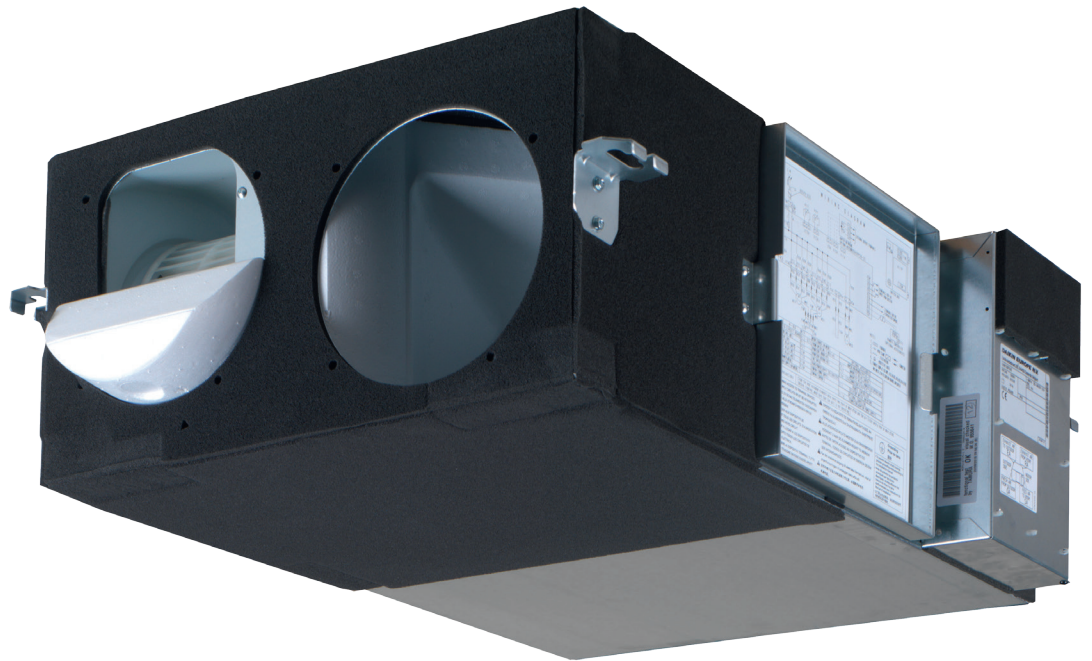


# Heat reclaim ventilation Air Conditioning Technical Data VAM-FC



VAM150FCVE  
VAM250FCVE  
VAM350FCVE  
VAM500FCVE  
VAM650FCVE  
VAM800FCVE  
VAM1000FCVE  
VAM1500FCVE  
VAM2000FCVE



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# TABLE OF CONTENTS

# VAM-FC

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1	<b>Features</b>	4
	VAM-FC	4
2	<b>Specifications</b>	5
3	<b>Options</b>	8
4	<b>Exchange efficiency</b>	9
5	<b>Dimensional drawings</b>	10
6	<b>Centre of gravity</b>	15
7	<b>Wiring diagrams</b>	19
	Wiring Diagrams - Single Phase	19
8	<b>Sound data</b>	23
	Sound Power Spectrum	23
	Sound Pressure Spectrum	28
9	<b>Fan characteristics</b>	35
10	<b>Installation</b>	40
	Installation Method	40
	Filter Installation Method	45

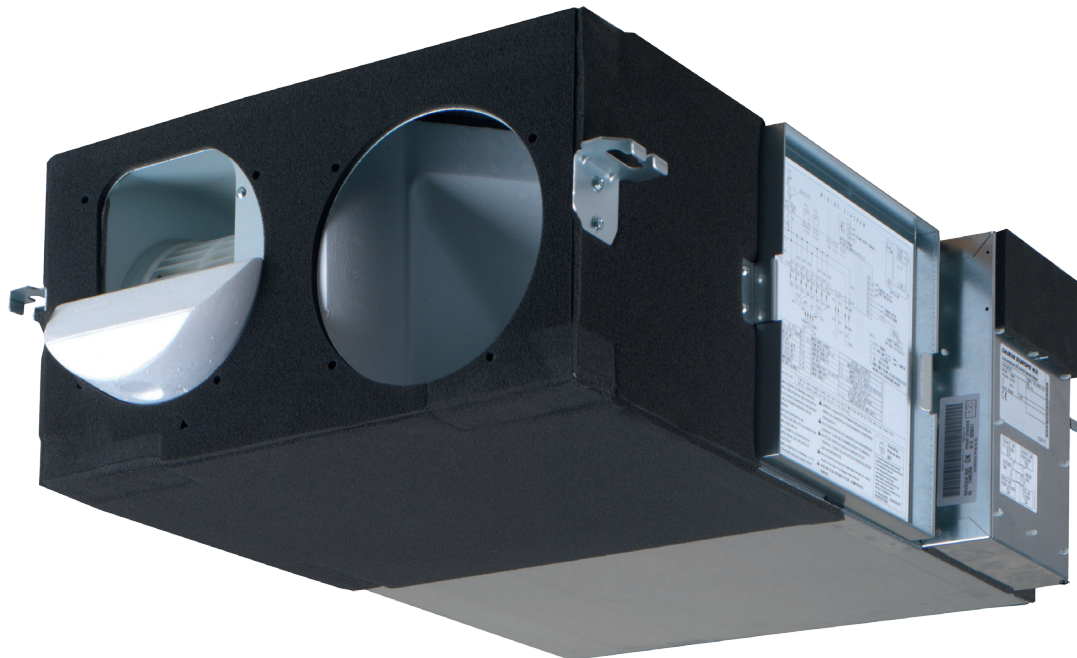
# 1 Features

## 1 - 1 VAM-FC

### Ventilation with heat recovery as standard

**1**

- › 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 m<sup>3</sup>/h
- › Optional medium and fine dust filters ePM10 70% (M6), ePM1 55% (F7), ePM1 70% (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 fresh air solution with optional electrical heater



## 2 Specifications

### 2 - 1 Specifications

Technical specifications				VAM150FC	VAM250FC	VAM350FC	VAM500FC	VAM650FC	
Power input - 50Hz	Heat exchange mode	Nom.	Ultra high	kW	0.132	0.161	0.071 (1)	0.147 (1)	0.188 (1)
			High	kW	0.111	0.079	0.057 (1)	0.101 (1)	0.114 (1)
			Low	kW	0.058	0.064	0.020 (1)	0.049 (1)	0.063 (1)
	Bypass mode	Nom.	Ultra high	kW	0.132	0.161	0.071 (1)	0.147 (1)	0.188 (1)
			High	kW	0.111	0.079	0.057 (1)	0.101 (1)	0.114 (1)
			Low	kW	0.058	0.064	0.020 (1)	0.049 (1)	0.063 (1)
Casing	Material			Galvanised steel plate					
Insulation material				Self-extinguishable urethane foam					
Dimensions	Unit	Height		mm	285		301		364
		Width		mm	776		828		1,000
		Depth		mm	525		816		868
Weight	Unit				24.0		33.0		51.0
Fan	Type			Sirocco fan					
	Air flow rate - 50Hz	Heat exchange mode	Ultra high	m <sup>3</sup> /h	150	250	350 (1)	500 (1)	650 (1)
			High	m <sup>3</sup> /h	140	230	320 (1)	410 (1)	545 (1)
			Low	m <sup>3</sup> /h	105	155	210 (1)	310 (1)	450 (1)
		Bypass mode	Ultra high	m <sup>3</sup> /h	150	250	350 (1)	500 (1)	650 (1)
			High	m <sup>3</sup> /h	140	230	320 (1)	410 (1)	545 (1)
			Low	m <sup>3</sup> /h	105	155	210 (1)	310 (1)	450 (1)
	External static pressure - 50Hz	Ultra high	Pa	90.0	70.0	103 (1)	83.0 (1)	100 (1)	
		High	Pa	87.0	63.0	93.0 (1)	57.0 (1)	73.0 (1)	
		Low	Pa	40.0	25.0	51.0 (1)	35.0 (1)	49.0 (1)	
Fan motor	Quantity			2					
	Output	50 Hz	W	30		80		106	
Temperature exchange efficiency - 50Hz	Ultra high			%	77.0 (2) / 72.0 (3)	74.9 (2) / 69.5 (3)			-
	High			%	78.3 (2) / 72.3 (3)	76.0 (2) / 70.0 (3)			-
	Low			%	82.8 (2) / 73.2 (3)	80.1 (2) / 72.0 (3)			-
Enthalpy exchange efficiency - 50Hz	Cooling	Ultra high	%	60.3 (2)		63.4 (2)		60.3 (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)	
		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 range	Min.			°CDB	-15				
	Max.			°CDB	50				
	Relative humidity			%	80 or less				
Sound pressure level - 50Hz	Heat exchange mode	Ultra high	dBA	27.0	28.0	32.0	33.0	34.5	
		High	dBA	26.0		31.5		33.0	
		Low	dBA	20.5	21.0	23.5	24.5	27.0	
	Bypass mode	Ultra high	dBA	27.0	28.0	32.0	33.5	34.5	
		High	dBA	26.5	27.0	31.0	32.5	34.0	
		Low	dBA	20.5	21.0	24.5	25.5	27.0	
Heat exchange system	Air to air cross flow total heat (sensible + latent heat) exchange								
Heat exchange element	Specially processed non-flammable paper								
Air filter	Type			Multidirectional fibrous fleeces					
Connection duct diameter	mm			100	150	200			
Operation mode	Heat exchange mode, bypass mode, fresh-up mode								
General	Supplier/ Manufacturer details	Name or trademark			Daikin Europe N.V.				
	Product description	Model identifier			VAM150FCVE	VAM250FCVE	VAM350FCVE	VAM500FCVE	VAM650FCVE
Specific energy consumption (SEC)	Cold climate			kWh/(m <sup>2</sup> .a)	-65.4 (4)	-65.1 (4)	-		
	Average climate			kWh/(m <sup>2</sup> .a)	-27.1 (4)	-29.2 (4)	-		
	Warm climate			kWh/(m <sup>2</sup> .a)	-2.51 (4)	-6.10 (4)	-		
SEC class					B / See note 4		-		
Type of product					Bidirectional RVU / See note 5		Heat reclaim ventilation unit		
Type of drive	Multi-speed drive								
Heat recovery system	recuperative								
Thermal efficiency	%			89.1 (3)	80.4 (3)	-			
Maximum flow rate at 100 Pa ESP	Flow rate			m <sup>3</sup> /h	130	207	-		
	Electric power input			W	129	160	-		
Sound power level (Lwa)	dB			40	43	48	50	51	
Reference flow rate	m <sup>3</sup> /s			0.025	0.035	-			
Reference pressure difference	Pa			50.0					
Specific power input	W/(m <sup>3</sup> /h)			0.616 (5)	0.454 (5)	-			

## 2 Specifications

### 2 - 1 Specifications

2

Technical specifications			VAM150FC	VAM250FC	VAM350FC	VAM500FC	VAM650FC
Ventilation control	Type		Clock control				
	Factor		0.950 (4)				
Maximum external leakage	%		7.42	4.66	4.13	2.89	3.81
Maximum internal leakage	%		4.50		8.10	8.20	7.70
Filter service warning			Displayed on controller / See note 7				
Instructions for pre-/disassembly			<a href="https://www.daikin.eu/en_us/about/daikin-innovations/seasonal-efficiency.html">https://www.daikin.eu/en_us/about/daikin-innovations/seasonal-efficiency.html</a>				
Annual electricity consumption	kWh/a		771 (4)	580 (4)			
Annual heating saved	Cold climate	kWh/a	8,941 (4)	8,426 (4)			
	Average climate	kWh/a	4,571 (4)	4,307 (4)			
	Warm climate	kWh/a	2,067 (4)	1,948 (4)			

Technical specifications				VAM800FC	VAM1000FC	VAM1500FC	VAM2000FC	
Power input - 50Hz	Heat exchange mode	Nom.	Ultra high	kW	0.320 (1)	0.360 (1)	0.617 (1)	0.685 (1)
			High	kW	0.241 (1)	0.309 (1)	0.463 (1)	0.575 (1)
			Low	kW	0.185 (1)	0.198 (1)	0.353 (1)	0.295 (1)
	Bypass mode	Nom.	Ultra high	kW	0.320 (1)	0.360 (1)	0.617 (1)	0.685 (1)
			High	kW	0.241 (1)	0.309 (1)	0.463 (1)	0.575 (1)
			Low	kW	0.185 (1)	0.198 (1)	0.353 (1)	0.295 (1)
Casing	Material		Galvanised steel plate					
Insulation material			Self-extinguishable urethane foam					
Dimensions	Unit	Height	mm	364		726		
		Width	mm	1,000		1,510		
		Depth	mm	868	1,160	868	1,160	
Weight	Unit		kg	54.0	63.0	128	145	
Fan	Type			Sirocco fan				
	Air flow rate - 50Hz	Heat exchange mode	Ultra high	m <sup>3</sup> /h	800 (1)	1,000 (1)	1,500 (1)	2,000 (1)
			High	m <sup>3</sup> /h	725 (1)	950 (1)	1,350 (1)	1,880 (1)
			Low	m <sup>3</sup> /h	665 (1)	820 (1)	1,230 (1)	1,500 (1)
	Bypass mode	Ultra high	High	m <sup>3</sup> /h	800 (1)	1,000 (1)	1,500 (1)	2,000 (1)
			High	m <sup>3</sup> /h	725 (1)	950 (1)	1,350 (1)	1,880 (1)
			Low	m <sup>3</sup> /h	665 (1)	820 (1)	1,230 (1)	1,500 (1)
	External static pressure - 50Hz	Ultra high	High	Pa	109 (1)	147 (1)	116 (1)	132 (1)
			High	Pa	94.0 (1)	135 (1)	97.0 (1)	118 (1)
			Low	Pa	78.0 (1)	100 (1)	80.0 (1)	77.0 (1)
Fan motor	Quantity			2		4		
	Output 50 Hz		W	210				
Enthalpy exchange efficiency - 50Hz	Cooling	Ultra high	%	62.4 (2)		63.4 (2)		
		High	%	63.6 (2)	64.2 (2)	65.0 (2)	64.5 (2)	
		Low	%	64.6 (2)	66.3 (2)	66.2 (2)	67.8 (2)	
	Heating	Ultra high	%	67.6 (2)		68.6 (2)		
		High	%	68.8 (2)	69.4 (2)	69.7 (2)	69.5 (2)	
		Low	%	69.8 (2)	71.5 (2)	70.5 (2)	72.1 (2)	
Operation range	Min.		°CDB	-15				
	Max.		°CDB	50				
	Relative humidity		%	80 or less				
Sound pressure level - 50Hz	Heat exchange mode	Ultra high	dB(A)	36.0		39.5	40.0	
		High	dB(A)	34.5	35.0	38.0		
		Low	dB(A)	31.0		34.0	35.0	
Sound pressure level - 50Hz	Bypass mode	Ultra high	dB(A)	36.0		40.5	40.0	
		High	dB(A)	34.5	35.5	38.0		
		Low	dB(A)	31.0		33.5	35.0	
Heat exchange system			Air to air cross flow total heat (sensible + latent heat) exchange					
Heat exchange element			Specially processed non-flammable paper					
Air filter	Type		Multidirectional fibrous fleeces					
Connection duct diameter		mm	250		350			
Operation mode			Heat exchange mode, bypass mode, fresh-up mode					
General	Supplier/ Manufacturer details	Name or trademark	Daikin Europe N.V.					
	Product description	Model identifier	VAM800FCVE	VAM1000FCVE	VAM1500FCVE	VAM2000FCVE		
Type of product			Heat reclaim ventilation unit					
Type of drive			Multi-speed drive					
Heat recovery system			recuperative					
Sound power level (Lwa)		dB	53		55	57		
Maximum external leakage	%		3.09	6.59	3.09	6.59		
Maximum internal leakage	%		7.70	6.50	7.70	6.50		
Filter service warning			Displayed on controller / See note 7					

6

## 2 Specifications

### 2 - 1 Specifications

Electrical specifications			VAM150FC	VAM250FC	VAM350FC	VAM500FC	VAM650FC	
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	
	Maximum fuse amps (MFA)	A	15.0			16.0		
	Fan motor rated output	kW	0.03x2		0.08x2		0.106x2	
	Full load amps (FLA)	Fan motor	A	0.400			0.600	0.700
		Fan motor 2	A	0.400			0.600	0.700

Electrical specifications			VAM800FC	VAM1000FC	VAM1500FC	VAM2000FC	
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	2.50	3.00	5.00		
	Maximum fuse amps (MFA)	A	16.0				
	Fan motor rated output	kW	0.210x2		0.210x4		
	Full load amps (FLA)	Fan motor	A	1.10	1.30	2.20	
		Fan motor 2	A	1.10	1.30	2.20	
		Fan motor 3	A	-		2.20	
	Fan motor 4	A	-		2.20		

(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) In accordance with commission regulation (EU) No 1254/2014 |

(5) At reference flow rate in accordance with commission regulation (EU) No 1254/2014 |

(6) In accordance with commission regulation (EU) No 1253/2014 |

(7) 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. |

(8) Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits. |

(9) Maximum allowable voltage range variation between phases is 2%. |

(10) MCA/MFA:  $MCA = 1.25 \times FLA(FM1) + FLA(FM2)$ ;  $MFA \leq 4 \times FLA$ ; (VAM2000 is regarded as 2x VAM1000) |

(11) Select wire size based on the value of MCA

# 3 Options

## 3 - 1 Options

3

### VAM150-250FC

Type Ceiling-mounted  
Installation with duct

Item		Model		
		VAM150FCVE	VAM250FCVE	
Control systems	Remote control	BRC301B61		
	Remote control   Wired type	BRC1D52		
		BRC1E53A7 *		
		BRC1E53B7 *		
		BRC1E53C7 *		
		DCS302C51		
	Centralised control systems	Central remote control	DCS302C51	
		Unified ON/OFF controller	General DCS301B61 or DCS301B51 For EU market	
		Schedule timer	DST301B51	
		iTouch Manager	DCM601A51	
		iTouch Controller	DCS601C51	
		iTab Controller	DCC601A51	
		Modbus DIII adaptor	EKMBDXA7V1	
	Adaptor PCB	** Wiring adaptor for electrical appendices	General	KRP2A61 or KRP2A51 For EU market
		** For humidifiers	KRP50-2	
*** Installation box for adaptor PCB		KRP50-2A90		
For heater control kit		BRP4A50		
Miscellaneous	Replacement air filter	YAFF323F15	YAFF323F25	
	High-efficiency filter	YAFM323F15	YAFM323F25	

Notes

- \* BRC1E53A7 Included languages are: English, German, French, Italian, Spanish, Portuguese, and Dutch.
- \* BRC1E53B7 Included languages are: English, Czech, Croatian, Hungarian, Slovenian, Romanian, and Bulgarian.
- \* BRC1E53C7 Included languages are: English, Russian, Greek, Turkish, Polish, Albanian, and Slovak.
- \*\* 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.

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### 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							
		BRC1E53A7 # / BRC1E53B7 # / BRC1E53C7 # / BRC1H519 * 7 / BRC1H81 * 7							
		DCS302C51							
	Centralised control systems	Unified ON/OFF controller	DCS301B51						
		iTouch Manager	DCM601A51						
		iTouch Controller	DCS601C51						
		iTab Controller	DCC601A51						
		Modbus ·DIII· adaptor	EKMBDXA7V1						
	Adaptor PCB	Wiring adaptor for electrical appendices	KRP2A51 + Installation box ·KRP1BA101·						
For heaters or humidifiers		BRP4A50A							
Mounting plate		----					EKMPVAM ##		
Miscellaneous	Silencer	Model	---	KDDM24B50	KDDM24B100	KDDM24B100	KDDM24B100	KDDM24B100 x 2	KDDM24B100 x 2
		Outside diameter [mm]	---	∅200	∅200	∅250	∅250	∅250	∅250
	High-efficiency filter	ePM10 70% (M6)	EKAFV50F6		EKAFV80F6		EKAFV100F6	EKAFV80F6 x 2	EKAFV100F6 x 2
		ePM10 70% ( F7)	EKAFV50F7		EKAFV80F7		EKAFV100F7	EKAFV80F7 x 2	EKAFV100F7 x 2
ePM10 70% (F8)		EKAFV50F8		EKAFV80F8		EKAFV100F8	EKAFV80F8 x 2	EKAFV100F8 x 2	
CO2	Sensor	BRYMA65	BRYMA65	BRYMA65	BRYMA100	BRYMA100	BRYMA200	BRYMA200	

Notes

1. # BRC1E53A7 Included languages are: English, German, French, Italian, Spanish, Portuguese, and Dutch.
2. # BRC1E53B7 Included languages are: English, Czech, Croatian, Hungarian, Slovenian, Romanian, and Bulgarian.
3. # BRC1E53C7 Included languages are: English, Russian, Greek, Turkish, Polish, Albanian, and Slovak.
4. ## To install an adaptor PCB on ·VAM1500FC/VAM2000FC· units, mounting plate ·EKMPVAM· is required.
5. Humidifiers and heaters cannot be combined.
6. 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.

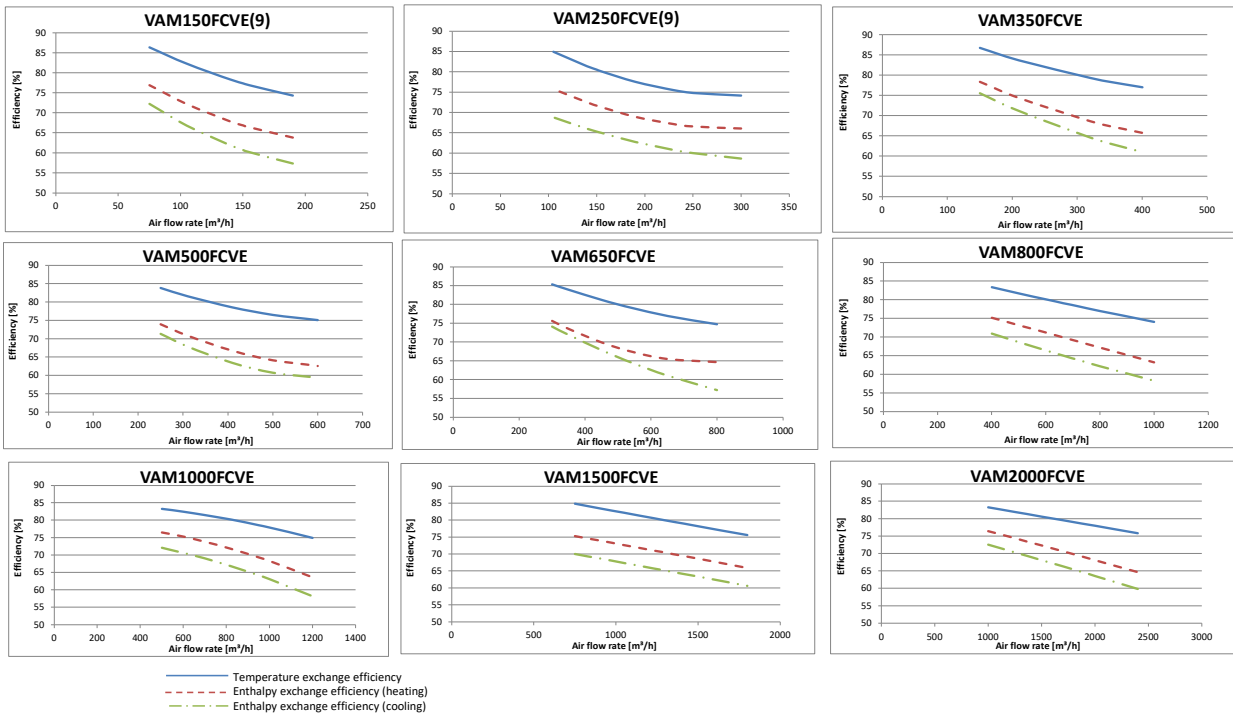
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# 4 Exchange efficiency

## 4 - 1 Exchange efficiency

### VAM-FC

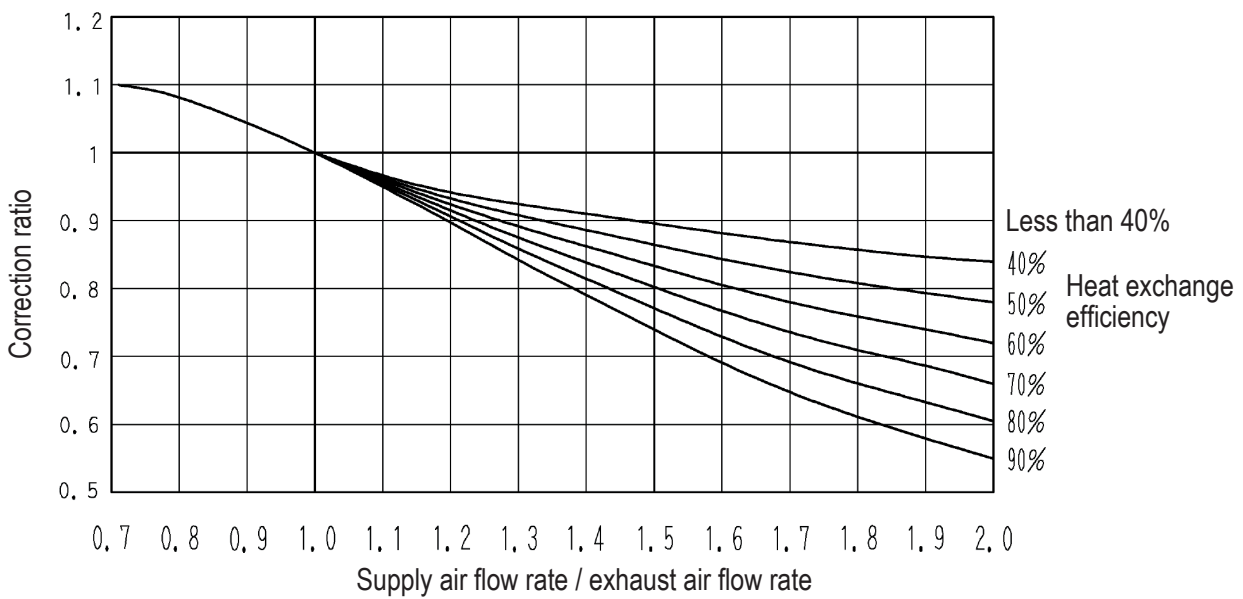


— Temperature exchange efficiency  
 - - - Enthalpy exchange efficiency (heating)  
 ···· Enthalpy exchange efficiency (cooling)

Notes  
 1. Efficiency according to JIS B 8628

3D100465A

### VAM-FC



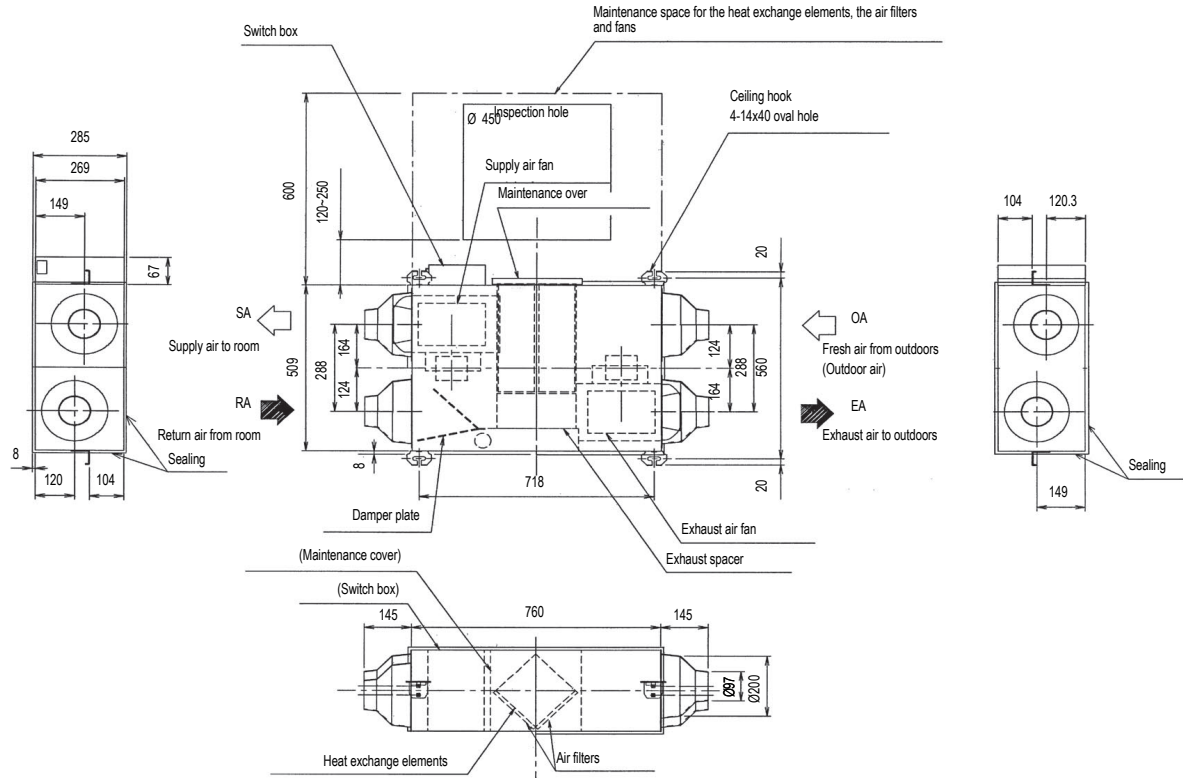
4D023764A

# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

5

### VAM150FC

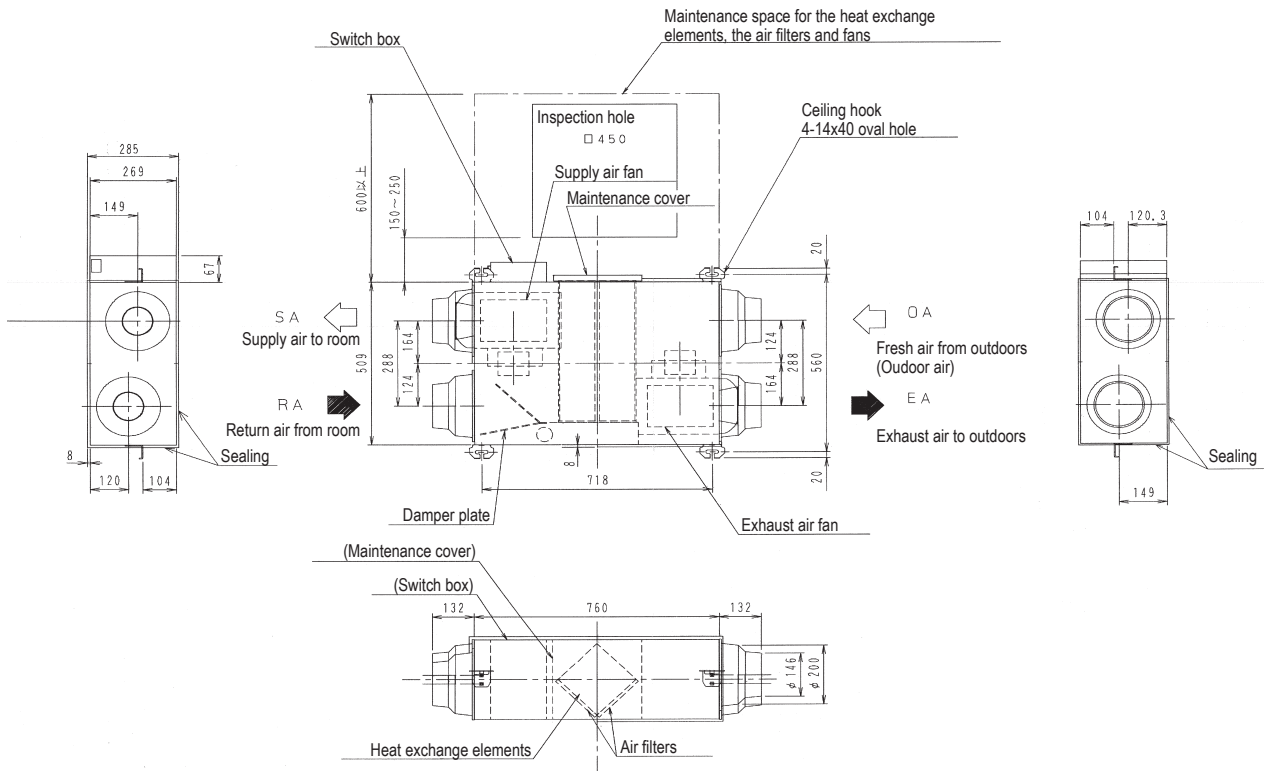


**NOTE**

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

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### VAM250FC



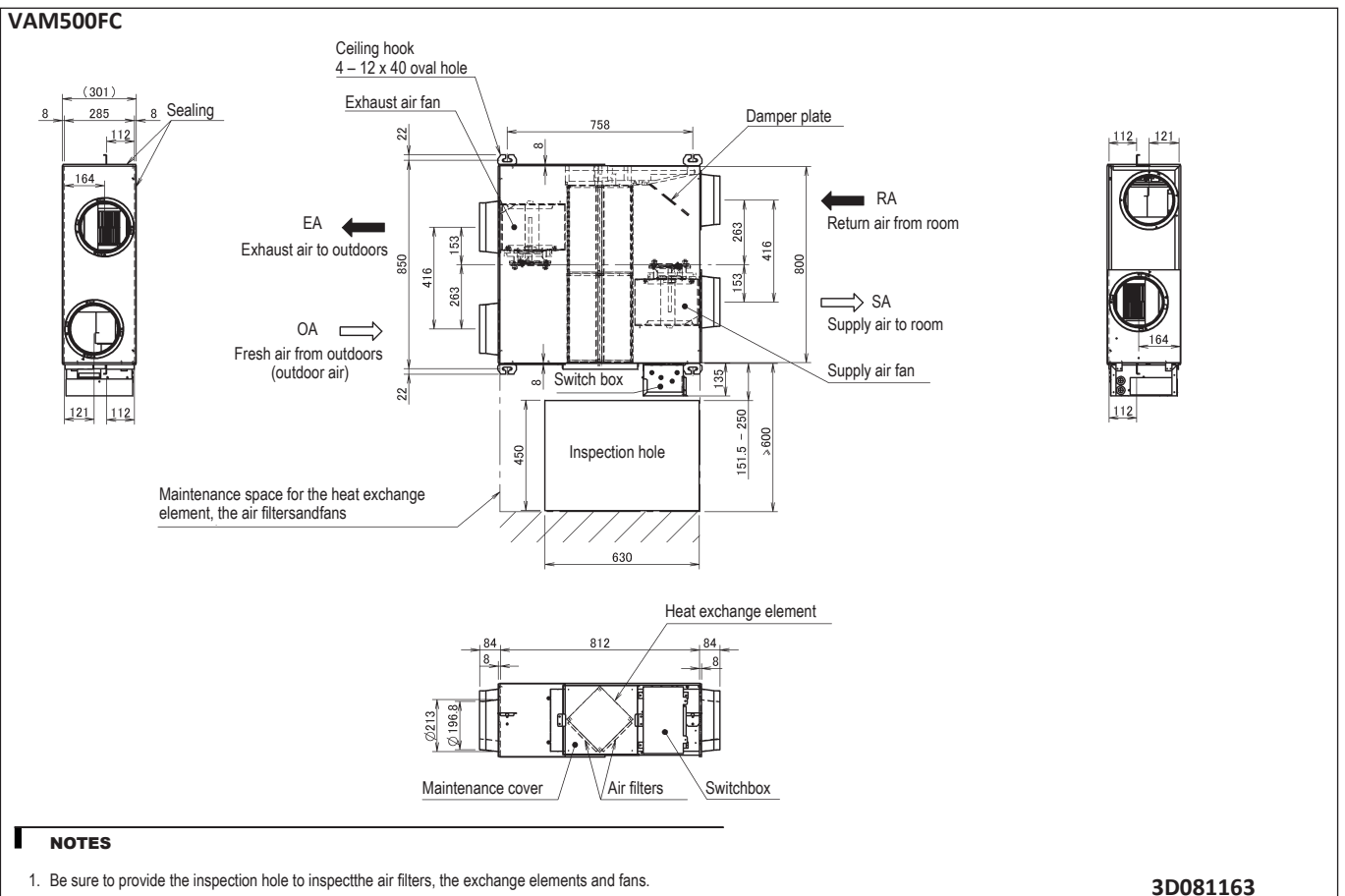
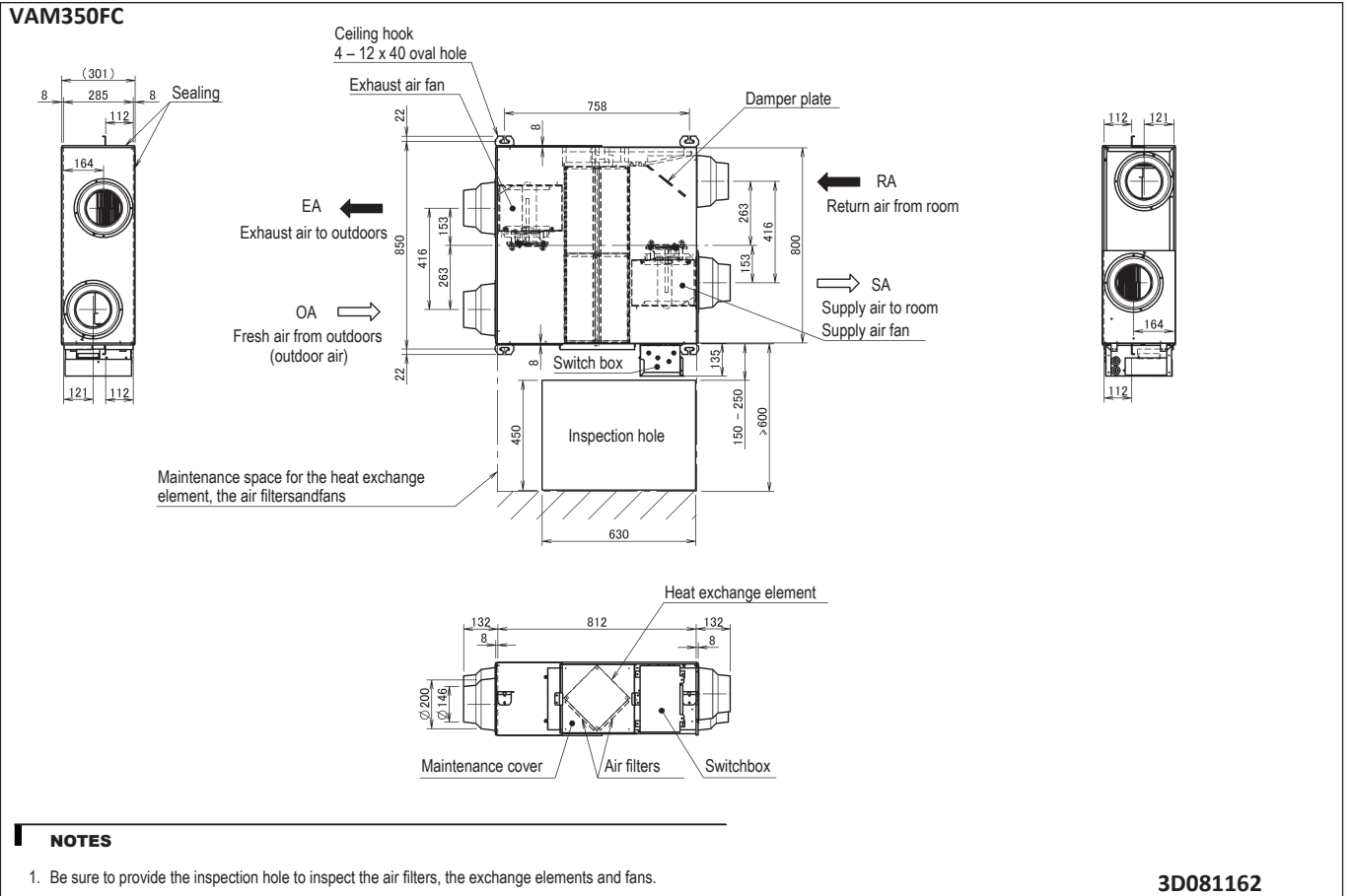
**REMARK**

Be sure to provide the inspection hole (450x450mm) to inspect the air filters, the exchange elements and fans.

3TW27884-1

# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

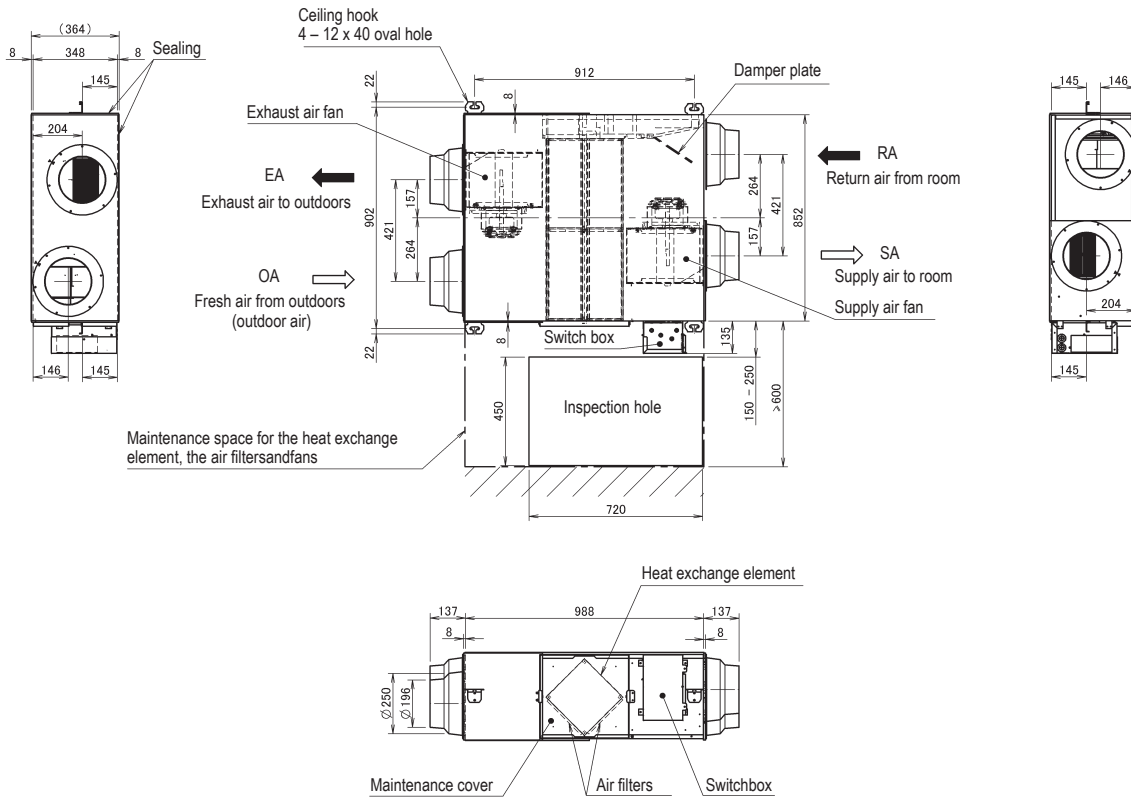


# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

5

### VAM650FC

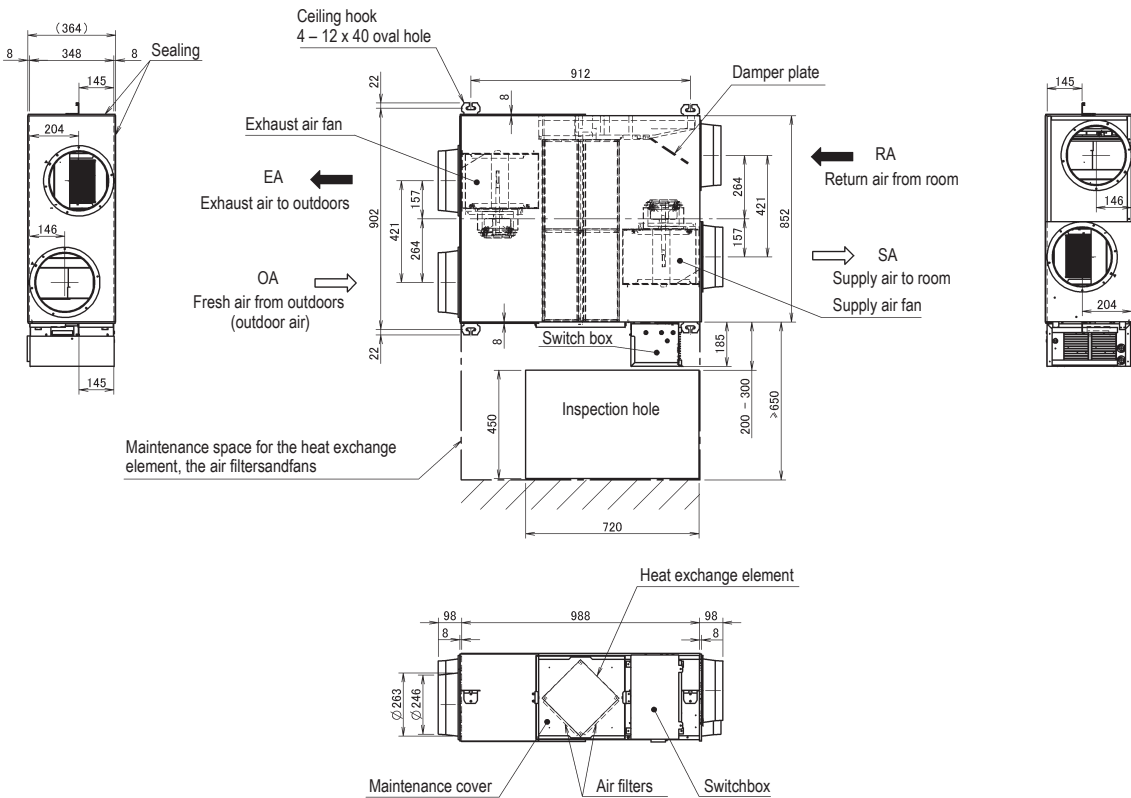


**NOTES**

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

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### VAM800FC



**NOTES**

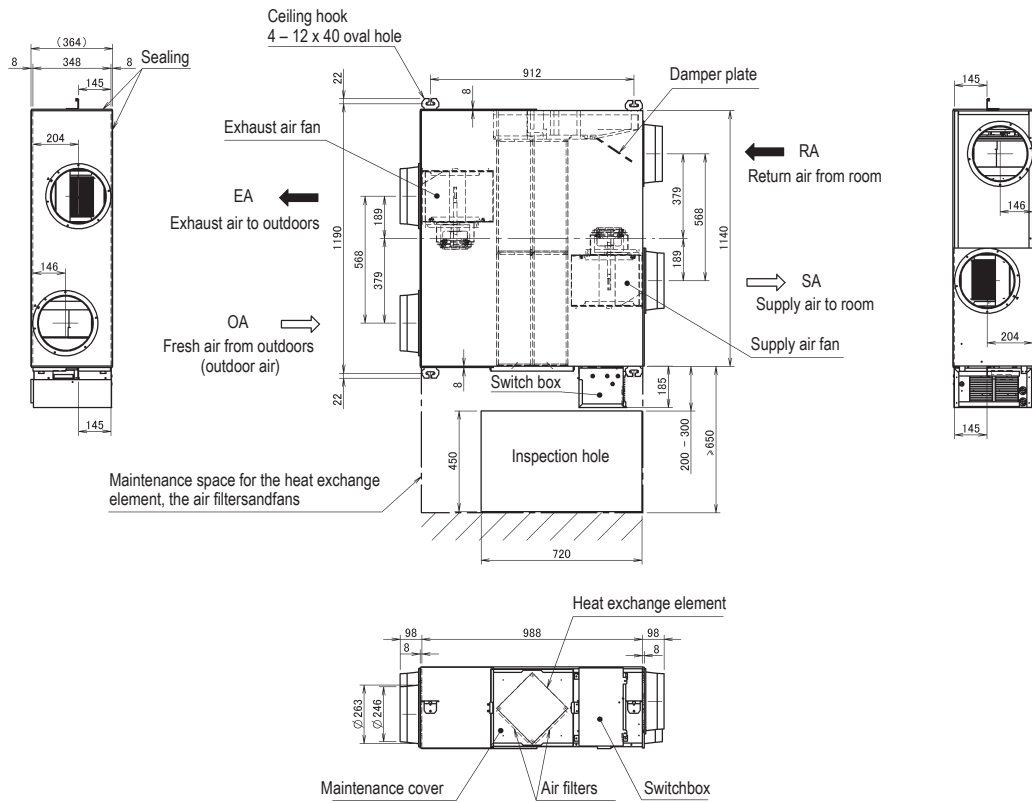
1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

3D081165

# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

VAM1000FC

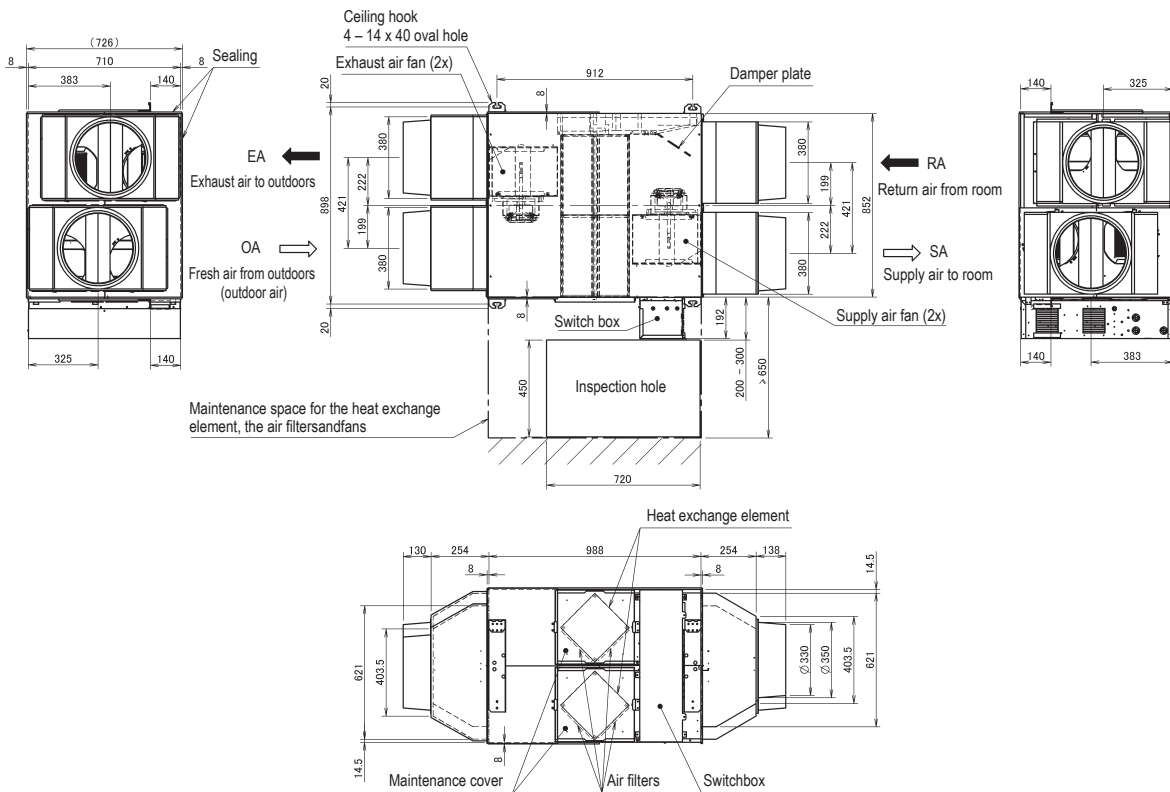


**NOTES**

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

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VAM1500FC



**NOTES**

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

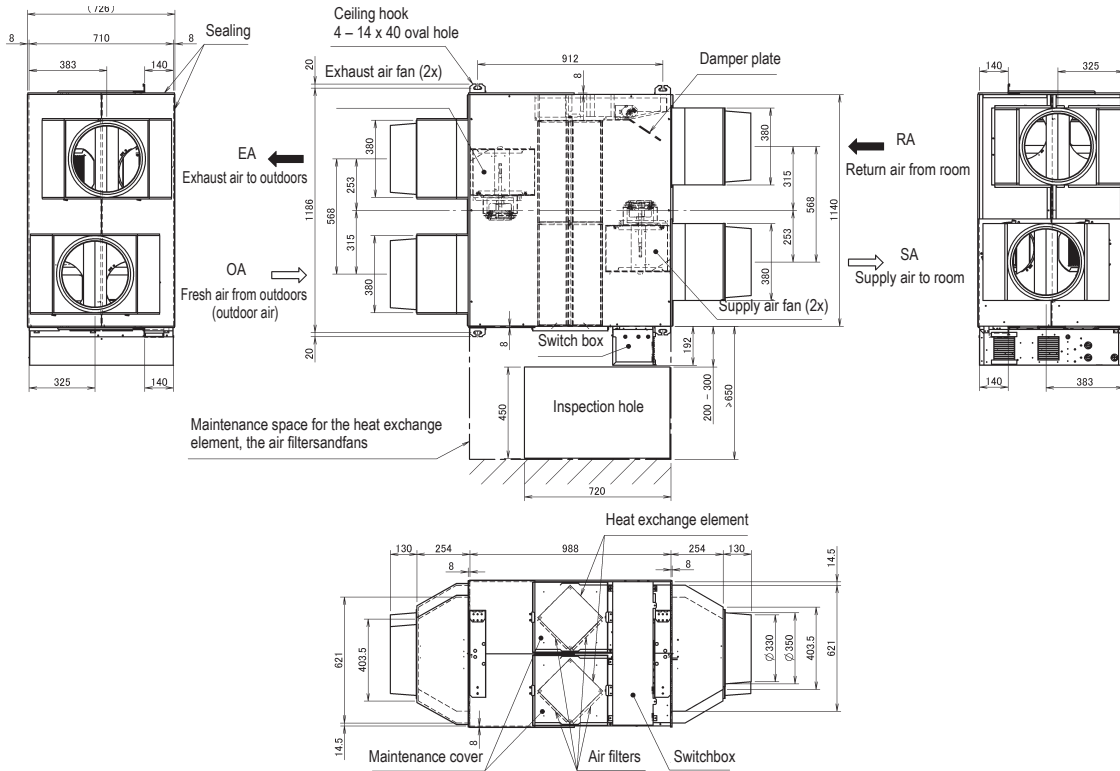
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# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

5

VAM2000FC



**NOTES**

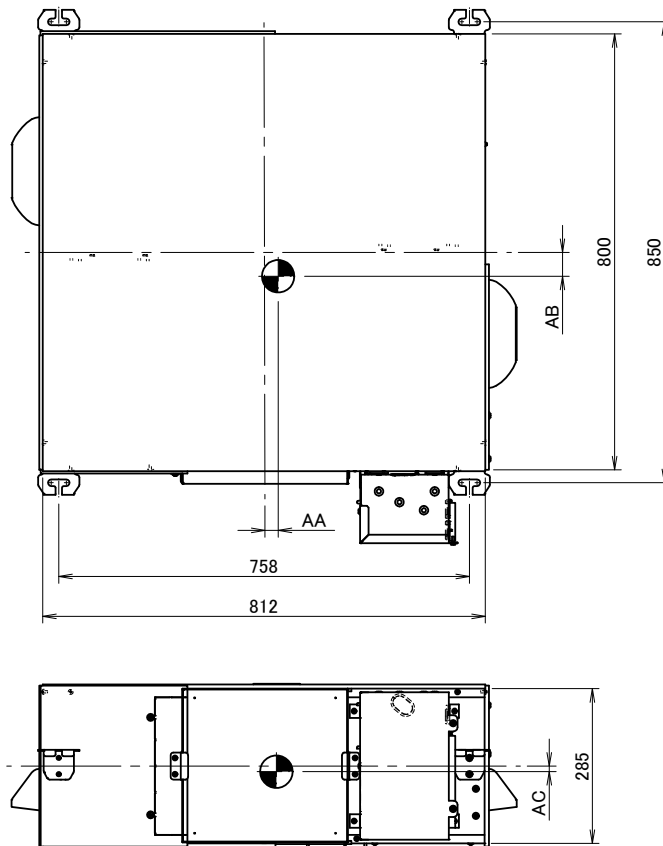
1. Be sure to provide the inspection hole to inspect the air filters, the exchange elements and fans.

3D081168

# 6 Centre of gravity

## 6 - 1 Centre of Gravity

VAM350-500FC



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

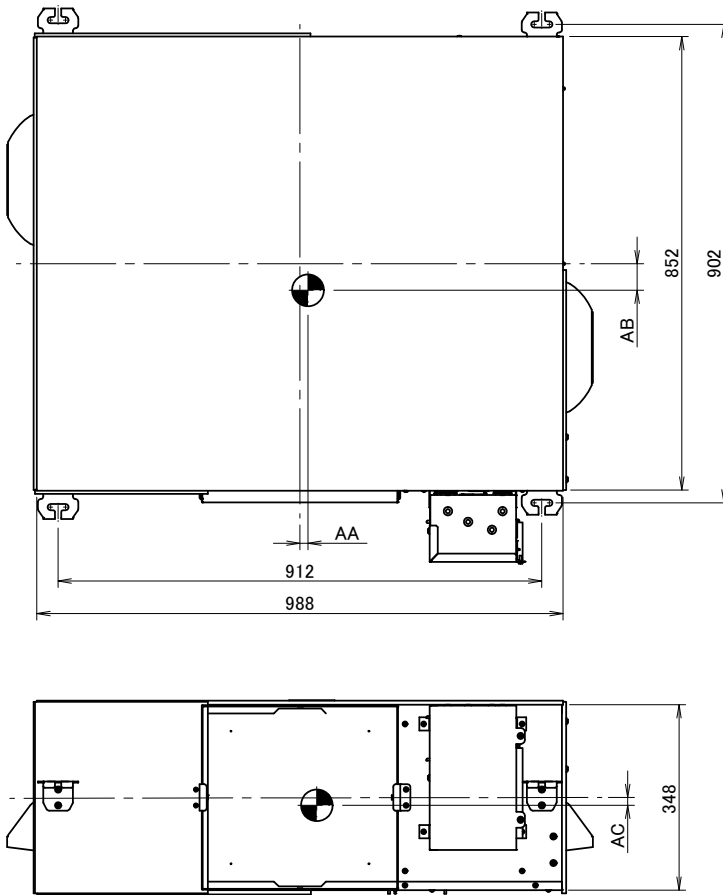
4D081262A

# 6 Centre of gravity

## 6 - 1 Centre of Gravity

6

VAM650-800FC



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

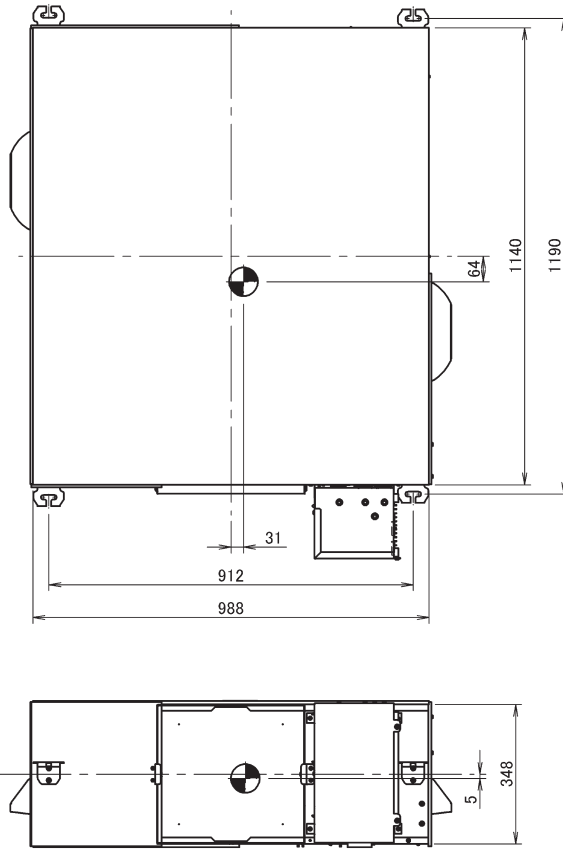
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# 6 Centre of gravity

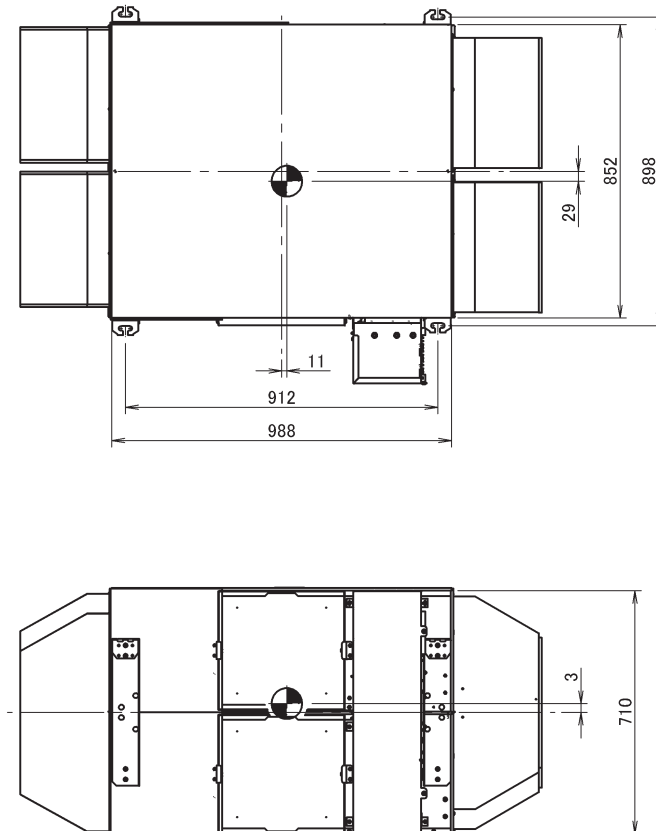
## 6 - 1 Centre of Gravity

VAM1000FC



4D081264

VAM1500FC



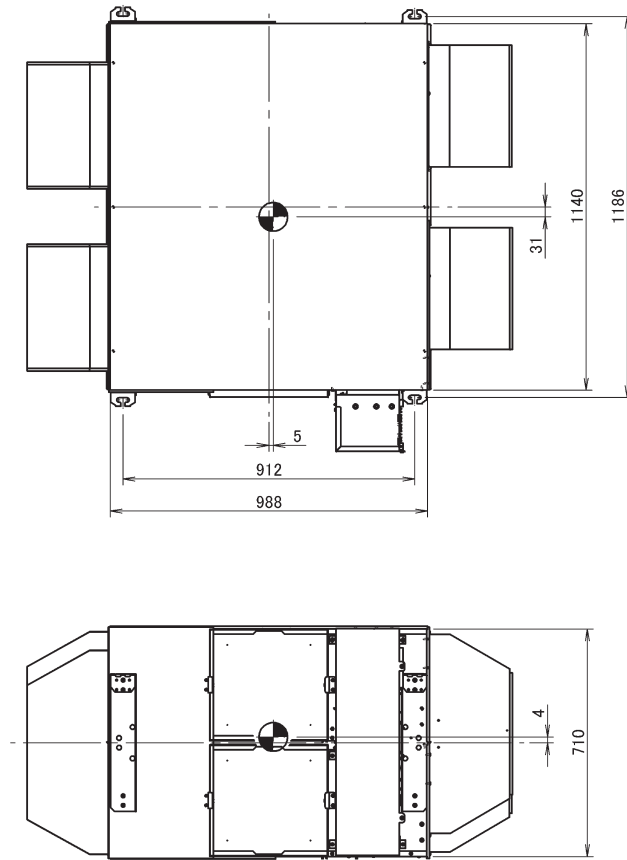
4D081265

# 6 Centre of gravity

## 6 - 1 Centre of Gravity

6

VAM2000FC

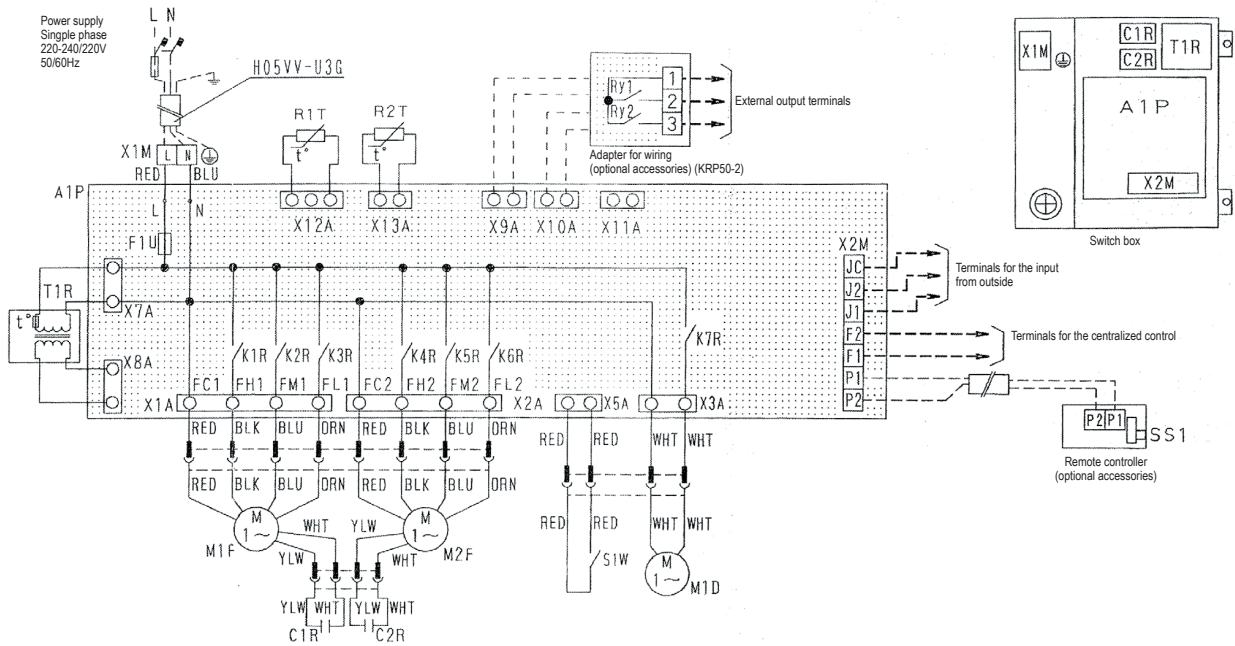


4D081266

# 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

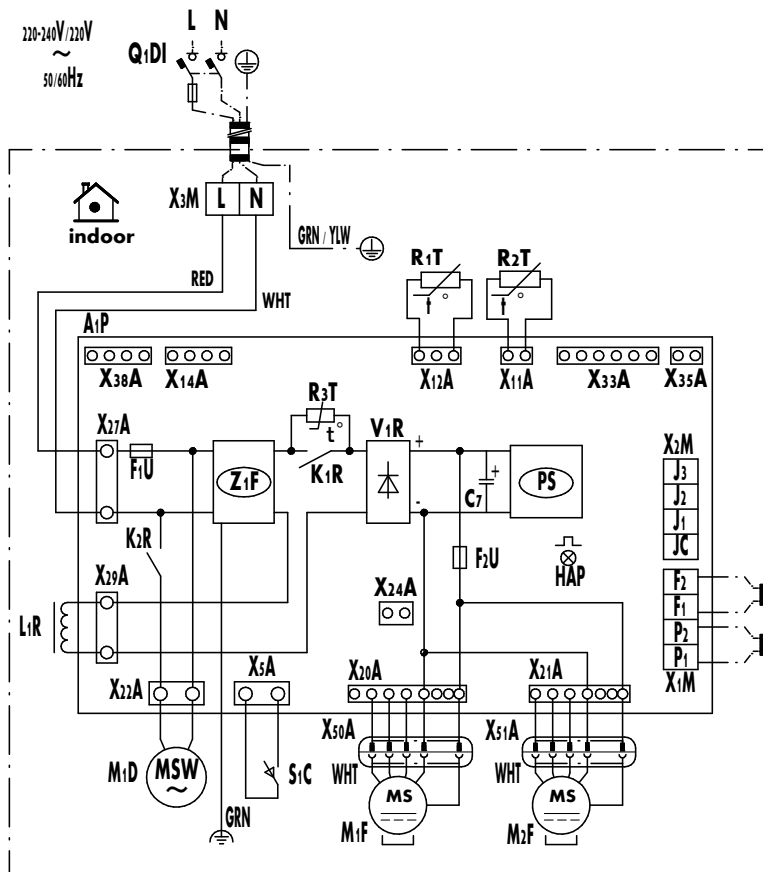
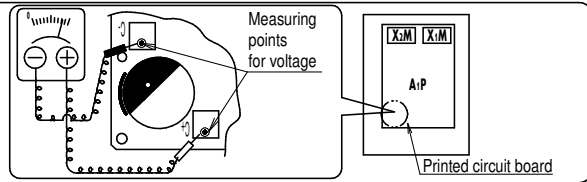
### VAM350-650FC

7

Caution when performing service inside the EL. Compo. box

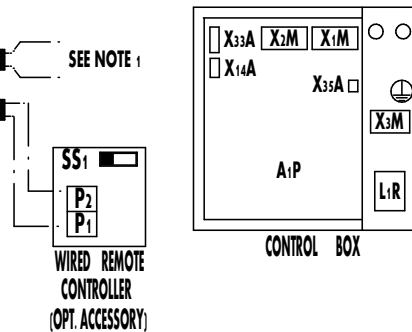
**WARNING** Caution for ELECTRIC SHOCK

- Do not open the EL. Compo. box cover for 10 minutes after the power supply is turned off.
- 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.



NOTES:

- IN CASE YOU USE THE CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED MANUAL.
- 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)
- FOR DETAILS OF CONNECTION SEE THE ATTACHED MANUAL OF THE OPTION KIT.
- SS1(A1P) HAS ALREADY BEEN SET TO "NOR." AT FACTORY SET. THE UNIT WILL NOT RUN IF THE SETTING IS CHANGED.
- L: LIVE, N: NEUTRAL, : FIELD WIRING
- : TERMINAL STRIP : CONNECTOR  
: CONNECTION : RELAY CONNECTOR  
: PROTECTIVE EARTH (SCREW)  
: NOISELESS EARTH



A1P PRINTED CIRCUIT BOARD		Q1DI FIELD EARTH LEAK DETECTOR (MAX. 300mA)	REMOTE CONTROLLER
C1	CAPACITOR (M1F)	R1T THERMISTOR (INDOOR AIR)	SS1 SELECTOR SWITCH
F1U	FUSE T. 6.3A, 250V (A1P)	R2T THERMISTOR (OUTDOOR AIR)	CONNECTOR FOR OPTION (SEE NOTE 3)
F1V	FUSE T. 5A, 250V (A1P)	R3T THERMISTOR (PTC)	X14A CONNECTOR (CO2 SENSOR)
HAP	PILOT LAMP (SERVICE MONITOR-GREEN)	S1C LIMIT SWITCH DAMPER MOTOR	X24A CONNECTOR (OUTSIDE DAMPER)
K1R	MAGNETIC RELAY	X1M TERMINAL (A1P)	X33A CONNECTOR (CONTACT PCB)
K2R	MAGNETIC RELAY	X2M TERMINAL (OUTSIDE INPUT) (A1P)	X35A CONNECTOR (APPENDICES PCB)
L1R	REACTOR	X3M TERMINAL (POWER SUPPLY)	
M1F	MOTOR (SUPPLY AIR FAN)	V1R DIODE BRIDGE	
M2F	MOTOR (EXHAUST AIR FAN)	Z1F NOISE FILTER	
M1D	MOTOR (DAMPER)		
PS	SWITCHING POWER SUPPLY (A1P)		

COLORS:  
 BLK: BLACK  
 BLU: BLUE  
 ORG: ORANGE  
 RED: RED  
 WHT: WHITE  
 YLW: YELLOW  
 GRN: GREEN

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# 7 Wiring diagrams

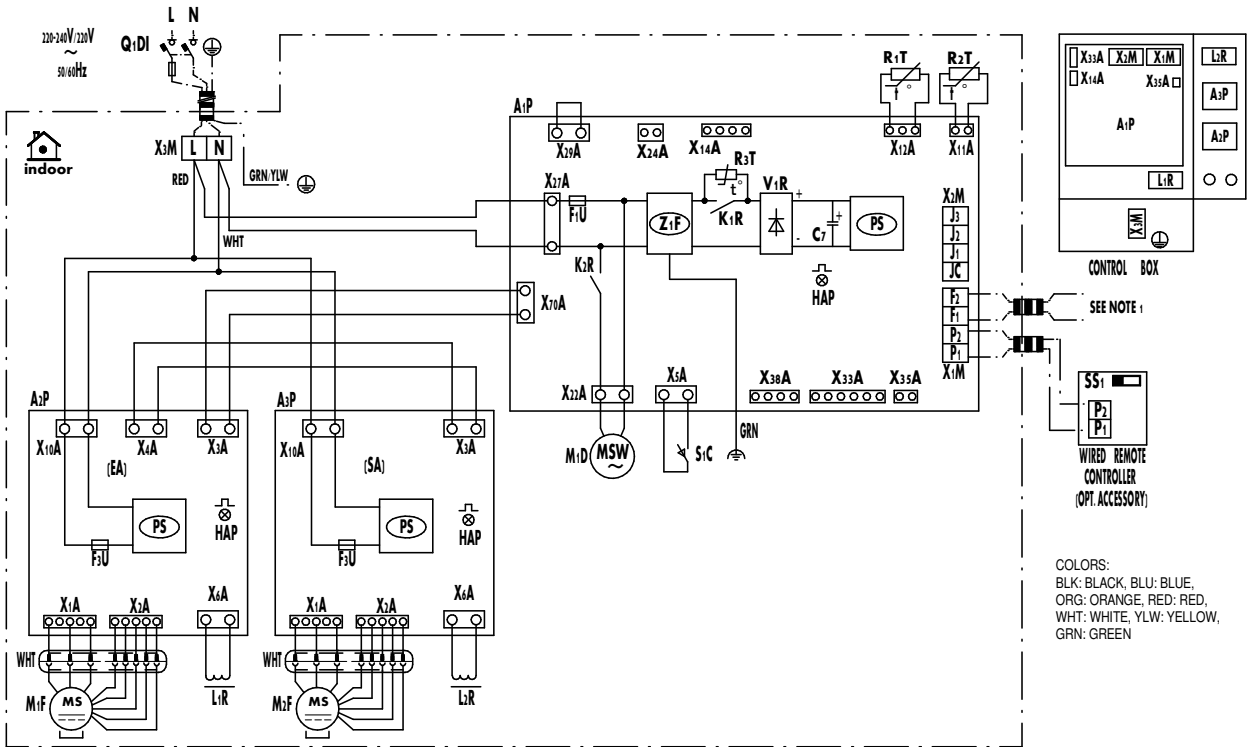
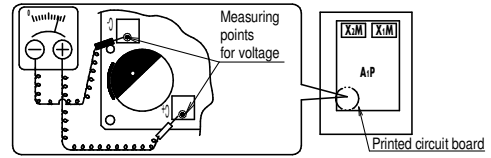
## 7-1 Wiring Diagrams - Single Phase

### VAM800-1000FC

Caution when performing service inside the EL. Compo. box

**WARNING** Caution for ELECTRIC SHOCK

- Do not open the EL.Compo. box cover for 10 minutes after the power supply is turned off.
- After opening the EL. Compo. box, measure (on A1P~A3P) 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.



COLORS:  
BLK: BLACK, BLU: BLUE,  
ORG: ORANGE, RED: RED,  
WHT: WHITE, YLW: YELLOW,  
GRN: GREEN

A1P	PRINTED CIRCUIT BOARD	M1D	MOTOR (DAMPER)	REMOTE CONTROLLER	
A2P	PRINTED CIRCUIT BOARD ASSY (FAN)	PS	SWITCHING POWER SUPPLY	SS1	SELECTOR SWITCH
A3P	PRINTED CIRCUIT BOARD ASSY (FAN)	Q1DI	FIELD EARTH LEAK DETECTOR (MAX. 300mA)		CONNECTOR FOR OPTION (SEE NOTE 3)
C1	CAPACITOR (M1F)			X14A	CONNECTOR (CO2 SENSOR)
F1U	FUSE T. 6.3A, 250V (A1P)	R1T	THERMISTOR (INDOOR AIR)	X24A	CONNECTOR (OUTSIDE DAMPER)
F3U	FUSE T. 6.3A, 250V (A2P, A3P)	R2T	THERMISTOR (OUTDOOR AIR)	X33A	CONNECTOR (CONTACT PCB)
HAP	PILOT LAMP (SERVICE MONITOR-GREEN)	R3T	THERMISTOR (PTC)	X35A	CONNECTOR (APPENDICES PCB)
K1R	MAGNETIC RELAY	S1C	LIMIT SWITCH DAMPER MOTOR		
K2R	MAGNETIC RELAY	X1M	TERMINAL (A1P)		
L1R	REACTOR	X2M	TERMINAL (OUTSIDE INPUT) (A1P)		
L2R	REACTOR	X3M	TERMINAL (POWER SUPPLY)		
M1F	MOTOR (EXHAUST AIR FAN)	V1R	DIODE BRIDGE		
M2F	MOTOR (SUPPLY AIR FAN)	Z1F	NOISE FILTER		

NOTES:

- IN CASE YOU USE THE CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED MANUAL.
- 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)
- FOR DETAILS OF CONNECTION SEE THE ATTACHED MANUAL OF THE OPTION KIT
- SS1(A1P) HAS ALREADY BEEN SET TO "NOR." AT FACTORY SET. THE UNIT WILL NOT RUN IF THE SETTING IS CHANGED.
- L: LIVE, N: NEUTRAL, : FIELD WIRING
- : TERMINAL STRIP : CONNECTOR : CONNECTION : RELAY CONNECTOR  
 : PROTECTIVE EARTH (SCREW) : NOISELESS EARTH

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# 7 Wiring diagrams

## 7 - 1 Wiring Diagrams - Single Phase

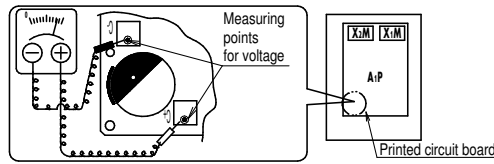
### VAM1500-2000FC

7

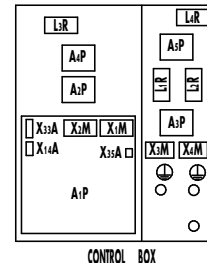
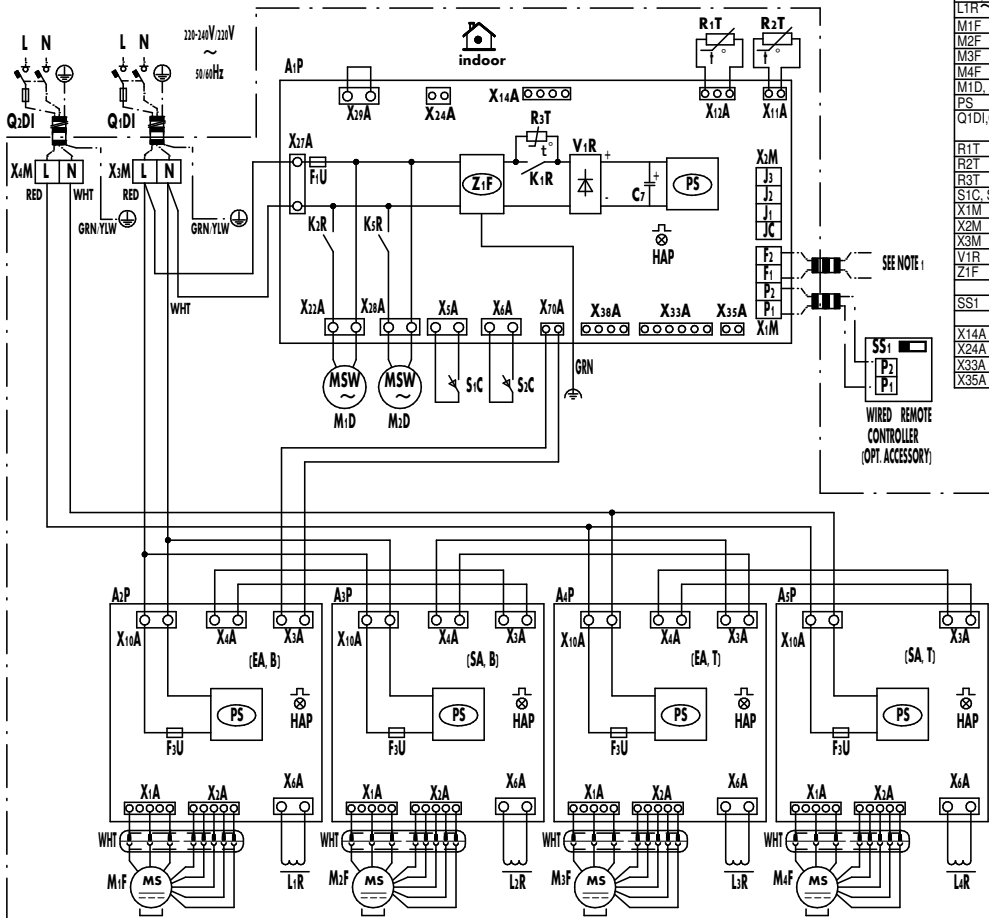
Caution when performing service inside the EL. Compo. box

**WARNING** Caution for ELECTRIC SHOCK

- Do not open the EL.Compo. box cover for 10 minutes after the power supply is turned off.
- After opening the EL. Compo. box, measure (on A1P~A5P) 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
A2P	A4H PRINTED CIRCUIT BOARD ASSY (FAN)
A5P	PRINTED CIRCUIT BOARD ASSY (FAN)
C1	CAPACITOR (M1F)
F1U	FUSE T, 6.3A 250V (A1P)
F3U	FUSE T, 6.3A 250V (A2P,A3P,A4P,A5P)
HAP	PILOT LAMP (SERVICE MONITOR-GREEN)
K1R	MAGNETIC RELAY
K2R, K5R	MAGNETIC RELAY
LTR	L4H REACTOR
M1F	MOTOR (EXHAUST AIR FAN)(BOTTOM)
M2F	MOTOR (SUPPLY AIR FAN)(BOTTOM)
M3F	MOTOR (EXHAUST AIR FAN)(TOP)
M4F	MOTOR (SUPPLY AIR FAN)(TOP)
M1D, M2D	MOTOR (DAMPER)
PS	SWITCHING POWER SUPPLY
Q1D1, Q2D1	FIELD EARTH LEAK DETECTOR (MAX. 300mA)
R1T	THERMISTOR (INDOOR AIR)
R2T	THERMISTOR (OUTDOOR AIR)
R3T	THERMISTOR (PTC)
S1C, S2C	LIMIT SWITCH DAMPER MOTOR
X1M	TERMINAL (A1P)
X2M	TERMINAL (OUTSIDE INPUT) (A1P)
X3M	TERMINAL (POWER SUPPLY)
V1R	DIODE BRIDGE
Z1F	NOISE FILTER
	REMOTE CONTROLLER
SS1	SELECTOR SWITCH
	CONNECTOR FOR OPTION (SEE NOTE 3)
X14A	CONNECTOR (CO2 SENSOR)
X24A	CONNECTOR (OUTSIDE DAMPER)
X33A	CONNECTOR (CONTACT PCB)
X35A	CONNECTOR (APPENDICES PCB)



COLORS:  
 BLK: BLACK, BLU: BLUE,  
 ORG: ORANGE, RED: RED,  
 WHT: WHITE, YLW: YELLOW,  
 GRN: GREEN

NOTES:

- IN CASE YOU USE THE CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED MANUAL.
- 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)
- FOR DETAILS OF CONNECTION SEE THE ATTACHED MANUAL OF THE OPTION KIT.
- SS1(A1P) HAS ALREADY BEEN SET TO "NOR." AT FACTORY SET. THE UNIT WILL NOT RUN IF THE SETTING IS CHANGED.
- L: LIVE, N: NEUTRAL, : FIELD WIRING
- : TERMINAL STRIP : CONNECTOR : CONNECTION : RELAY CONNECTOR : PROTECTIVE EARTH (SCREW) : NOISELESS EARTH

3D080684C

## 8 Sound data

### 8 - 1 Sound Power Spectrum

#### VAM150FC

##### Sound power

Model	Fan speed	Hz								
		63	125	250	500	1000	2000	4000	8000 [dB]	Total [dBA]
VAM150FCVE(9)	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 =  $\cdot 10E-6\mu W/m^2$ .
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.

4D099265B

#### VAM250FC

##### Sound power

Model	Fan speed	Hz								
		63	125	250	500	1000	2000	4000	8000 [dB]	Total [dBA]
VAM250FCVE(9)	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 =  $\cdot 10E-6\mu W/m^2$ .
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.

4D099266B

# 8 Sound data

## 8 - 1 Sound Power Spectrum

8

### VAM350FC

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

Unit model name	Fan speed	(dB) (dBA)									
		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 0dB = 10E-6μW/m<sup>2</sup>
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)

Unit model name	Fan speed	(dB) (dBA)									
		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 0dB = 10E-6μW/m<sup>2</sup>
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



# 8 Sound data

## 8 - 1 Sound Power Spectrum

### VAM650FC

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

Unit model name	Fan speed \ Hz	(dB) (dBA)								
		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 0dB = 10E-6μW/m<sup>2</sup>
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

### VAM800FC

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

Unit model name	Fan speed \ Hz	(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 0dB = 10E-6μW/m<sup>2</sup>
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

# 8 Sound data

## 8 - 1 Sound Power Spectrum

**8**
**VAM1000FC**

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

Unit model name	Fan speed \ Hz	(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 0dB =  $10E-6\mu W/m^2$
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 \ Hz	(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 0dB =  $10E-6\mu W/m^2$
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**

## 8 Sound data

### 8 - 1 Sound Power Spectrum

#### 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.

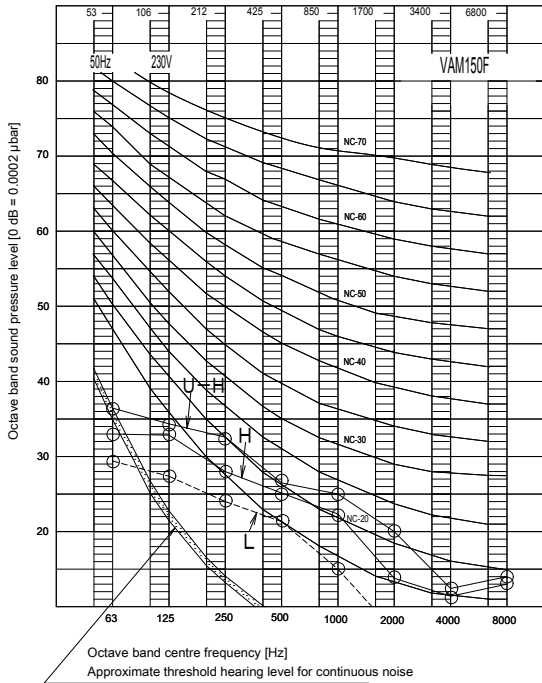
4D082470

# 8 Sound data

## 8 - 2 Sound Pressure Spectrum

8

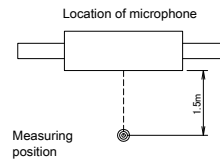
### VAM150FC



Notes

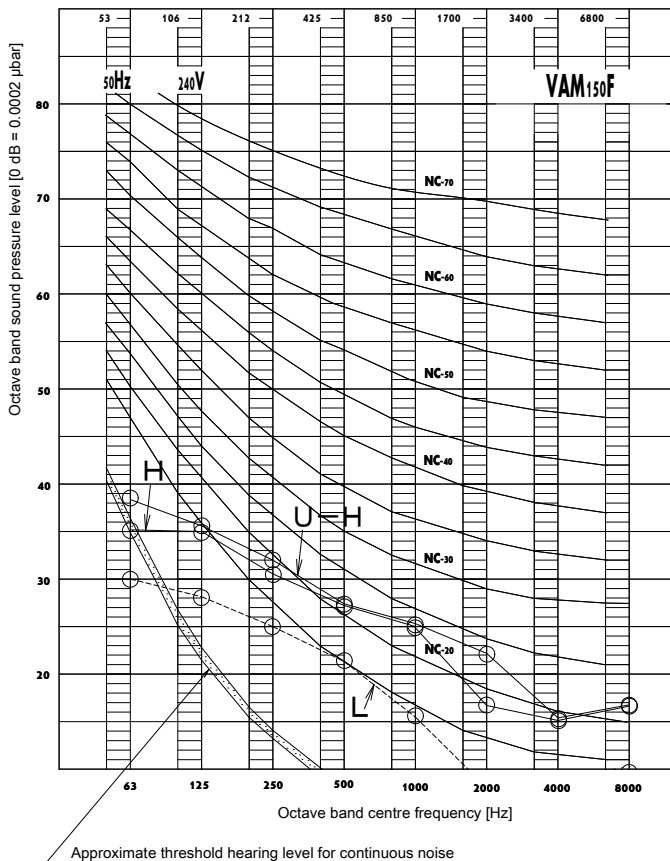
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Operating noise varies depending on operation, installation, and ambient conditions.
- Measuring location: anechoic chamber

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



3D099269

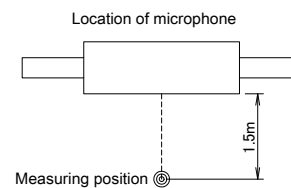
### VAM150FC (240V)



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	Air flow rate		
	U-H	H	L
A	28.5	27.5	21.5

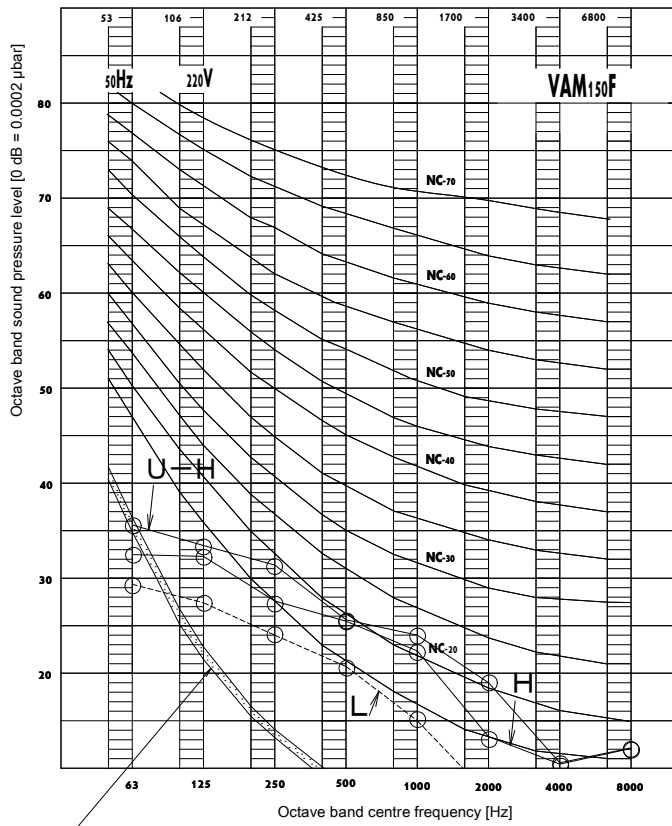


3D099271

# 8 Sound data

## 8 - 2 Sound Pressure Spectrum

### VAM150FC (220V)



Approximate threshold hearing level for continuous noise

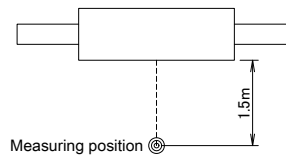
Notes

- 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

Total dB

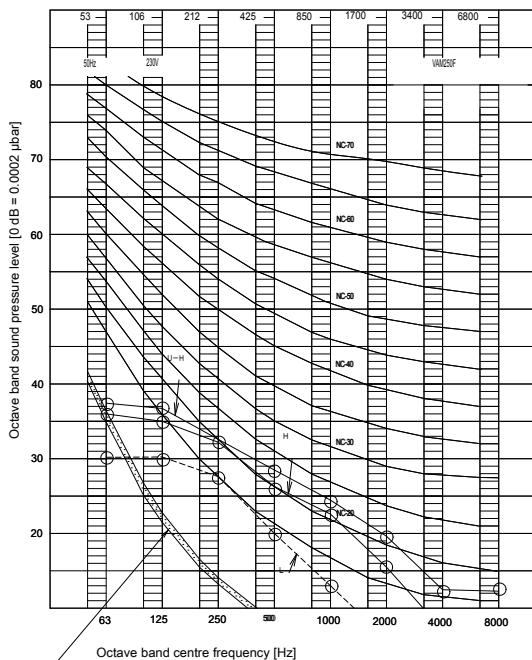
Scale	Air flow rate		
	U-H	H	L
A	27	26	20,5

Location of microphone



3D099267

### VAM250FC (230V)



Octave band centre frequency [Hz]  
Approximate threshold hearing level for continuous noise

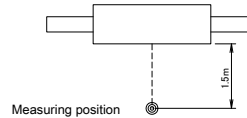
Notes

- 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

Total dB

Scale	Air flow rate		
	U-H	H	L
A	28,5	26,5	21,5

Location of microphone

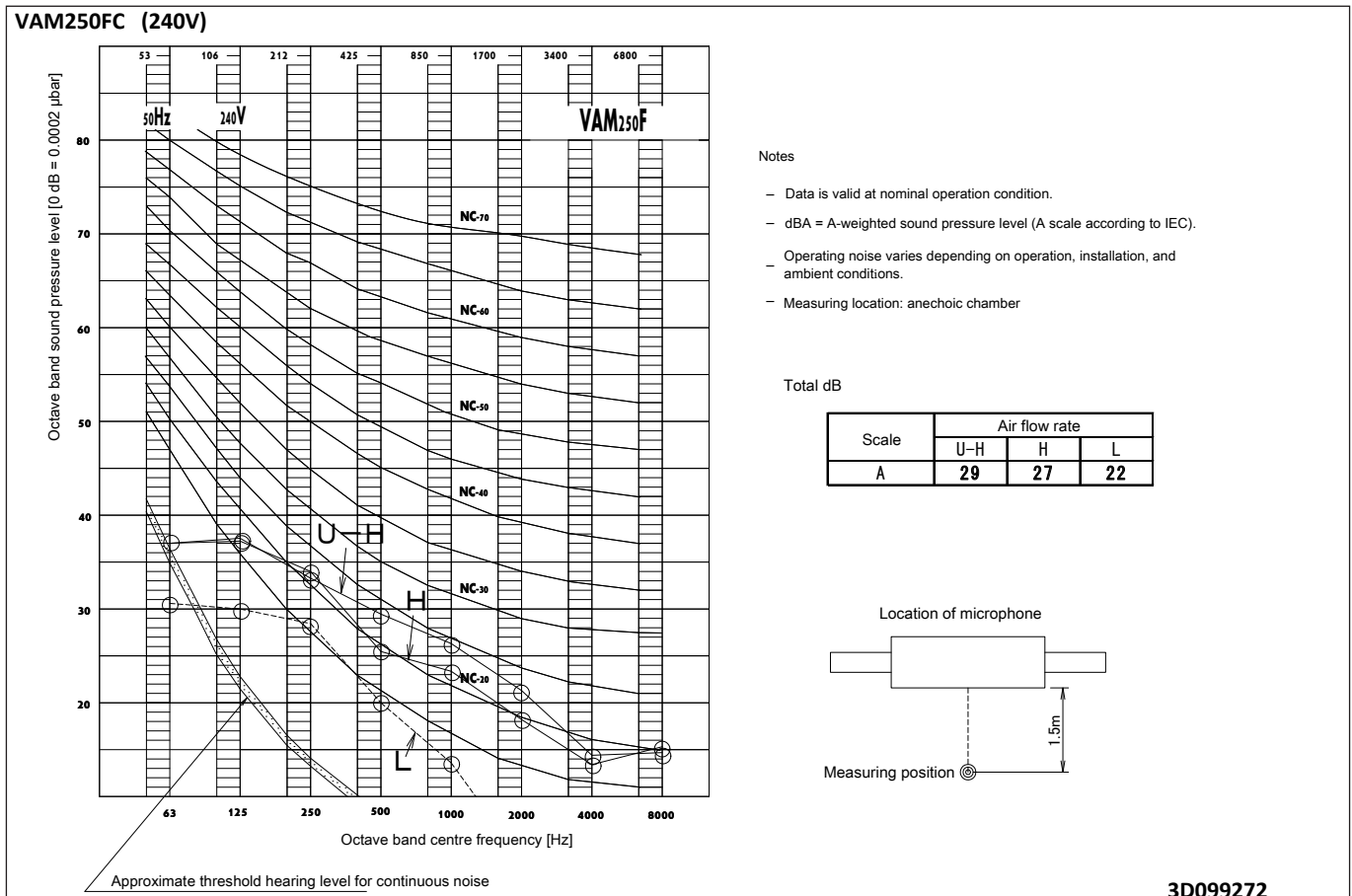
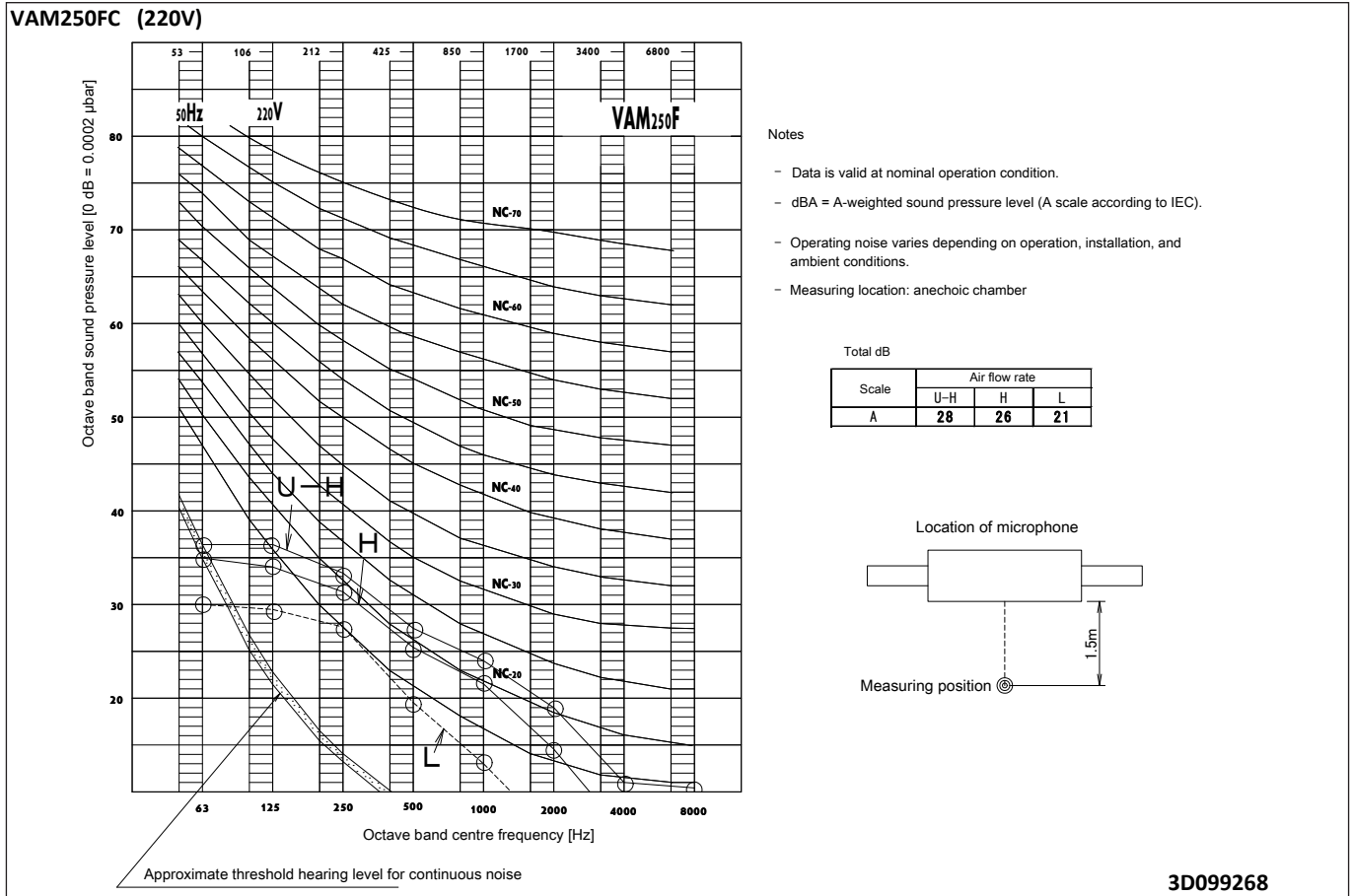


3D099270

# 8 Sound data

## 8 - 2 Sound Pressure Spectrum

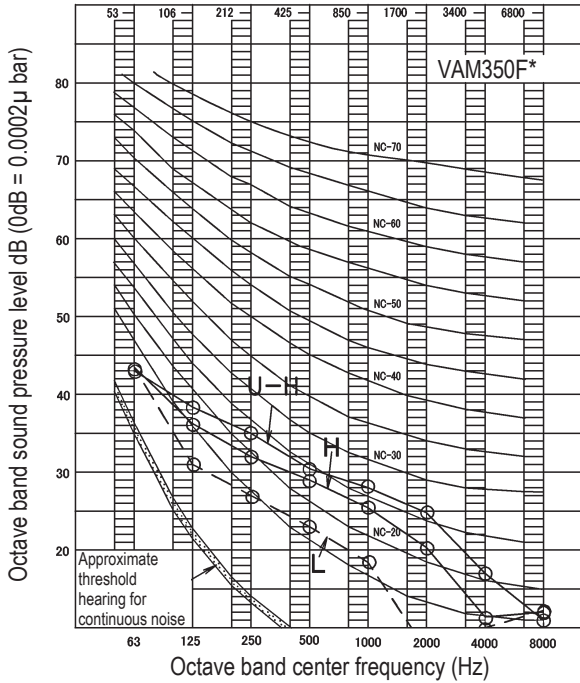
8



# 8 Sound data

## 8 - 2 Sound Pressure Spectrum

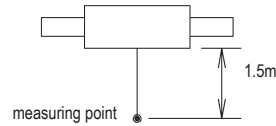
### VAM350FC



Air flow rate (dB)		
U-H	H	L
32	31.5	23.5

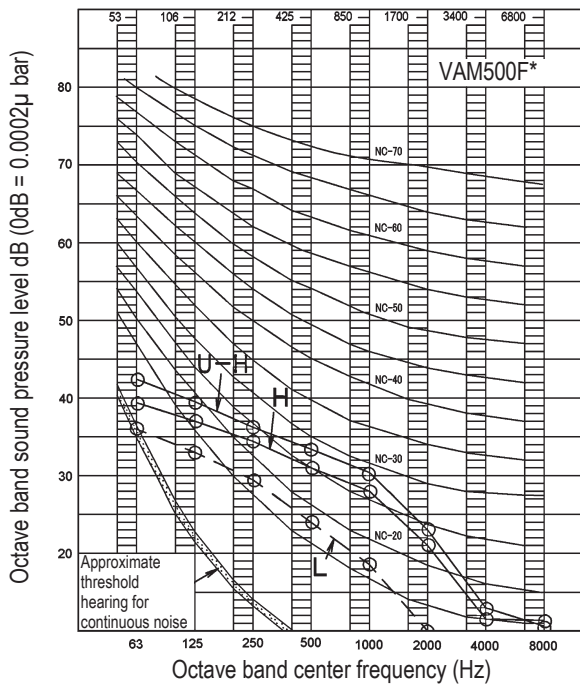
**NOTES**

1. Ventilation mode: total heat exchange.
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.
5. U-H: ultra-high, H: high, L: low
6. Location of microphone.



4D082471

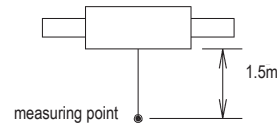
### VAM500FC



Air flow rate (dB)		
U-H	H	L
33	31.5	24.5

**NOTES**

1. Ventilation mode: total heat exchange.
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.
5. U-H: ultra-high, H: high, L: low
6. Location of microphone.



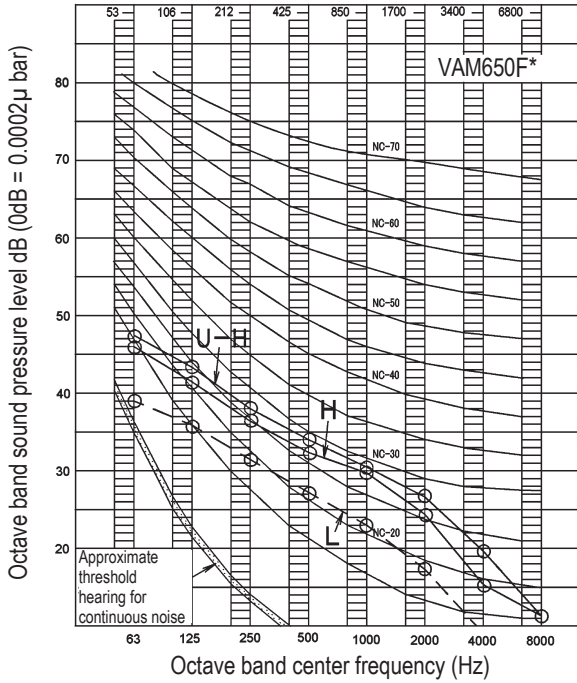
4D082472

# 8 Sound data

## 8 - 2 Sound Pressure Spectrum

8

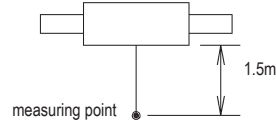
### VAM650FC



Air flow rate (dB)		
U-H	H	L
34.5	33	27

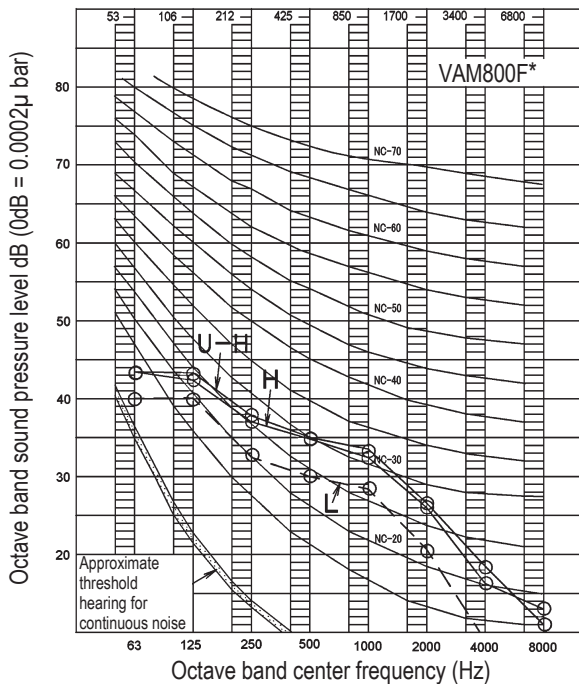
#### NOTES

1. Ventilation mode: total heat exchange.
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.
5. U-H: ultra-high, H: high, L: low
6. Location of microphone.



4D082473

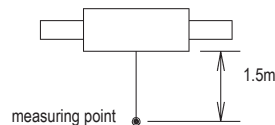
### VAM800FC



Air flow rate (dB)		
U-H	H	L
35.5	34.5	31

#### NOTES

1. Ventilation mode: total heat exchange.
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.
5. U-H: ultra-high, H: high, L: low
6. Location of microphone.



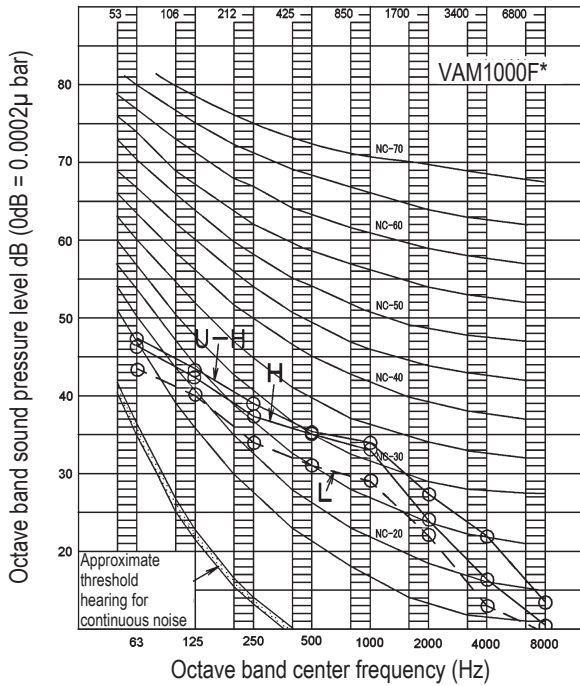
4D082474



# 8 Sound data

## 8 - 2 Sound Pressure Spectrum

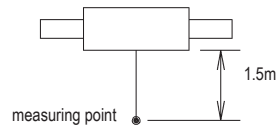
### VAM1000FC



Air flow rate (dB)		
U-H	H	L
36	35	31.5

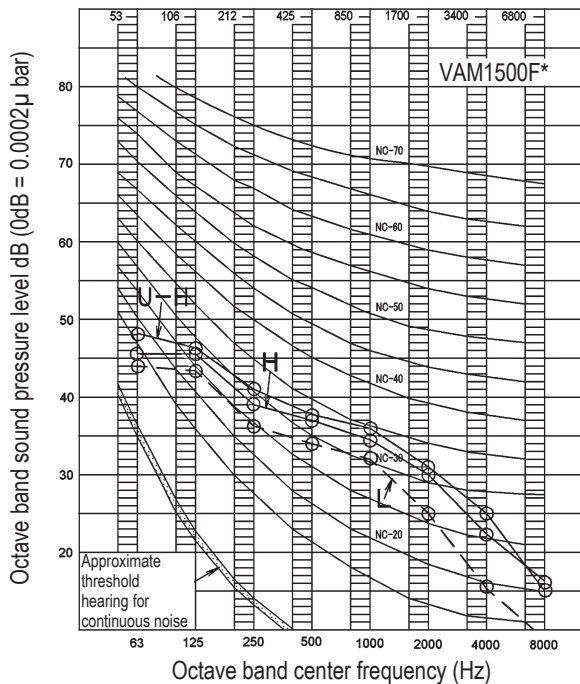
**NOTES**

1. Ventilation mode: total heat exchange.
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.
5. U-H: ultra-high, H: high, L: low
6. Location of microphone.



4D082475

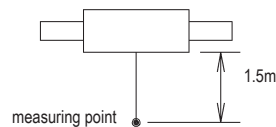
### VAM1500FC



Air flow rate (dB)		
U-H	H	L
39.5	38	34

**NOTES**

1. Ventilation mode: total heat exchange.
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.
5. U-H: ultra-high, H: high, L: low
6. Location of microphone.



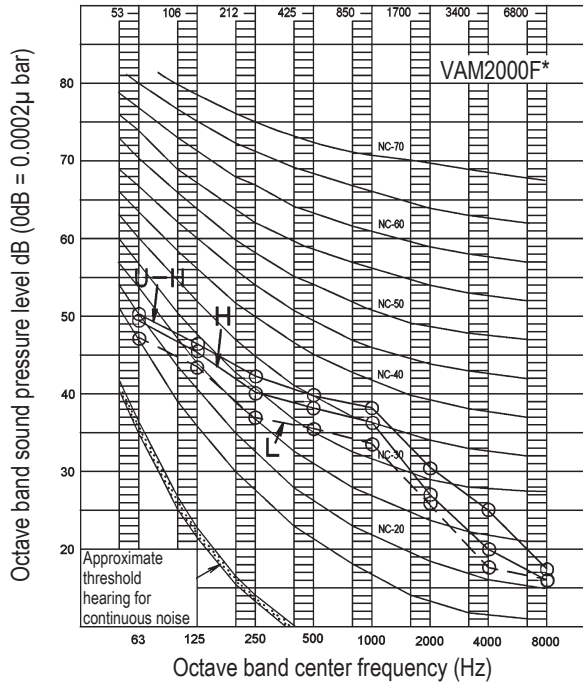
4D082476

# 8 Sound data

## 8 - 2 Sound Pressure Spectrum

8

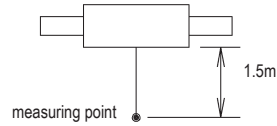
VAM2000FC



Air flow rate (dB)		
U-H	H	L
40	38	35

**NOTES**

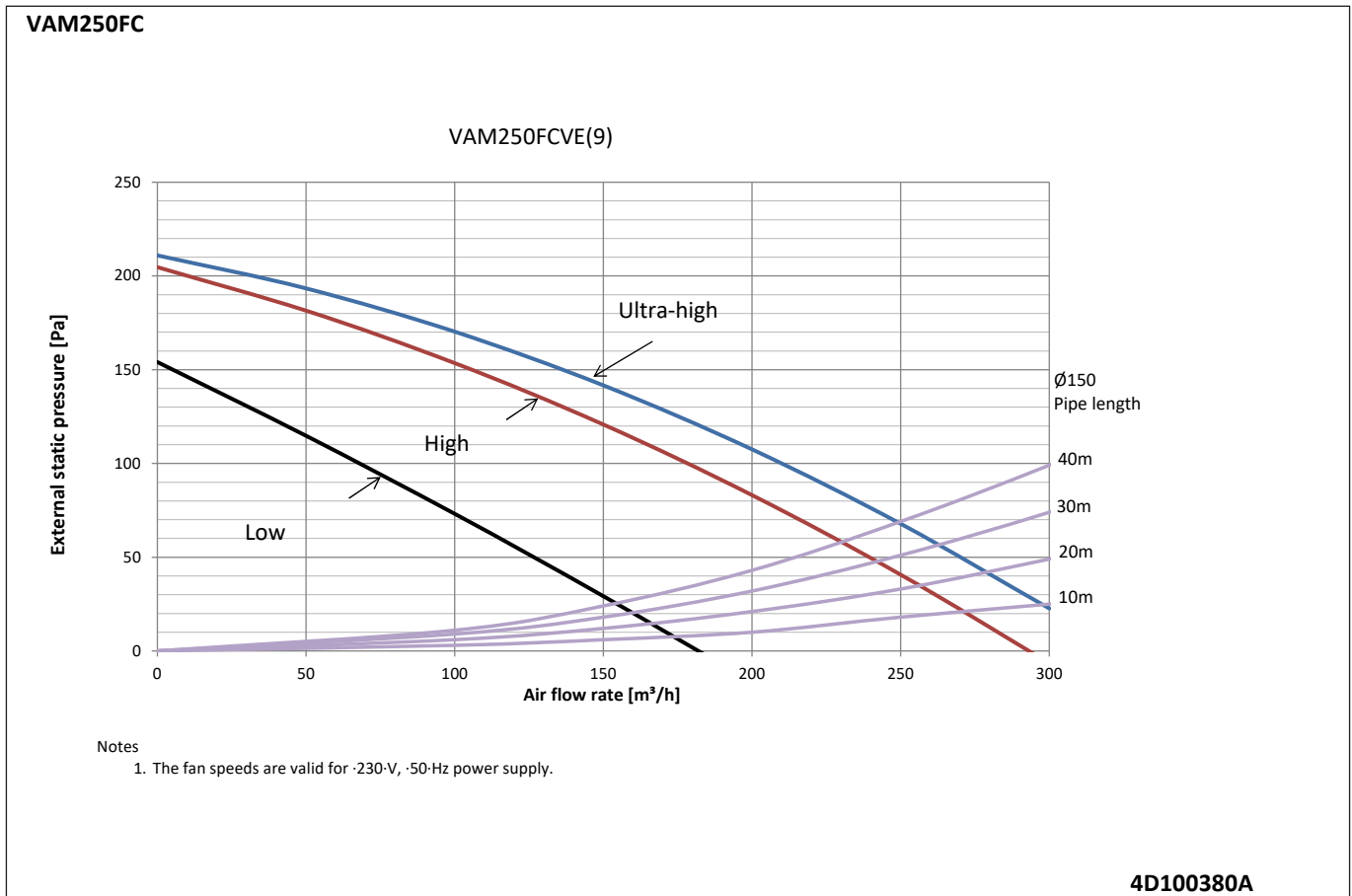
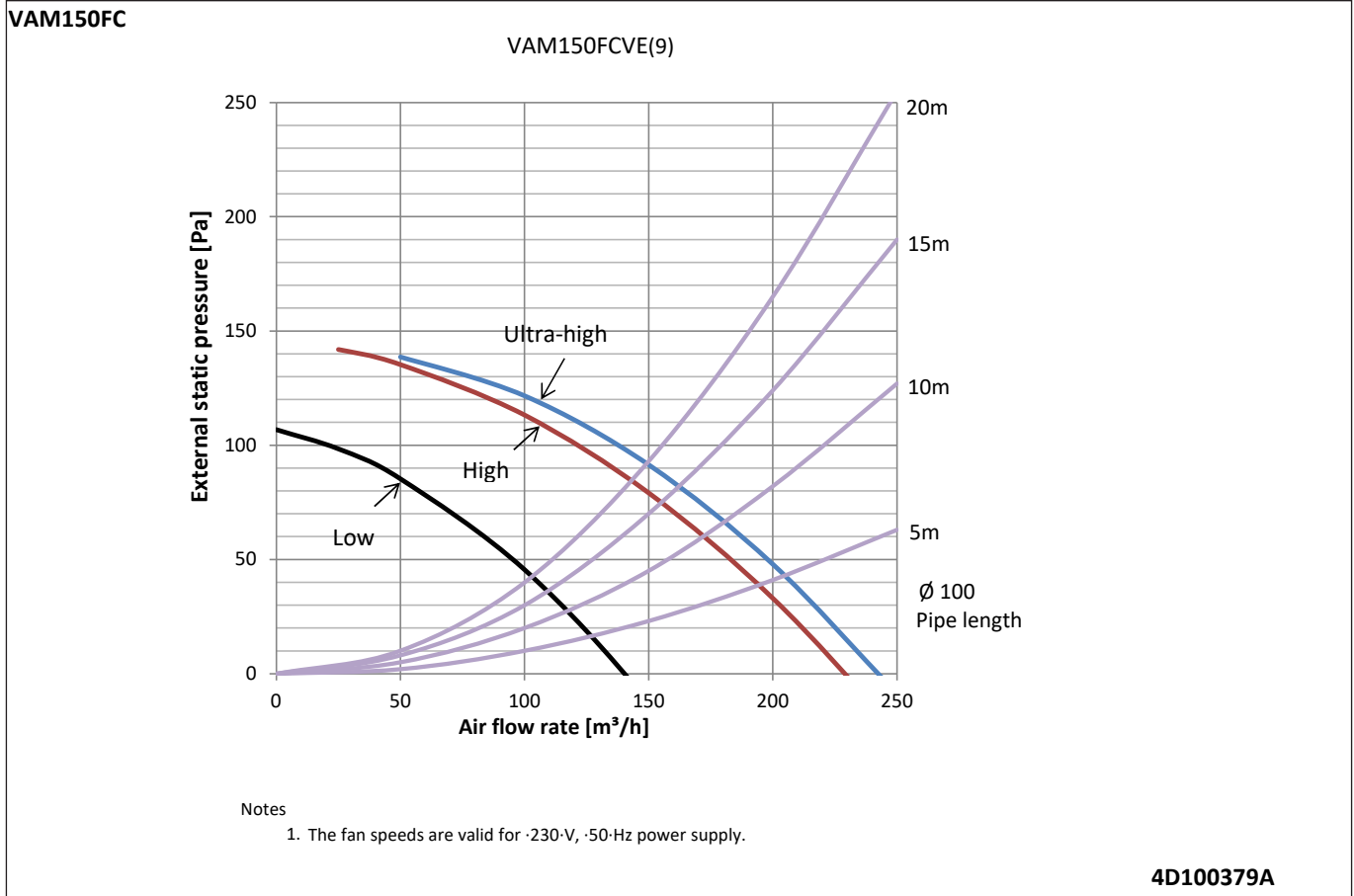
1. Ventilation mode: total heat exchange.
2. Operation noise is measured in an anechoic chamber.
3. The operation noise level may become higher than this value depending on the operation conditions, reflected sound and peripheral noise.
4. Operation noise differs with operation and ambient conditions.
5. U-H: ultra-high, H: high, L: low
6. Location of microphone.



4D082477

# 9 Fan characteristics

## 9 - 1 Fan Characteristics

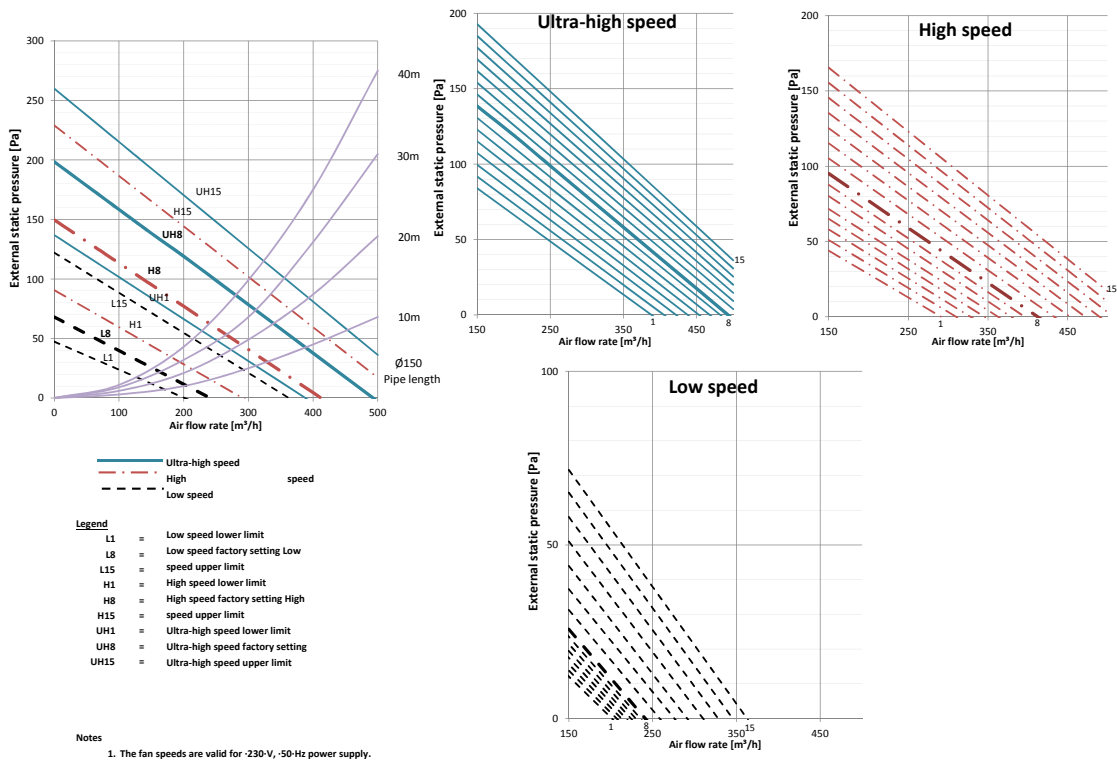


# 9 Fan characteristics

## 9 - 1 Fan Characteristics

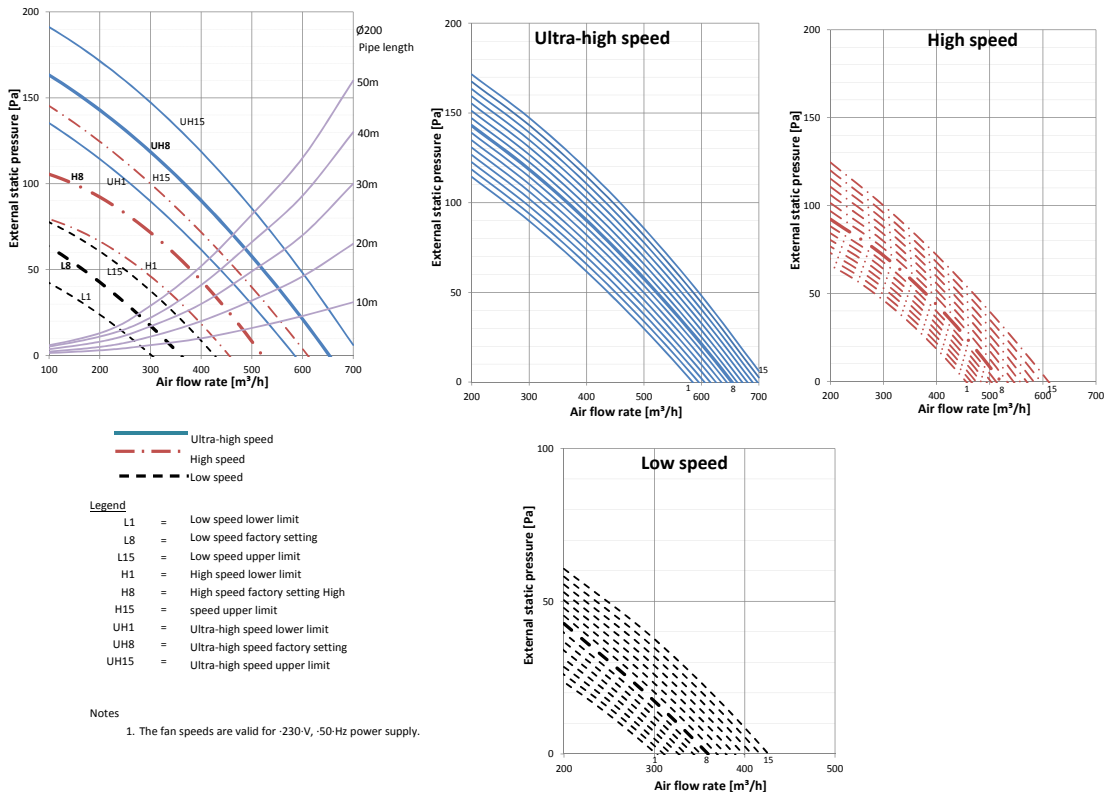
9

### VAM350FC



3D100381

### VAM500FC

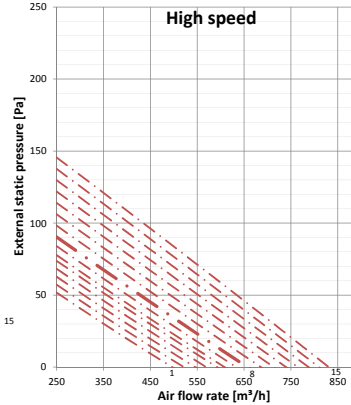
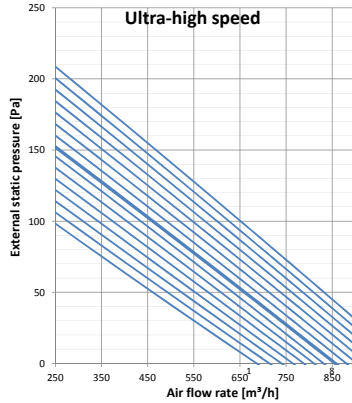
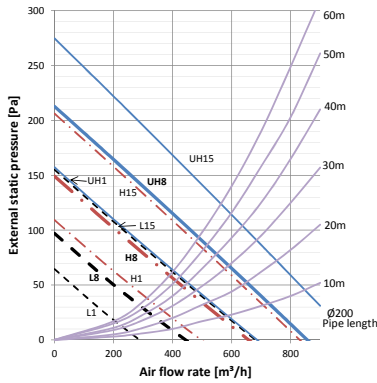


3D100382

# 9 Fan characteristics

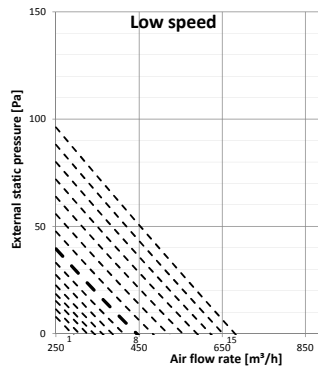
## 9 - 1 Fan Characteristics

### VAM650FC



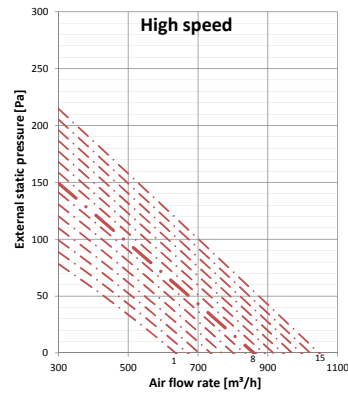
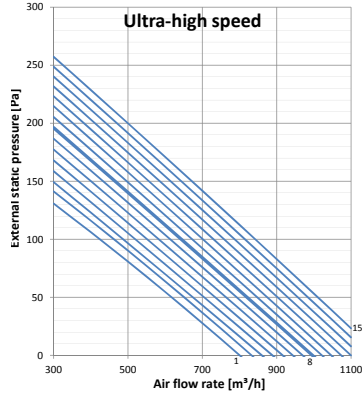
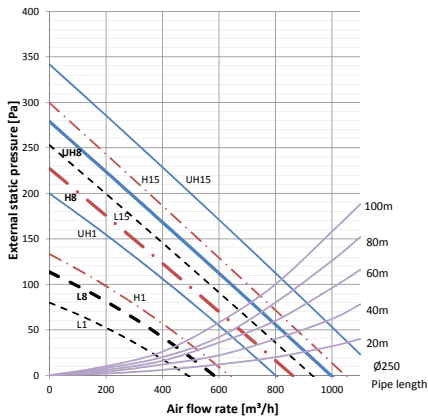
- Ultra-high speed  
- - - High speed  
- - - Low speed
- Legend**
- L1 = Low speed lower limit
  - L8 = Low speed factory setting
  - L15 = Low speed upper limit
  - H1 = High speed lower limit
  - H8 = High speed factory setting High
  - H15 = High speed upper limit
  - UH1 = Ultra-high speed lower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

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



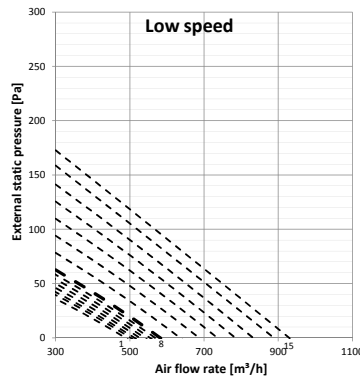
3D100383

### VAM800FC



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

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



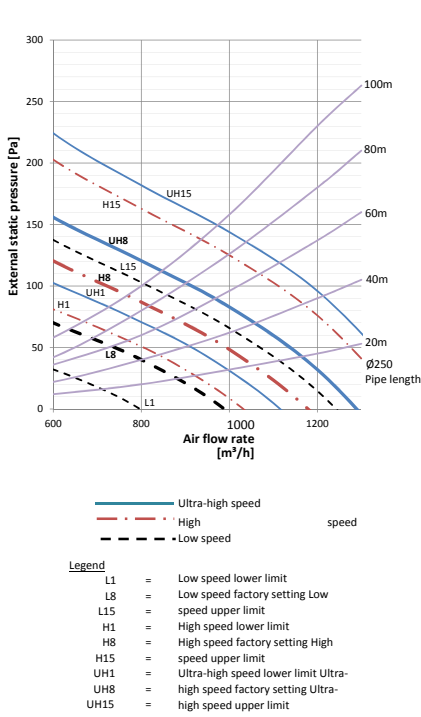
3D100384

# 9 Fan characteristics

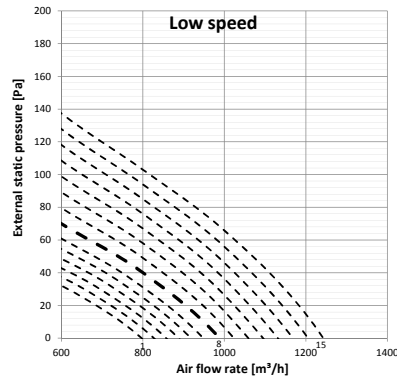
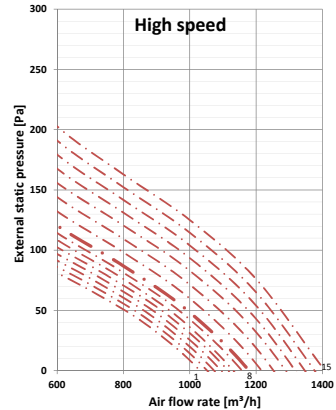
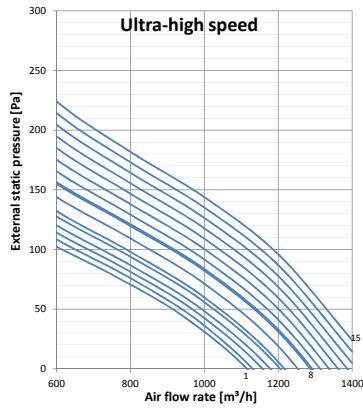
## 9 - 1 Fan Characteristics

9

### VAM1000FC

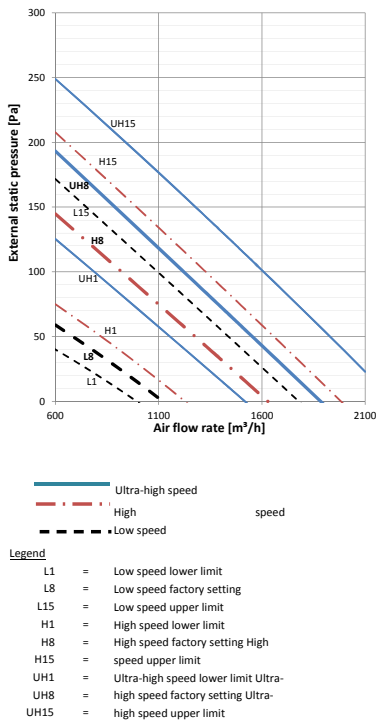


Notes  
1. The fan speeds are valid for ~230-V, ~50-Hz power supply.

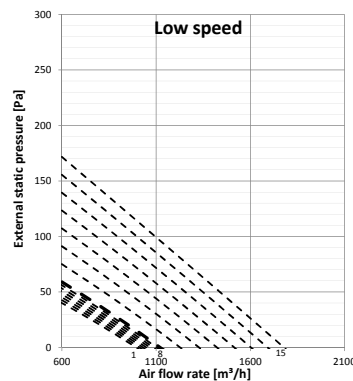
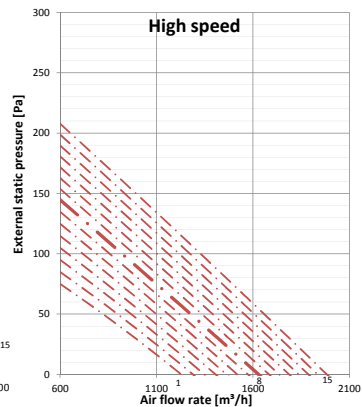
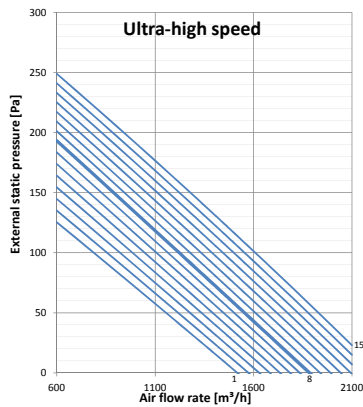


3D100385

### VAM1500FC



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

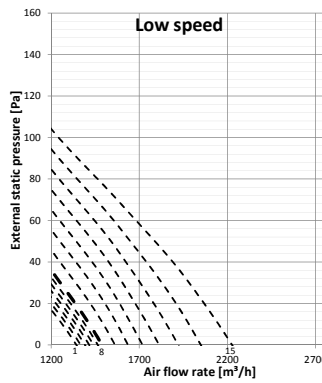
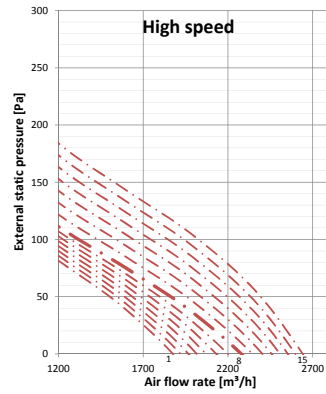
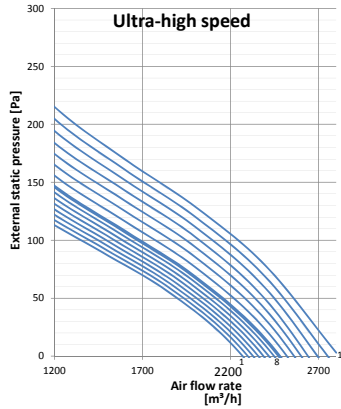
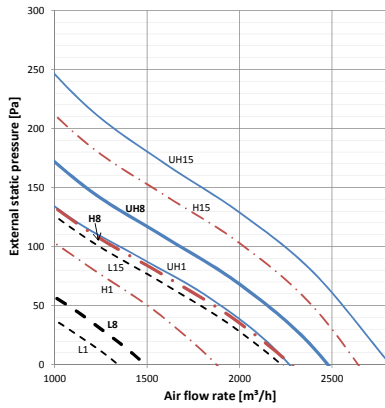


3D100386

# 9 Fan characteristics

## 9 - 1 Fan Characteristics

### VAM2000FC



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

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

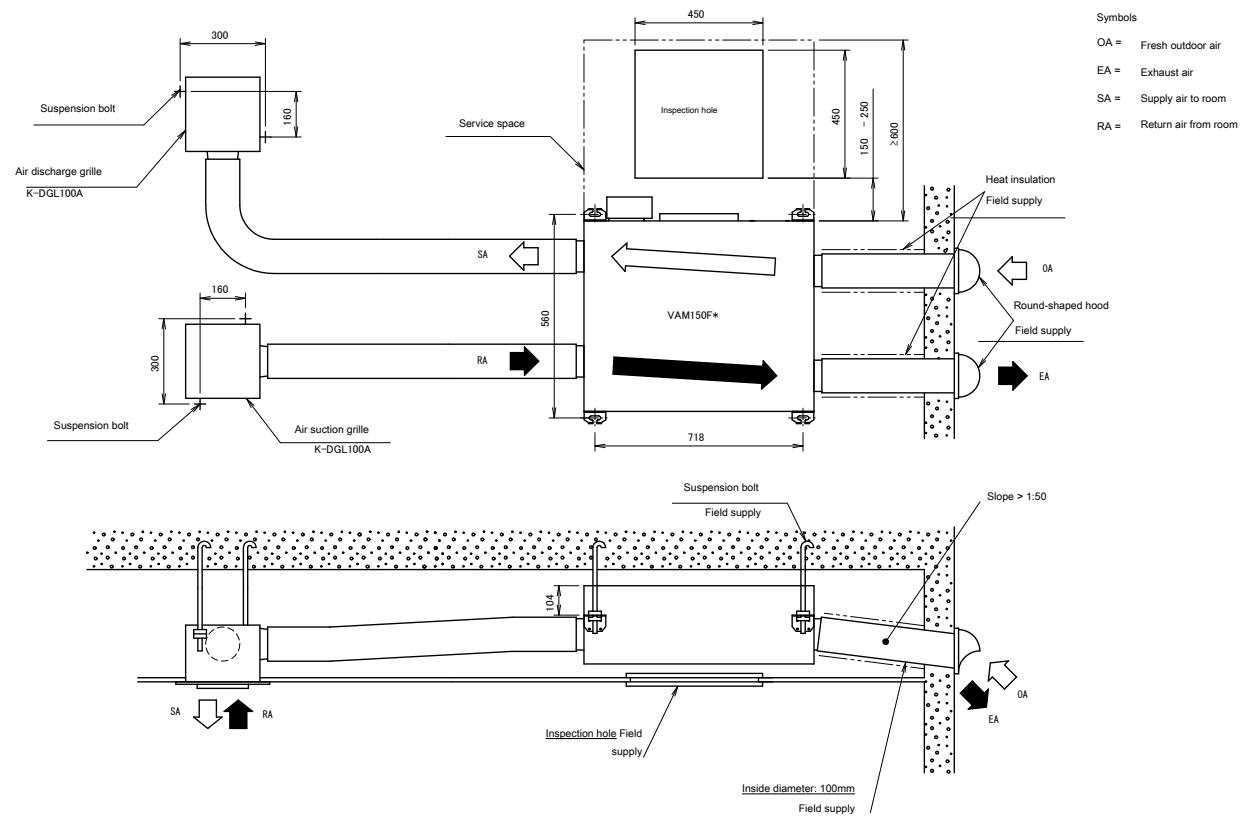
3D100387

# 10 Installation

## 10 - 1 Installation Method

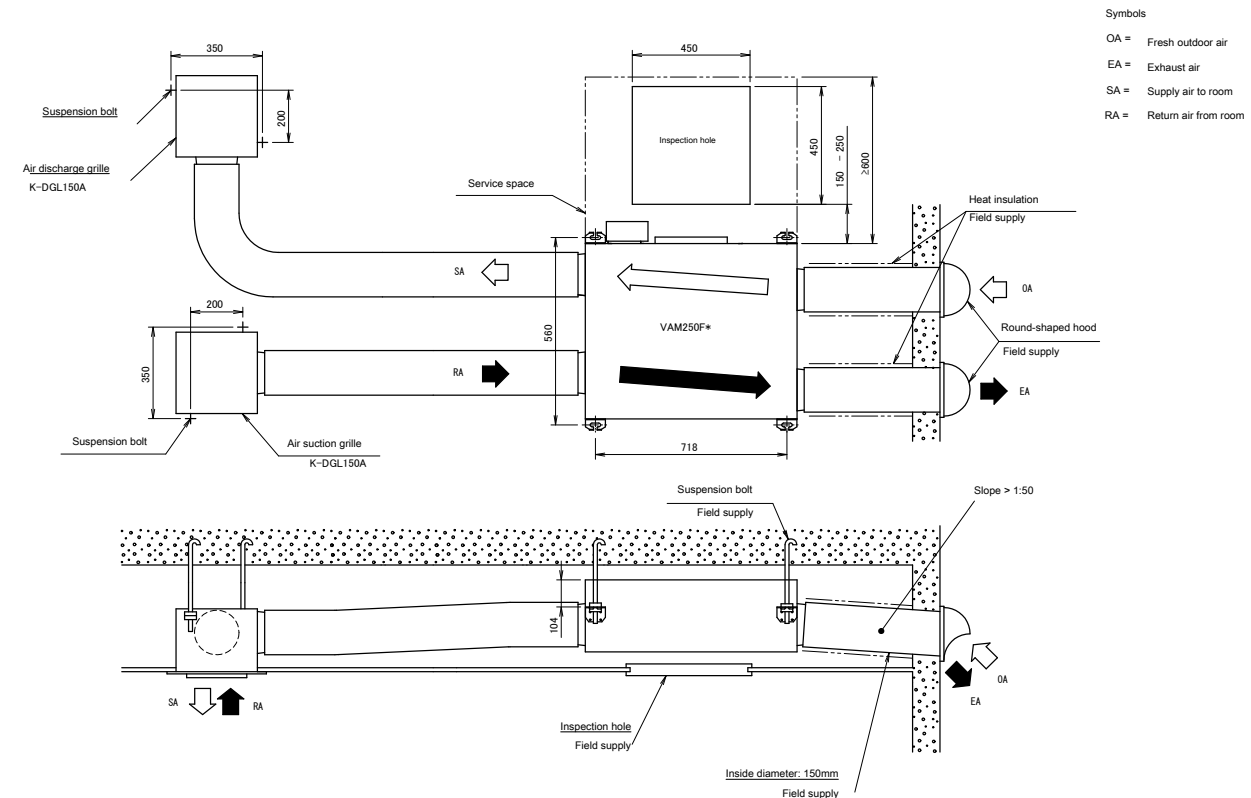
10

### VAM150FC



3D099263

### VAM250FC

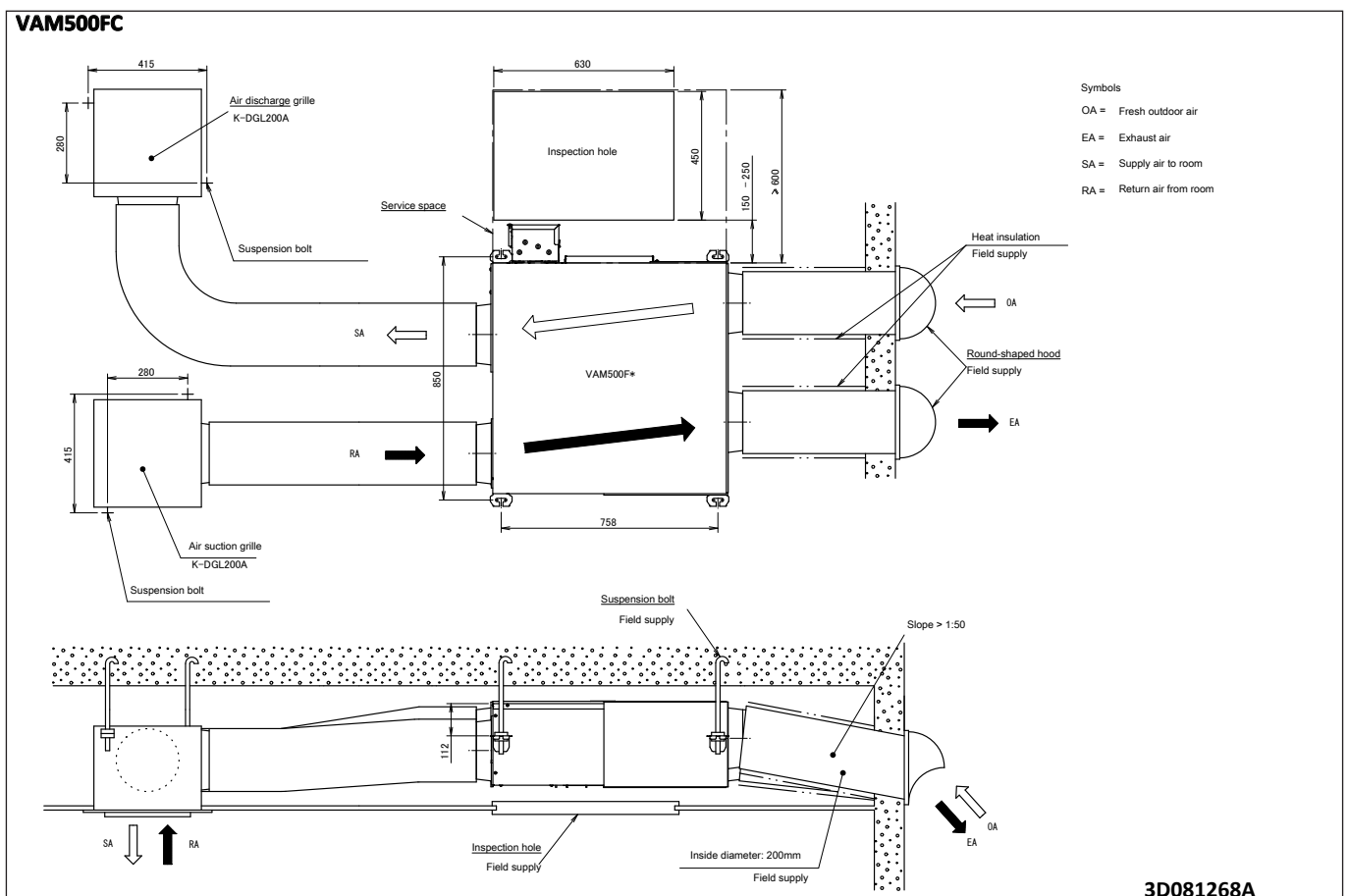
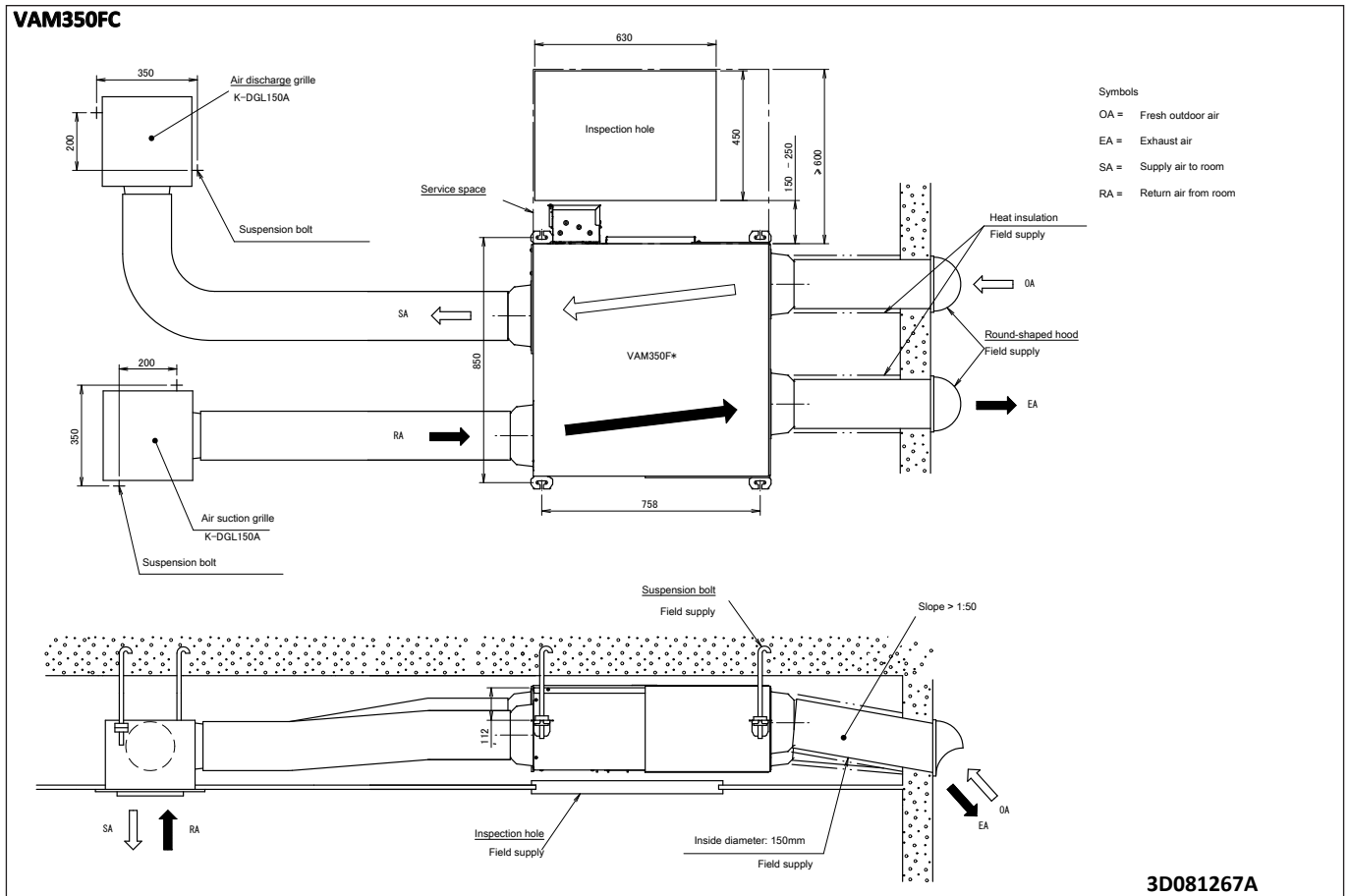


3D099264



# 10 Installation

## 10 - 1 Installation Method

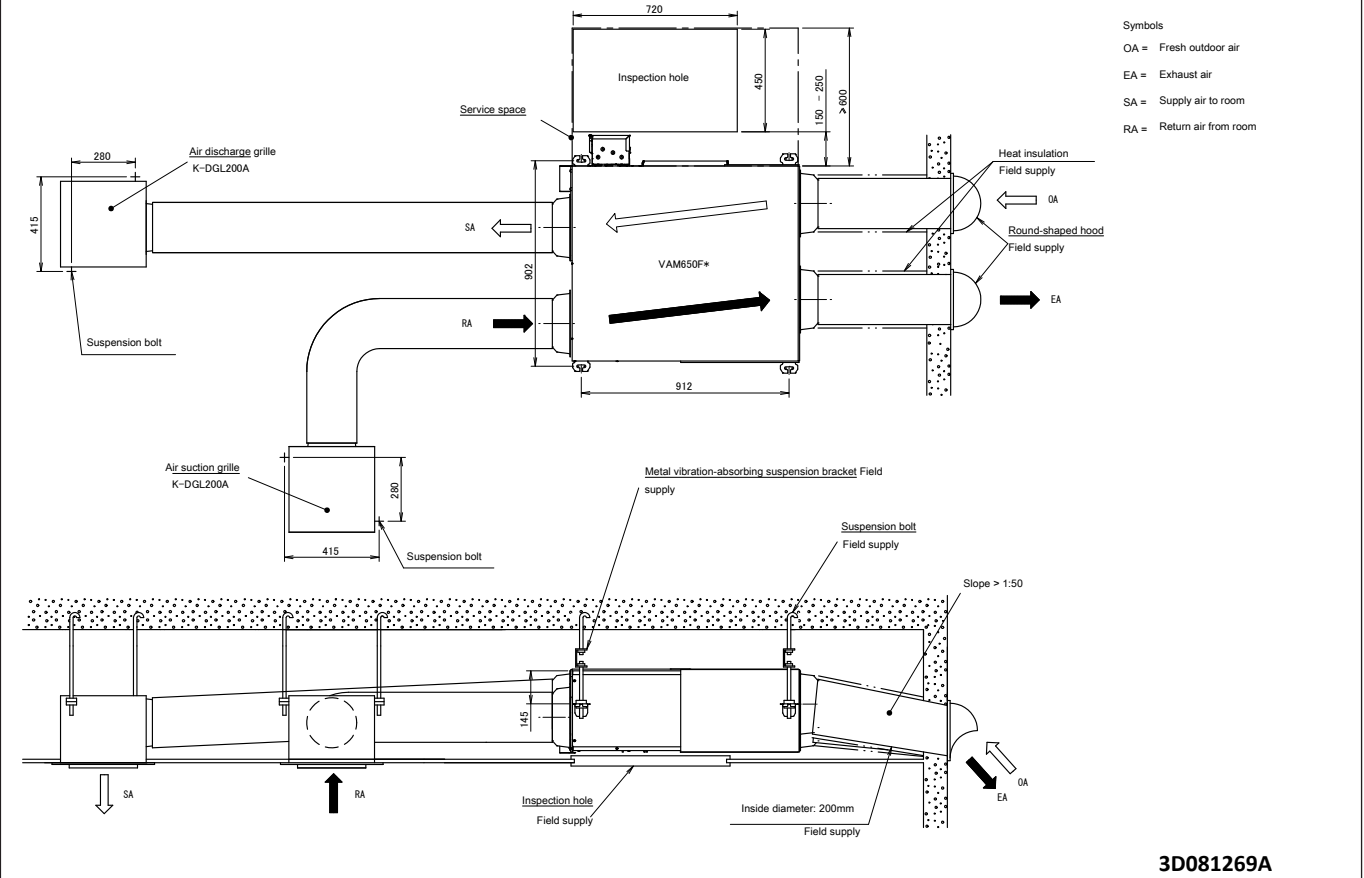


# 10 Installation

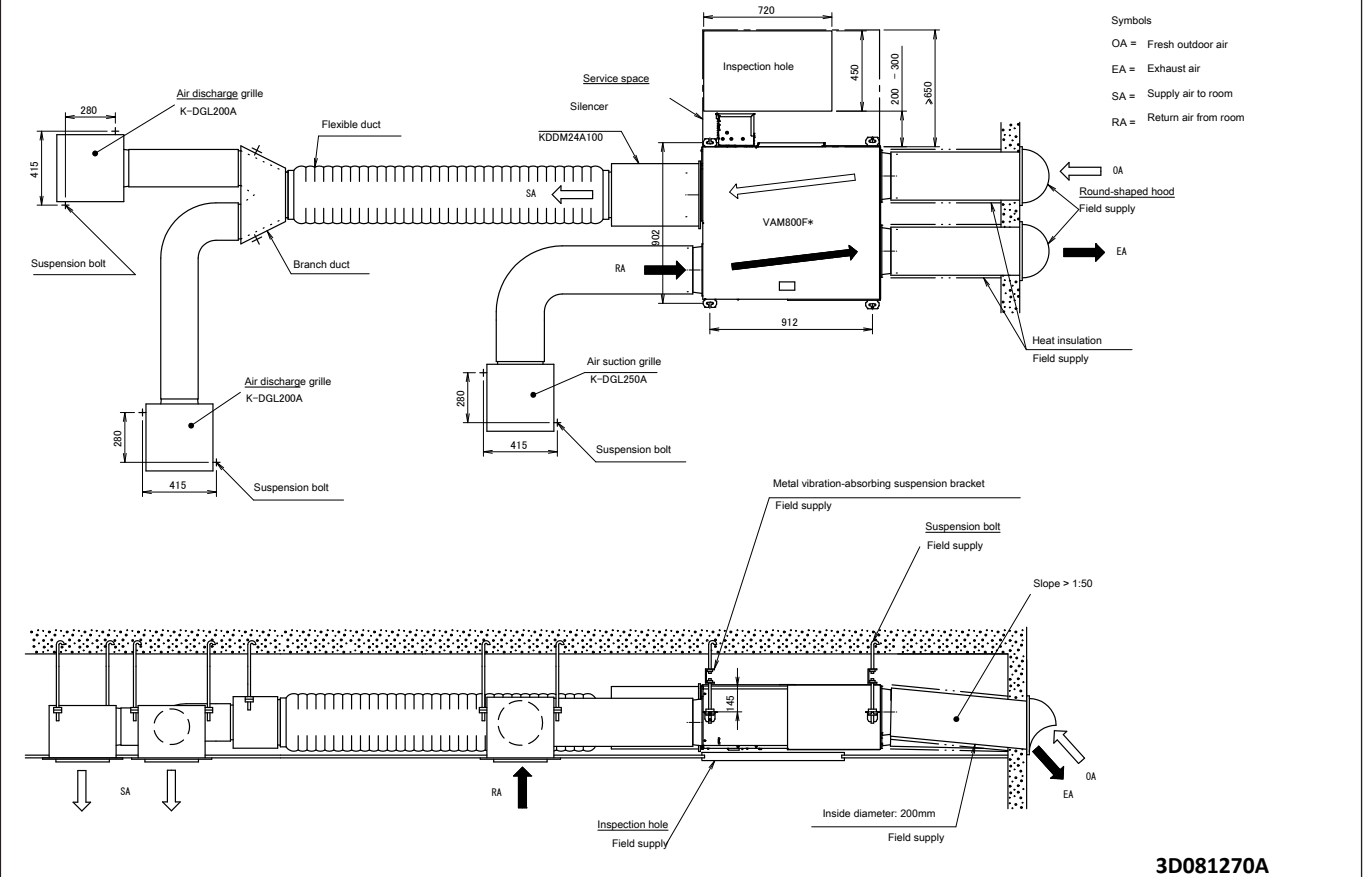
## 10 - 1 Installation Method

10

### VAM650FC

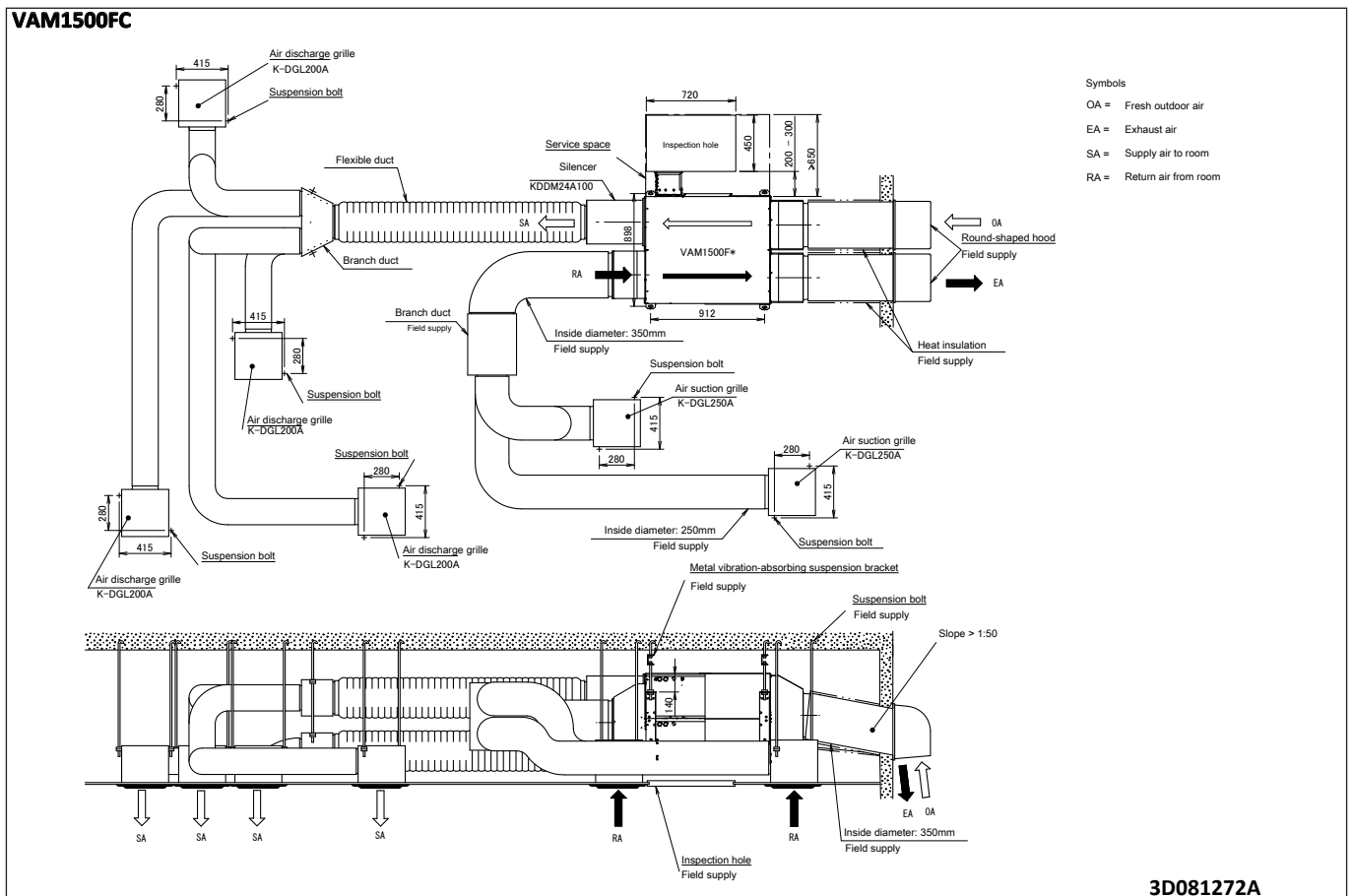
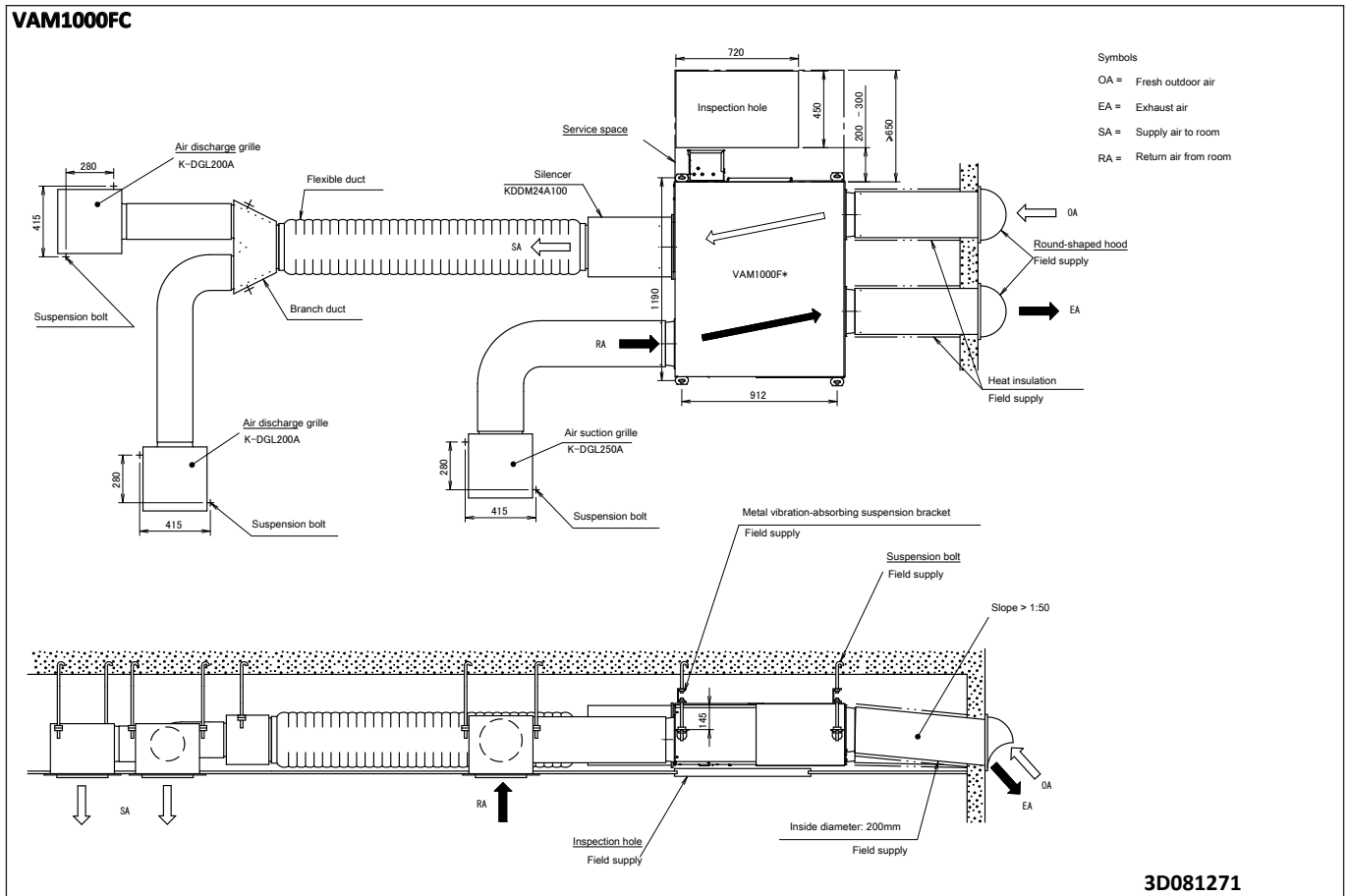


### VAM800FC



# 10 Installation

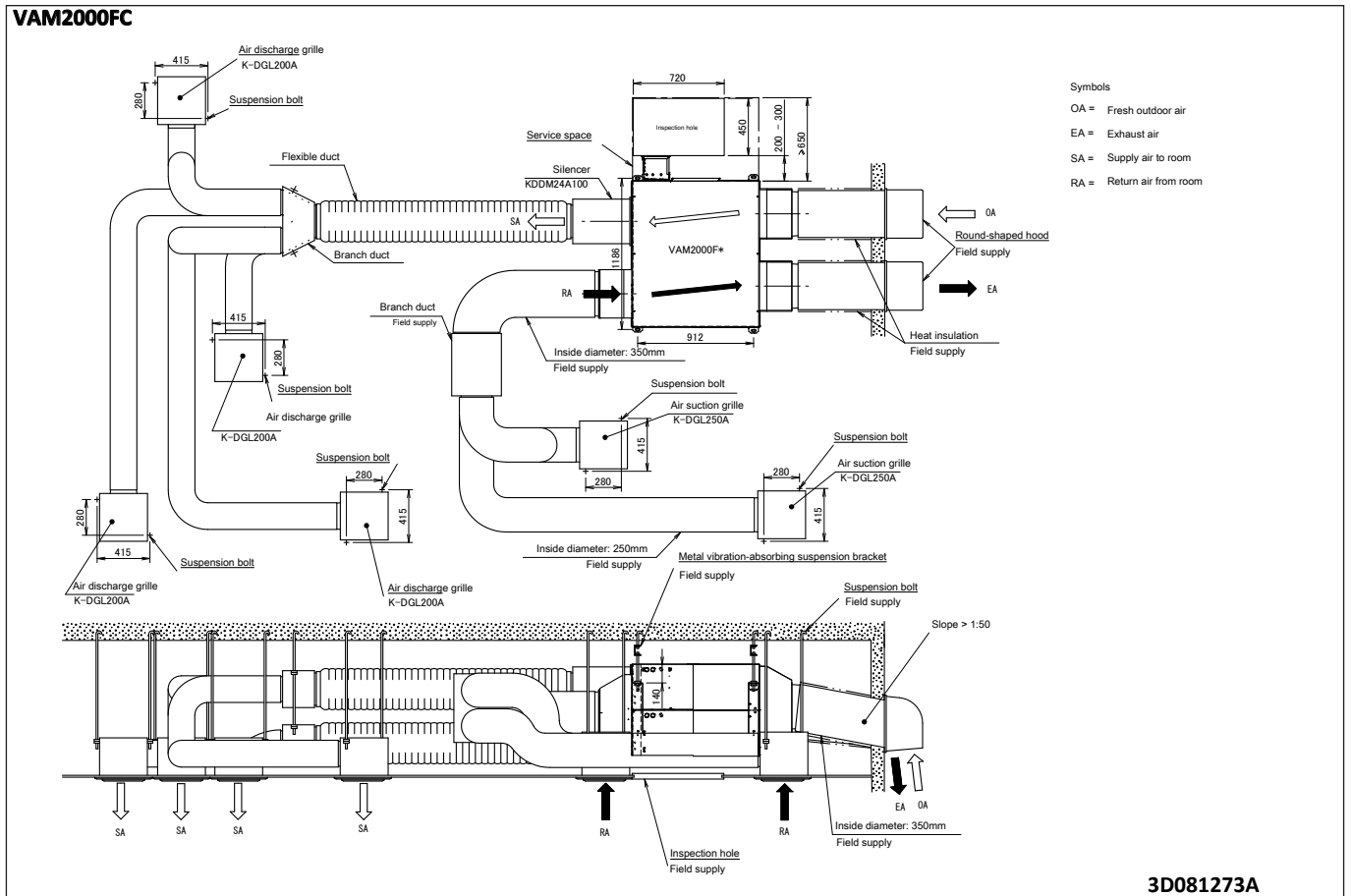
## 10 - 1 Installation Method



# 10 Installation

## 10 - 1 Installation Method

10



# 10 Installation

## 10 - 2 Filter Installation Method

### VAM350-2000

#### High efficiency filter / dust filter for VAM350-2000

##### 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	ePM <sub>1</sub> 70% (F8)	ePM <sub>1</sub> 50% (F7)	ePM <sub>10</sub> 75% (M5)
ODA 2 (dust)	N/A	ePM <sub>10</sub> 70% (M6) + ePM <sub>1</sub> 70% (F8)	ePM <sub>10</sub> 75% (M5) + ePM <sub>1</sub> 50% (F7)	ePM <sub>10</sub> 75% (M5) + ePM <sub>10</sub> 70% (M6)
ODA 3 (very high concentrations of dust of gases)	N/A	N/A	ePM <sub>10</sub> 75% (M5) + ePM <sub>1</sub> 50% (F7)	ePM <sub>10</sub> 75% (M5) + ePM <sub>10</sub> 70% (M6)

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

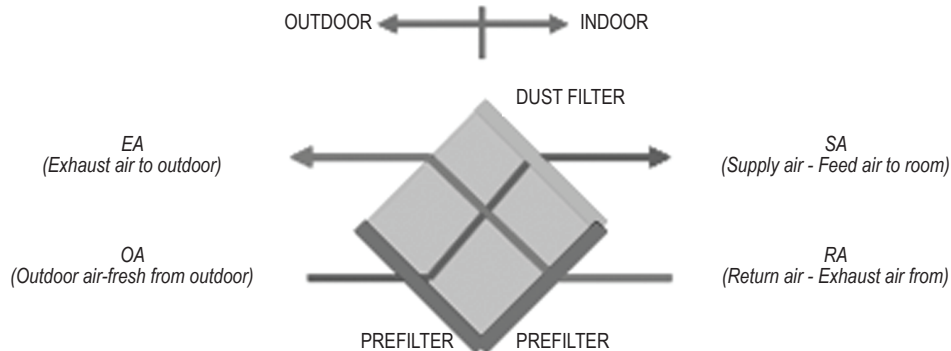
#### Outdoor air Quality:

- 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.



#### NOTES

Prefilters are factory mounted, ePM<sub>10</sub> 70% (M6), ePL<sub>1</sub> 55% (F7) and ePM<sub>1</sub> 70% (F8) dust filters are options

# 10 Installation

## 10 - 2 Filter Installation Method

**10**

### VAM350-2000

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 (m <sup>3</sup> /h)	filter pressure drop		
		ePM10 70% (M6)	ePM1 55% (F7)	ePM1 70% (F8)
VAM350	350	39	52	88
VAM500	500	65	87	148
VAM650	650	61	83	140
VAM800	800	89	121	206
VAM1000	1000	80	109	185
VAM1500	1500	79	106	181
VAM2000	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

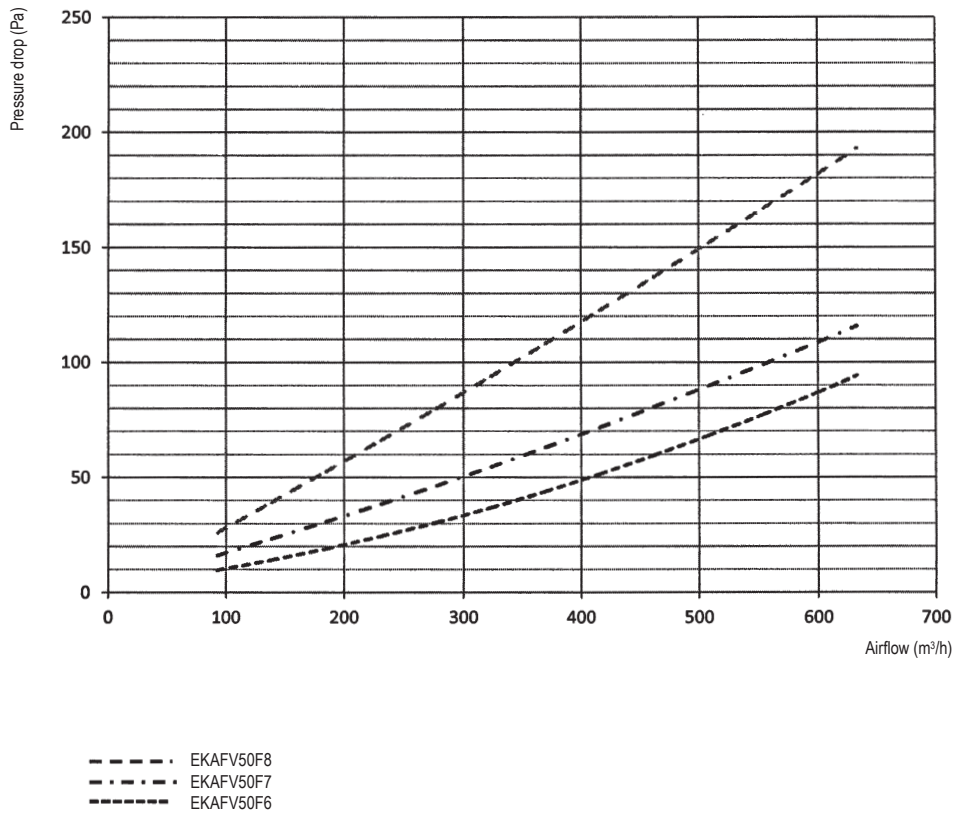
To adjust static pressure after filter placement:

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

# 10 Installation

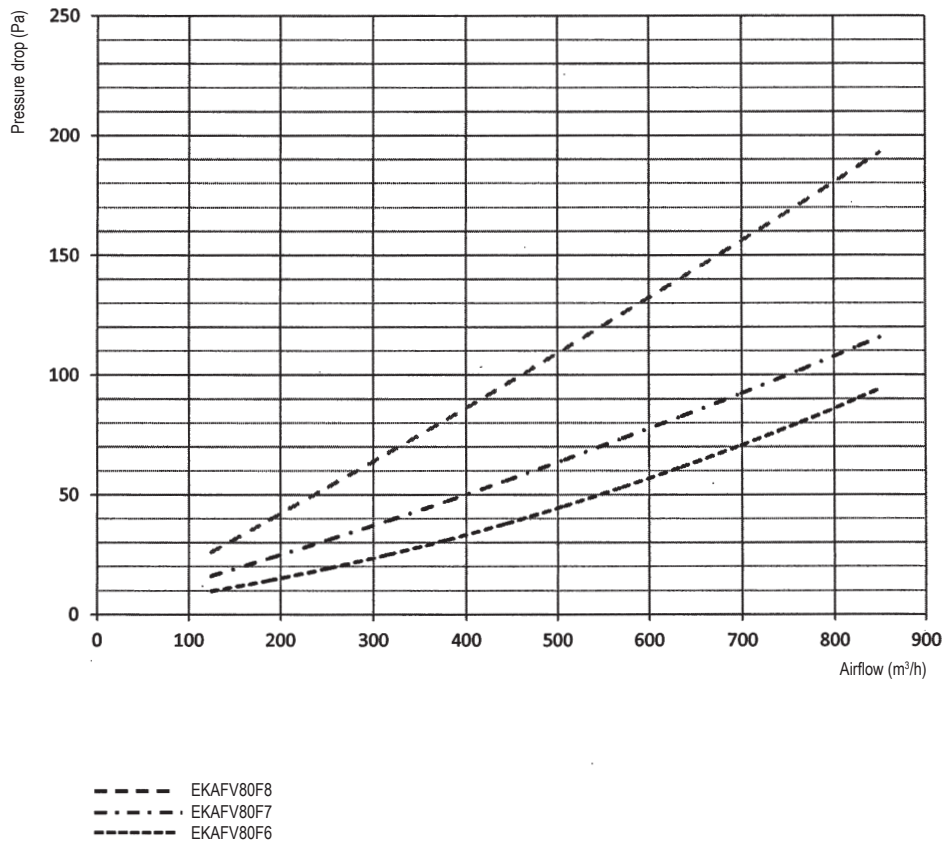
## 10 - 2 Filter Installation Method

VAM350-500FC



4D082449

VAM650-800FC



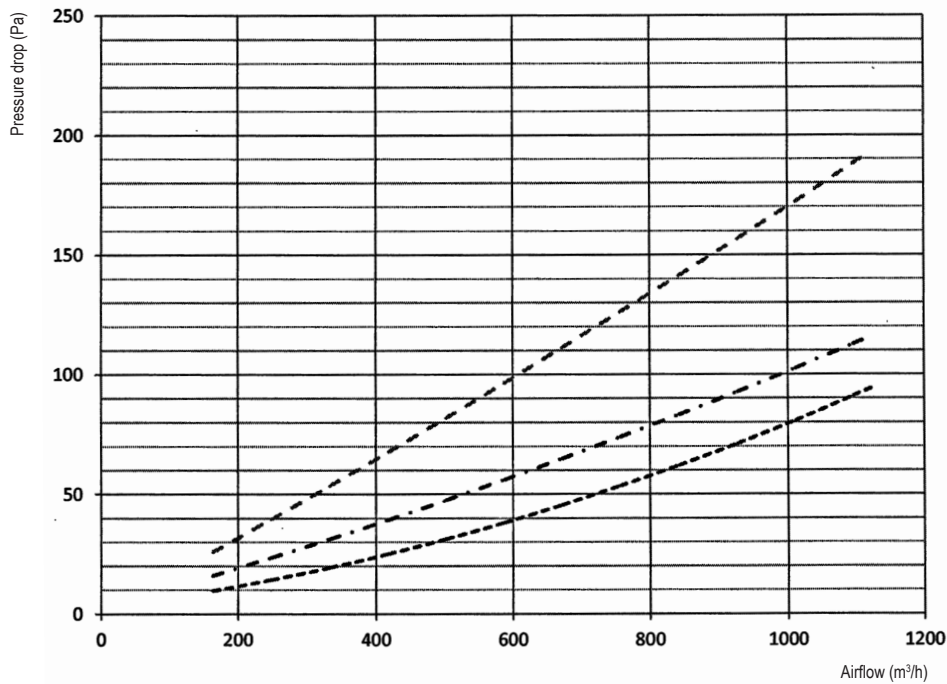
4D082450

# 10 Installation

## 10 - 2 Filter Installation Method

10

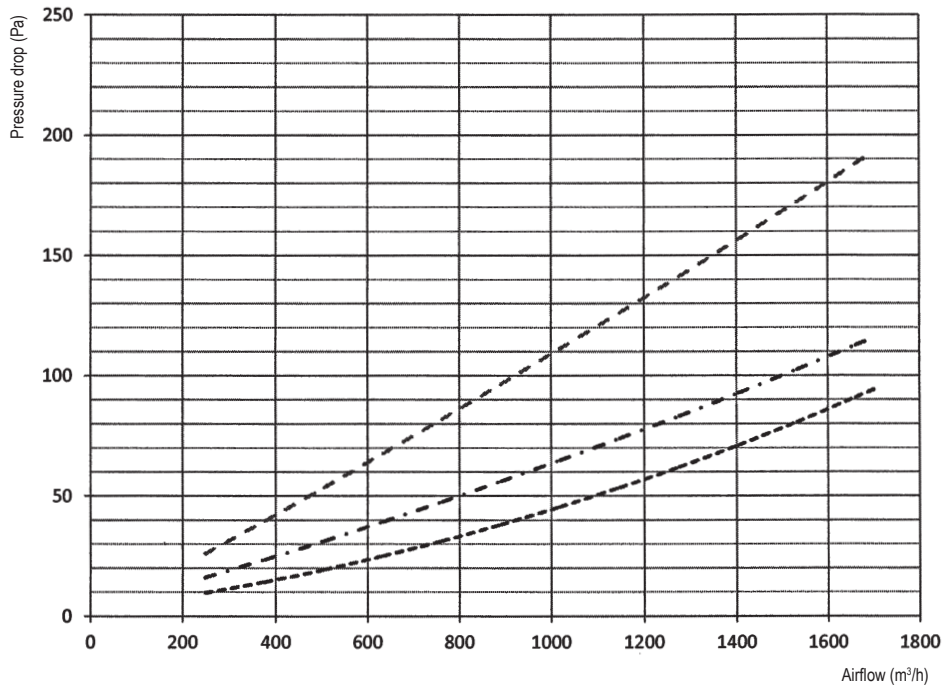
VAM1000FC



- - - - - EKAHV100F8 x1 (2 filters)  
 - · - · - EKAHV100F7 x1 (2 filters)  
 - - - - - EKAHV100F6 x1 (2 filters)

4D082451

VAM1500FC



- - - - - EKAHV80F8 x2 (2 filters)  
 - · - · - EKAHV80F7 x2 (2 filters)  
 - - - - - EKAHV80F6 x2 (2 filters)

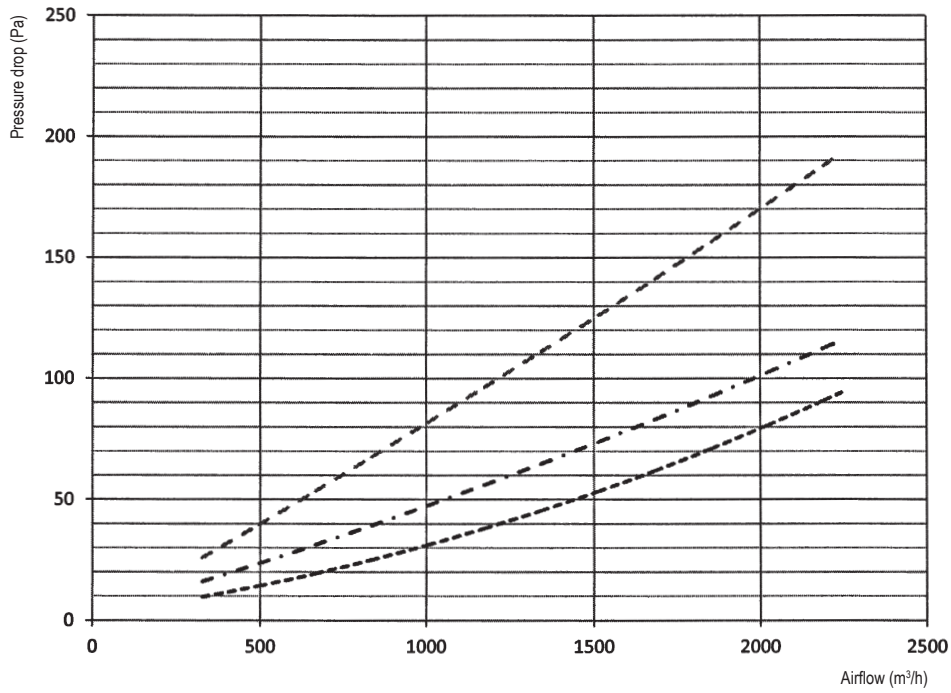
4D082452



# 10 Installation

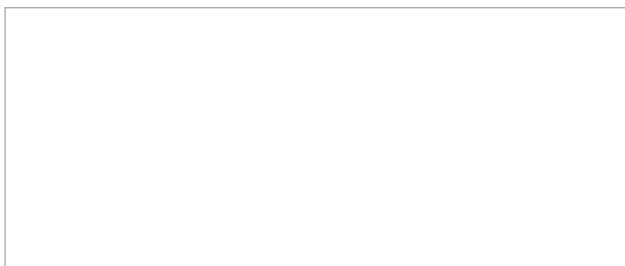
## 10 - 2 Filter Installation Method

VAM2000FC



- EKAHV100F8 x2 (4 filters)
- .-.- EKAHV100F7 x2 (4 filters)
- EKAHV100F6 x2 (4 filters)

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