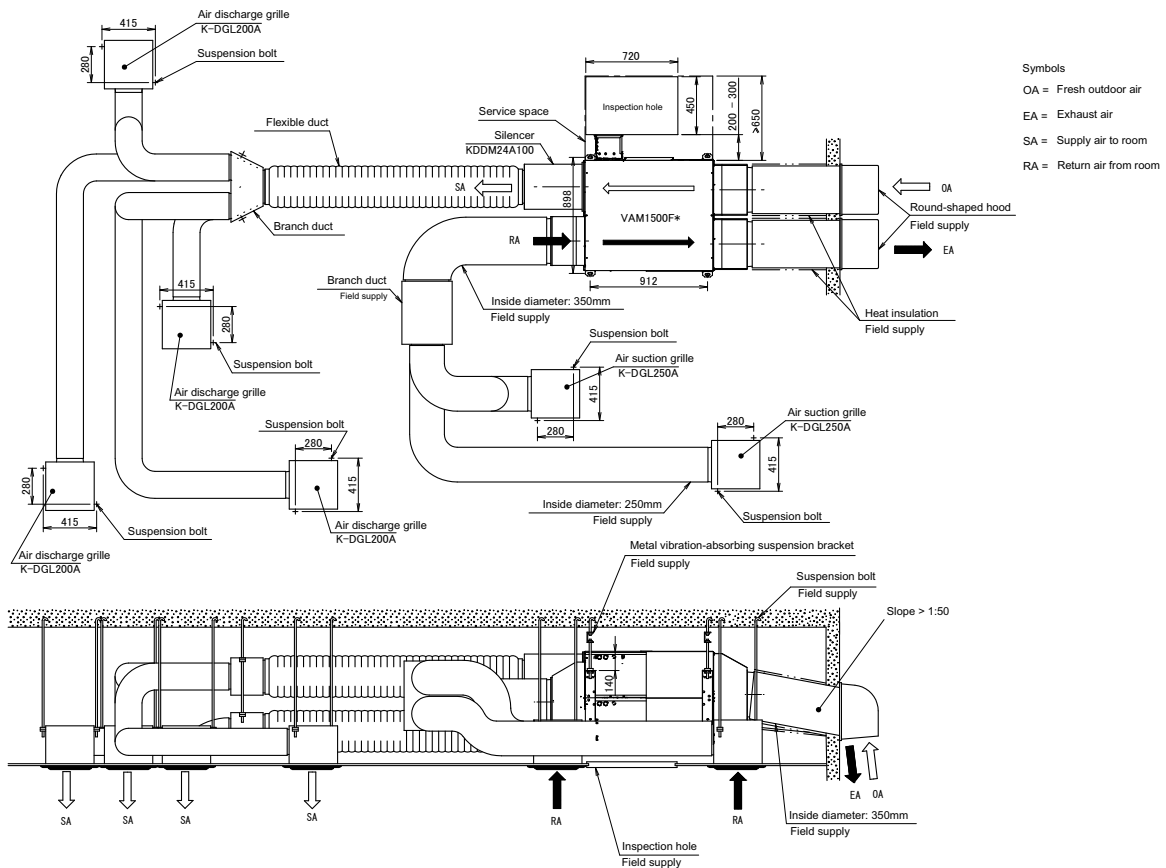
## 11 - 1 Installation Method

### VAM1000FC



3D091271A

### VAM1500FC



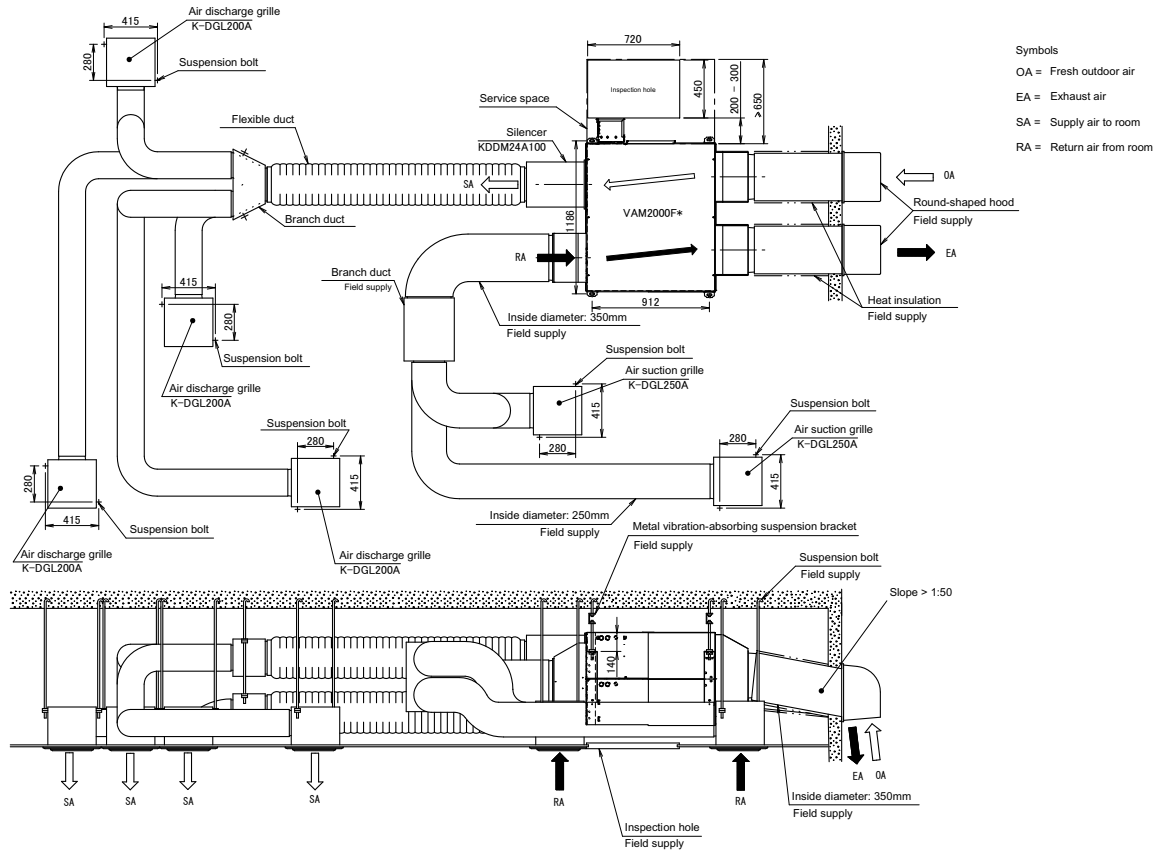
3D081272A

# 11 Installation

## 11 - 1 Installation Method

11

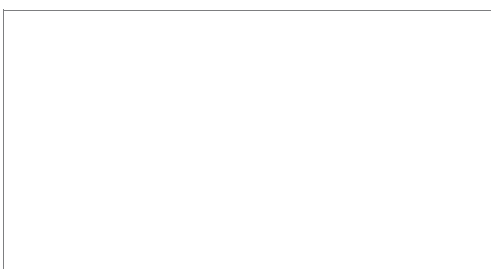
VAM2000FC



3D081273A



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