

Heat reclaim ventilation Air Conditioning Technical Data VAM-J8



VAM350J8VEB
VAM500J8VEB
VAM650J8VEB
VAM800J8VEB
VAM1000J8VEB
VAM1500J8VEB
VAM2000J8VEB

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1 Features

1 - 1 VAM-J8

Ventilation with heat recovery as standard

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- › Wide range of units: air flow rate from 350 up to 2,000 m³/h
- › Shorter installation time thanks to easy adjustment of nominal air flow rate, so less need for dampers compared with traditional installations
- › Filter change indication based on actual filter contamination
- › 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
- › Optional medium and fine dust filters ePM10 70% (M6), ePM1 55% (F7), ePM1 70% (F8) to meet customer request or legislation
- › 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

1 - 1 VAM-J8

Technical specifications					VAM350J8	VAM500J8	VAM650J8	VAM800J8	VAM1000J8	VAM1500J8
Power input - 50Hz	Heat exchange mode	Nom.	Ultra high	kW	0.097 (1)	0.164 (1)	0.247 (1)	0.303 (1)	0.416 (1)	0.548 (1)
			High	kW	0.070 (1)	0.113 (1)	0.173 (1)	0.212 (1)	0.307 (1)	0.384 (1)
			Low	kW	0.039 (1)	0.054 (1)	0.081 (1)	0.103 (1)	0.137 (1)	0.191 (1)
	Bypass mode	Nom.	Ultra high	kW	0.085 (1)	0.148 (1)	0.195 (1)	0.289 (1)	0.417 (1)	0.525 (1)
			High	kW	0.061 (1)	0.100 (1)	0.131 (1)	0.194 (1)	0.300 (1)	0.350 (1)
			Low	kW	0.031 (1)	0.045 (1)	0.059 (1)	0.086 (1)	0.119 (1)	0.156 (1)
Casing	Material				Galvanised steel plate					
Insulation material					Closed cell					
Dimensions	Unit	Height	mm		305		368		731	
		Width	mm		1,113		1,354			
		Depth	mm		866		920	1,172		
Weight	Unit			kg	46.5		61.5	76.5		160
Fan	Type				Sirocco fan					
	Air flow rate - 50Hz	Heat exchange mode	Ultra high	m³/h	350 (1)	500 (1)	650 (1)	800 (1)	1,000 (1)	1,500 (1)
			High	m³/h	300 (1)	425 (1)	550 (1)	680 (1)	850 (1)	1,275 (1)
			Low	m³/h	200 (1)	275 (1)	350 (1)	440 (1)	550 (1)	825 (1)
		Bypass mode	Ultra high	m³/h	350 (1)	500 (1)	650 (1)	800 (1)	1,000 (1)	1,500 (1)
			High	m³/h	300 (1)	425 (1)	550 (1)	680 (1)	850 (1)	1,275 (1)
			Low	m³/h	200 (1)	275 (1)	350 (1)	440 (1)	550 (1)	825 (1)
	External static pressure - 50Hz	Maximum	Pa	150 (1)	120 (1)		200 (1)		170 (1)	200 (1)
		Ultra high	Pa	90.0 (1)						
		High	Pa	70.0 (1)						
Low		Pa	50.0 (1)							
Fan motor	Quantity				2					4
Temperature ex- change efficiency - 50Hz	Ultra high			%	85.1 (1)	80.0 (1)	84.3 (1)	82.5 (1)	79.6 (1)	83.2 (1)
	High			%	86.7 (1)	82.5 (1)	86.4 (1)	84.2 (1)	81.8 (1)	84.8 (1)
	Low			%	90.1 (1)	87.6 (1)	90.5 (1)	87.7 (1)	86.1 (1)	88.1 (1)
Enthalpy exchange efficiency - 50Hz	Cooling	Ultra high	%	65.2 (1)	59.2 (1)		67.7 (1)		62.6 (1)	68.9 (1)
		High	%	67.9 (1)	61.8 (1)	63.8 (1)	70.7 (1)	66.4 (1)	71.8 (1)	
		Low	%	74.6 (1)	69.5 (1)	73.1 (1)	76.8 (1)	74.0 (1)	77.5 (1)	
	Heating	Ultra high	%	75.5 (1)	69.0 (1)	73.1 (1)	72.8 (1)	68.6 (1)	73.8 (1)	
		High	%	77.6 (1)	72.2 (1)	76.3 (1)	75.3 (1)	71.7 (1)	76.1 (1)	
		Low	%	82.0 (1)	78.7 (1)	82.7 (1)	80.2 (1)	77.9 (1)	80.8 (1)	
Operation range	Min.			°CDB	-10 (2)					
	Max.			°CDB	46					
	Relative humidity			%	80 or less					
Operation range	Around unit			°CDB	0°C~40°CDB, 80% RH or less					
Sound pressure level - 50Hz	Heat exchange mode	Ultra high	dBA	34.5 (1)	37.5 (1)	39.0 (1)		42.0 (1)		
		High	dBA	32.0 (1)	35.0 (1)	36.0 (1)		38.5 (1)	39.0 (1)	
	Bypass mode	Low	dBA	29.0 (1)	30.5 (1)	31.0 (1)	30.5 (1)	32.5 (1)	33.5 (1)	
		Ultra high	dBA	34.5 (1)	38.0 (1)		40.0 (1)	42.5 (1)	42.0 (1)	
		High	dBA	32.0 (1)	35.0 (1)	34.5 (1)	36.5 (1)	40.0 (1)	39.0 (1)	
	Low	dBA	28.0 (1)	29.5 (1)	30.5 (1)		32.5 (1)			
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 (G3)								
Connection duct diameter				mm	200		250		2x250	
Operation mode					Heat exchange mode, bypass mode, fresh-up mode					
Safety devices	Item	01		Fuse						
Control systems	Wired remote control				BRC1D52 / BRC1E53A7 / BRC1E53B7 / BRC1E53C7 / BRC1H52W/S/K / BRC1H82W/S					
	VAM wired remote control				BRC301B61					
General	Supplier/ Manu- facturer details	Name or trademark			Daikin Europe N.V.					
	Product descrip- tion	Model identifier			VAM350J8VEB	VAM500J8VEB	VAM650J8VEB	VAM800J8VEB	VAM1000J8VEB	VAM1500J8VEB
Type of product					Bidirectional NRVU / See note 3					
Type of drive					variable speed drive					
Heat recovery system					recuperative					
Thermal efficiency				%	77 (4)	73 (4)	74 (4)	76 (4)	73 (4)	77 (4)
Sound power level (Lwa)				dB	51	54	58		61	62
Nominal flow rate				m³/s	0.097	0.139	0.181	0.222	0.278	0.417
Effective electric power input				kW	0.096	0.171	0.203	0.272	0.409	0.475
Internal specific fan power				W/ (m³/s)	465 (3)	663 (3)	836 (3)	757 (3)	972 (3)	721 (3)
Maximum external leakage				%	<9	<8				
Maximum internal leakage				%	<8					
Filter service warning					Displayed on controller / See note 5					
Instructions for pre-/disassembly					https://www.daikin.eu/en_us/about/daikin-innovations/seasonal-efficiency.html					
Face velocity				m/s	0.520	0.740	0.720	0.670	0.830	0.620
External pressure				Pa	90.0					

2 Specifications

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Technical specifications		VAM350J8	VAM500J8	VAM650J8	VAM800J8	VAM1000J8	VAM1500J8
Internal pressure drop	Pa	106 (3)	155 (3)	196 (3)	166 (3)	216 (3)	158 (3)
Fan efficiency	%	43.0 (6)		41.9 (6)	41.1 (6)		

Technical specifications					VAM2000J8	
Power input - 50Hz	Heat exchange mode	Nom.	Ultra high	kW	0.833 (1)	
			High	kW	0.614 (1)	
			Low	kW	0.273 (1)	
	Bypass mode	Nom.	Ultra high	kW	0.835 (1)	
			High	kW	0.600 (1)	
			Low	kW	0.239 (1)	
Casing	Material				Galvanised steel plate	
Insulation material					Closed cell	
Dimensions	Unit	Height		mm	731	
		Width		mm	1,354	
		Depth		mm	1,172	
Weight	Unit				160	
Fan	Type				Sirocco fan	
	Air flow rate - 50Hz	Heat exchange mode	Ultra high	m³/h	2,000 (1)	
High			m³/h	1,700 (1)		
Low			m³/h	1,100 (1)		
Bypass mode		Ultra high	m³/h	2,000 (1)		
		High	m³/h	1,700 (1)		
		Low	m³/h	1,100 (1)		
	External static pressure - 50Hz	Maximum		Pa	170 (1)	
Ultra high		Pa	90.0 (1)			
High		Pa	70.0 (1)			
		Low		Pa	50.0 (1)	
Fan motor	Quantity				4	
Temperature ex- change efficiency - 50Hz	Ultra high			%	79.6 (1)	
	High			%	81.8 (1)	
	Low			%	86.1 (1)	
Enthalpy exchange efficiency - 50Hz	Cooling	Ultra high		%	62.6 (1)	
		High		%	66.4 (1)	
		Low		%	74.0 (1)	
	Heating	Ultra high		%	68.6 (1)	
		High		%	71.7 (1)	
		Low		%	77.9 (1)	
Operation range	Min.		°CDB	-10 (2)		
	Max.		°CDB	46		
	Relative humidity		%	80 or less		
Operation range	Around unit			°CDB	0°C~40°CDB, 80% RH or less	
Sound pressure level - 50Hz	Heat exchange mode	Ultra high		dBA	45.0 (1)	
		High		dBA	41.5 (1)	
		Low		dBA	36.0 (1)	
	Bypass mode	Ultra high		dBA	45.0 (1)	
		High		dBA	41.0 (1)	
		Low		dBA	35.0 (1)	
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 (G3)	
Connection duct diameter					mm	2x250
Operation mode					Heat exchange mode, bypass mode, fresh-up mode	
Safety devices	Item	01			Fuse	
Control systems	Wired remote control				BRC1D52 / BRC1E53A7 / BRC1E53B7 / BRC1E53C7 / BRC1H52W/S/K / BRC1H82W/S	
	VAM wired remote control				BRC301B61	
General	Supplier/	Name or trademark			Daikin Europe N.V.	
	Manu- facturer details					
	Product descrip- tion	Model identifier			VAM2000J8VEB	
Type of product					Bidirectional NRVU / See note 3	
Type of drive					variable speed drive	
Heat recovery system					recuperative	
Thermal efficiency				%	73 (4)	
Sound power level (Lwa)				dB	65	
Nominal flow rate				m³/s	0.556	
Effective electric power input				kW	0.817	
Internal specific fan power				W/ (m³/s)	972 (3)	
Maximum external leakage				%	<8	

2 Specifications

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Technical specifications		VAM2000J8
Maximum internal leakage	%	<8
Filter service warning		Displayed on controller / See note 5
Instructions for pre-/disassembly		https://www.daikin.eu/en_us/about/daikin-innovations/seasonal-efficiency.html
Face velocity	m/s	0.830
External pressure	Pa	90.0
Internal pressure drop	Pa	216 (3)
Fan efficiency	%	41.1 (6)

Electrical specifications			VAM350J8	VAM500J8	VAM650J8	VAM800J8	VAM1000J8	VAM1500J8	
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	1.56	2.08	2.80	4.39	4.90	8.78	
	Maximum fuse amps (MFA)	A	16.0						
	Fan motor rated output	kW	0.08x2		0.106x2	0.210x2		0.210x4	
	Full load	Fan motor	A	0.620	0.830	1.12	1.76	1.96	1.76
	amps	Fan motor 2	A	0.620	0.830	1.12	1.76	1.96	1.76
	(FLA)	Fan motor 3	A	-				1.76	
		Fan motor 4	A	-				1.76	

Electrical specifications			VAM2000J8	
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	9.80	
	Maximum fuse amps (MFA)	A	16.0	
	Fan motor rated output	kW	0.210x4	
	Full load	Fan motor	A	1.96
	amps	Fan motor 2	A	1.96
	(FLA)	Fan motor 3	A	1.96
		Fan motor 4	A	1.96

(1) Measured according to JIS B 8628 - 2003 |

(2) When the heat reclaim ventilation unit is installed upside down, the minimal allowed outdoor air temperature is 5°C. |

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

(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 regulation (EU) No 327/2011 |

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

(8) MCA = $1.25 \times (FLA(FM1) + FLA(FM2) + FLA(FM3) + FLA(FM4))$ |

(9) MCA represents maximum input current. |

(10) MFA $\leq 4 \times (FLA(FM1) + FLA(FM2) + \dots)$ |

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

(12) Fan step 8 is nominal specs. |

(13) The unit complies for "Code du travail" and "ERP 5e catégorie" applications according to French legislation. |

(14) "Code du travail" applications are non-public buildings (example offices). |

(15) "ERP (Etablissement Recevant du Public) de 5e catégorie" are smaller shops, hotels etc

Options

3 - 1 Options

VAM-J8

3

Available options for -VAM*J8*- models

Item			Model						
			VAM350J8VEB	VAM500J8VEB	VAM650J8VEB	VAM800J8VEB	VAM1000J8VEB	VAM1500J8VEB	VAM2000J8VEB
Control systems	Remote control		BRC301B61						
	Remote control Wired type		BRC1D52						
			BRC1E53A7 (1) / BRC1E53B7 (2) / BRC1E53C7 (3) / BRC1H52* / BRC1H82*						
	Centralised control systems	Central remote control	DCS302C51						
		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	BRP4A50A						
		Mounting plate	---	EKMP65VAM (5)	---			EKMPVAM (4)	
Miscellaneous	Plenum chamber	Model	----						EKPLEN200 (6)
		Outside diameter [mm]	Ø350						
	High-efficiency filter (7)	ePM10 70% (M6)	EKAFVJ50F6	EKAFVJ65F6	EKAFVJ100F6	EKAFVJ100F6 x 2			
		ePM1 60% (F7)	EKAFVJ50F7	EKAFVJ65F7	EKAFVJ100F7	EKAFVJ100F7 x 2			
		ePM1 70% (F8)	EKAFVJ50F8	EKAFVJ65F8	EKAFVJ100F8	EKAFVJ100F8 x 2			
		CO2 Sensor		BRYMA65			BRYMA100		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 -VAM1500J/VAM2000J- units, mounting plate -EKMPVAM- is required.
5. To install an adaptor PCB on -VAM650J- units, mounting plate -EKMP65VAM- is required.
6. Plenum chamber to merge either -2- air inlets or -2- air outlets. Up to -4- plenum chambers can be connected.
7. 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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VAM-J8

Available options for -VAM*J8*- models in combination with -EKVDX*-

Item								
			VAM500J8VEB	VAM650J8VEB	VAM800J8VEB	VAM1000J8VEB	VAM1500J8VEB	VAM2000J8VEB
Adaptor PCB	For heaters		BRP4A50A					
	Mounting plate		----	EKMP65VAM (2)	----		EKMPVAM (1)	
Miscellaneous	Plenum chamber	Model	----				EKPLEN200 (3)	
		Outside diameter (mm)					ø350	
	High-efficiency filter (4)	ePM10 70% (M6)	EKAFVJ50F6	EKAFVJ65F6	EKAFVJ100F6		EKAFVJ100F6 x 2	
		ePM1 60% (F7)	EKAFVJ50F7	EKAFVJ65F7	EKAFVJ100F7		EKAFVJ100F7 x 2	
		ePM1 70% (F8)	EKAFVJ50F8	EKAFVJ65F8	EKAFVJ100F8		EKAFVJ100F8 x 2	
CO2 Sensor		BRYMA65		BRYMA100		BRYMA200		

Notes

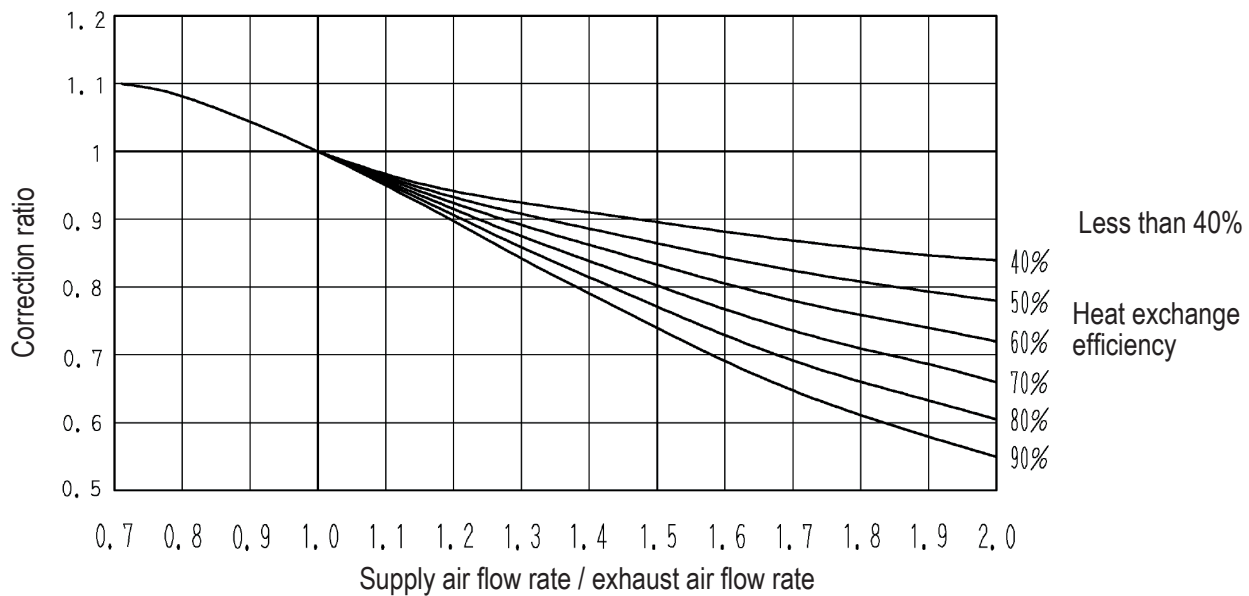
1. To install an adaptor PCB on -VAM1500J/VAM2000J- units, mounting plate -EKMPVAM- is required.
2. To install an adaptor PCB on -VAM650J- units, mounting plate -EKMP65VAM- is required.
3. Plenum chamber to merge either -2- air inlets or -2- air outlets. Up to -4- plenum chambers can be connected
4. 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

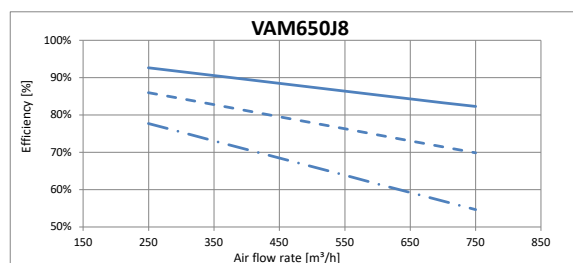
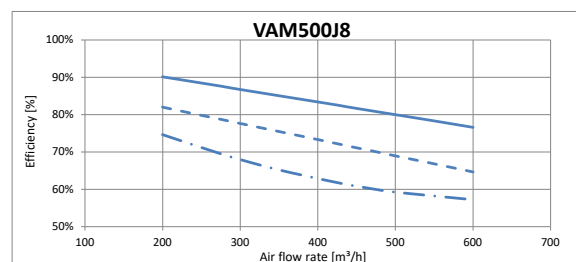
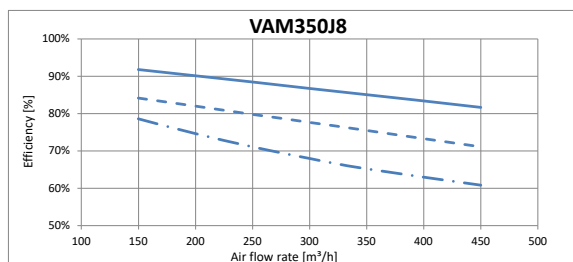
4 - 1 Exchange efficiency

VAM-J8



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VAM350-650J8



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

Notes

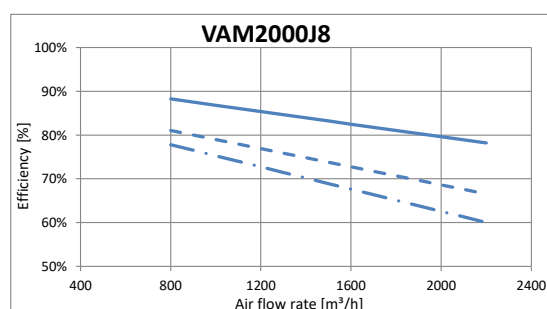
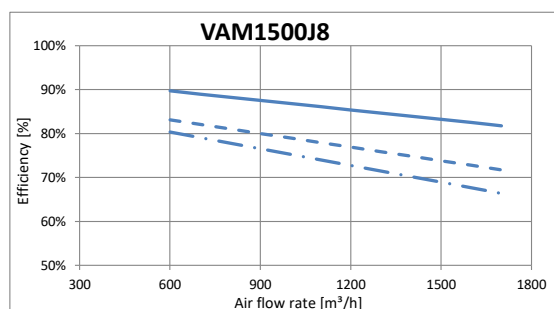
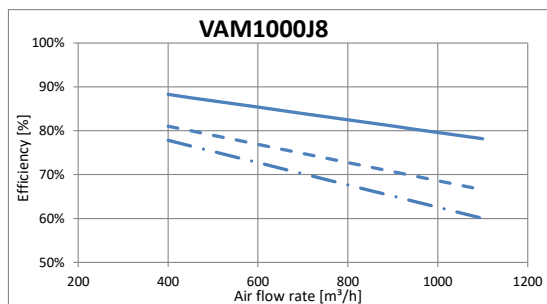
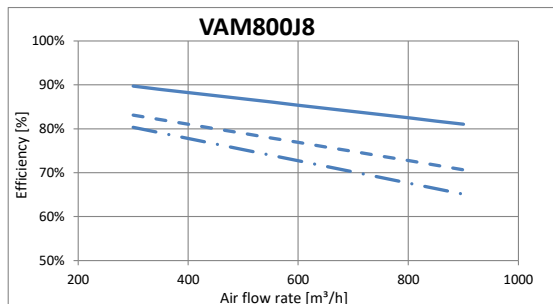
1. Efficiency according to JIS B 8628-2003.

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4 Exchange efficiency

4 - 1 Exchange efficiency

VAM800-2000J8



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

Notes

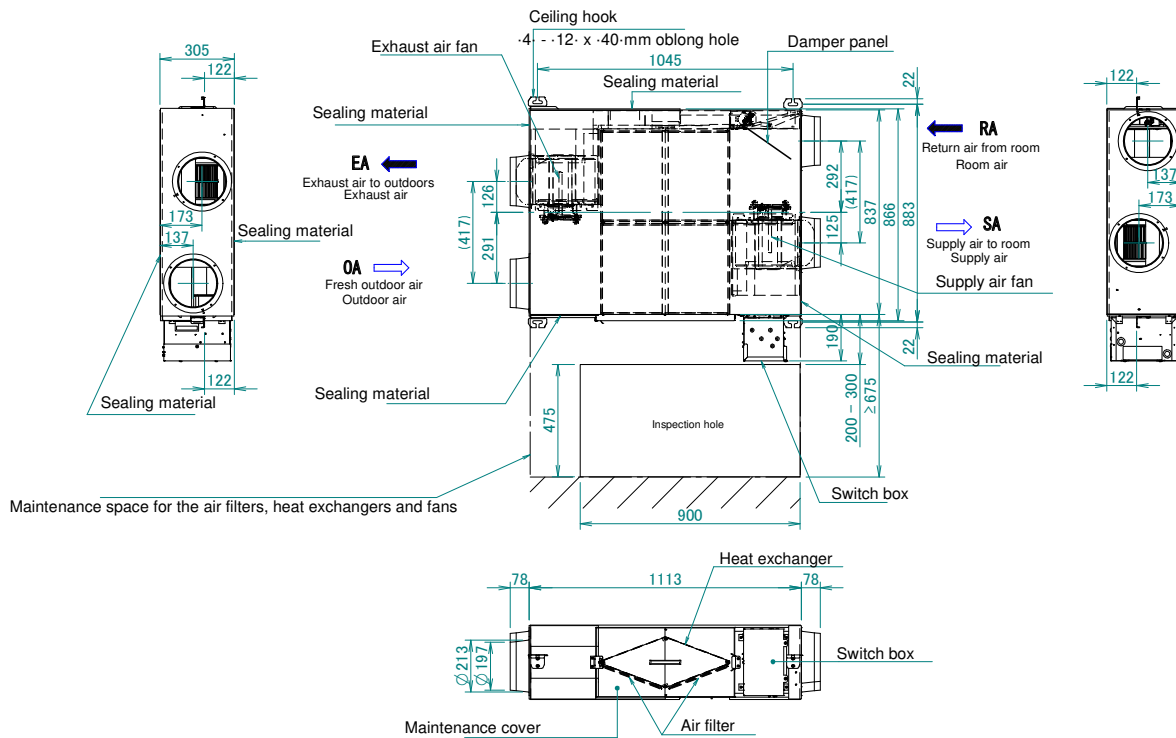
1. Efficiency according to JIS B 8628-2003.

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5 Dimensional drawings

5 - 1 Dimensional Drawings

VAM350-500J8

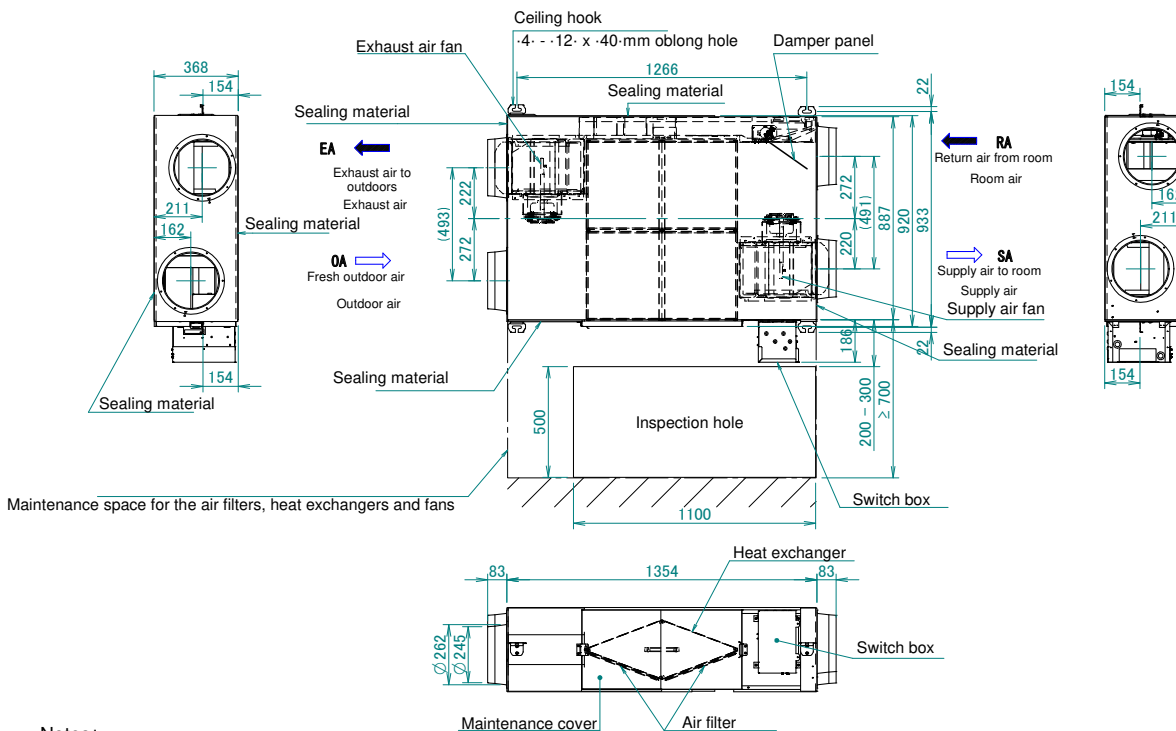


Notes:

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

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VAM650J8



Notes:

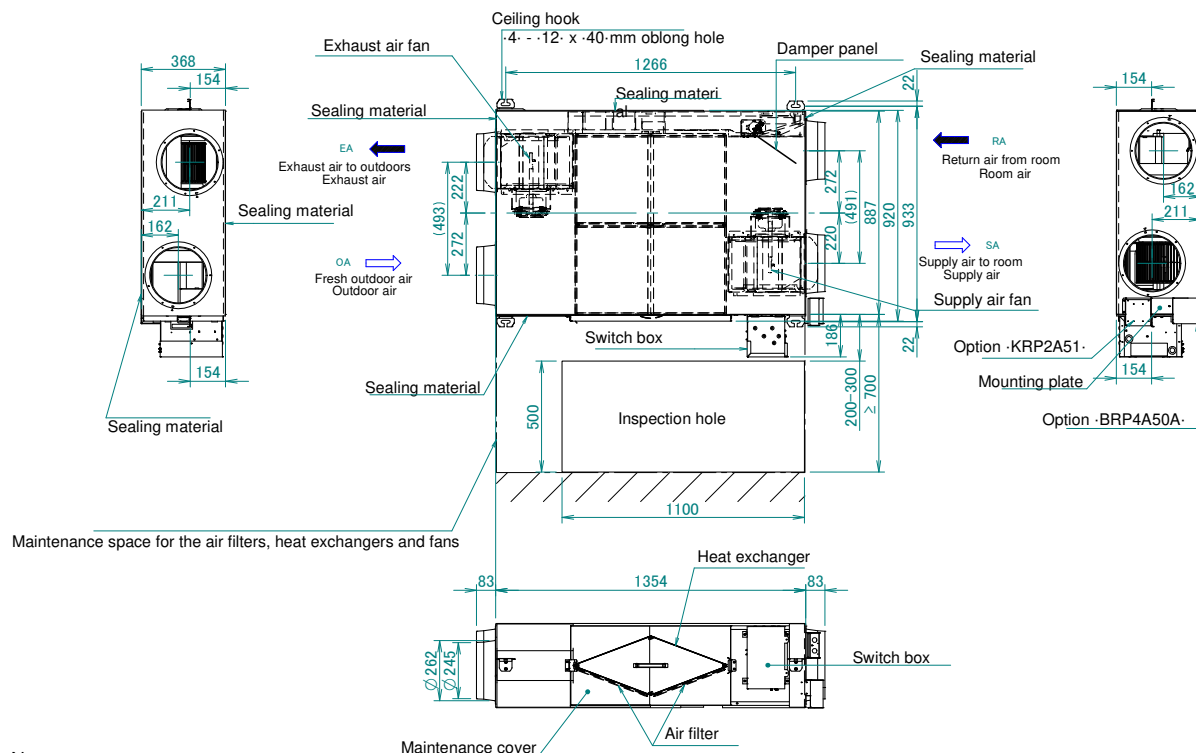
- To allow for the inspection of the air filters, heat exchangers, and fans, be sure to provide the inspection hole.

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5 Dimensional drawings

5 - 1 Dimensional Drawings

VAM650J8

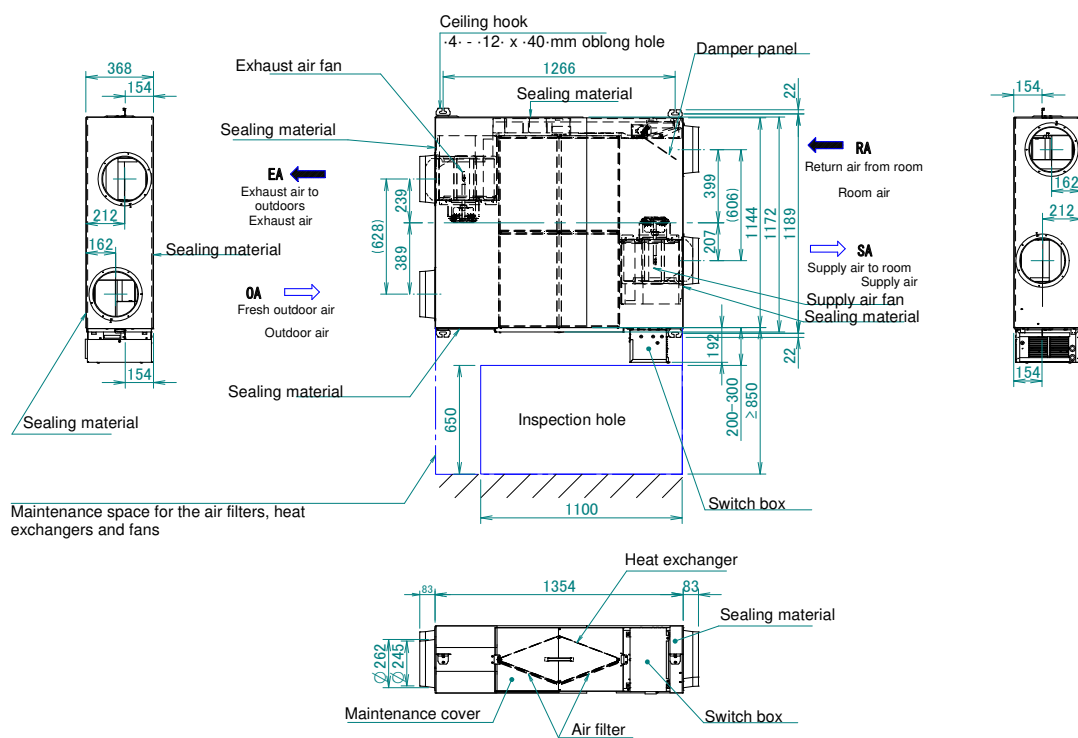


Notes :

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

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VAM800-1000JA



Notes :-

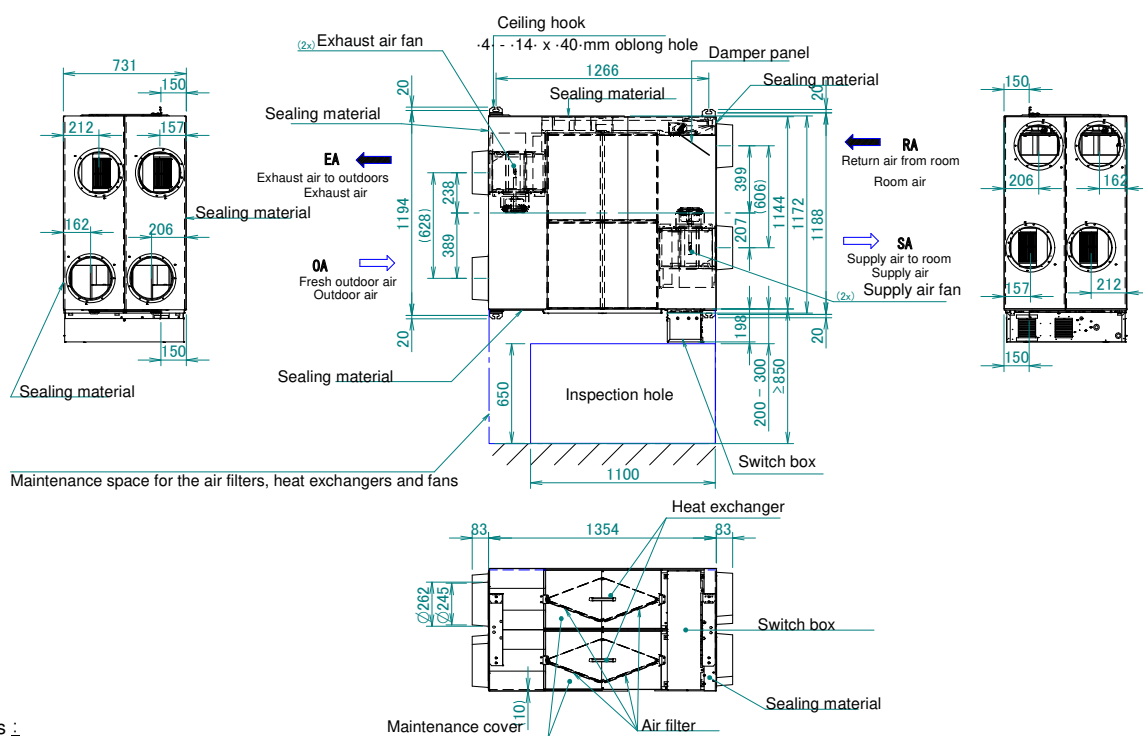
1. To perform maintenance on the air filter, it is required to provide a service access panel.

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5 Dimensional drawings

5 - 1 Dimensional Drawings

VAM1500-2000J8

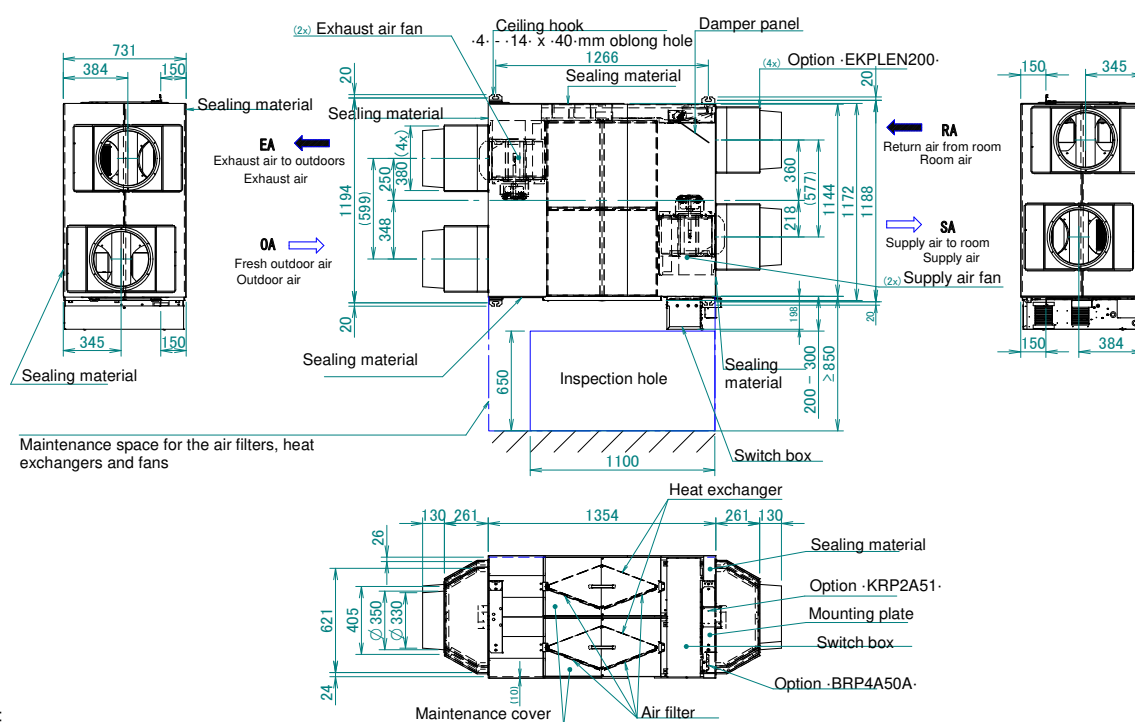


Notes :

1. To perform maintenance on the air filter, it is required to provide a service access panel.

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VAM1500-2000J8



Notes :

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

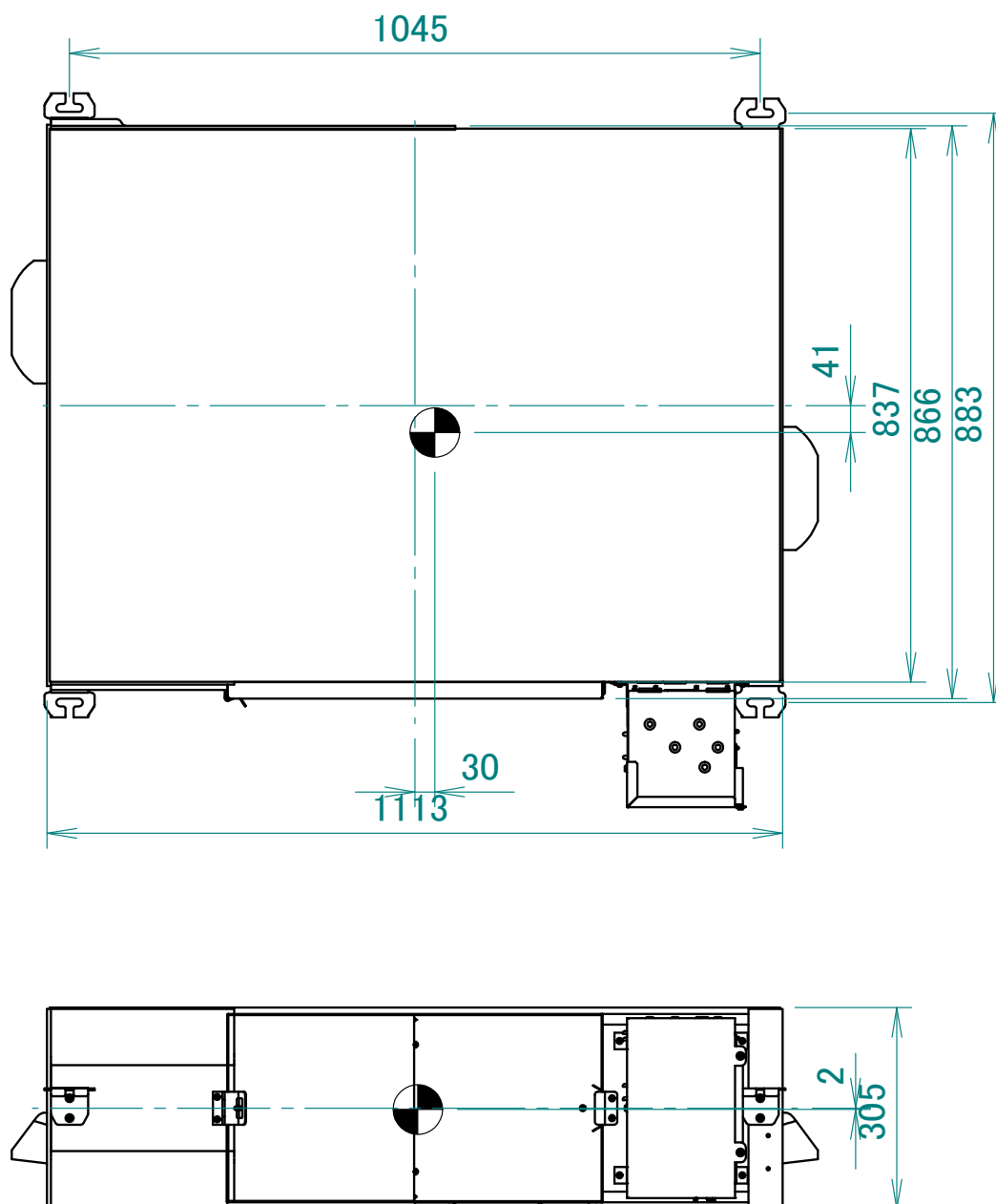
3D112818C

6 Centre of gravity

6 - 1 Centre of Gravity

VAM350-500J8

6

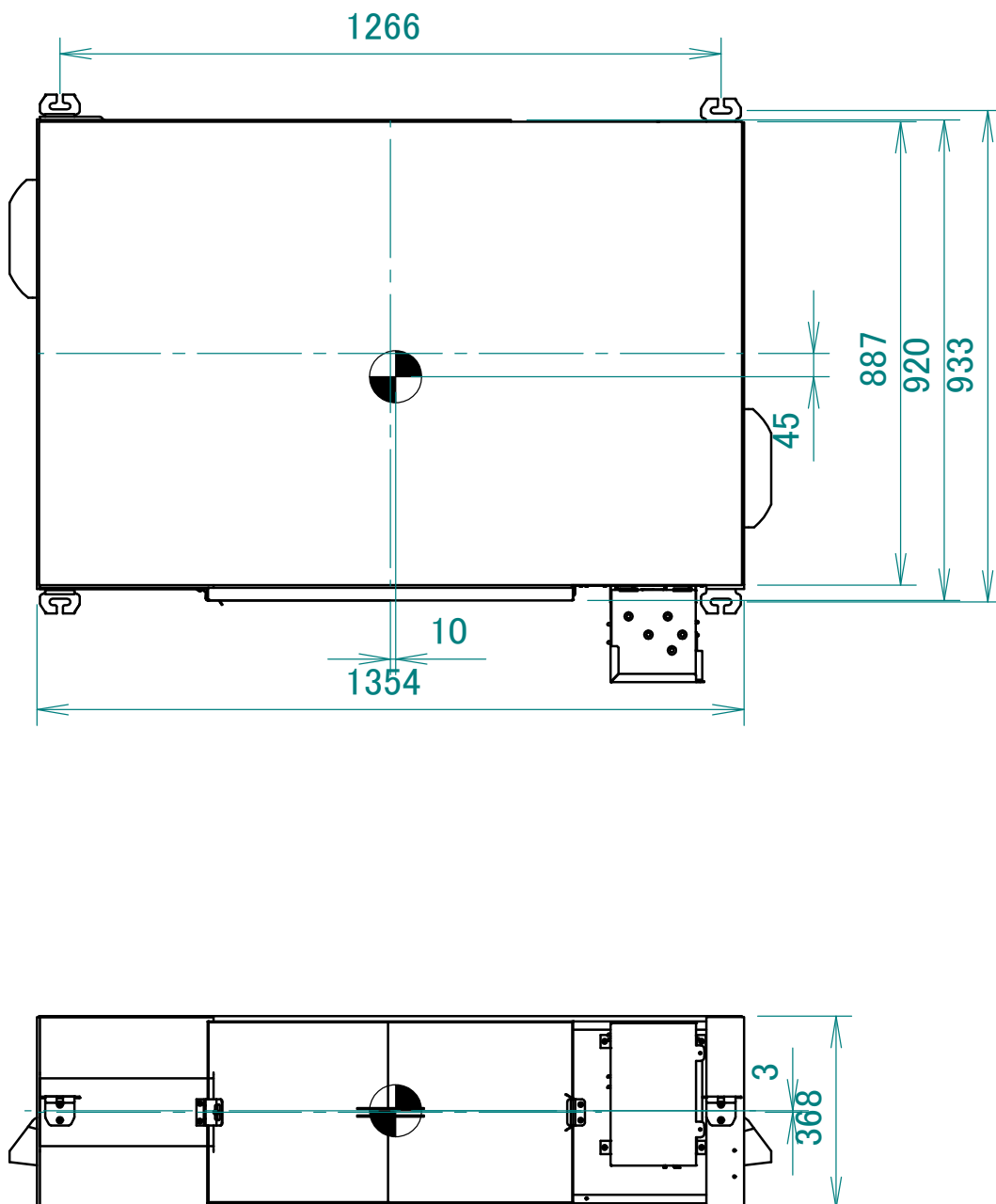


4D112821A

6 Centre of gravity

6 - 1 Centre of Gravity

VAM650J8



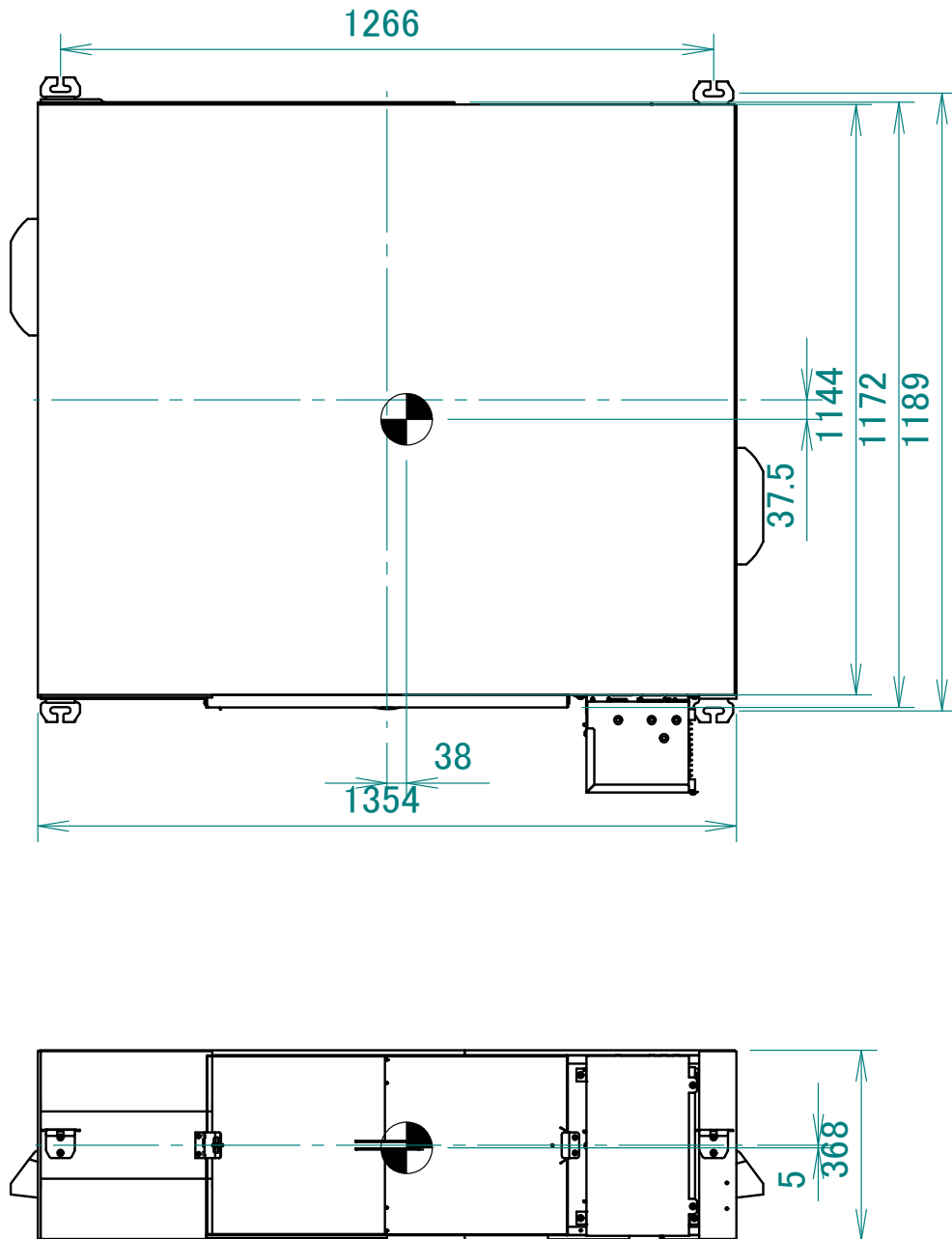
4D113503A

6 Centre of gravity

6 - 1 Centre of Gravity

VAM800-1000J8

6

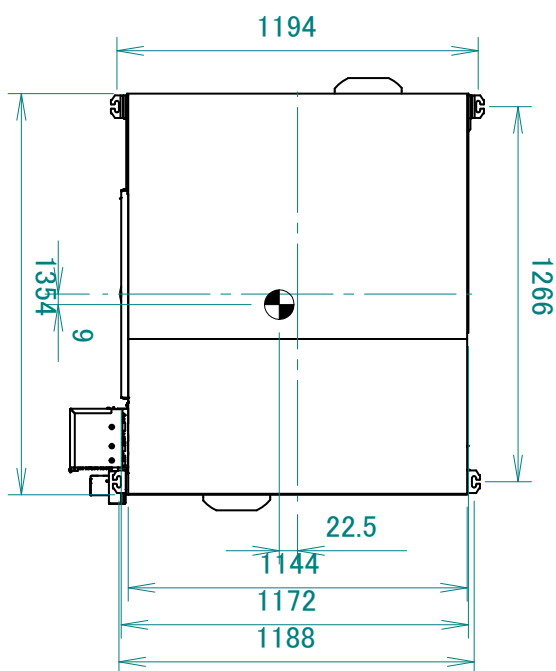
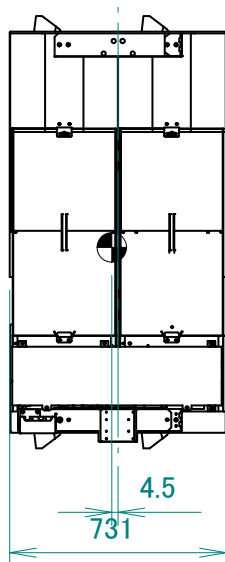


4D112820B

6 Centre of gravity

6 - 1 Centre of Gravity

VAM1500-2000J8



4D112822A

7 Wiring diagrams

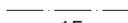
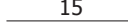
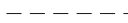
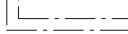
7 - 1 Wiring Diagrams - Single Phase

7

VAM350-650J8

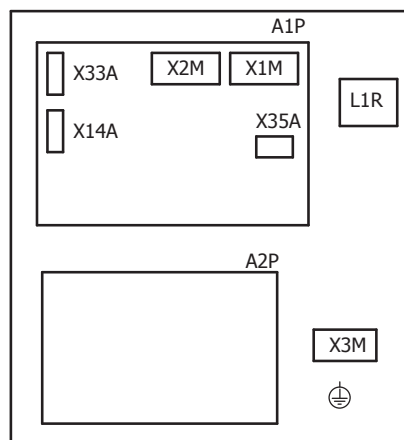
NOTES to go through before starting the unit

1. Symbols:

-  : Earth wiring
-  : Wire number 15
-  : Field wire
-  : Field cable
-  : Connection ** continues on page 12 column 2
-  : Several wiring possibilities
-  : Option
-  : Wiring depending on model
-  : Not mounted in switch box
-  : PCB

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

POSITION IN SWITCH BOX



4D112850

VAM350-650J8

LEGEND

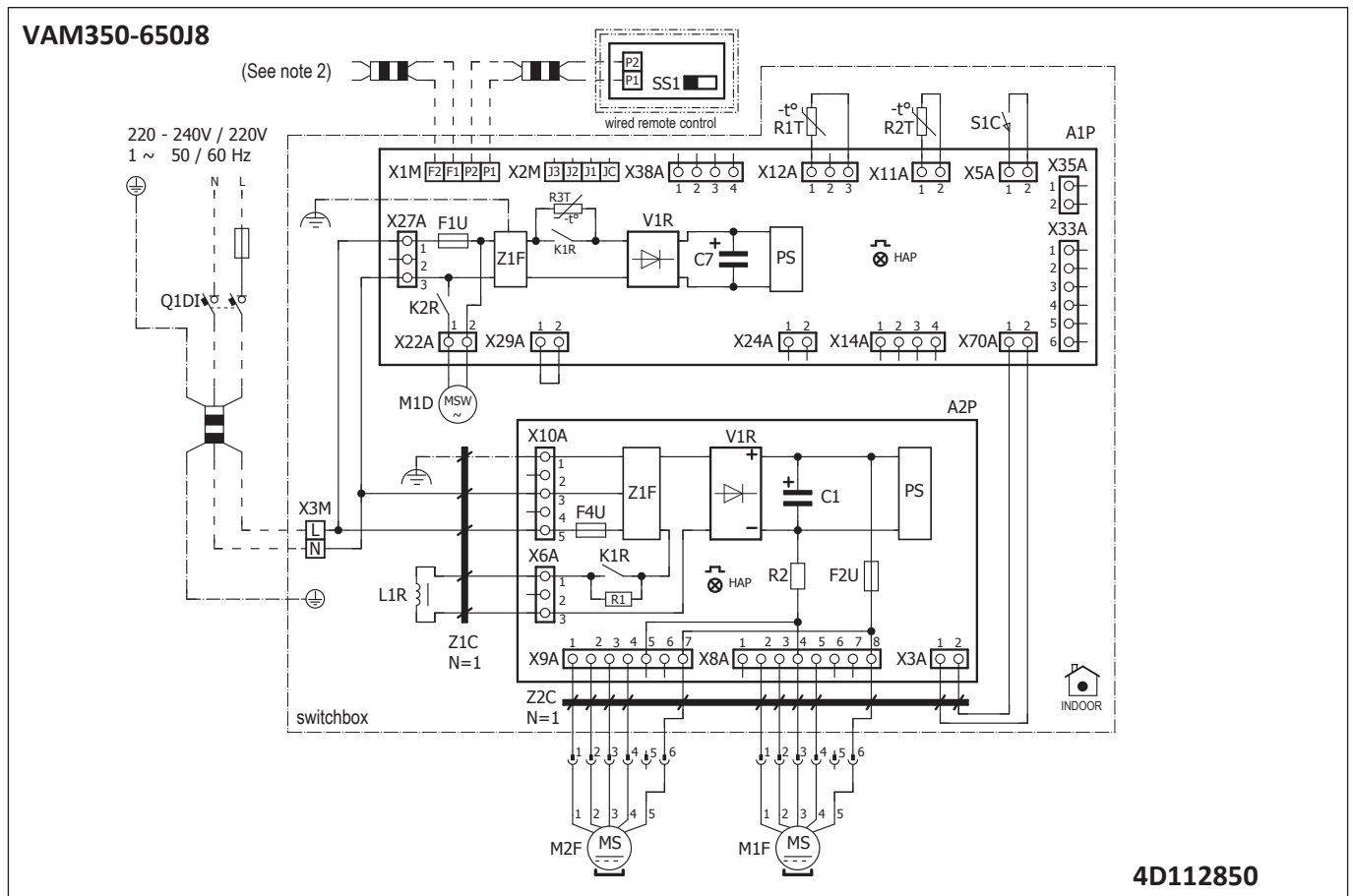
Part n°	Description	Part n°	Description
A1P	main PCB	R2T	thermistor outdoor air
A2P	fan PCB	R3T (A1P)	thermistor PTC
C* (A*P)	capacitor	S1C	limit switch damper motor
F1U (A1P)	fuse T 6.3 A 250 V	V1R (A*P)	diode module
F2U (A2P)	fuse T 5 A 250 V	X1M (A1P)	terminal
F4U (A2P)	fuse T 6.3 A 250 V	X2M (A1P)	terminal (outside input)
HAP (A*P)	running LED (service monitor-green)	X3M	main terminal (power supply)
K*R (A*P)	magnetic relay	Z1F (A*P)	noise filter
L1R	reactor	Z*C	ferrit core
M1D	motor (damper)	REMOTE CONTROL	
M1F	supply air fan	SS1	selector switch
M2F	exhaust air fan	CONNECTORS FOR OPTION (see note 4)	
PS (A*P)	switching power supply	X14A	connector (CO2 sensor)
Q1DI	# earth leakage circuit breaker (max. 300mA)	X24A	connector (outside damper)
R* (A2P)	resistance	X33A	connector (contact PCB)
R1T	thermistor indoor air	X35A	connector (appendices PCB)

- * : optional
- # : field supply

4D112850

7 Wiring diagrams

7 - 1 Wiring Diagrams - Single Phase

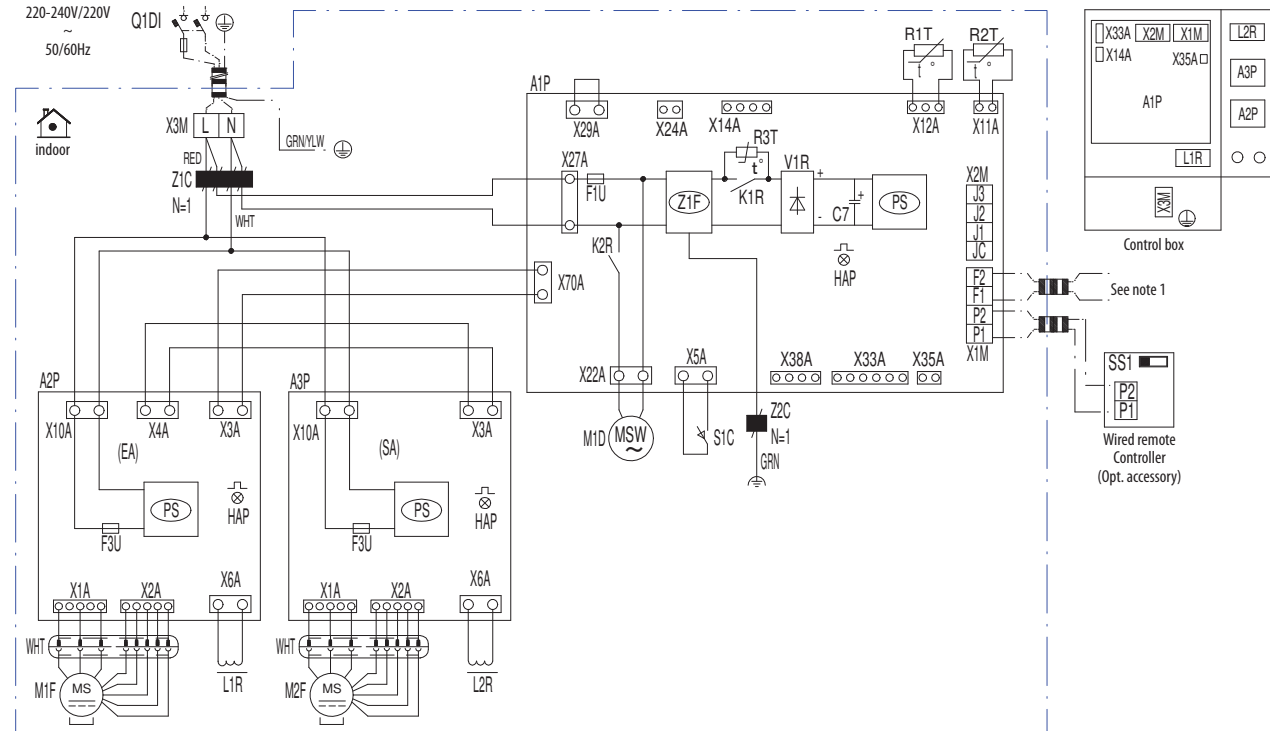


7 Wiring diagrams

7 - 1 Wiring Diagrams - Single Phase

7

VAM800-1000J8

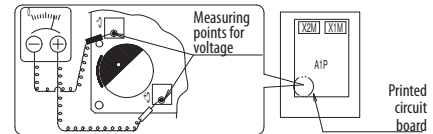


Caution when performing service inside the EL. Compo. box

WARNING

- 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.

Caution for ELECTRIC SHOCK



A1P	Printed circuit board (main)
A2P	Printed circuit board assy (fan)
A3P	Printed circuit board assy (fan)
C7	Capacitor (M1F)
F1U	Fuse T, 6.3A, 250V (A1P)
F3U	Fuse T 6.3A, 250V (A2P, A3P)
HAP	Pilot lamp (service monitor-green)
K1R	Magnetic relay
K2R	Magnetic relay
L1R	Reactor
L2R	Reactor
M1F	Motor (exhaust air fan)
M2F	Motor (supply air fan)
M1D	Motor (damper)
PS	Switching power supply
Q1DI	Field earth leak detector (max. 300mA)
R1T	Thermistor (indoor air)
R2T	Thermistor (outdoor air)
R3T	Thermistor (PTC)
S1C	Limit switch damper motor
X1M	Terminal (A1P)
X2M	Terminal (outside input) (A1P)
X3M	Terminal (power supply)
V1R	Diode bridge
Z1F	Noise filter
Z2C	Noise filter (ferrit core)
Remote controller	
SS1	Selector switch
Connector for option (see note 3)	
X14A	Connector (CO ₂ sensor)
X24A	Connector (outside damper)
X33A	Connector (contact PCB)
X35A	Connector (appendices PCB)

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

COLORS

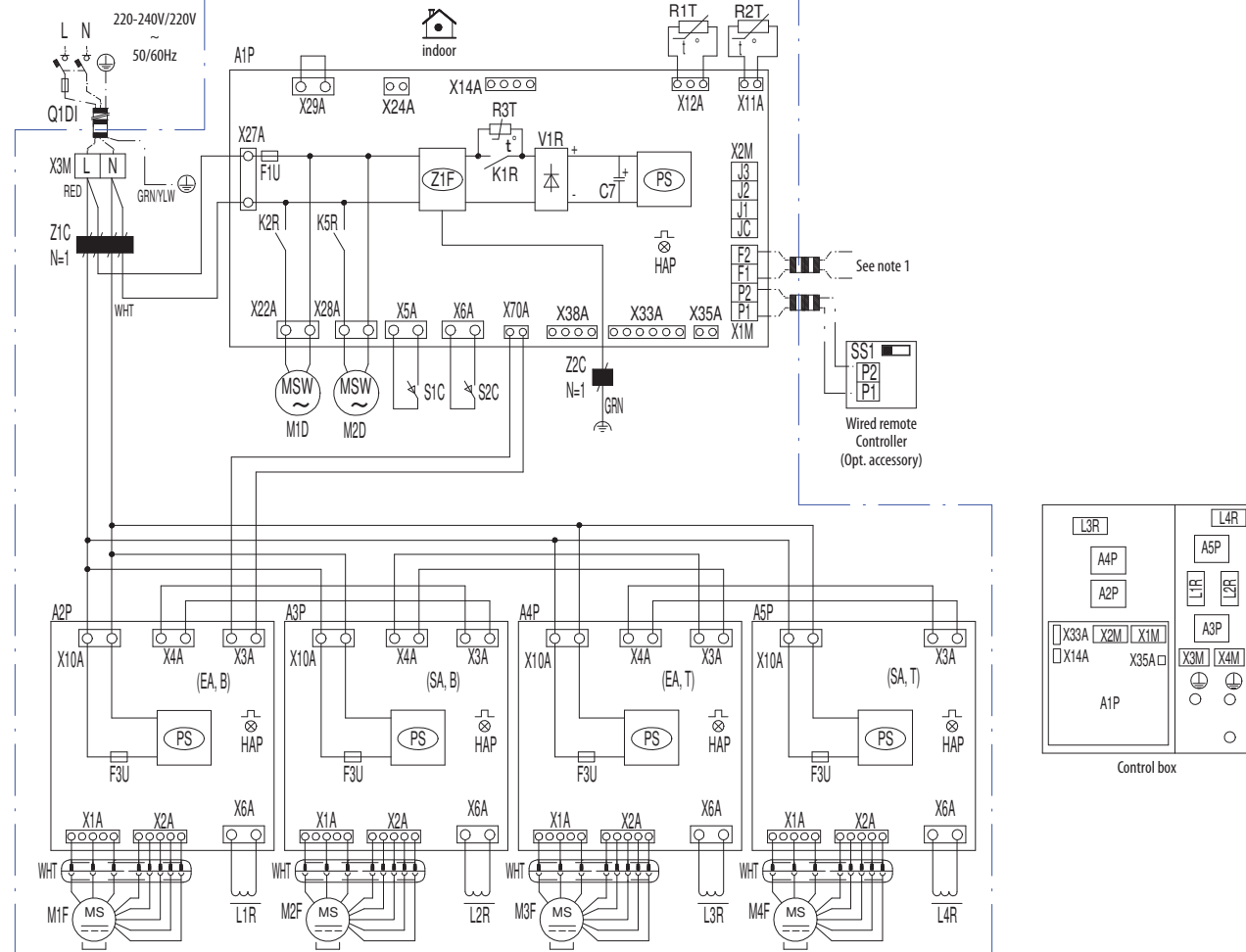
BLK: black, BLU: blue, ORG: orange, RED: red,
WHT: white, YLW: yellow, GRN: green

2D137285

7 Wiring diagrams

7 - 1 Wiring Diagrams - Single Phase

VAM1500-2000J8

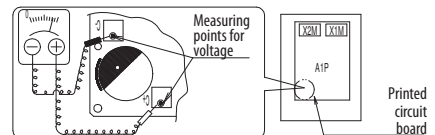


Caution when performing service inside the EL. Compo. box

WARNING

- 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.

Caution for ELECTRIC SHOCK



A1P	Printed circuit board (main)
A2P~A4P	Printed circuit board assy (fan)
A5P	Printed circuit board assy (fan)
C7	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
L1R~L4R	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
Q1DI	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
Z*C	Noise filter (ferrit core)
SS1	Selector switch
	Connector for option (see note 3)
X14A	Connector (CO, sensor)
X24A	Connector (outside damper)
X33A	Connector (contact PCB)
X35A	Connector (appendices PCB)

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

COLORS

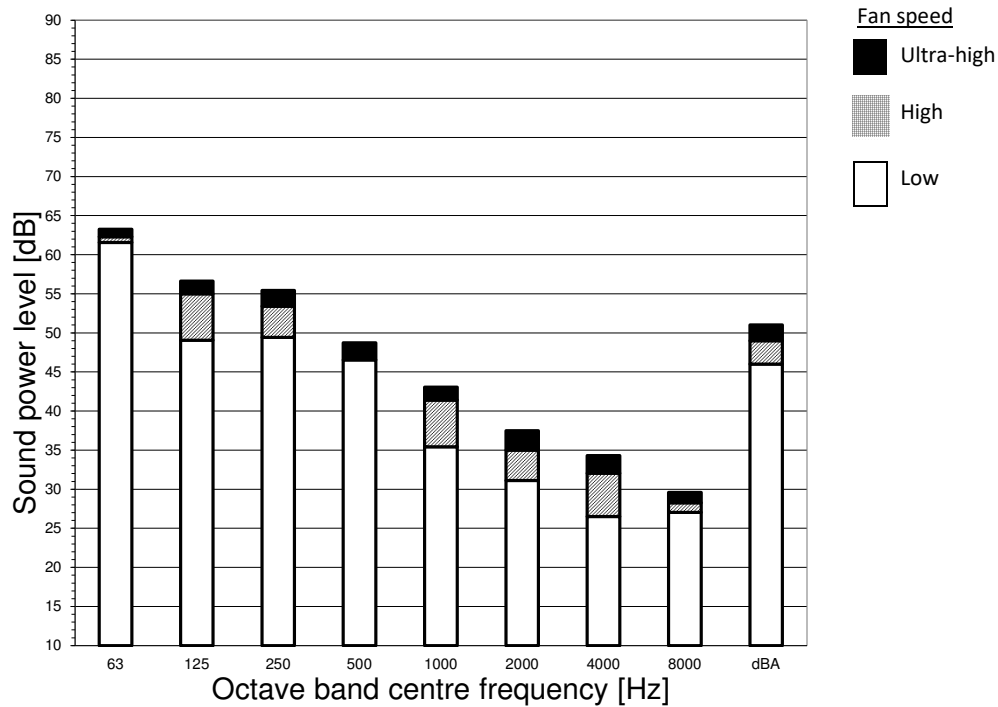
BLK: black, BLU: blue, ORG: orange, RED: red,
WHT: white, YLW: yellow, GRN: green

2D137286

8 Sound data

8 - 1 Sound Power Spectrum

VAM350J8

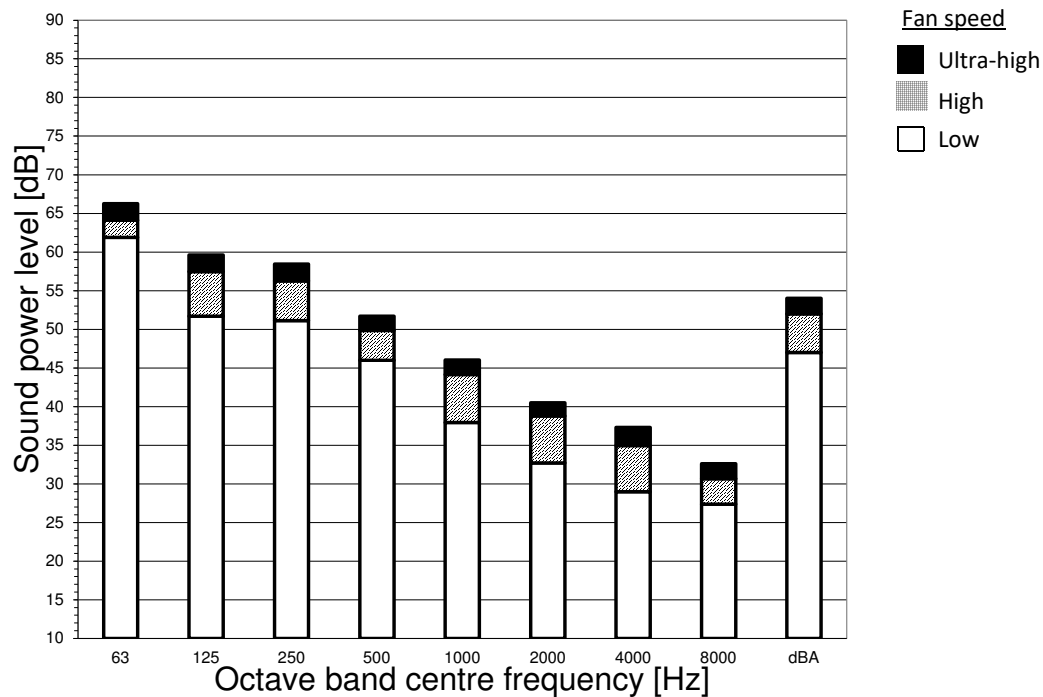


Notes

- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10^{-12} W.
- Measured according to ISO 3744

3D113496A

VAM500J8



Notes

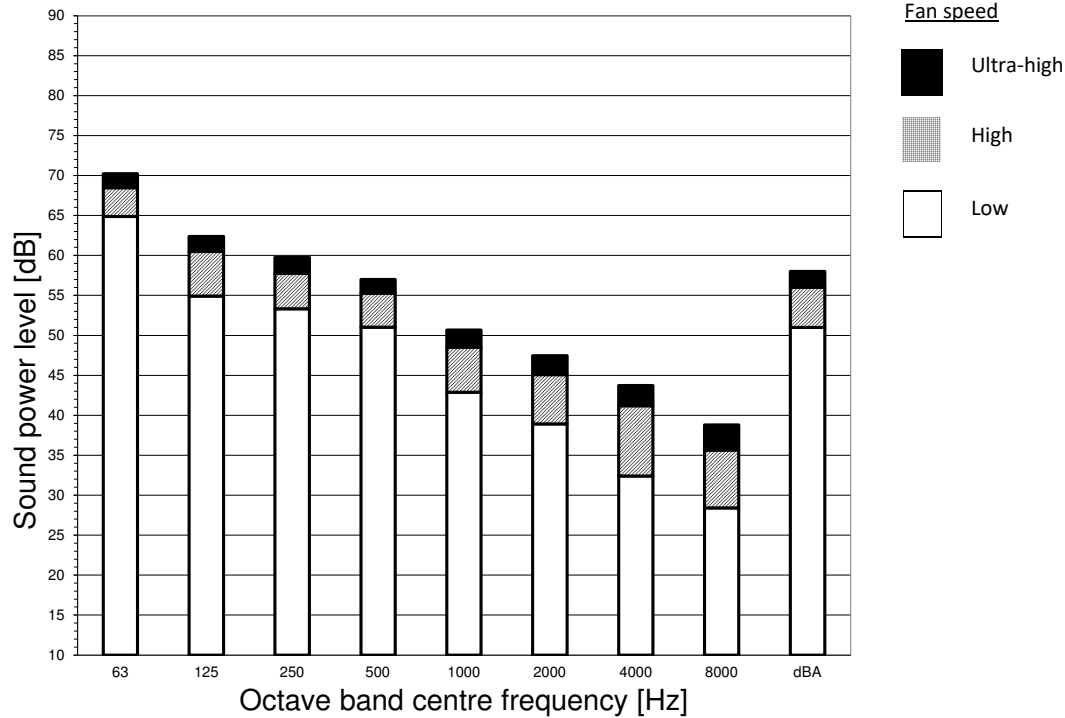
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10^{-12} W.
- Measured according to ISO 3744

3D113497A

8 Sound data

8 - 1 Sound Power Spectrum

VAM650J8

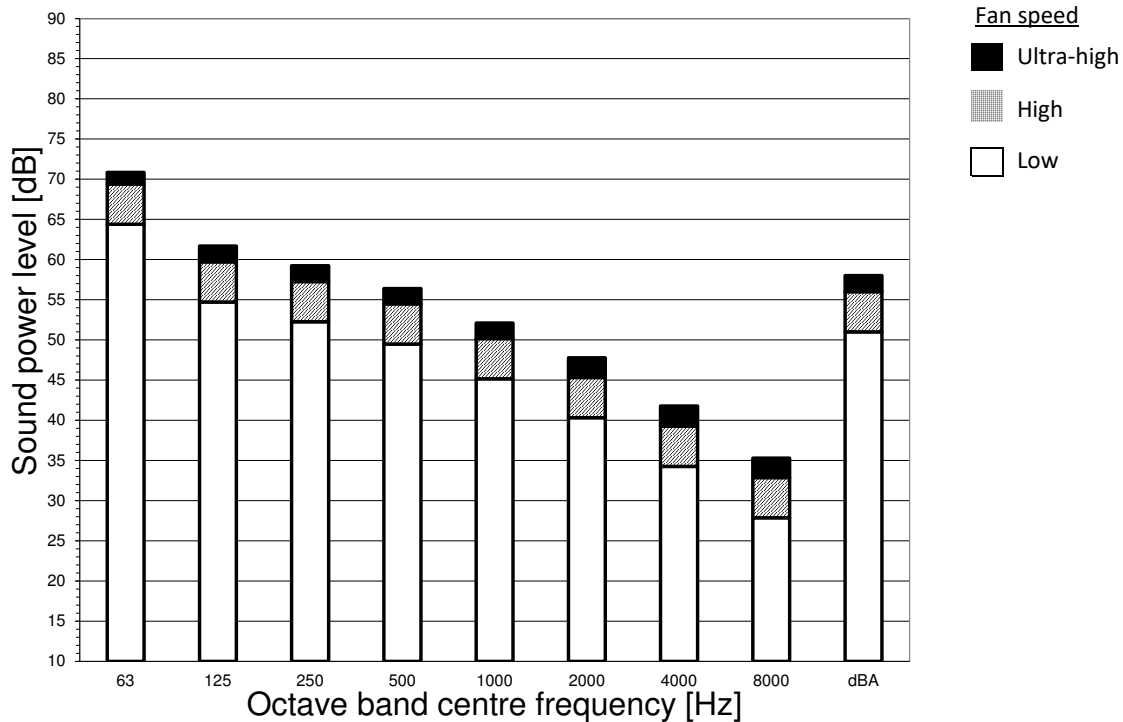


Notes

- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10^{-12} W
- Measured according to ISO 3744

3D113498A

VAM800J8



Notes

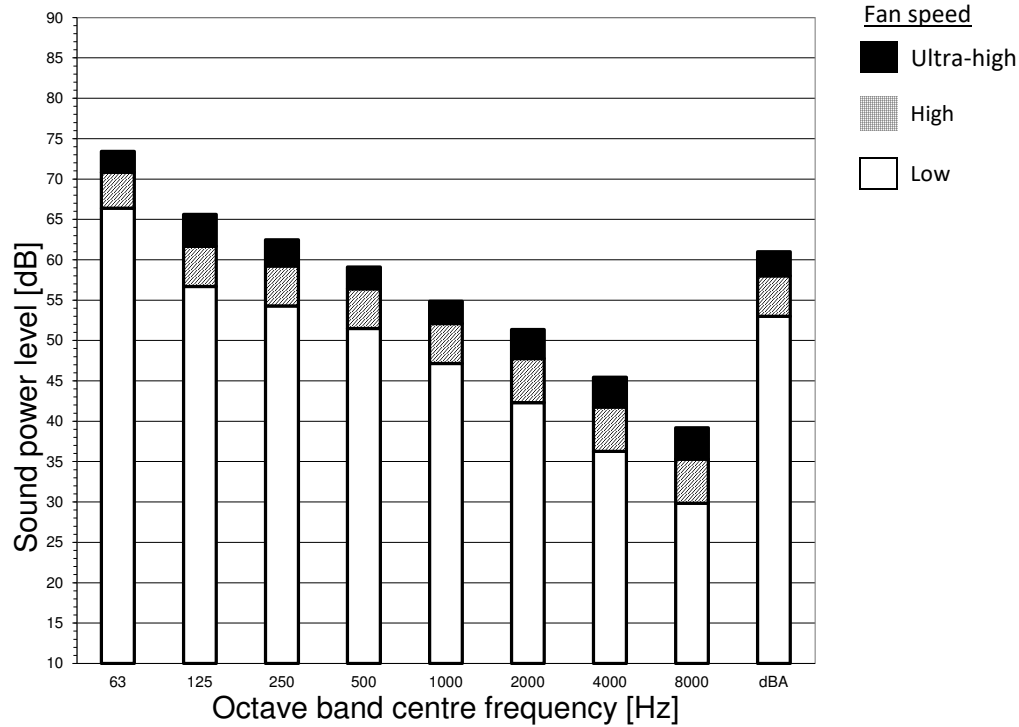
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10^{-12} W
- Measured according to ISO 3744

3D112841A

8 Sound data

8 - 1 Sound Power Spectrum

VAM1000J8

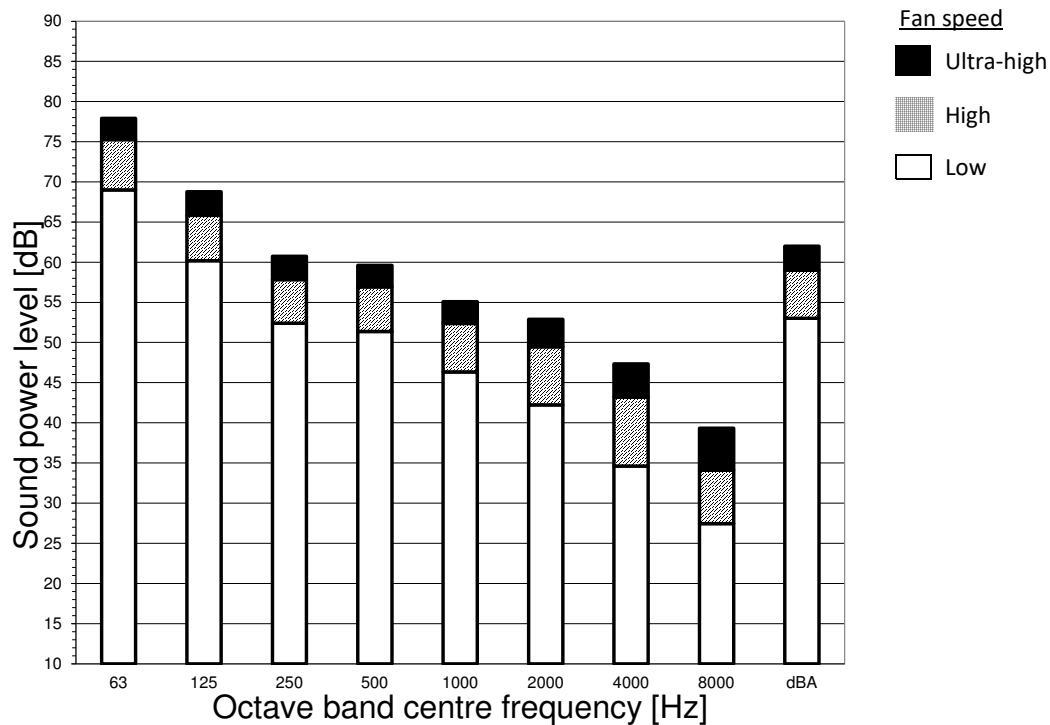


Notes

- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10^{-12} W.
- Measured according to ISO 3744

3D112842A

VAM1500J8



Notes

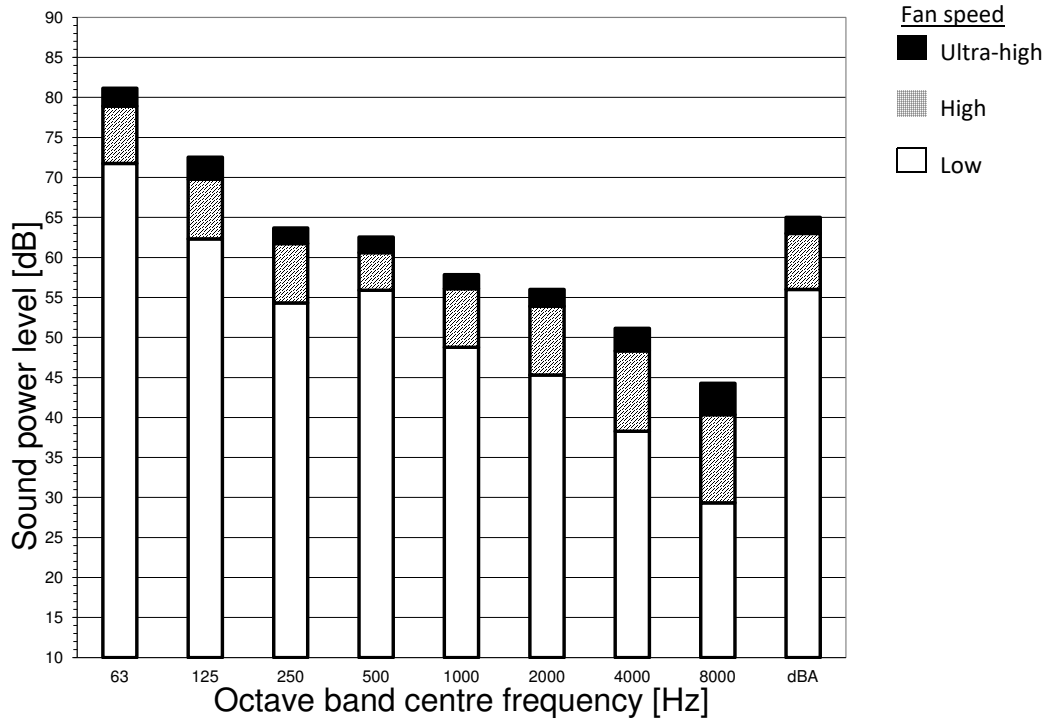
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10^{-12} W.
- Measured according to ISO 3744

3D112843A

8 Sound data

8 - 1 Sound Power Spectrum

VAM2000J8



Notes

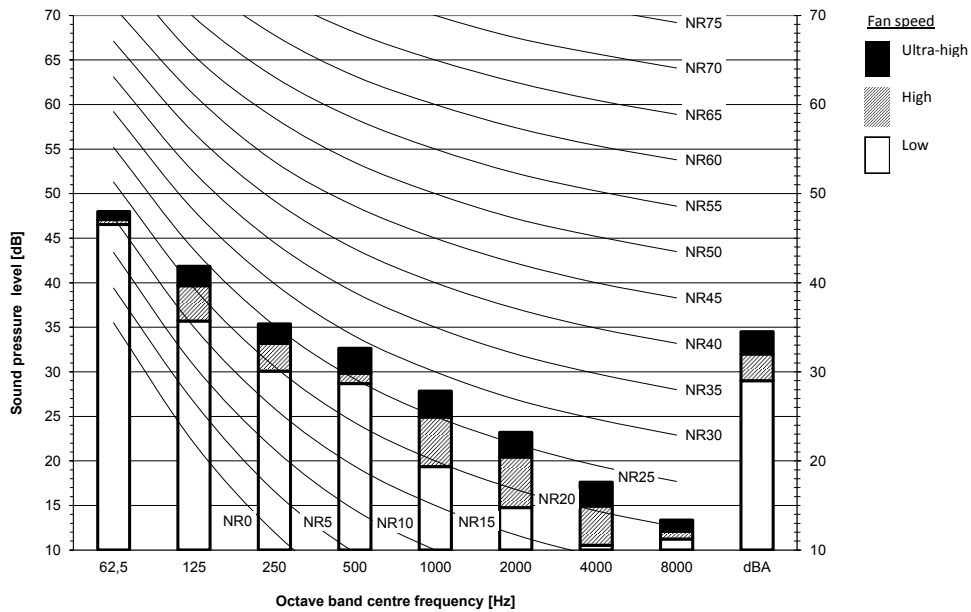
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity $0\text{ dB} = 10^{-12} \text{ W}$.
- Measured according to ISO 3744

3D112848A

8 Sound data

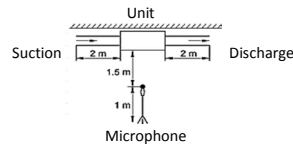
8 - 2 Sound Pressure Spectrum

VAM350J8



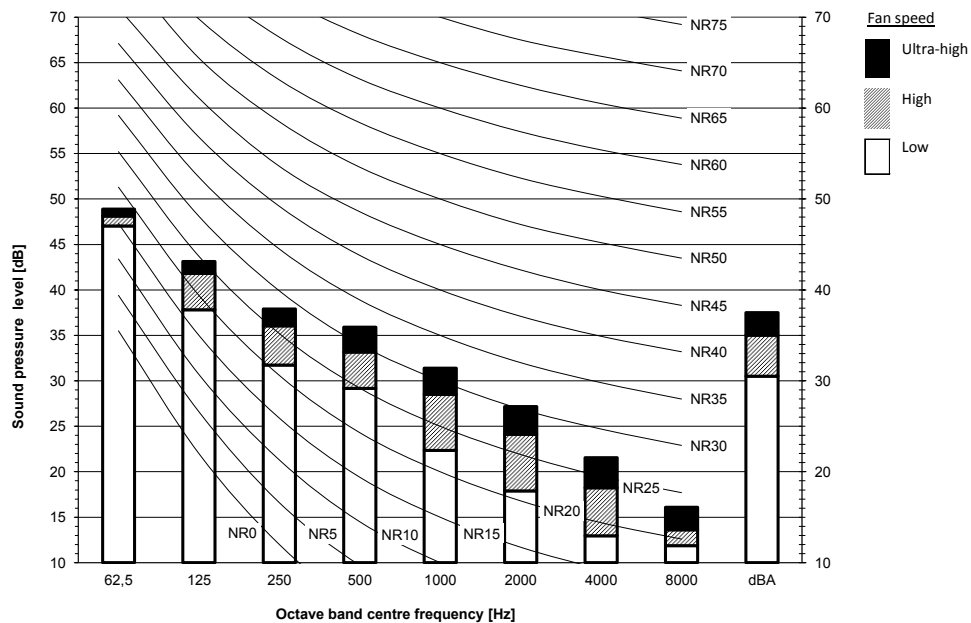
Notes

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 μ Pa



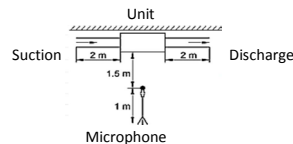
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VAM500J8



Notes

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 μ Pa

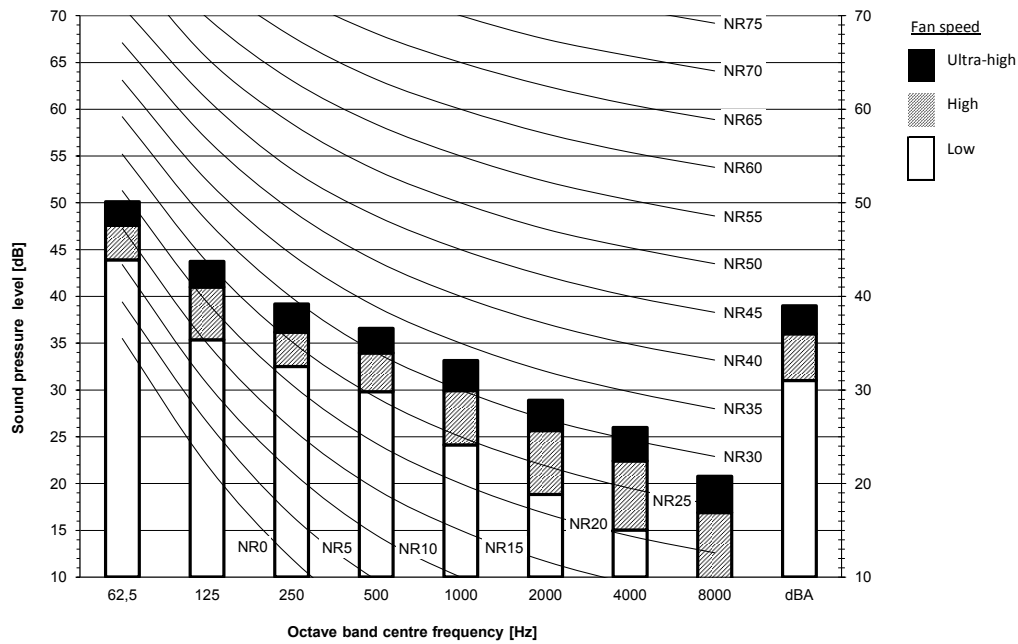


3D113500

8 Sound data

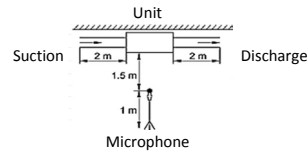
8 - 2 Sound Pressure Spectrum

VAM650J8



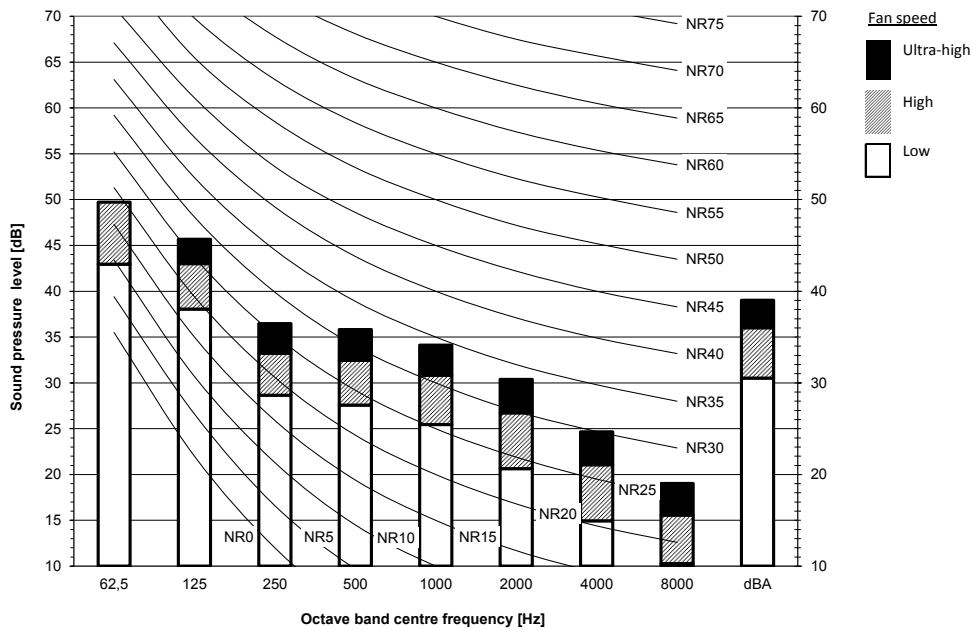
Notes

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 μ Pa



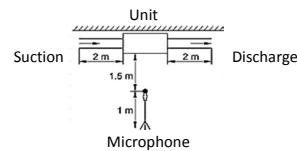
3D113501

VAM800J8



Notes

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 μ Pa



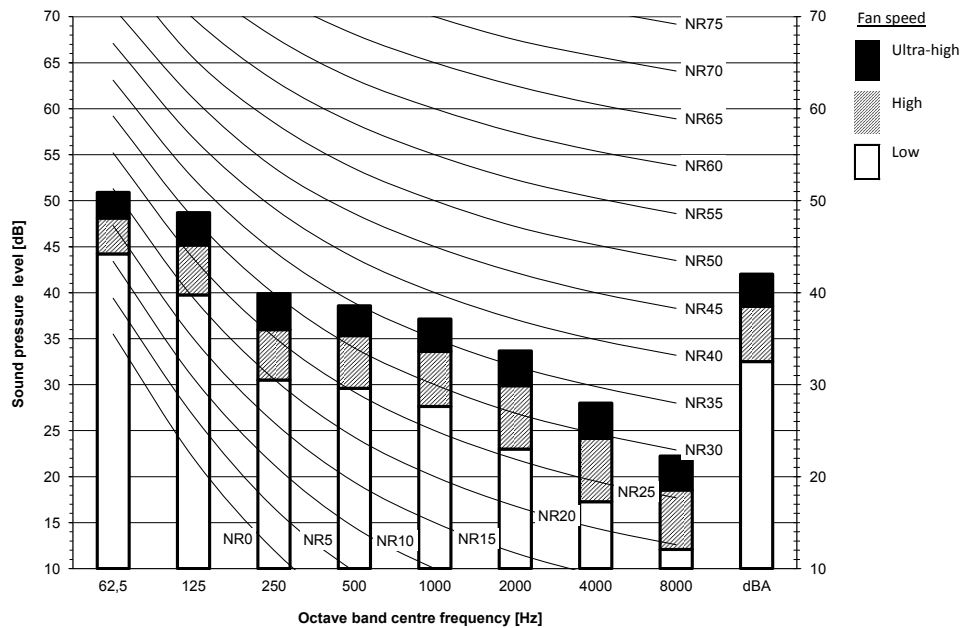
3D112844

8 Sound data

8 - 2 Sound Pressure Spectrum

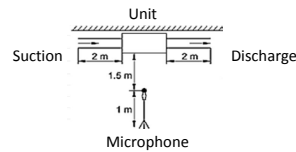
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VAM1000J8



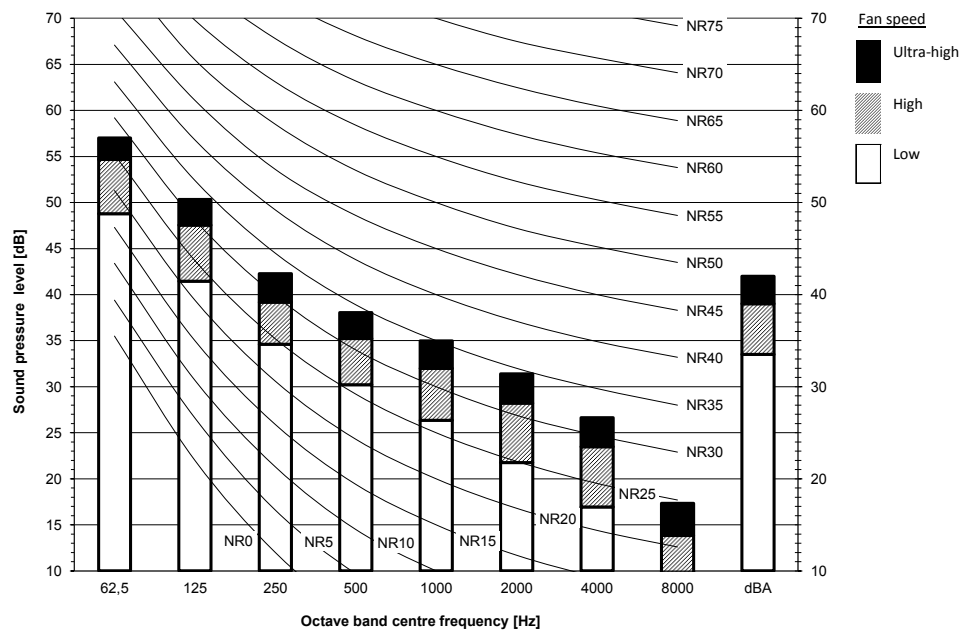
Notes

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 μ Pa



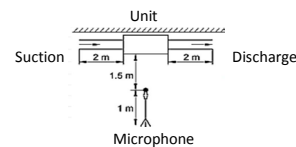
3D112845

VAM1500J8



Notes

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 μ Pa

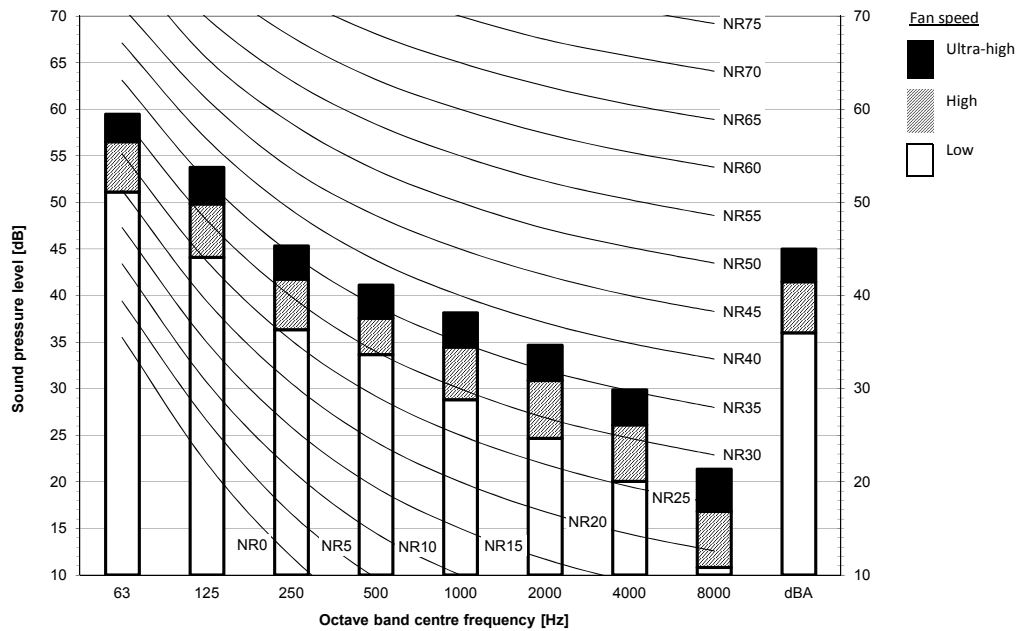


3D112846

8 Sound data

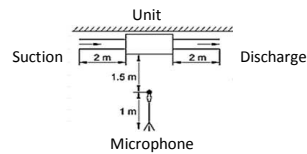
8 - 2 Sound Pressure Spectrum

VAM2000J8



Notes

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 μ Pa

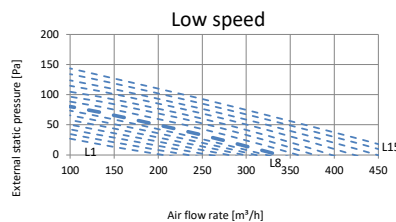
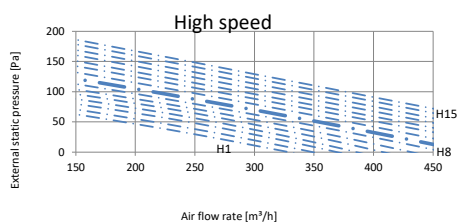
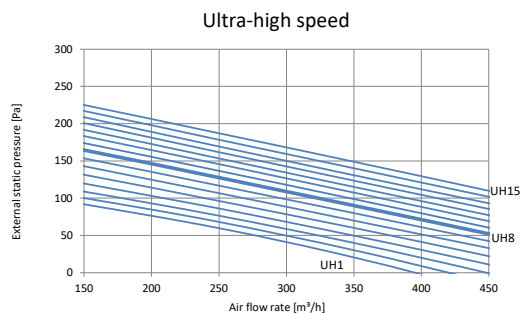
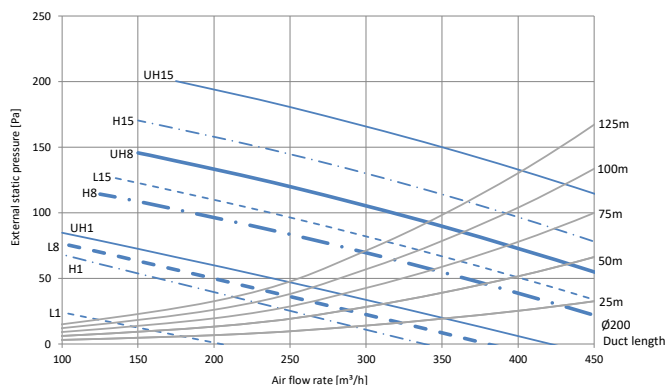


3D112847

9 Fan characteristics

9 - 1 Fan Characteristics

VAM350J8



Notes

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

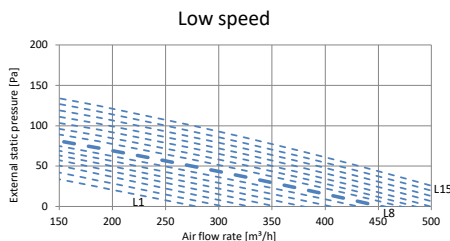
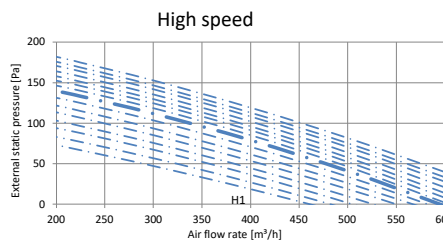
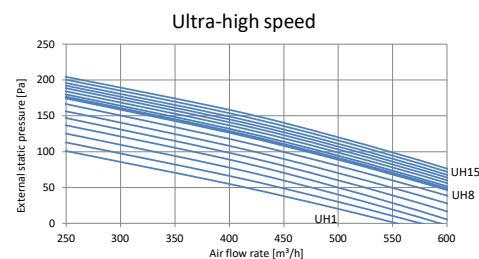
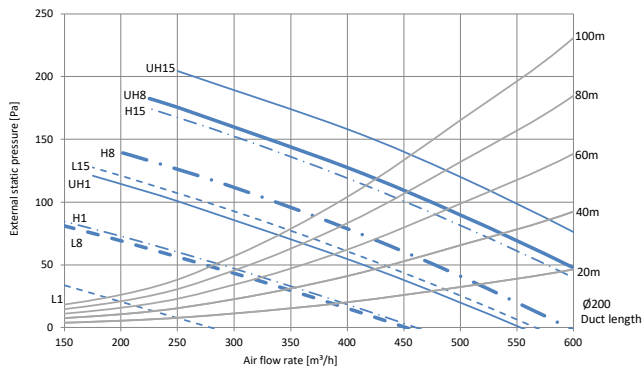
— Ultra-high speed
- - - High speed
- - - Low speed

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
H15 = High speed upper limit
UH1 = Ultra-high speed lower limit
UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit

3D113493B

VAM500J8



Notes

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

— Ultra-high speed
- - - High speed
- - - Low speed

Legend

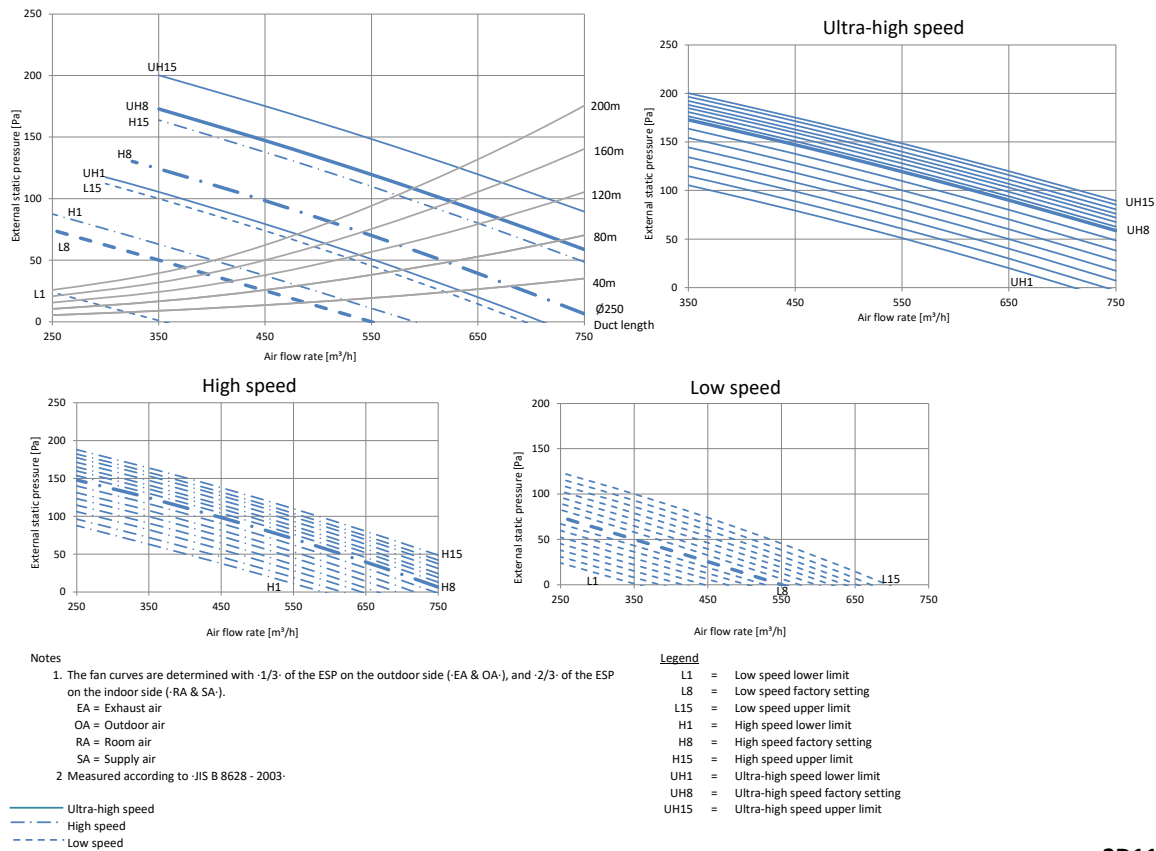
- L1 = Low speed lower limit
L8 = Low speed factory setting
L15 = Low speed upper limit
H1 = High speed lower limit
H8 = High speed factory setting
H15 = High speed upper limit
UH1 = Ultra-high speed lower limit
UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit

3D113494B

9 Fan characteristics

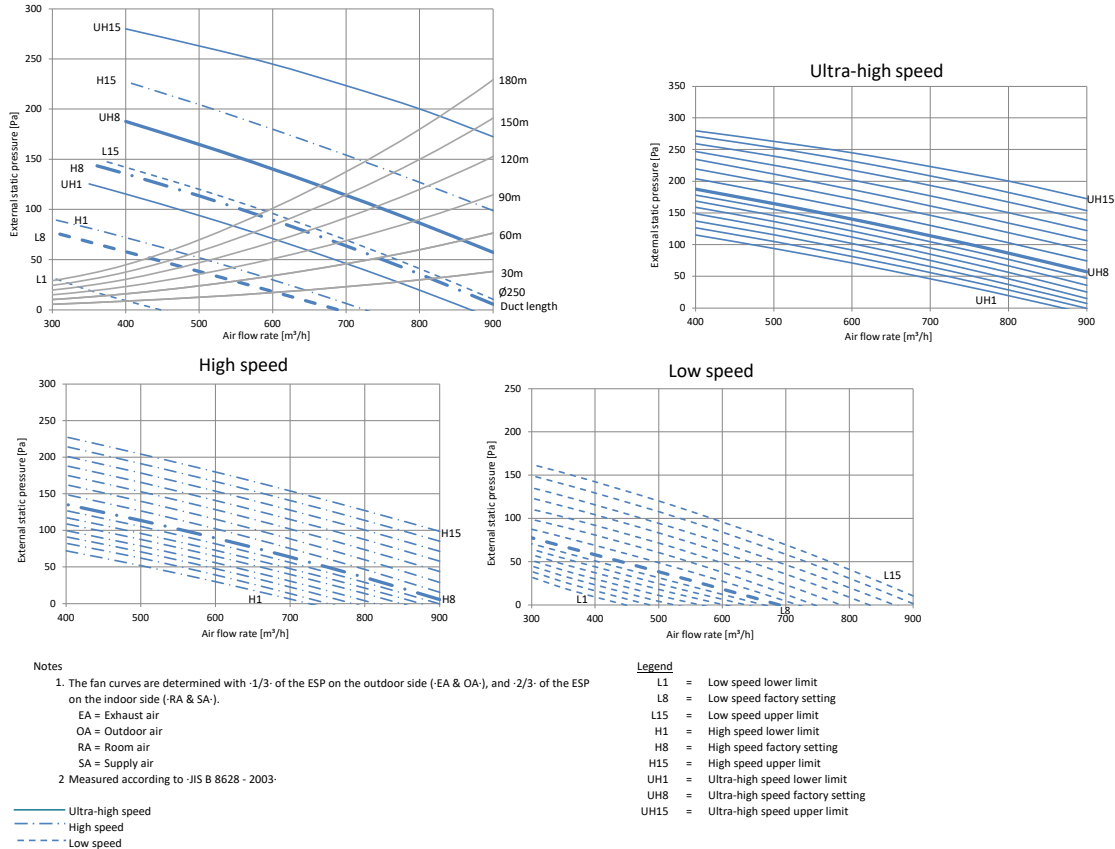
9 - 1 Fan Characteristics

VAM650J8



3D113495B

VAM800J8

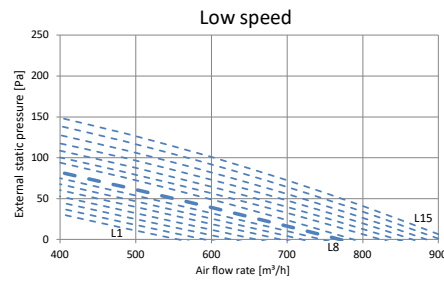
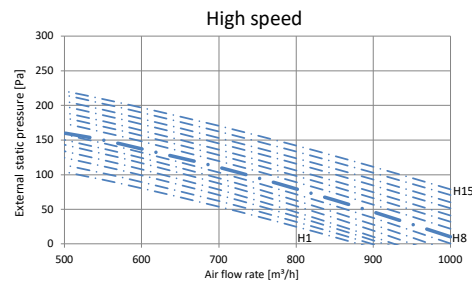
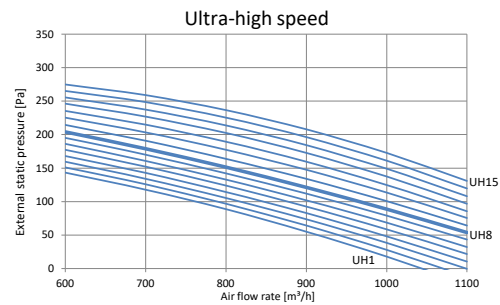
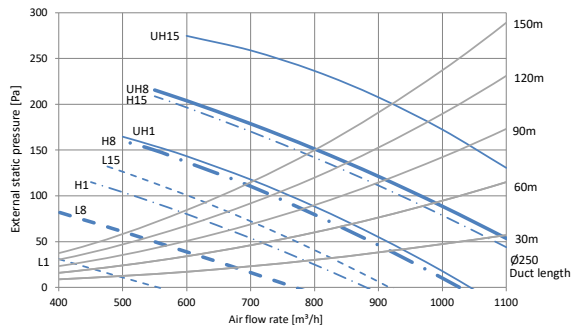


3D112837A

9 Fan characteristics

9 - 1 Fan Characteristics

VAM1000J8



Notes

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

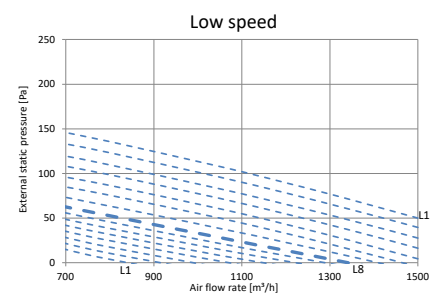
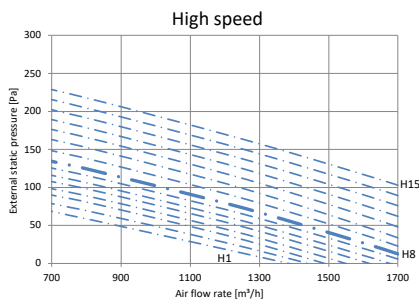
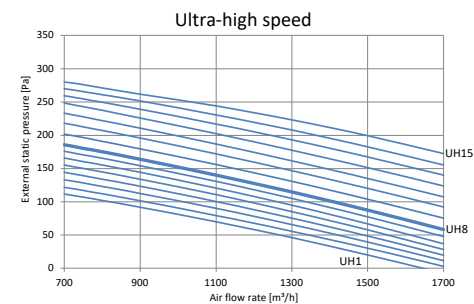
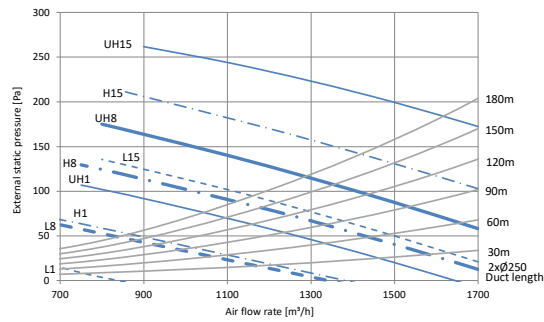
— Ultra-high speed
- - - High speed
- - - Low speed

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
H15 = High speed upper limit
UH1 = Ultra-high speed lower limit
UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit

3D112832

VAM1500J8



Notes

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

— Ultra-high speed
- - - High speed
- - - Low speed

Legend

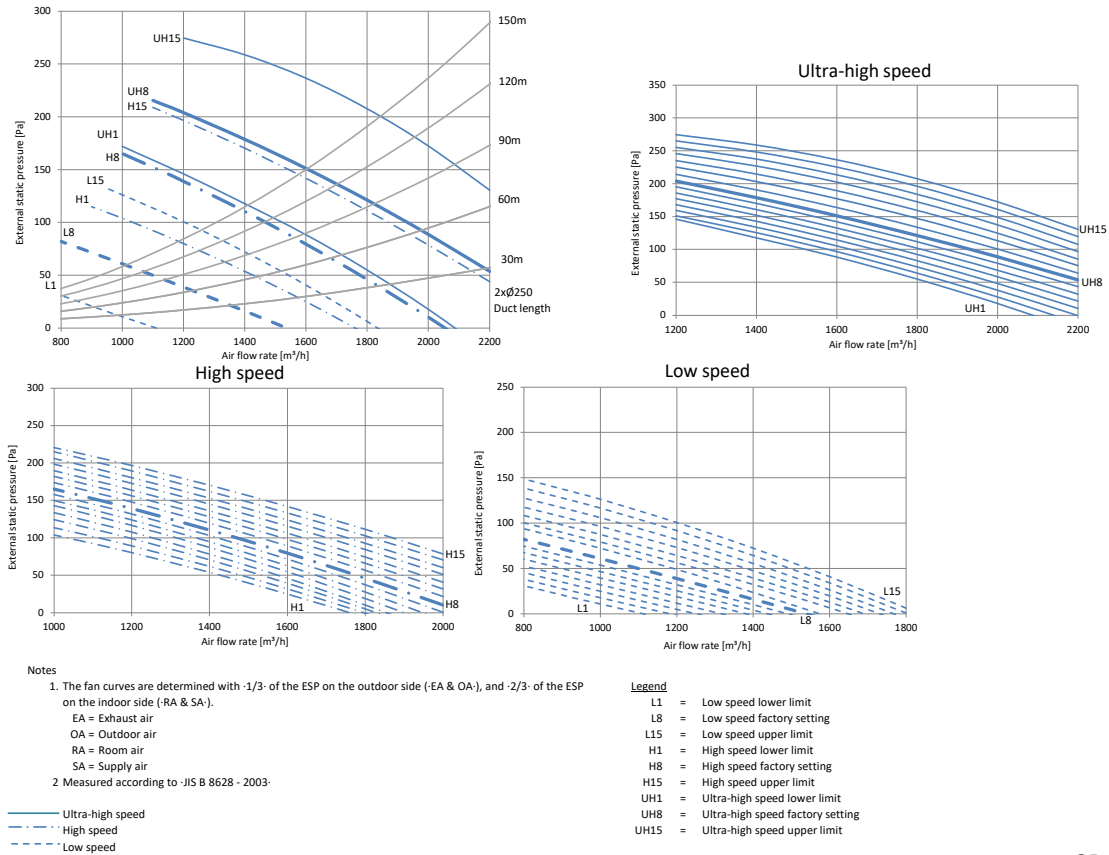
- L1 = Low speed lower limit
L8 = Low speed factory setting
L15 = Low speed upper limit
H1 = High speed lower limit
H8 = High speed factory setting
H15 = High speed upper limit
UH1 = Ultra-high speed lower limit
UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit

3D112838A

9 Fan characteristics

9 - 1 Fan Characteristics

VAM2000J8



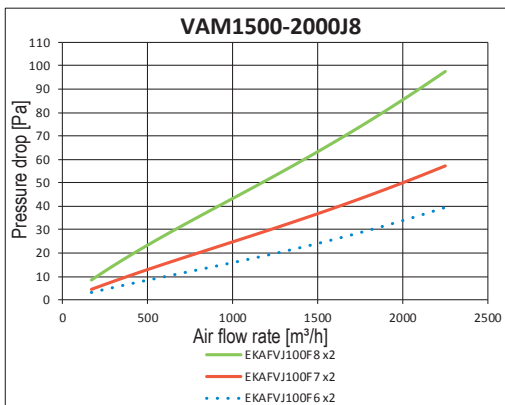
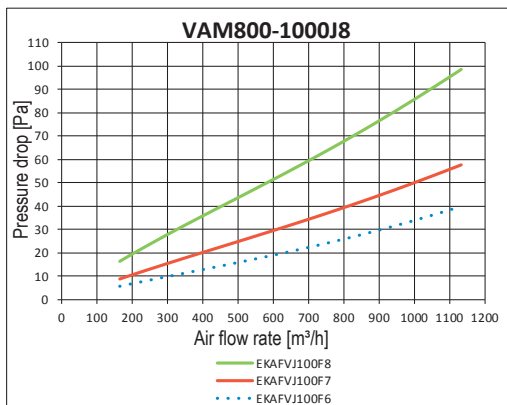
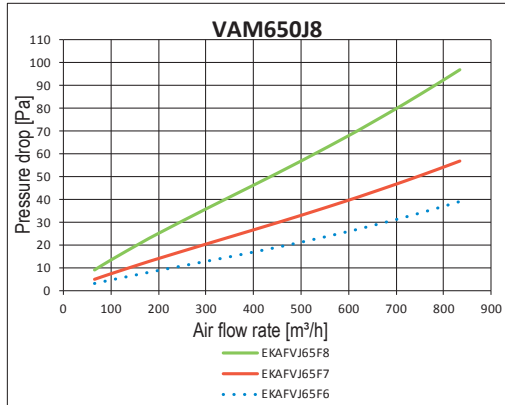
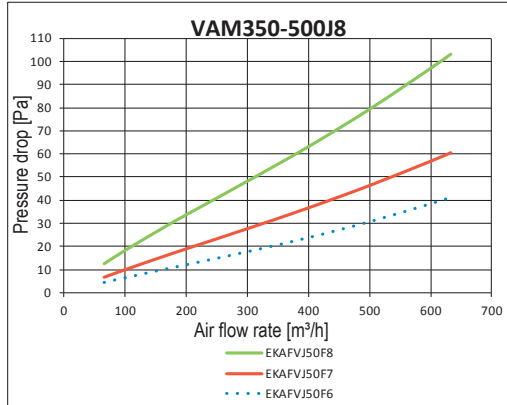
3D112839A

10 Air filter characteristics

10 - 1 Air filter characteristics

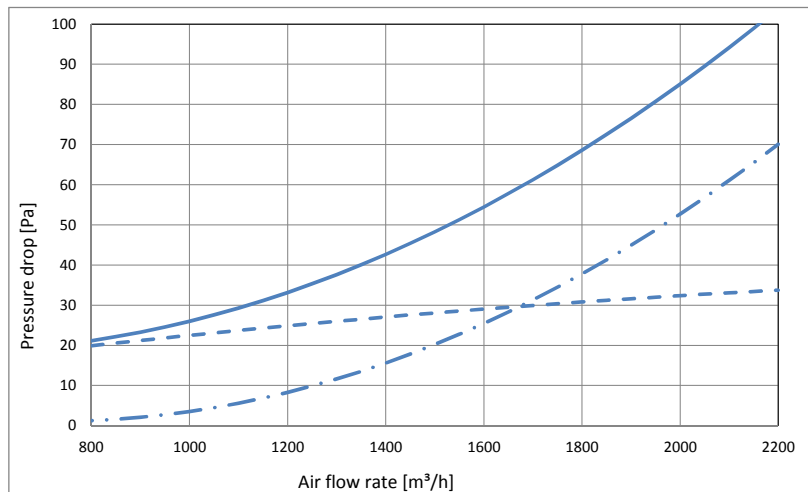
10

VAM-J8



3D112840

VAM-J8



- Option kit EKPLEN200 installed on OA and SA, or RA and EA side.
- - - Option kit EKPLEN200 installed on OA or RA side.
- . - Option kit EKPLEN200 installed on SA or EA side.

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

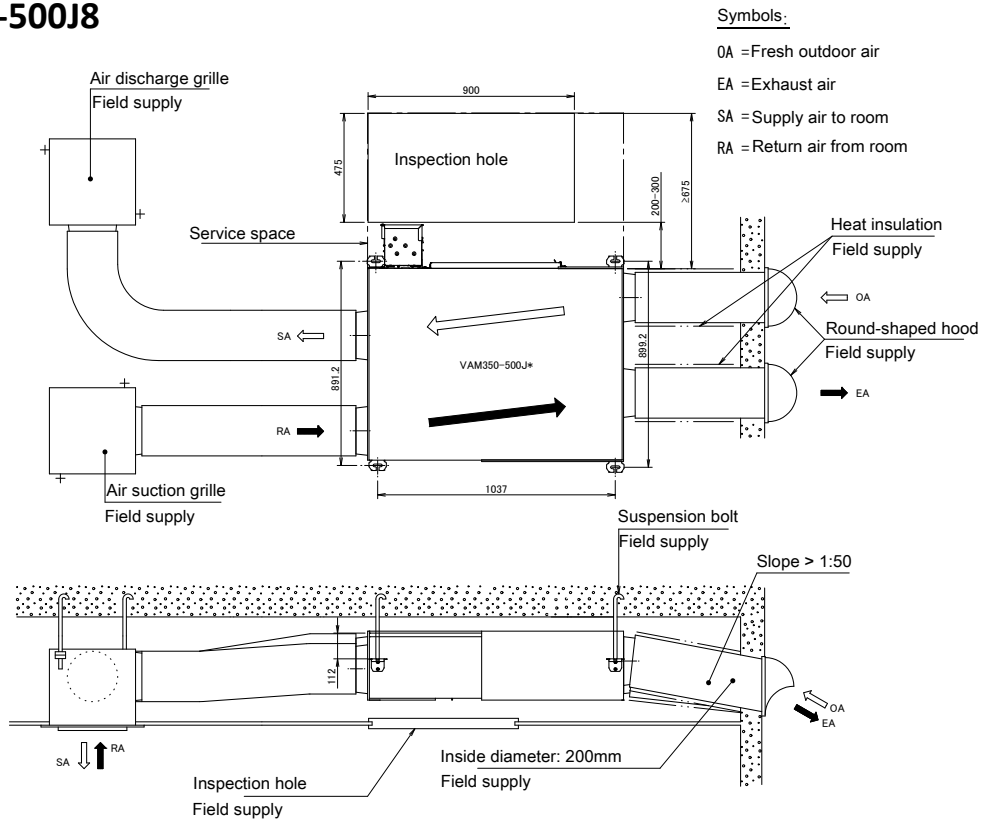
Measured according to JIS B 8628 - 2003

3D113505

11 Installation

11 - 1 Installation Method

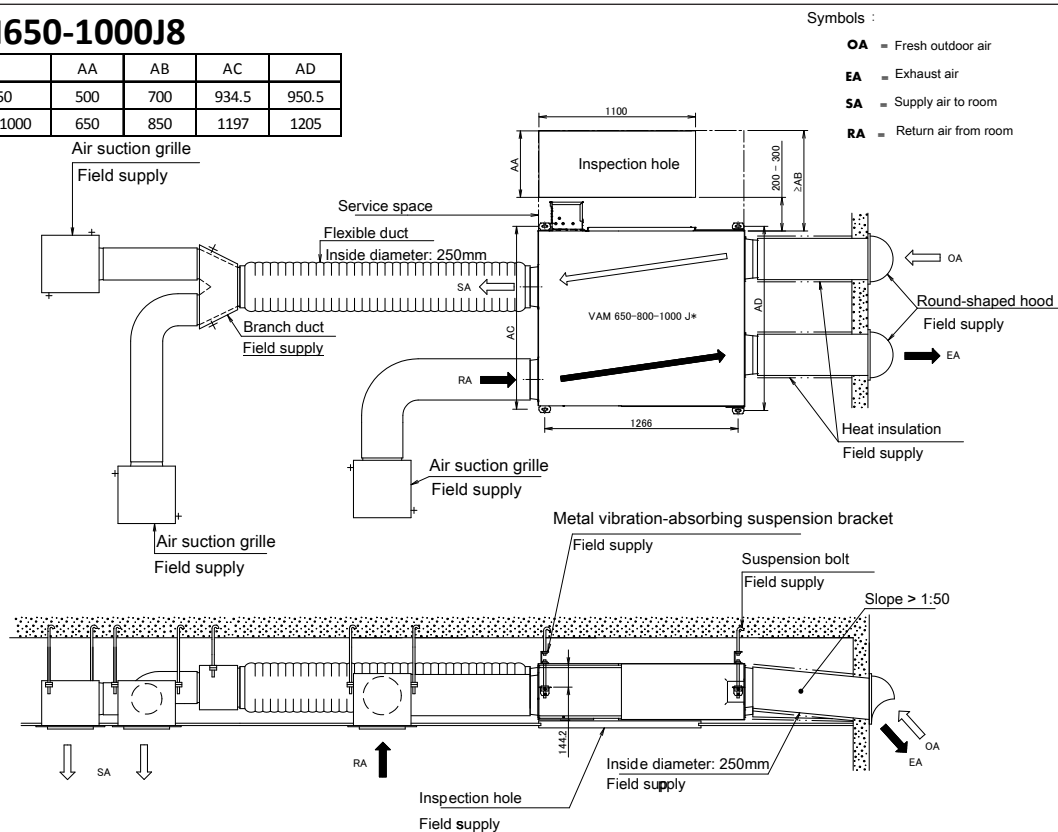
VAM350-500J8



3D112823

VAM650-1000J8

Model	AA	AB	AC	AD
VAM 650	500	700	934.5	950.5
VAM 800-1000	650	850	1197	1205

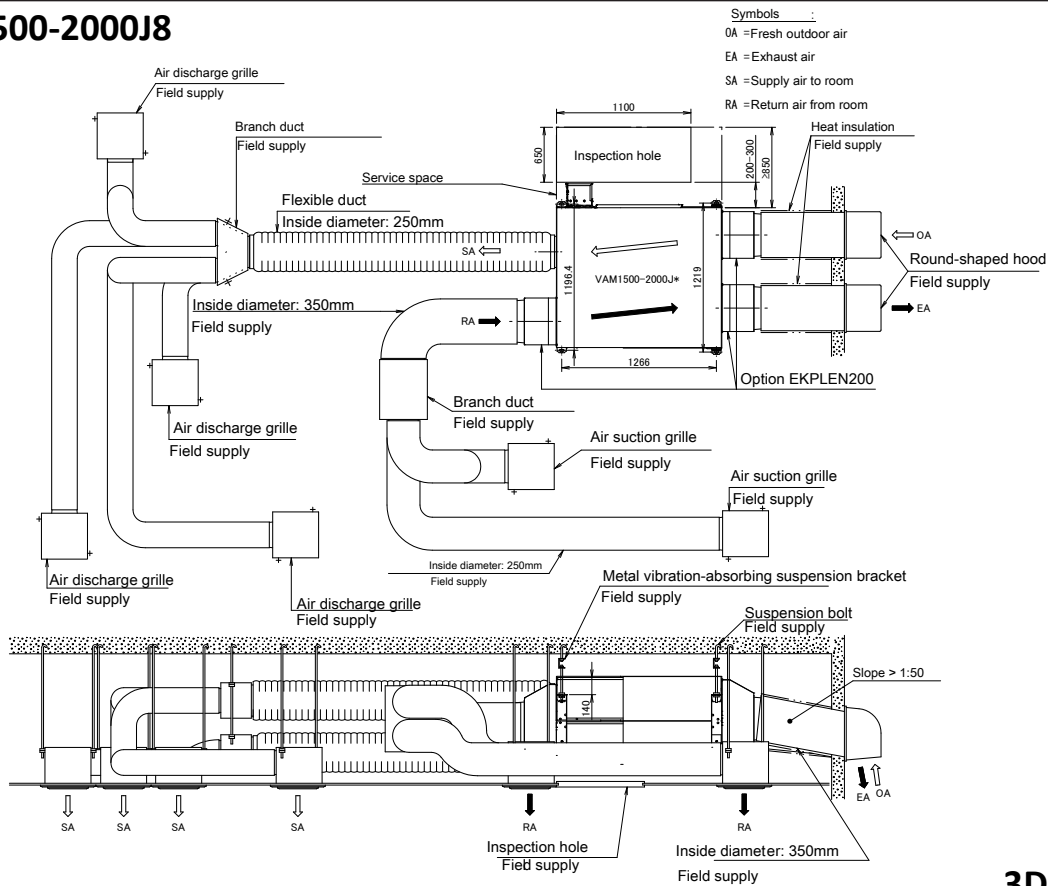


3D112824

11 Installation

11 - 1 Installation Method

VAM1500-2000J8



3D112825

11 Installation

11 - 2 Filter Installation Method

11

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

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

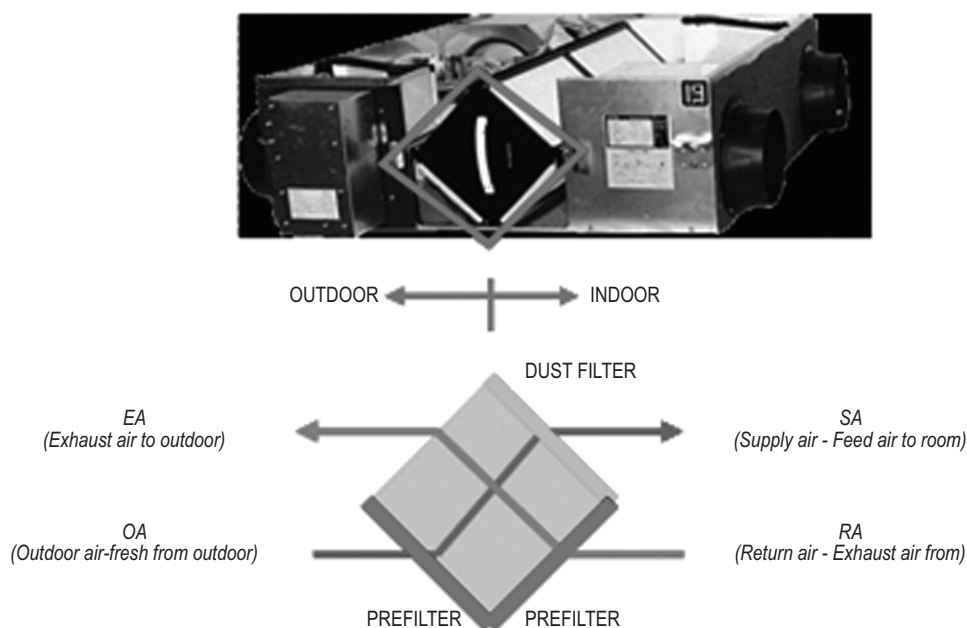
Outdoor air Quality:

- 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, ePM₁₀ 70% (M6), ePL₁ 55% (F7) and ePM₁ 70% (F8) dust filters are options

11 Installation

11 - 2 Filter Installation Method

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]

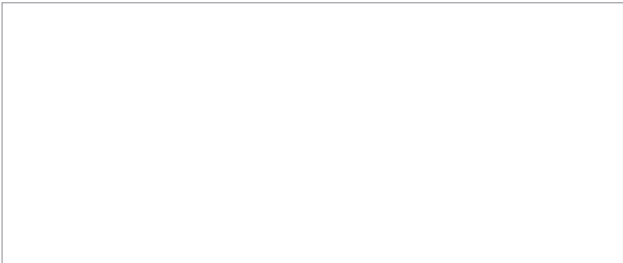
unit	airflow (m³/h)	filter pressure drop		
		ePM10 70% (M6)	ePM1 55% (F7)	ePM1 70% (F8)
VAM350	350	39	52	88
VAM500	500	65	87	148
VAM650	650	61	83	140
VAM800	800	89	121	206
VAM1000	1000	80	109	185
VAM1500	1500	79	106	181
VAM2000	2000	80	109	185

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



EEDEN22

07/2022



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