

Concealed ceiling unit with medium ESP Air Conditioning Technical Data FXSA-A



FXSA15A2VEB
FXSA20A2VEB
FXSA25A2VEB
FXSA32A2VEB
FXSA40A2VEB
FXSA50A2VEB
FXSA63A2VEB
FXSA80A2VEB
FXSA100A2VEB
FXSA125A2VEB
FXSA140A2VEB

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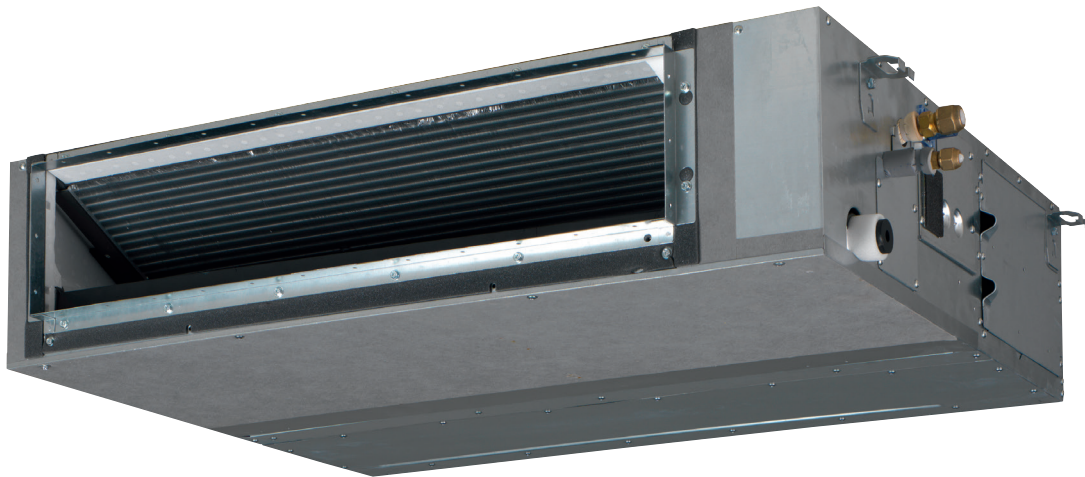
1 Features

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Slimmest yet most powerful medium static pressure unit on the market

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- › Optimised design for R-32 refrigerant
- › Slimmest unit in class, only 245mm (300mm built-in height) and therefore narrow ceiling voids are no longer a challenge
- › Quiet operation: down to 25dBA sound pressure level
- › Medium external static pressure up to 150Pa facilitates using flexible ducts of varying lengths
- › Possibility to change ESP via wired remote control allows optimisation of the supply air volume
- › Discretely concealed in the wall: only the suction and discharge grilles are visible
- › 15 class unit especially developed for small or well-insulated rooms, such as hotel bedrooms, small offices, etc.
- › Optional fresh air intake
- › Flexible installation: air suction direction can be altered from rear to bottom suction and choice between free use or connection to optional suction grilles
- › Standard built-in drain pump with 625mm lift increases flexibility and installation speed



Home leave operation



Fan only



Auto cooling-heating changeover



Whisper quiet



Fan speed steps



Dry programme



Air filter



Weekly timer



Infrared remote control



Wired remote control



Centralised control



Auto-restart



Self diagnosis



Multi tenant



Drain pump kit

2 Specifications

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Technical specifications					FXSA15A	FXSA20A	FXSA25A	FXSA32A	FXSA40A	FXSA50A	
Cooling capacity	Sensible capacity	At high fan speed	kW	1.20	1.60	2.00	2.60	3.30	4.00		
		At medium fan speed	kW	1.00	1.30	1.70	2.20	2.80	3.30		
		At low fan speed	kW	0.90	1.10	1.50	1.80	2.30	2.70		
	Latent capacity	At high fan speed	kW	0.50	0.60	0.80	1.00	1.20	1.60		
		At medium fan speed	kW	0.50	0.60	0.80	0.90	1.10	1.40		
		At low fan speed	kW	0.50	0.60	0.70	0.90	1.10	1.30		
	Total capacity	At high fan speed	kW	1.70	2.20	2.80	3.60	4.50	5.60		
		At medium fan speed	kW	1.50	1.90	2.50	3.10	3.90	4.70		
At low fan speed		kW	1.40	1.70	2.20	2.70	3.40	4.00			
Heating capacity	Total capacity	At high fan speed	kW	1.90	2.50	3.20	4.00	5.00	6.30		
		At medium fan speed	kW	1.60	2.10	2.70	3.40	4.20	5.10		
		At low fan speed	kW	1.50	1.80	2.30	2.90	3.60	4.10		
Power input - 50Hz	Cooling	At high fan speed	kW	0.086			0.092	0.147	0.150		
		At medium fan speed	kW	0.066			0.072	0.119	0.126		
		At low fan speed	kW	0.056			0.062	0.097	0.105		
	Heating	At high fan speed	kW	0.086			0.092	0.147	0.150		
		At medium fan speed	kW	0.066			0.072	0.119	0.126		
		At low fan speed	kW	0.056			0.062	0.097	0.105		
Power input - 60Hz	Cooling	At high fan speed	kW	0.086			0.092	0.147	0.150		
	Heating	At high fan speed	kW	0.086			0.092	0.147	0.150		
Dimensions	Unit	Height	mm	245							
		Width	mm	550				700			
		Depth	mm	800							
	Packed unit	Height	mm	890							
		Width	mm	750				900			
		Depth	mm	295							
Weight	Unit	kg	23.5				24.0	28.5	29.0		
	Packed unit	kg	26.0				27.0	31.0	31.5		
Casing	Colour	Not painted (galvanised)									
	Material	Galvanised steel plate									
Heat exchanger	Inside length	mm	342					492			
	Rows	Quantity	3								
	Fin pitch	mm	1.40								
	Passes	Quantity	4					6			
	Face area	m²	0.124					0.178			
	Stages	Quantity	26								
	Heat exchanger	Empty tubeplate hole	Quantity	26				-	26	-	
Fin		Type	Cross fin coil (Multi slit fins with hydrophilic treatment and Ø5Hi-XA tubes)								
Fan	Type	Sirocco fan									
	Quantity	1									
	Air flow rate - 50Hz	Cooling	At high fan speed	m³/min	8.7	9.0		9.5	15.0	15.2	
			At medium fan speed	m³/min	7.5				8.0	12.5	
			At low fan speed	m³/min	6.5				7.0	11.0	
		Heating	At high fan speed	m³/min	8.7	9.0		9.5	15.0	15.2	
			At medium fan speed	m³/min	7.5				8.0	12.5	
			At low fan speed	m³/min	6.5				7.0	11.0	
	Air flow rate - 60Hz	Cooling	At high fan speed	cfm	307	318		335	530	537	
			At medium fan speed	cfm	265				283	441	
			At low fan speed	cfm	230				247	388	
		Heating	At high fan speed	cfm	307	318		335	530	537	
			At medium fan speed	cfm	265				283	441	
			At low fan speed	cfm	230				247	388	
	External static pressure - 50Hz	Factory set	Pa	30							
		High	Pa	150							
	Sound power level	Cooling	At high fan speed	dBA	54				55	60	
Sound pressure level	Cooling	At high fan speed	dBA	29.5	30.0		31.0	35.0			
		At medium fan speed	dBA	28.0				29.0	32.0		
		At low fan speed	dBA	25.0				26.0	29.0		
	Heating	At high fan speed	dBA	31.5	32.0		33.0	37.0			
		At medium fan speed	dBA	29.0				30.0	34.0		
		At low fan speed	dBA	26.0				27.0	29.0		

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Technical specifications					FXSA15A	FXSA20A	FXSA25A	FXSA32A	FXSA40A	FXSA50A	
Fan motor	Quantity				1						
	Model				Brushless DC motor						
	Speed	Steps				3					
		Cooling	High	rpm		1,124		1,158	1,249	1,259	
		Heating	High	rpm		1,124		1,158	1,249	1,259	
Output	Max	W		78				130			
Refrigerant	Type				R-32						
	GWP				675.0						
Piping connections	Liquid	Type			Flare connection						
		OD			6.35						
	Gas	Type			Flare connection						
OD			9.52				12.70				
Piping connections	Drain				VP20 (I.D. 20/O.D. 26), drain height 625 mm						
	Heat insulation				Foamed polystyrene / Foamed polyethylene						
	Sound absorbing insulation				Butyl Rubber						
Drain-up height	mm				625						
Air filter	Type				Resin net						
Safety devices	Item	01				PC board fuse					
		02				Fan motor overcurrent protector					
Control systems	Infrared remote control				BRC4C65 / BRC4C66						
	Wired remote control				BRC1H52W/S/K / BRC1E53A / BRC1E53B / BRC1E53C / BRC1D52						

Technical specifications				FXSA63A	FXSA80A	FXSA100A	FXSA125A	FXSA140A
Cooling capacity	Sensible capacity	At high fan speed	kW	5.10	6.40	8.10	10.10	11.50
		At medium fan speed	kW	4.10	5.30	6.20	8.10	9.30
		At low fan speed	kW	3.20	3.70	3.90	6.20	6.90
	Latent capacity	At high fan speed	kW	2.00	2.60	3.10	3.90	4.50
		At medium fan speed	kW	1.70	2.20	2.50	3.30	3.80
		At low fan speed	kW	1.50	1.70	1.90	2.80	3.20
	Total capacity	At high fan speed	kW	7.10	9.00	11.20	14.00	16.00
		At medium fan speed	kW	5.80	7.50	8.70	11.40	13.10
		At low fan speed	kW	4.70	5.40	5.80	9.00	10.10
Heating capacity	Total capacity	At high fan speed	kW	8.00	10.00	12.50	16.00	18.00
		At medium fan speed	kW	6.30	8.30	9.30	12.80	14.00
		At low fan speed	kW	5.00	5.90	6.00	9.80	10.50
Power input - 50Hz	Cooling	At high fan speed	kW	0.183	0.209	0.285	0.326	0.382
		At medium fan speed	kW	0.161	0.167	0.225	0.262	0.280
		At low fan speed	kW	0.134	0.133	0.188	0.197	0.205
	Heating	At high fan speed	kW	0.183	0.209	0.285	0.326	0.382
		At medium fan speed	kW	0.161	0.167	0.225	0.262	0.280
		At low fan speed	kW	0.134	0.133	0.188	0.197	0.205
Power input - 60Hz	Cooling	At high fan speed	kW	0.183	0.209	0.285	0.326	0.382
	Heating	At high fan speed	kW	0.183	0.209	0.285	0.326	0.382
Dimensions	Unit	Height	mm	245				
		Width	mm	1,000		1,400		1,550
		Depth	mm	800				
	Packed unit	Height	mm	890				
		Width	mm	1,200		1,600		1,750
		Depth	mm	295				
Weight	Unit	kg	35.5	36.5	46.0	47.0	51.0	
	Packed unit	kg	38.0	39.0	49.0		54.0	
Casing	Colour			Not painted (galvanised)				
	Material			Galvanised steel plate				
Heat exchanger	Inside length		mm	792		1,192		1,342
	Rows	Quantity		3				
	Fin pitch		mm	1.40				
	Passes	Quantity		12			16	
	Face area		m²	0.288		0.433		0.488
	Stages	Quantity		26				
Heat exchanger	Empty tubeplate hole	Quantity		26	-	26	-	
	Fin	Type	Cross fin coil (Multi slit fins with hydrophilic treatment and Ø5Hi-XA tubes)					

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Technical specifications					FXSA63A	FXSA80A	FXSA100A	FXSA125A	FXSA140A	
Fan	Type				Sirocco fan					
	Quantity				2		3			
	Air flow rate - 50Hz	Cooling	At high fan speed	m³/min	21.0	23.0	32.0	36.0	39.0	
			At medium fan speed	m³/min	18.0	19.5	27.0	31.5	34.0	
			At low fan speed	m³/min	15.0	16.0	23.0	26.0	28.0	
		Heating	At high fan speed	m³/min	21.0	23.0	32.0	36.0	42.5	
			At medium fan speed	m³/min	18.0	19.5	27.0	31.5	34.0	
			At low fan speed	m³/min	15.0	16.0	23.0	26.0	28.0	
	Air flow rate - 60Hz	Cooling	At high fan speed	cfm	742	812	1,130	1,271	1,377	
			At medium fan speed	cfm	636	689	953	1,112	1,201	
			At low fan speed	cfm	530	565	812	918	989	
		Heating	At high fan speed	cfm	742	812	1,130	1,271	1,501	
			At medium fan speed	cfm	636	689	953	1,112	1,201	
			At low fan speed	cfm	530	565	812	918	989	
	External static pressure - 50Hz	Factory set		Pa	30	40		50		
		High		Pa	150					
Sound power level	Cooling	At high fan speed		dBa	59	61		64		
Sound pressure level	Cooling	At high fan speed		dBa	33.0	35.0	36.0	39.0	41.5	
		At medium fan speed		dBa	30.0	32.0	34.0	36.0	38.0	
		At low fan speed		dBa	27.0	29.0	31.0	33.0	34.0	
	Heating	At high fan speed		dBa	35.0	37.0		40.0	42.0	
		At medium fan speed		dBa	32.0	34.0		37.0	38.5	
		At low fan speed		dBa	28.0	30.0	31.0	33.0	34.0	
Fan motor	Quantity				1					
	Model				Brushless DC motor					
	Speed	Steps				3				
		Cooling	High	rpm	1,130	1,246	1,226	1,310	1,346	
		Heating	High	rpm	1,130	1,246	1,226	1,310	1,346	
Output	Max	W		230		300		350		
Refrigerant	Type				R-32					
	GWP				675.0					
Piping connections	Liquid	Type			Flare connection					
		OD			mm	6.35		952		
	Gas	Type			Flare connection					
		OD			mm	12.70		15.90		
Piping connections	Drain				VP20 (I.D. 20/O.D. 26), drain height 625 mm					
	Heat insulation				Foamed polystyrene / Foamed polyethylene					
	Sound absorbing insulation				Butyl Rubber					
Drain-up height					mm	625				
Air filter	Type				Resin net					
Safety devices	Item	01			PC board fuse					
		02			Fan motor overcurrent protector					
Control systems	Infrared remote control				BRC4C65 / BRC4C66					
	Wired remote control				BRC1H52W/S/K / BRC1E53A / BRC1E53B / BRC1E53C / BRC1D52					

Standard accessories: Installation and operation manual; Quantity: 1;

Standard accessories: Drain hose; Quantity: 1;

Standard accessories: Metal clamp for drain hose; Quantity: 1;

Standard accessories: Washer for hanger bracket; Quantity: 8;

Standard accessories: Screws; Quantity: 40;

Standard accessories: Insulation for fitting; Quantity: 2;

Standard accessories: Sealing pad; Quantity: 5;

Standard accessories: Clamps; Quantity: 4;

Electrical specifications			FXSA15A	FXSA20A	FXSA25A	FXSA32A	FXSA40A	FXSA50A
Power supply	Name		VE					
	Phase		1~					
	Frequency	Hz	50/60					
	Voltage	V	220-240/220					
Current - 50Hz	Minimum circuit amps (MCA)	A	0.8			0.9	1.4	
	Maximum fuse amps (MFA)	A	6					
	Full load amps (FLA) Total	A	0.7			0.8	1.3	

2 Specifications

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Electrical specifications			FXSA15A	FXSA20A	FXSA25A	FXSA32A	FXSA40A	FXSA50A
Current - 60Hz	Minimum circuit amps (MCA)	A	0.8			0.9	1.4	
	Maximum fuse amps (MFA)	A	6					
	Full load amps (FLA) Total	A	0.7			0.8	1.3	

Electrical specifications			FXSA63A		FXSA80A	FXSA100A	FXSA125A	FXSA140A
Power supply	Name		VE					
	Phase		1~					
	Frequency		Hz		50/60			
	Voltage		V		220-240/220			
Current - 50Hz	Minimum circuit amps (MCA)		A	1.4	1.7	2.0	2.2	3.0
	Maximum fuse amps (MFA)		A		6			
	Full load amps (FLA) Total		A	1.3	1.5	1.8	2.0	2.7
Current - 60Hz	Minimum circuit amps (MCA)		A	1.4	1.7	2.0	2.2	3.0
	Maximum fuse amps (MFA)		A		6			
	Full load amps (FLA) Total		A	1.3	1.5	1.8	2.0	2.7

Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 5m; level difference: 0m |

Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 5m; level difference: 0m |

Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat. |

External static pressure is changeable to set by the remote control (from standard to high, see installation manual) |

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

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

MCA/MFA: MCA = 1.1 x FLA |

Instead of a fuse, use a circuit breaker |

Select wire size based on the value of MCA |

Contains fluorinated greenhouse gases

3 Electrical data

3 - 1 Electrical Data

FXSA-A

Model name	Unit			Power supply		IFM	Power input [W]	
	Hz	Voltage	Voltage range	MCA	MFA	FLA	Cooling	Heating
FXSA15A2VEB	50/60	220-240/220	MAX. 264/MAX. 242 MIN. 198/MIN. 198	0,8	6	0,7	86	86
FXSA20A2VEB				0,8	6	0,7	86	86
FXSA25A2VEB				0,8	6	0,7	86	86
FXSA32A2VEB				0,9	6	0,8	92	92
FXSA40A2VEB				1,4	6	1,3	147	147
FXSA50A2VEB				1,4	6	1,3	150	150
FXSA63A2VEB				1,4	6	1,3	183	183
FXSA80A2VEB				1,7	6	1,5	209	209
FXSA100A2VEB				2	6	1,8	285	285
FXSA125A2VEB				2,2	6	2	326	326
FXSA140A2VEB				3	6	2,7	382	382

Notes

- 1) Voltage range
The units are suitable for use with electrical systems in which the voltage supplied to the unit terminals is not below or above the listed range limits.
- 2) The maximum allowable voltage that is unbalanced between phases is ·2%.
- 3) $MCA = 1.1 \times FLA$
- 4) Select the wire size according to the MCA.
- 5) Use a circuit breaker instead of a fuse.

Symbols

- MCA: Minimum Circuit Ampere [A]
MFA: Maximum Fuse Ampere [A]
FLA: Full Load Ampere [A]
IFM: Indoor fan motor

3D129442

4 Safety device settings

4 - 1 Safety Device Settings

FXSA-A

		15	20	25	32	40	50	63	80	100	125	140
FXSA	Safety devices											
	Printed circuit board (main)	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A
	Printed circuit board (fan)	250V, 6.3A	250V, 6.3A	250V, 6.3A	250V, 6.3A	250V, 6.3A	250V, 6.3A	250V, 6.3A	250V, 6.3A	250V, 6.3A	250V, 6.3A	250V, 6.3A
	Fan motor thermal protector	°C	---	---	---	---	---	---	---	---	---	---
	Drain pump fuse	°C	145	145	145	145	145	145	145	145	145	145

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5 Options

5 - 1 Options

FXSA-A

Option kit	Product name	Availability				
		FXSA15-32A2VEB	FXSA40-50A2VEB	FXSA63-80A2VEB	FXSA100-125A2VEB	FXSA140A2VEB
Air discharge adaptor for round ducts	KDAP25A36A	✓				
	KDAP25A56A		✓			
	KDAP25A71A			✓		
	KDAP25A140A				✓	
Wireless remote control	BRC4C65 (2)	✓	✓	✓	✓	✓
	BRC4C66 (2)	✓	✓	✓	✓	✓
Wired remote control	BRC1H52W/S/K	✓	✓	✓	✓	✓
	KRP4A52 (1)	✓	✓	✓	✓	✓
Wiring adaptor for electrical appendices	KRP4A51 (1)	✓	✓	✓	✓	✓
	EKRP1C14 (1)	✓	✓	✓	✓	✓
	KRCS01-8B	✓	✓	✓	✓	✓
Remote sensor	KRCS01-8B	✓	✓	✓	✓	✓
Installation box for adaptor PCB	KRP1BC101	✓	✓	✓	✓	✓
Central remote control	DCS302C51	✓	✓	✓	✓	✓
Unified ON/OFF controller	DCS301B51	✓	✓	✓	✓	✓
Electrical box with earth terminal (-2- blocks)	KJB212AA	✓	✓	✓	✓	✓
Electrical box with earth terminal (-3- blocks)	KJB311AA	✓	✓	✓	✓	✓
Electrical box with earth terminal	KJB411A	✓	✓	✓	✓	✓
Schedule timer	DST301BA51	✓	✓	✓	✓	✓
External adaptor for outdoor unit (installation on indoor unit)	DTA104A61 (1)	✓	✓	✓	✓	✓
iTouch Controller	DCS601C51	✓	✓	✓	✓	✓
Digital input adaptor	BRP7A51 (1)(2)	✓	✓	✓	✓	✓
Intelligent Touch Manager	DCM601A51	✓	✓	✓	✓	✓
Relay PCB	ERP01A50 (1)	✓	✓	✓	✓	✓
Wire harness for external wireless temperature sensor	EKEWTSC-1 (3)	✓	✓	✓	✓	✓
WLAN adaptor for smartphones	BRP069C51 (2)	✓	✓	✓	✓	✓

Notes

- ① Requires installation box for adaptor PCB -KRP1BC101-.
 - ② Only possible in combination with remote control -BRC1H52-.
 - ③ -EKEWTSC-1- is a wire harness for the connection of option -K.RSS-.
- K.RSS- is not an official option. Sales for this option are an SBU responsibility.

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6 Capacity tables

6 - 1 Cooling Capacity Tables

FXSA-A

Unit size		Fan speed		Indoor air temperature											
				14,0 [°C WB]		16,0 [°C WB]		18,0 [°C WB]		19,0 [°C WB]		20,0 [°C WB]		22,0 [°C WB]	
				20,0 [°C DB]		23,0 [°C DB]		26,0 [°C DB]		27,0 [°C DB]		28,0 [°C DB]		30,0 [°C DB]	
Unit size	Fan speed	TC		SHC		TC		SHC		TC		SHC		TC	
		TC		SHC		TC		SHC		TC		SHC		TC	
15	H	1,0	0,8	1,2	1,0	1,5	1,2	1,7	1,2	1,9	1,3	2,2	1,4	2,5	1,4
	M	Correction factor -0.88 × H-													
	L	Correction factor -0.82 × H-													
20	H	1,2	1,1	1,6	1,3	2,0	1,5	2,2	1,6	2,4	1,6	2,8	1,8	3,3	1,9
	M	Correction factor -0.86 × H-													
	L	Correction factor -0.77 × H-													
25	H	1,6	1,4	2,1	1,6	2,6	1,9	2,8	2,0	3,1	2,1	3,6	2,3	4,2	2,4
	M	Correction factor -0.89 × H-													
	L	Correction factor -0.79 × H-													
32	H	2,1	1,8	2,7	2,1	3,3	2,5	3,6	2,6	3,9	2,7	4,6	2,8	5,3	3,0
	M	Correction factor -0.86 × H-													
	L	Correction factor -0.75 × H-													
40	H	2,5	2,2	3,3	2,7	4,1	3,1	4,5	3,3	4,9	3,4	5,8	3,7	6,7	3,8
	M	Correction factor -0.87 × H-													
	L	Correction factor -0.76 × H-													
50	H	3,2	2,8	4,2	3,4	5,1	3,9	5,6	4,0	6,1	4,2	7,1	4,4	8,2	4,6
	M	Correction factor -0.84 × H-													
	L	Correction factor -0.71 × H-													
63	H	3,9	3,4	5,2	4,2	6,4	4,9	7,1	5,1	7,8	5,3	9,2	5,8	10,7	6,1
	M	Correction factor -0.82 × H-													
	L	Correction factor -0.66 × H-													
80	H	5,1	4,3	6,6	5,2	8,2	6,1	9,0	6,4	9,8	6,7	11,6	7,1	13,4	7,4
	M	Correction factor -0.83 × H-													
	L	Correction factor -0.60 × H-													
100	H	6,4	5,5	8,3	6,7	10,2	7,8	11,2	8,1	12,2	8,4	14,4	9,0	16,6	9,5
	M	Correction factor -0.78 × H-													
	L	Correction factor -0.52 × H-													
125	H	8,7	6,9	10,8	8,2	12,9	9,4	14,0	9,7	15,1	10,0	17,5	10,5	20,0	11,0
	M	Correction factor -0.81 × H-													
	L	Correction factor -0.64 × H-													
140	H	9,3	7,9	11,9	9,5	14,6	11,1	16,0	11,5	17,4	11,9	20,4	12,6	23,6	13,2
	M	Correction factor -0.82 × H-													
	L	Correction factor -0.63 × H-													

Notes

- 1) TC: Total capacity [kW]
SHC: Sensible heat capacity [kW]
- 2) Outdoor temperature -35°C DB

3D129414

6 Capacity tables

6 - 2 Heating Capacity Tables

FXSA-A

Unit size	Fan speed	Indoor air temperature					
		16,0 [°C DB]	18,0 [°C DB]	20,0 [°C DB]	21,0 [°C DB]	22,0 [°C DB]	24,0 [°C DB]
		TC	TC	TC	TC	TC	TC
15	H	2,2	2,1	1,9	1,8	1,7	1,6
	M	Correction factor -0.84 × H-					
	L	Correction factor -0.79 × H-					
20	H	2,9	2,7	2,5	2,4	2,3	2,1
	M	Correction factor -0.84 × H-					
	L	Correction factor -0.72 × H-					
25	H	3,7	3,5	3,2	3,1	2,9	2,7
	M	Correction factor -0.84 × H-					
	L	Correction factor -0.72 × H-					
32	H	4,7	4,3	4,0	3,8	3,7	3,3
	M	Correction factor -0.85 × H-					
	L	Correction factor -0.73 × H-					
40	H	5,8	5,4	5,0	4,8	4,6	4,2
	M	Correction factor -0.84 × H-					
	L	Correction factor -0.72 × H-					
50	H	7,3	6,8	6,3	6,0	5,8	5,3
	M	Correction factor -0.81 × H-					
	L	Correction factor -0.65 × H-					
63	H	9,3	8,7	8,0	7,7	7,3	6,7
	M	Correction factor -0.79 × H-					
	L	Correction factor -0.63 × H-					
80	H	11,7	10,8	10,0	9,6	9,2	8,4
	M	Correction factor -0.83 × H-					
	L	Correction factor -0.59 × H-					
100	H	14,6	13,5	12,5	12,0	11,5	10,5
	M	Correction factor -0.74 × H-					
	L	Correction factor -0.48 × H-					
125	H	18,7	17,3	16,0	15,3	14,7	13,4
	M	Correction factor -0.80 × H-					
	L	Correction factor -0.61 × H-					
140	H	21,0	19,5	18,0	17,3	16,5	15,1
	M	Correction factor -0.78 × H-					
	L	Correction factor -0.58 × H-					

Notes

1) TC: Total capacity [kW]

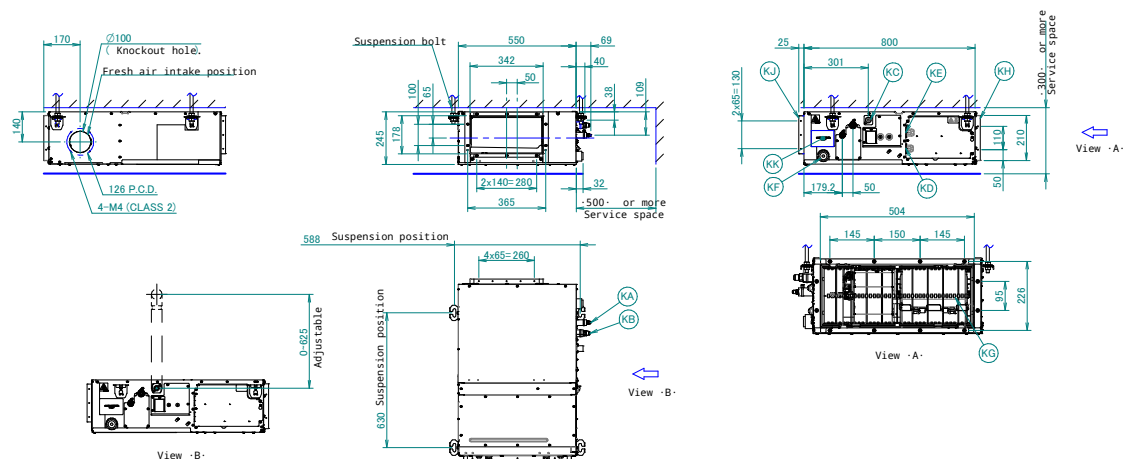
2) Outdoor temperature -7°C DB / -6°C WB

3D129415

7 Dimensional drawings

7 - 1 Dimensional Drawings

FXSA15A
FXSA20A
FXSA25A
FXSA32A



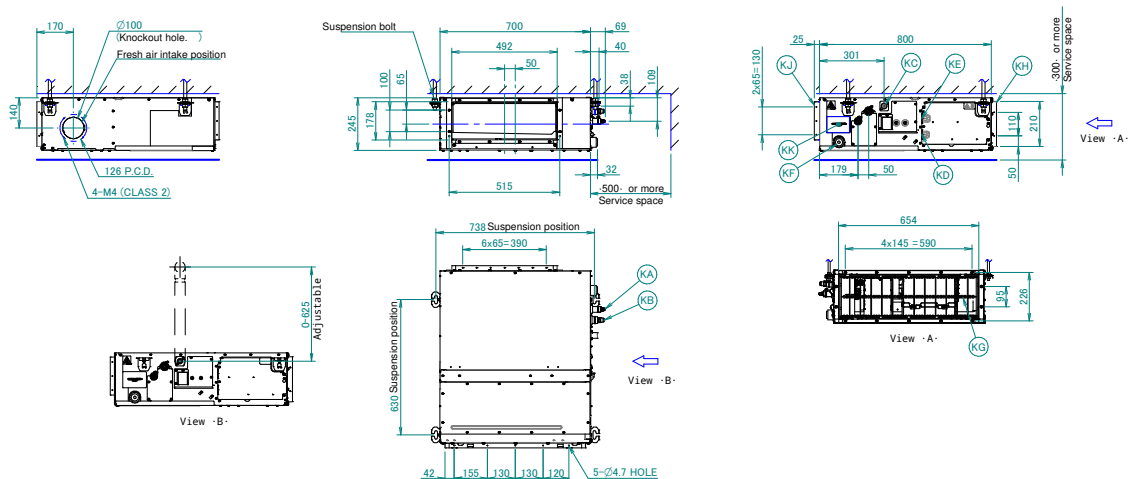
Item	Name	Description
KA	Liquid pipe connection port	Ø6.35" flared connection
KB	Gas pipe connection port	Ø9.52" flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

- NOTES**
1. When installing optional accessories, refer to their respective documentation.
 2. The ceiling depth varies according to the documentation of the specific system.
 3. In case of bottom suction, mount the chamber cover to the backside of the unit.
For more information, refer to the installation manual.
 4. In case of rear suction, mount the chamber cover to the bottom side of the unit.
For more information, refer to the installation manual.

3D128686

FXSA40A
FXSA50A



Item	Name	Description
KA	Liquid pipe connection port	Ø6.35- flared connection
KB	Gas pipe connection port	Ø12.70- flared connection
KC	Drain pipe connection	VP20 (ØD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (ØD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

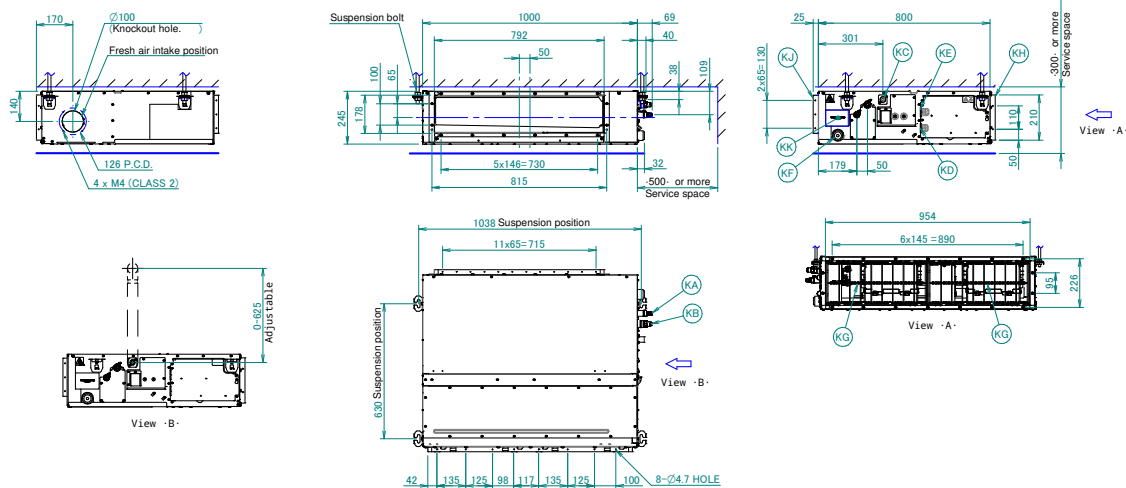
- NOTES
1. When installing optional accessories, refer to their respective documentation.
 2. The ceiling depth varies according to the documentation of the specific system.
 3. In case of bottom suction, mount the chamber cover to the backside of the unit.
For more information, refer to the installation manual.
 4. In case of rear suction, mount the chamber cover to the bottom side of the unit.
For more information, refer to the installation manual.

3D128715

7 Dimensional drawings

7 - 1 Dimensional Drawings

FXSA63A
FXSA80A



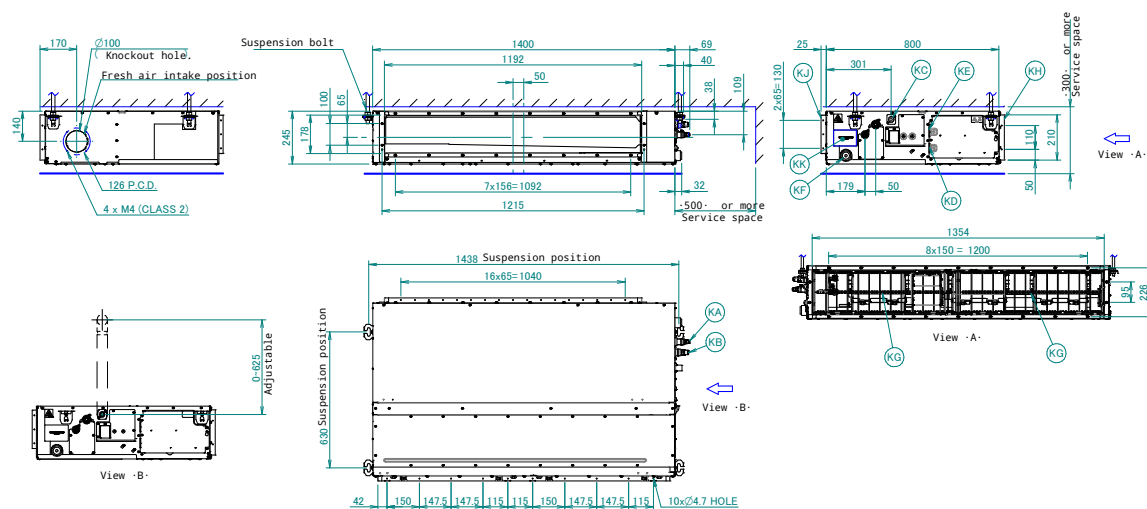
Item	Name	Description
KA	Liquid pipe connection port	Ø6.35- flared connection
KB	Gas pipe connection port	Ø12.70- flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.
3. In case of bottom suction, mount the chamber cover to the backside of the unit.
For more information, refer to the installation manual.
4. In case of rear suction, mount the chamber cover to the bottom side of the unit.
For more information, refer to the installation manual.

3D128716

FXSA100A
FXSA125A



Item	Name	Description
KA	Liquid pipe connection port	·Ø9.52· flared connection
KB	Gas pipe connection port	·Ø15.90· flared connection
KC	Drain pipe connection	VP20 (ØD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (ØD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

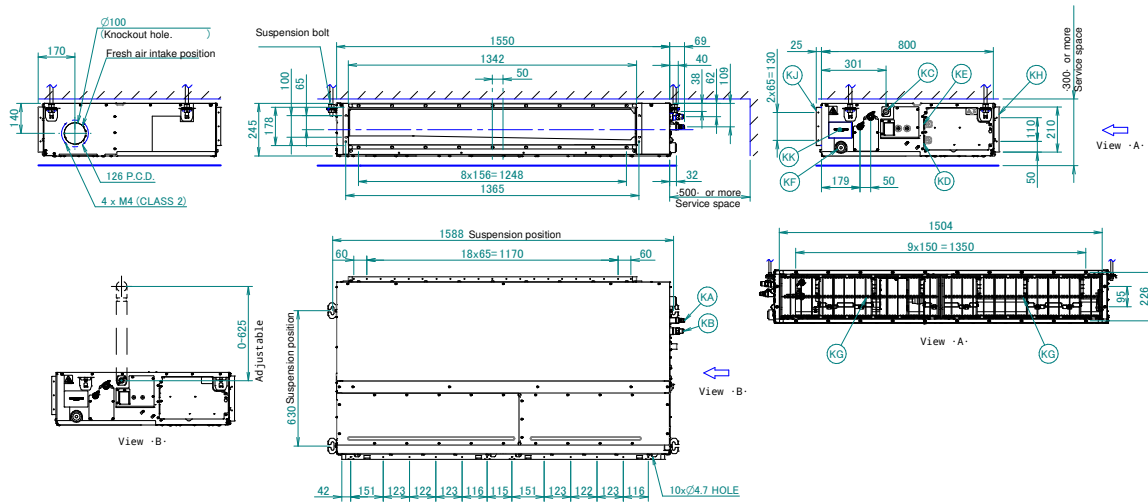
1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.
3. In case of bottom suction, mount the chamber cover to the backside of the unit.
For more information, refer to the installation manual.
4. In case of rear suction, mount the chamber cover to the bottom side of the unit.
For more information, refer to the installation manual.

3D128719

7 Dimensional drawings

7 - 1 Dimensional Drawings

FXSA140A



Item	Name	Description
KA	Liquid pipe connection port	Ø9.52- flared connection
KB	Gas pipe connection port	Ø15.90- flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

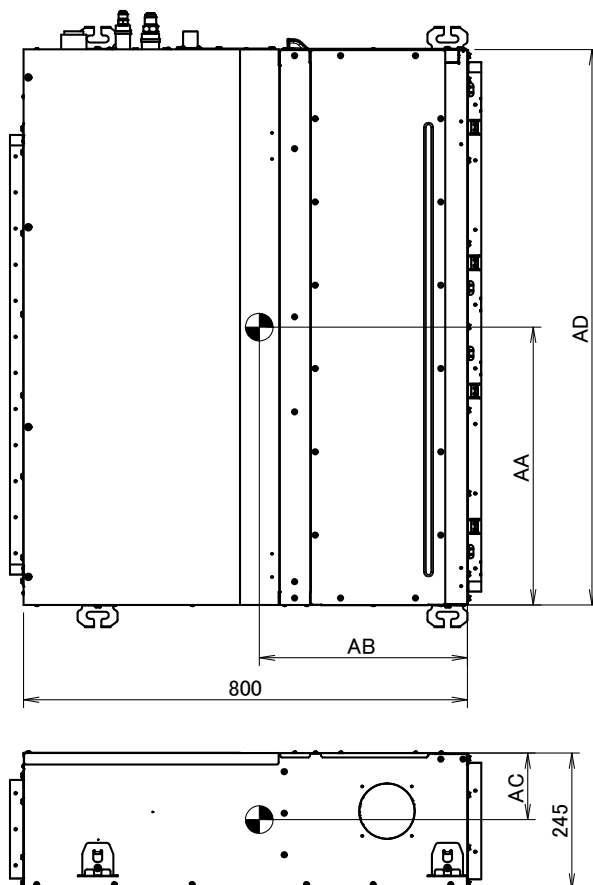
- When installing optional accessories, refer to their respective documentation.
- The ceiling depth varies according to the documentation of the specific system.
- In case of bottom suction, mount the chamber cover to the backside of the unit. For more information, refer to the installation manual.
- In case of rear suction, mount the chamber cover to the bottom side of the unit. For more information, refer to the installation manual.

3D128720

8 Centre of gravity

8 - 1 Centre of Gravity

FXSA-A



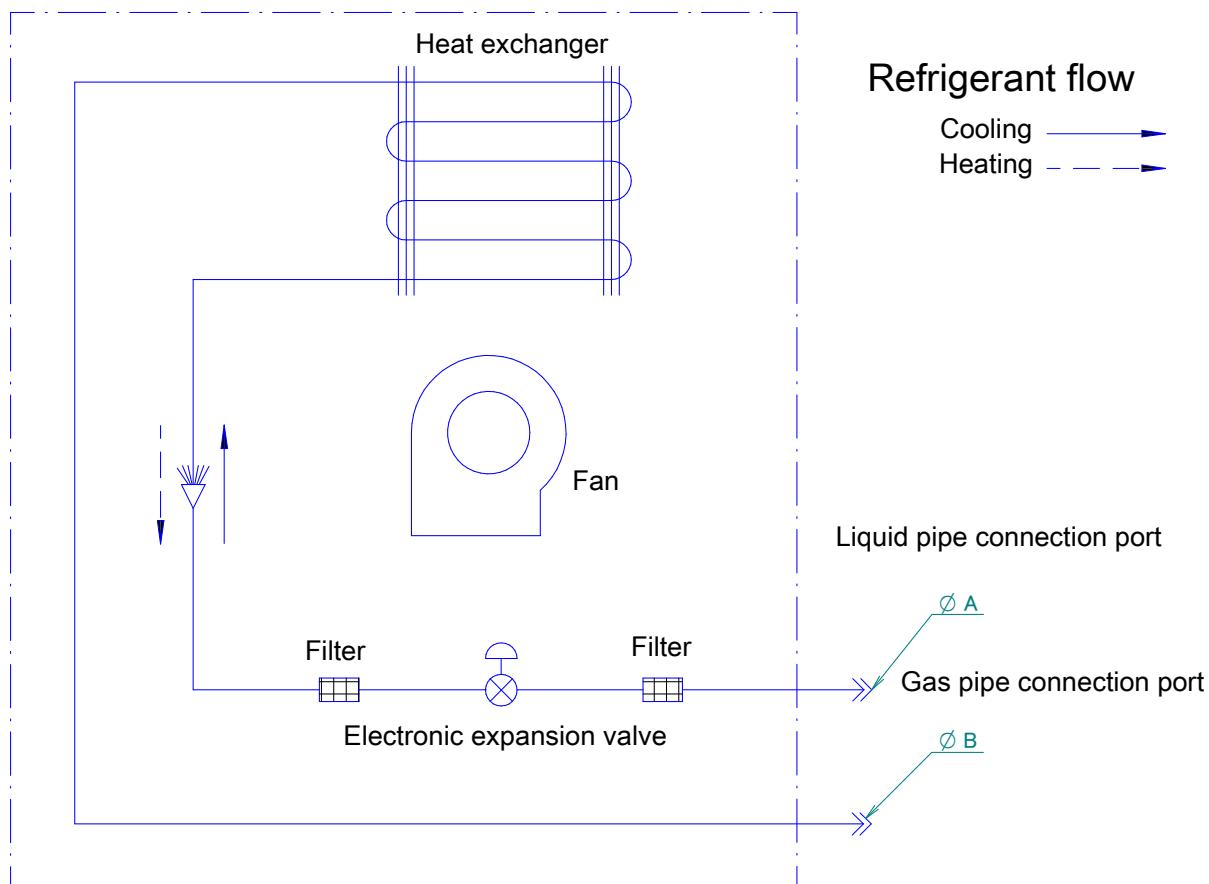
Applicable models	AA	AB	AC	AB
FXSQ15/20/25/32	305	365	145	550
FXSQ40/50	410	375	125	700
FXSQ63/80	525	380	125	100
FXSQ100/125	760	390	115	1400
FXSQ140	870	385	120	1550

4D096407A

9 Piping diagrams

9 - 1 Piping Diagrams

FXSA-A



Model	A	B
FXSA15A2VEB	6.35	9.52
FXSA20A2VEB		
FXSA25A2VEB		
FXSA32A2VEB		
FXSA40A2VEB		
FXSA50A2VEB		
FXSA63A2VEB		
FXSA80A2VEB	9.52	15.9
FXSA100A2VEB		
FXSA125A2VEB		
FXSA140A2VEB		

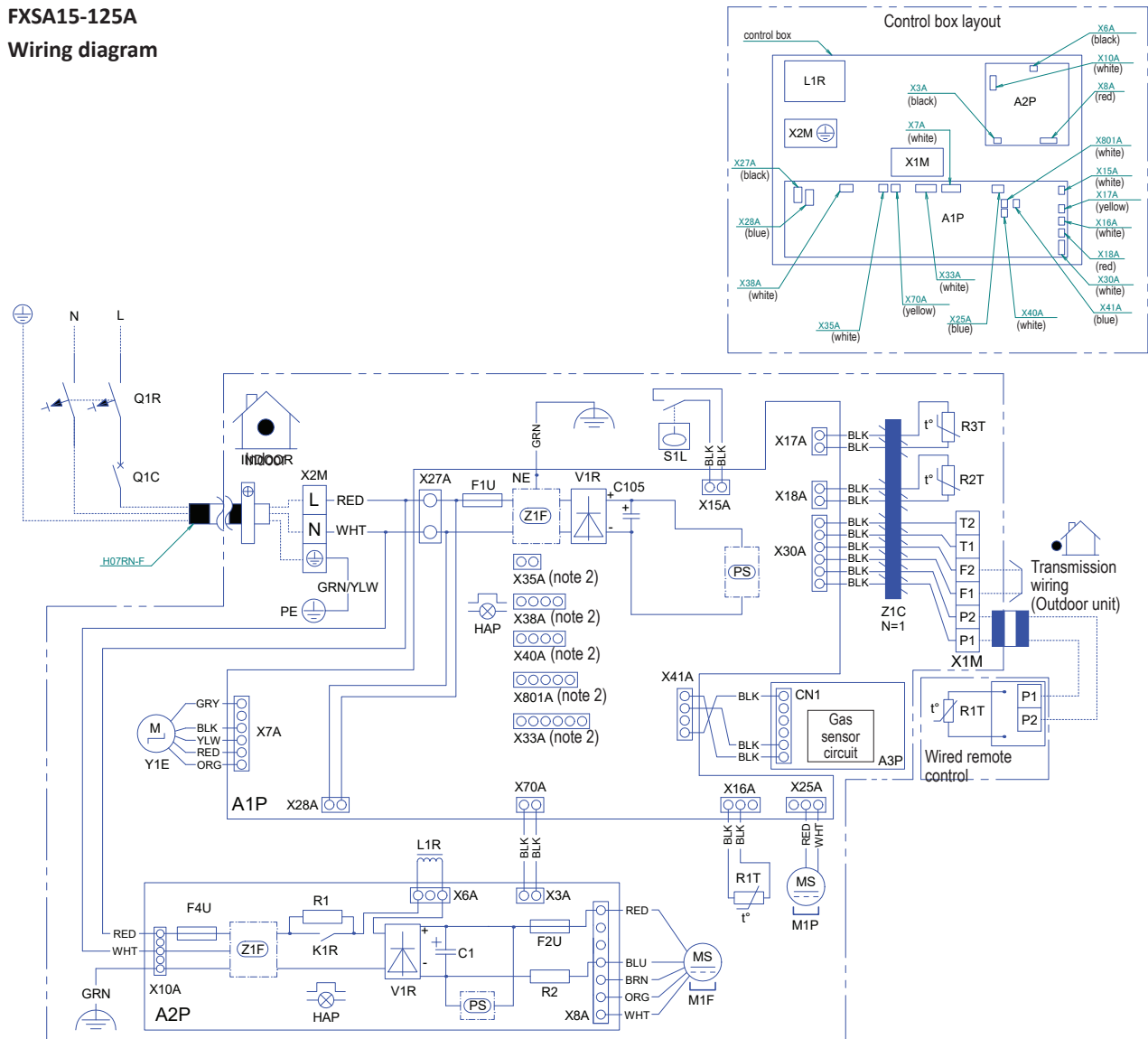
4D126216

10 Wiring diagrams

10 - 1 Wiring Diagrams - Single Phase

FXSA15-125A

Wiring diagram



Indoor unit	
A1P	Printed circuit board (main)
A2P	Printed circuit board (fan)
C1	Capacitor
C105	Capacitor
CN1	Sensor connector
A3P	Printed circuit board (gas sensor)
F1U	Fuse (T, 3.15A, 250V)
F2U	Fuse (T, 5A, 250V)
F4U	Fuse (T, 6.3A, 250V)
HAP	Indication lamp
K1R	Magnetic relay
L1R	Reactor
M1F	Motor (indoor fan)
M1P	Motor (drain pump)
NE	Noiseless earth
Q1R	Residual current device
Q1C	Circuit breaker
R1	Resistor
R2	Resistor (current sensor)
R1T	Thermistor (air)
R2T	Thermistor (liquid)
R3T	Thermistor (coil)
S1L	Float switch

Indoor unit	
V1R	Diode bridge
PS	Switching power supply
X1M	Terminal strip (Remote controller)
X2M	Terminal strip (power supply)
X3A-X801A	Connector
Y1E	Electronic expansion valve
Z1C	Ferrite core
Z1F	Noise filter
Wired remote control	
R1T	Thermistor (air)

NOTES

1. : terminal block, : connector, : field wiring
2. X33A, X35A, X38A, X40A, X801A are connected when optional accessories are being used, see wiring diagram of this accessory.

WIRE COLOURS

BLK: black, RED: red, BLU: blue, WHT: white, YLW: yellow, GRN: green, BRN: brown, PNK: pink, ORG: orange, GRY: grey

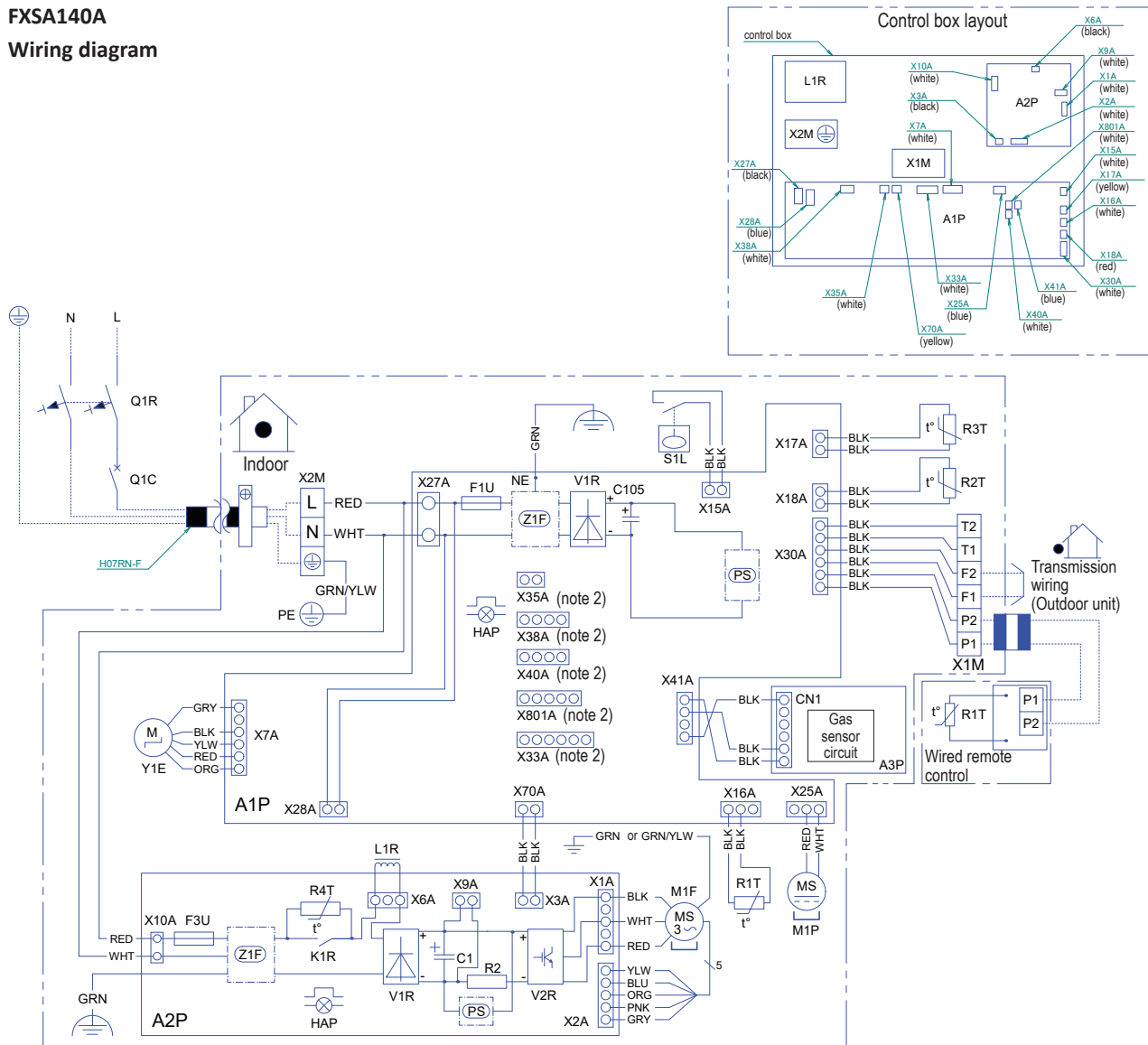
3D128710A

10 Wiring diagrams

10 - 1 Wiring Diagrams - Single Phase

FXSA140A

Wiring diagram



Indoor unit		Indoor unit	
A1P	Printed circuit board (main)	V2R	Power module
A2P	Printed circuit board (fan)	PS	Switching power supply
C1	Capacitor	X1M	Terminal strip (control)
C105	Capacitor	X2M	Terminal strip (power supply)
CN1	Gas sensor connector	X7A-X801A	Connector
A3P	Printed circuit board (gas sensor)	Y1E	Electronic expansion valve
F1U	Fuse (T, 3.15A, 250V)	Z1F	Noise filter
F3U	Fuse (T, 6.3A, 250V)	Wired remote control	
HAP	Indication lamp	R1T	Thermistor (air)
K1R	Magnetic relay		
L1R	Reactor		
M1F	Motor (indoor fan)		
M1P	Motor (drain pump)		
NE	Noiseless earth		
Q1R	Residual current device		
Q1C	Circuit breaker		
R2	Resistor (current sensor)		
R1T	Thermistor (air)		
R2T	Thermistor (liquid)		
R3T	Thermistor (coil)		
R4T	Thermistor NTC (current limiting)		
S1L	Float switch		
V1R	Diode bridge		

NOTES

1. : terminal block, : connector, : field wiring
2. X33A, X35A, X38A, X40A, X801A are connected when optional accessories are being used, see wiring diagram of this accessory.

WIRE COLOURS

BLK: black, RED: red, BLU: blue, WHT: white, YLW: yellow, GRN: green, BRN: brown, PNK: pink, ORG: orange, GRY: grey

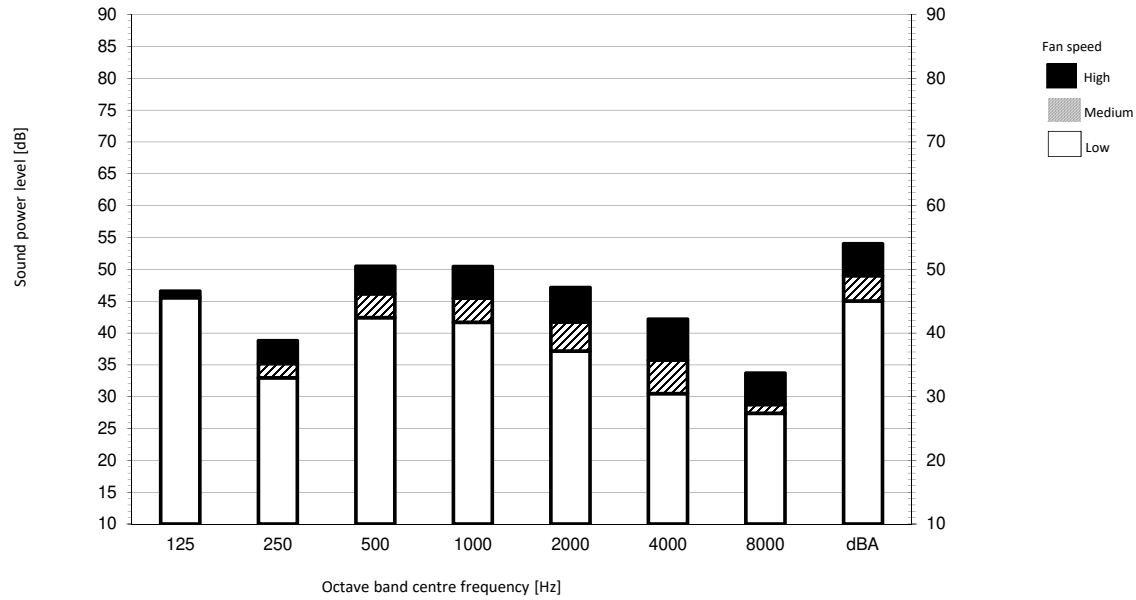
3D128748A

11 Sound data

11 - 1 Sound Power Spectrum - Cooling

FXSA15A

Cooling mode



Notes

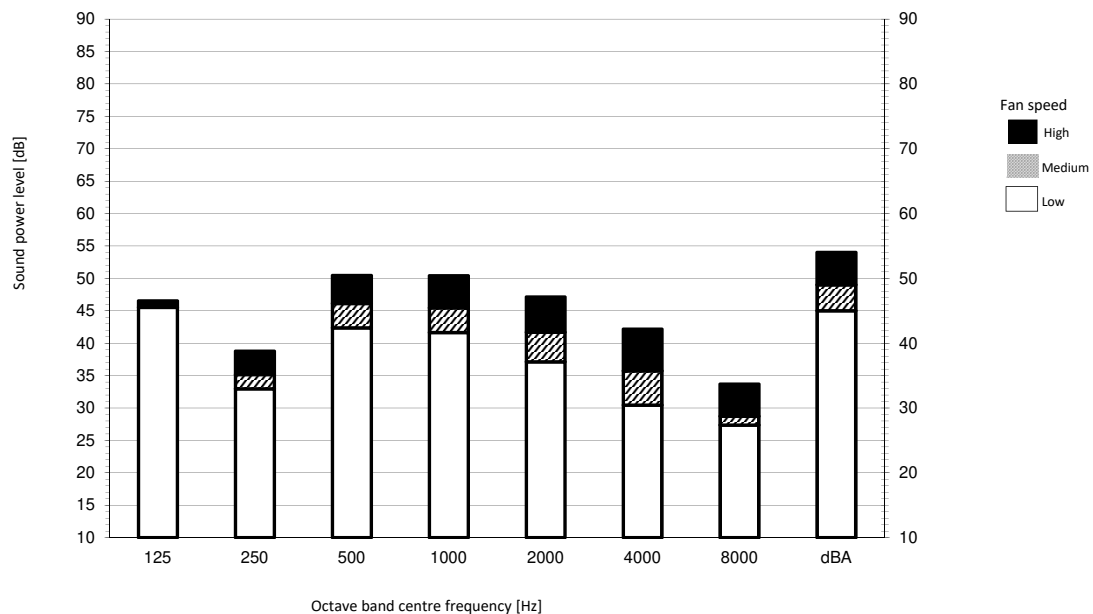
1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity $0\text{dB} = 10^{-10}\text{W/m}^2$.
3. Measured according to ISO 3744

3D095590C

FXSA20A

FXSA25A

Cooling mode



Notes

1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity $0\text{dB} = 10^{-10}\text{W/m}^2$.
3. Measured according to ISO 3744

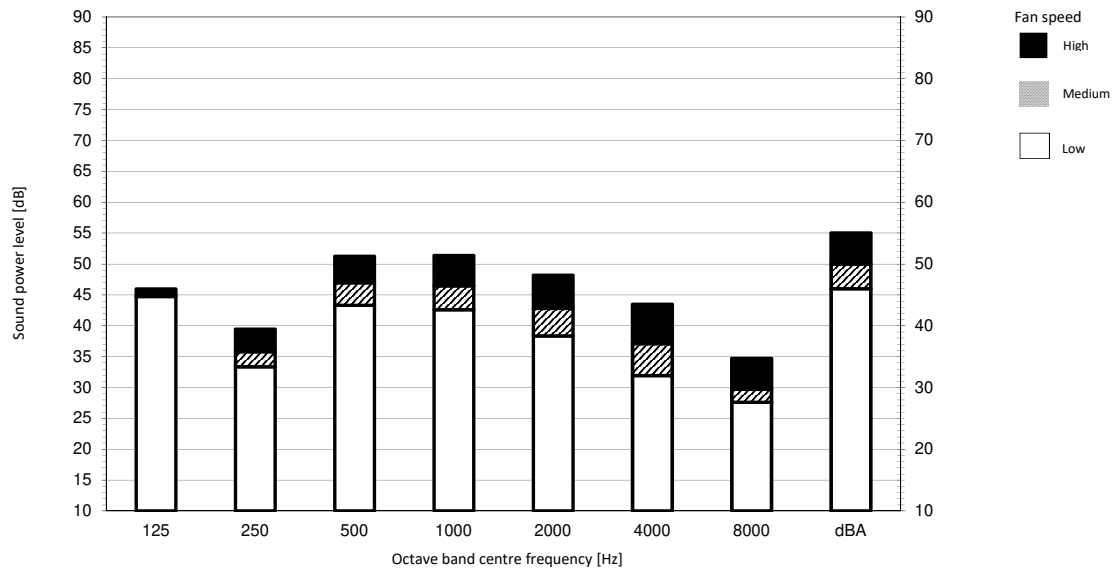
3D095591C

11 Sound data

11 - 1 Sound Power Spectrum - Cooling

FXSA32A

Cooling mode



Notes

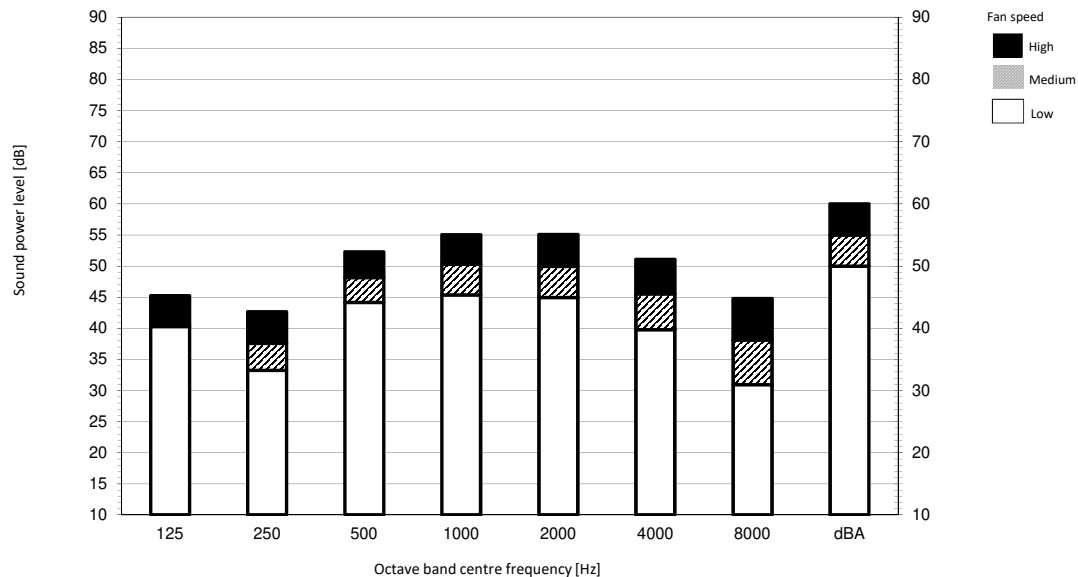
1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity $0\text{dB} = -10\text{E-}6\mu\text{W/m}^2$.
3. Measured according to ISO 3744

3D095592C

FXSA40A

FXSA50A

Cooling mode



Notes

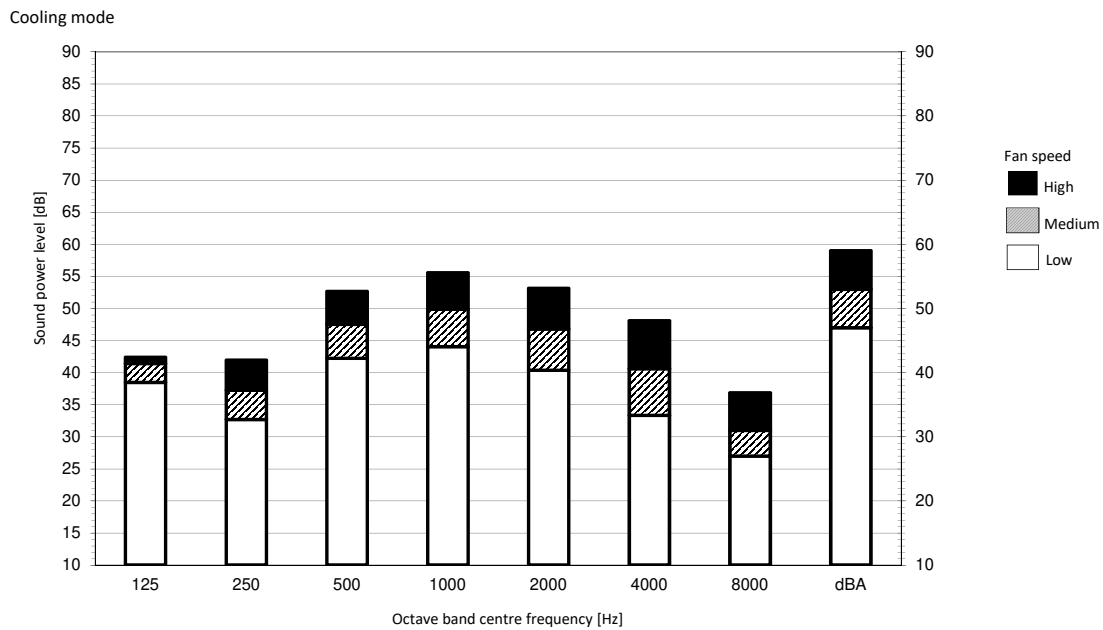
1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity $0\text{dB} = -10\text{E-}6\mu\text{W/m}^2$.
3. Measured according to ISO 3744

3D095579C

11 Sound data

11 - 1 Sound Power Spectrum - Cooling

FXSA63A

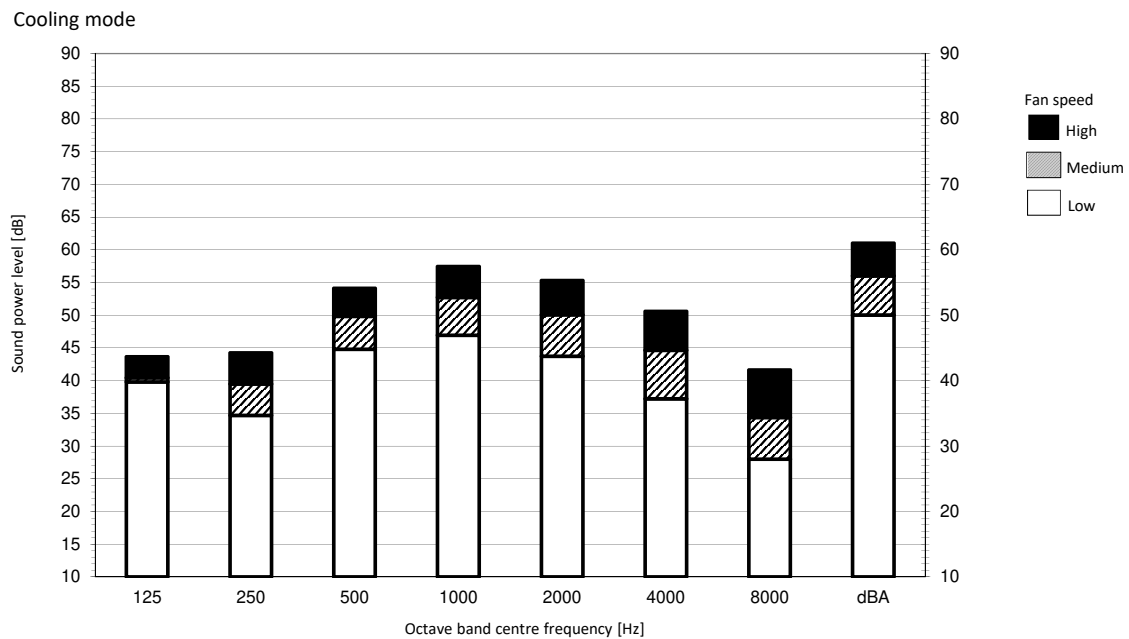


Notes

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

3D095593C

FXSA80A



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

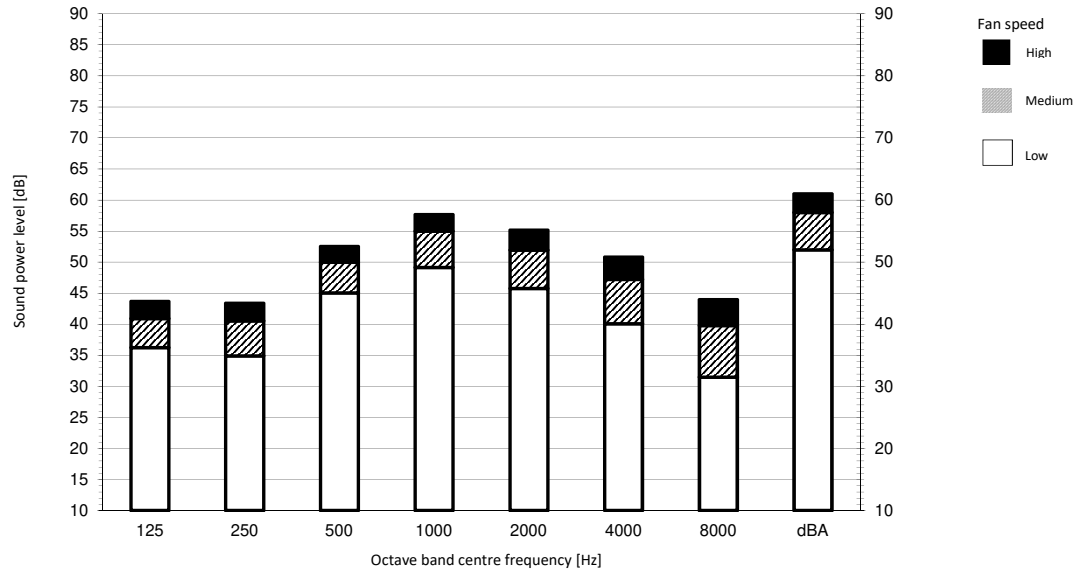
3D095594C

11 Sound data

11 - 1 Sound Power Spectrum - Cooling

FXSA100A

Cooling mode



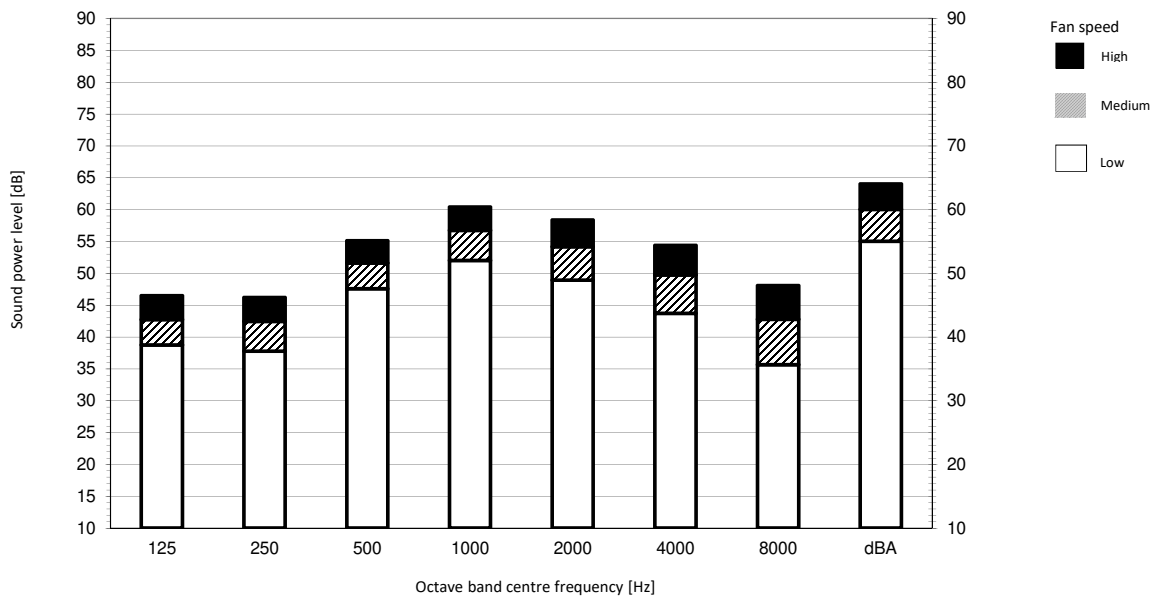
Notes

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

3D095596C

FXSA125A

Cooling mode



Notes

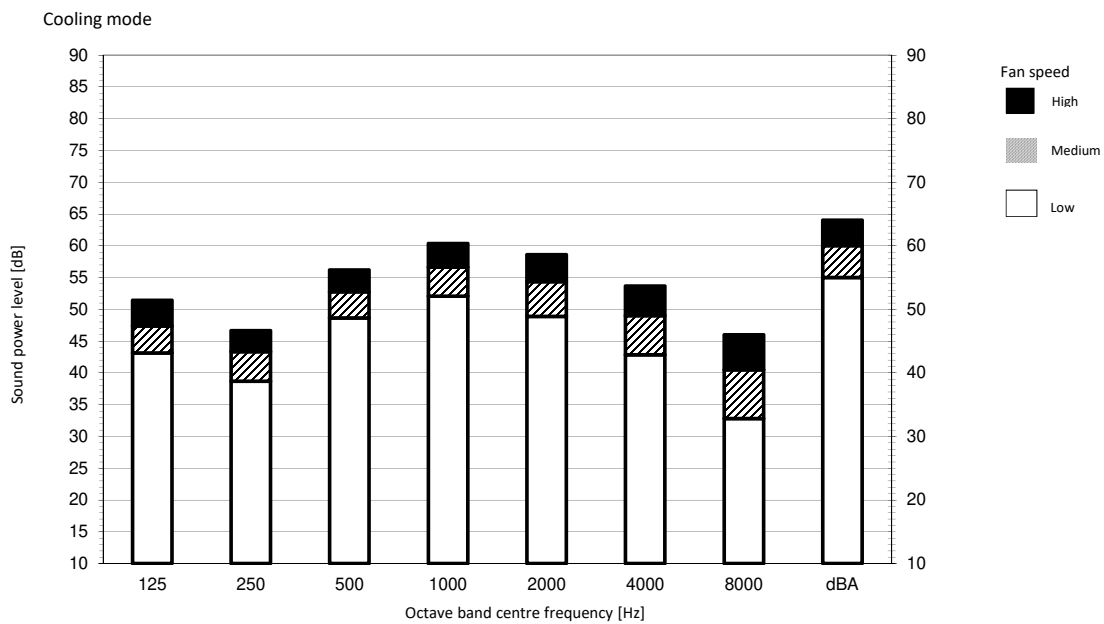
1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity 0dB = $-10E-6\mu W/m^2$.
3. Measured according to ISO 3744

3D095597C

11 Sound data

11 - 1 Sound Power Spectrum - Cooling

FXSA140A



Notes

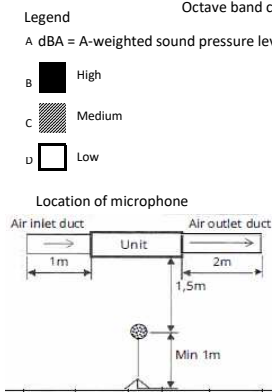
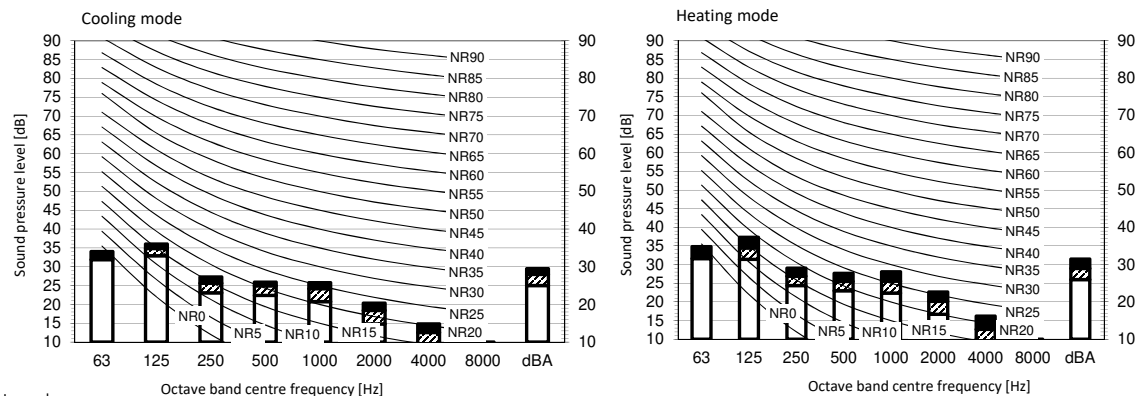
1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity $0\text{ dB} = 10^{-6}\text{ W/m}^2$.
3. Measured according to ISO 3744

3D100610B

11 Sound data

11 - 2 Sound Pressure Spectrum

FXSA15A



Cooling		Total dB	
A	B	C	D
dBA	29,5	28,0	25,0

Heating		Total dB	
A	B	C	D
dBA	31,5	29,0	26,0

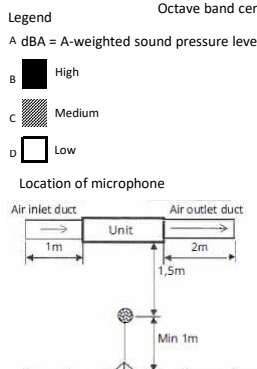
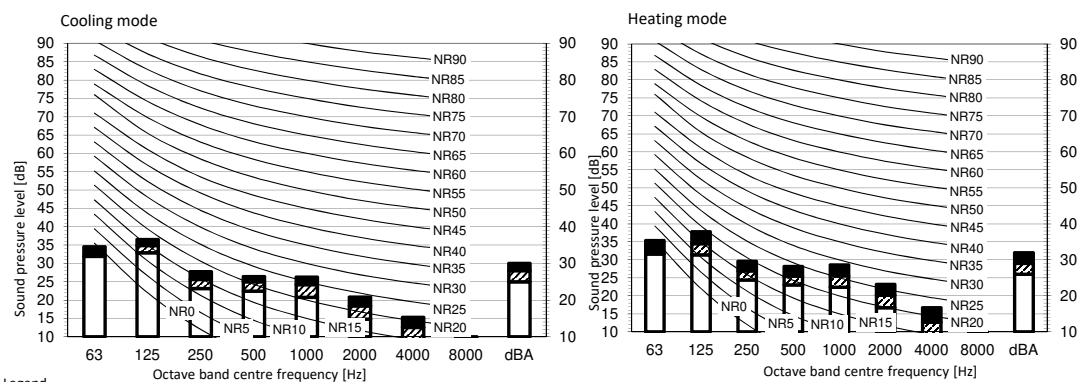
Notes

1. Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
2. Background noise already taken into account.
3. Operating noise varies depending on operation and ambient conditions.
4. The operation noise measuring method is in accordance with JISC9612.
5. Measuring location: anechoic chamber

3D095568B

FXSA20A

FXSA25A



Cooling		Total dB	
A	B	C	D
dBA	30,0	28,0	25,0

Heating		Total dB	
A	B	C	D
dBA	32,0	29,0	26,0

Notes

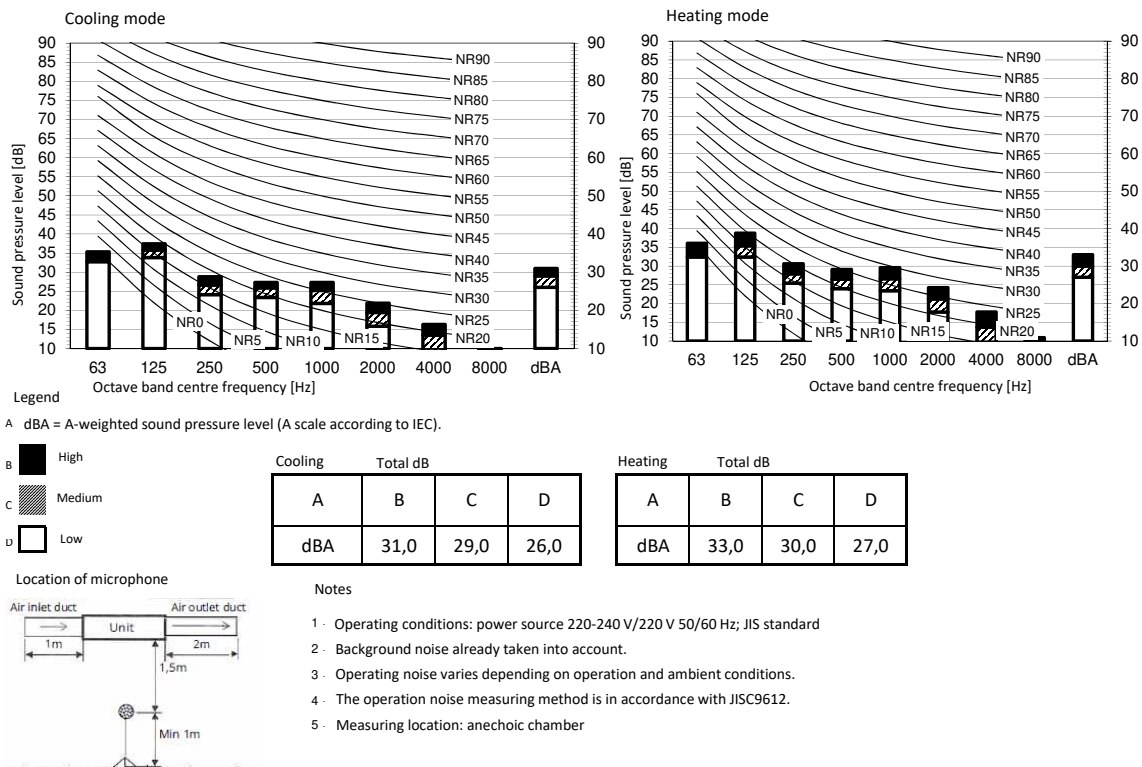
1. Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
2. Background noise already taken into account.
3. Operating noise varies depending on operation and ambient conditions.
4. The operation noise measuring method is in accordance with JISC9612.
5. Measuring location: anechoic chamber

3D095569B

11 Sound data

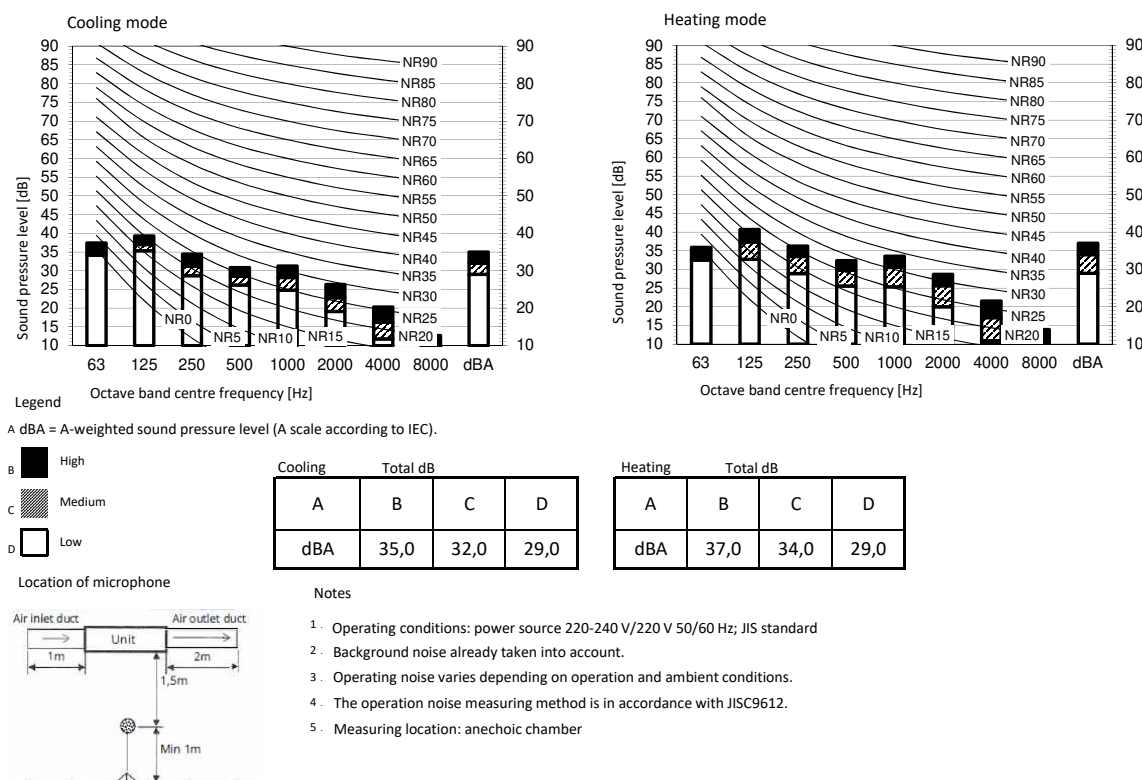
11 - 2 Sound Pressure Spectrum

FXSA32A



3D095570B

FXSA40A FXSA50A



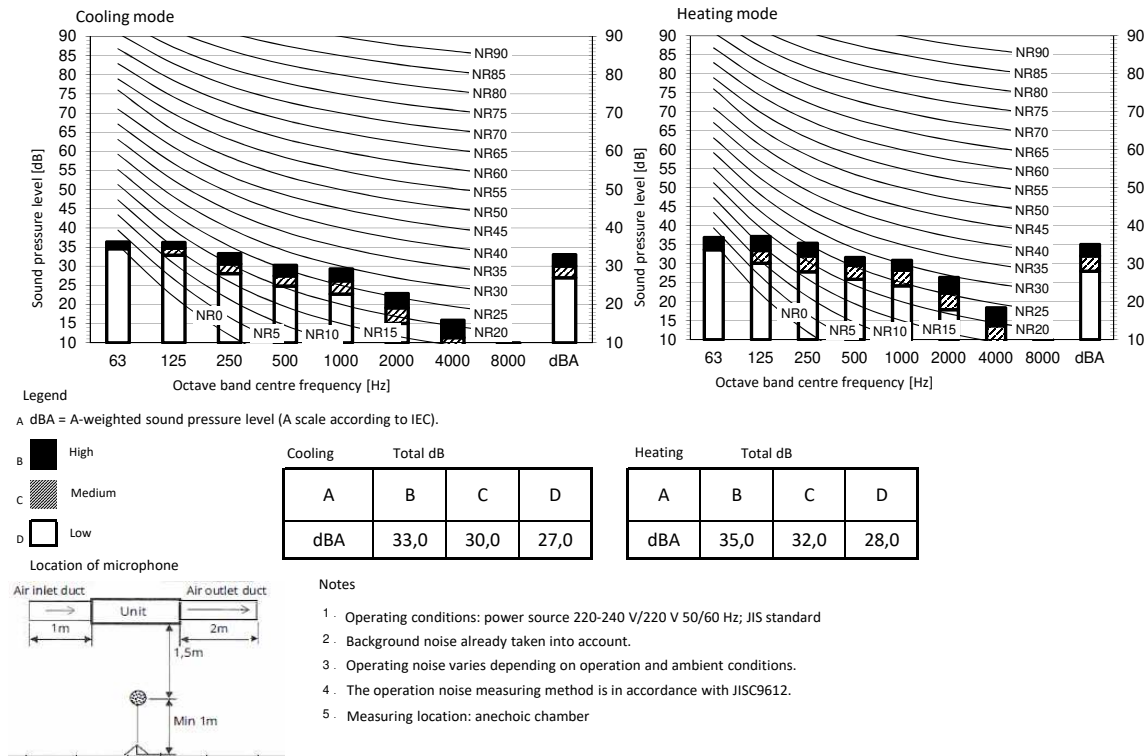
3D095575B

11 Sound data

11 - 2 Sound Pressure Spectrum

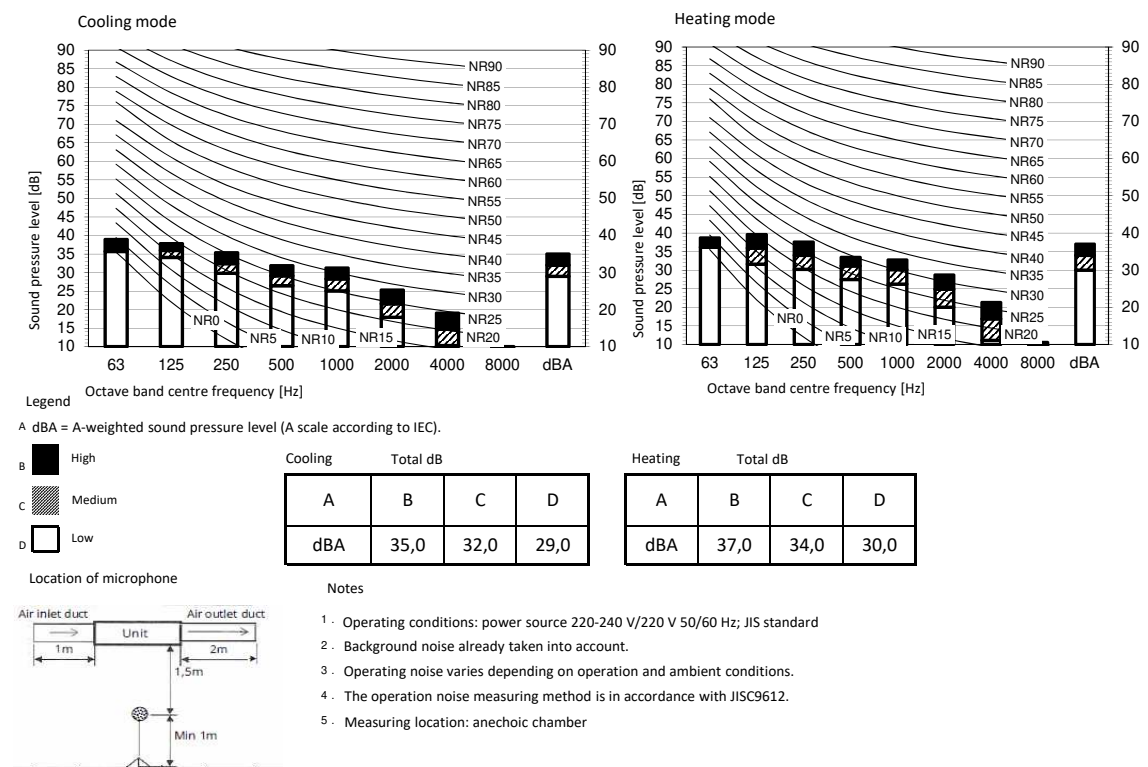
11

FXSA63A



3D095571B

FXSA80A

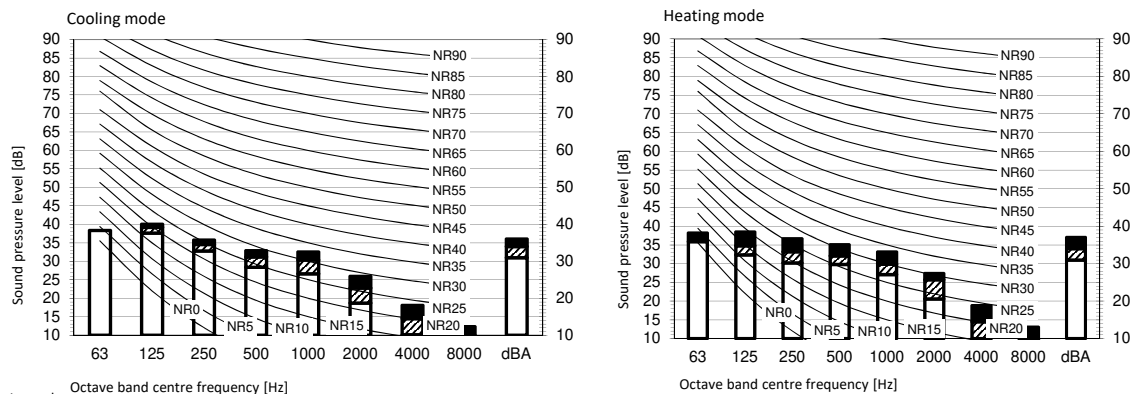


3D095572B

11 Sound data

11 - 2 Sound Pressure Spectrum

FXSA100A



Legend

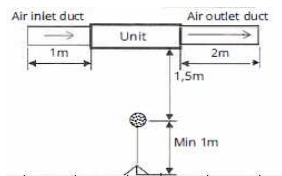
A dBA = A-weighted sound pressure level (A scale according to IEC).

B High
C Medium
D Low

Cooling	Total dB			
A	B	C	D	
dBA	36,0	34,0	31,0	

Heating	Total dB			
A	B	C	D	
dBA	37,0	34,0	31,0	

Location of microphone

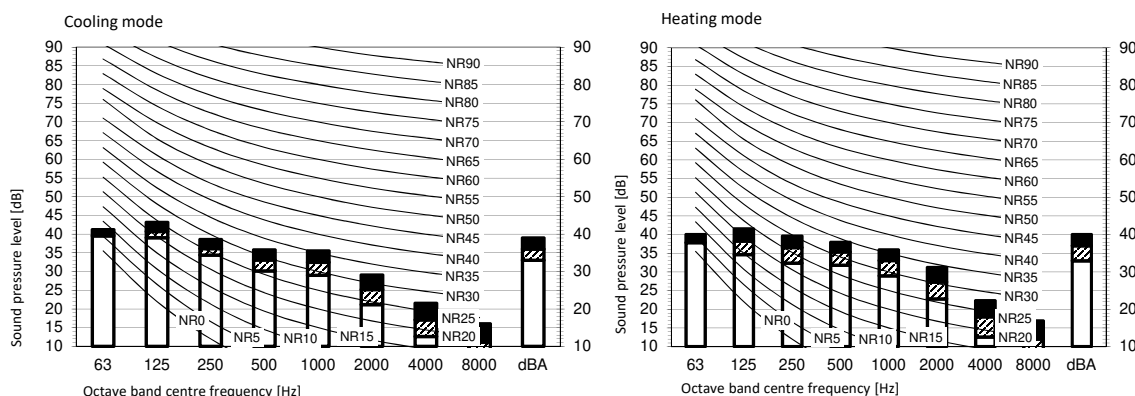


Notes

- Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
- Background noise already taken into account.
- Operating noise varies depending on operation and ambient conditions.
- The operation noise measuring method is in accordance with JISC9612.
- Measuring location: anechoic chamber

3D095573B

FXSA125A



Legend

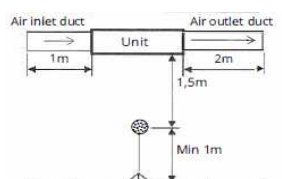
A dBA = A-weighted sound pressure level (A scale according to IEC).

B High
C Medium
D Low

Cooling	Total dB			
A	B	C	D	
dBA	39,0	36,0	33,0	

Heating	Total dB			
A	B	C	D	
dBA	40,0	37,0	33,0	

Location of microphone



Notes

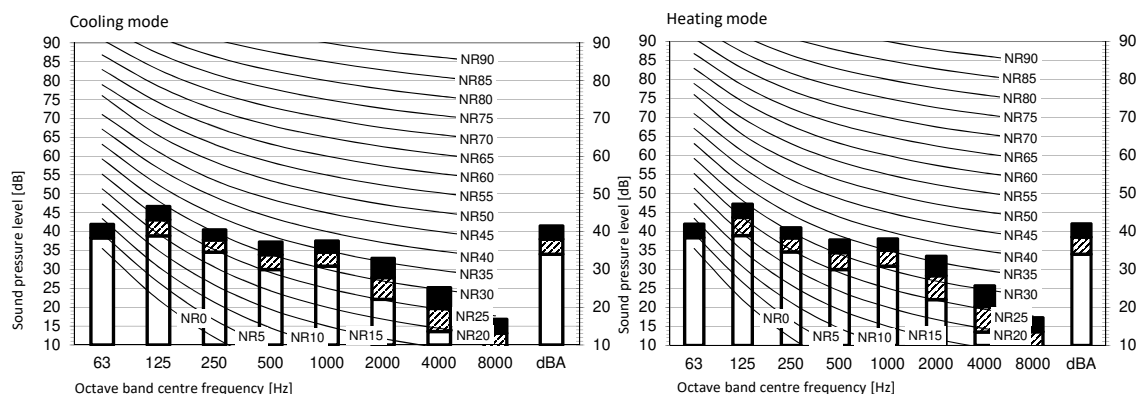
- Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
- Background noise already taken into account.
- Operating noise varies depending on operation and ambient conditions.
- The operation noise measuring method is in accordance with JISC9612.
- Measuring location: anechoic chamber

3D095574B

11 Sound data

11 - 2 Sound Pressure Spectrum

FXSA140A

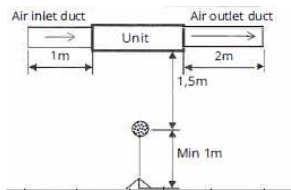


Legend

A dBA = A-weighted sound pressure level (A scale according to IEC).

B High
 C Medium
 D Low

Location of microphone



Cooling Total dB			
A	B	C	D
dBA	41,5	38,0	34,0

Heating Total dB			
A	B	C	D
dBA	42,0	38,5	34,0

Notes

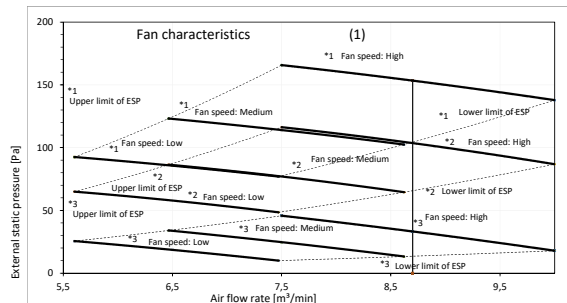
- Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
- Background noise already taken into account.
- Operating noise varies depending on operation and ambient conditions.
- The operation noise measuring method is in accordance with JISC9612.
- Measuring location: anechoic chamber

3D096622B

12 Fan characteristics

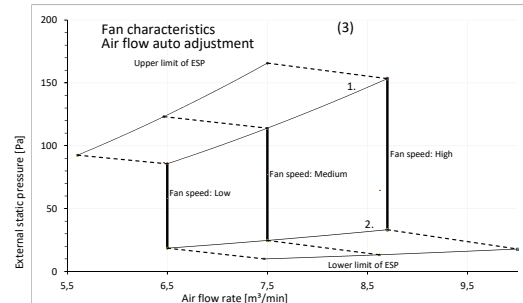
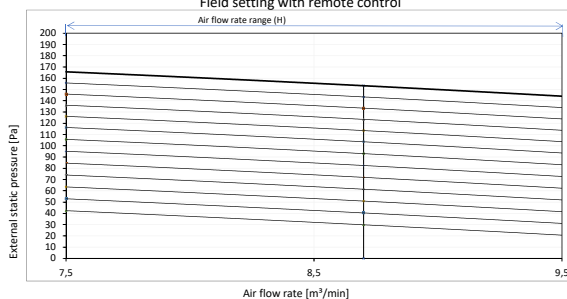
12 - 1 Fan Characteristics

FXSA15A



Mark	ESP [Pa]
*1	Maximum 150
*2	Standard 100

Fan characteristics (2) Field setting with remote control



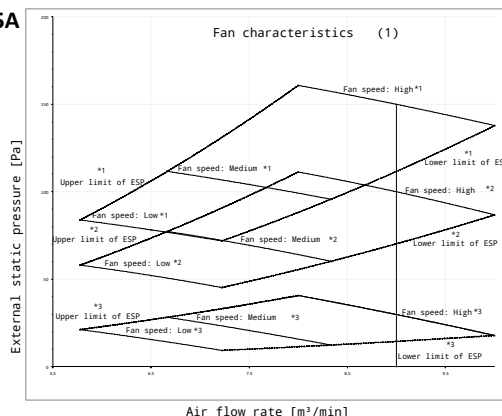
1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment

- Notes
1. The fan characteristics shown are in "fan only" mode.
 2. ESP: External Static Pressure

3D096999B

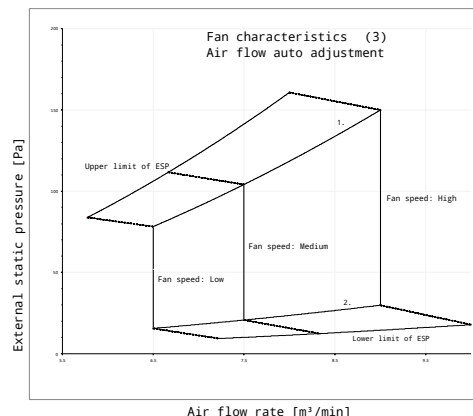
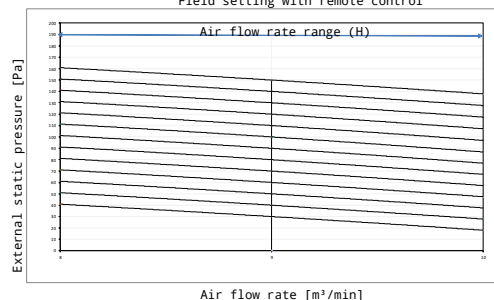
FXSA20A

FXSA25A



Mark	ESP [Pa]
*1	Maximum 150
*2	- 100
*3	Standard 30

Fan characteristics (2) Field setting with remote control



1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment

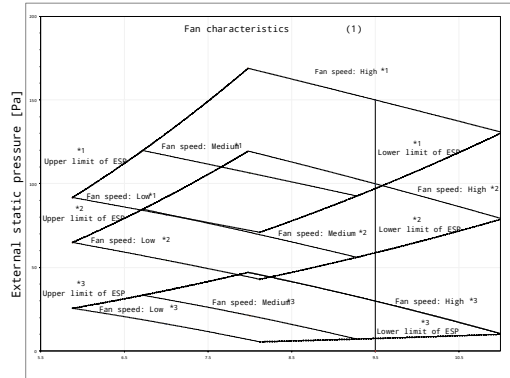
- Notes
1. The fan characteristics shown are in "fan only" mode.
 2. ESP: External Static Pressure

3D095680B

12 Fan characteristics

12 - 1 Fan Characteristics

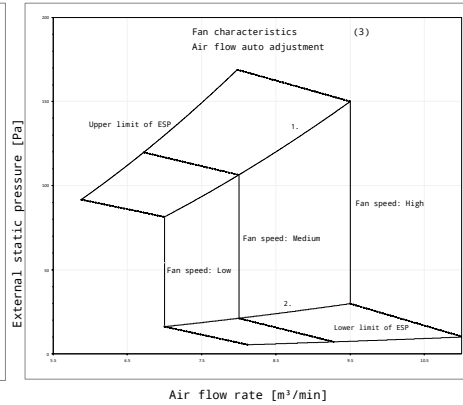
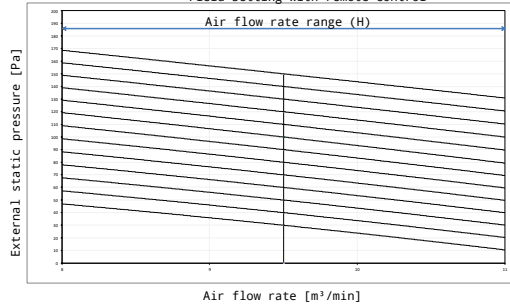
FXSA32A



Mark	ESP [Pa]
*1 Maximum	150
*2 -	100
*3 Standard	30

Air flow rate [m³/min]

Fan characteristics (2)
Field setting with remote control



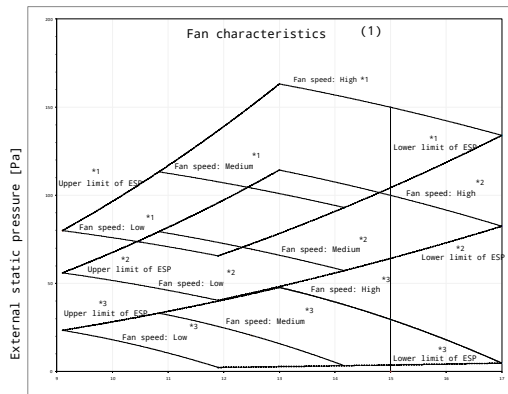
1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment

Notes

- 1.The fan characteristics shown are in "fan only" mode.
- 2.ESP: External Static Pressure

3D095681B

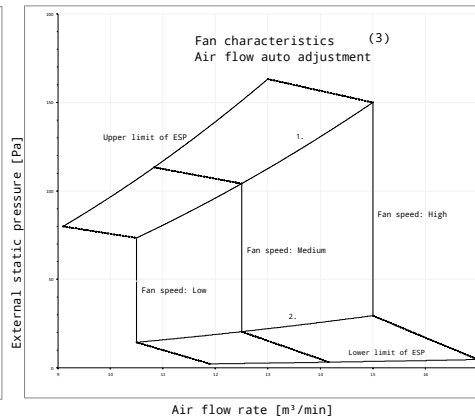
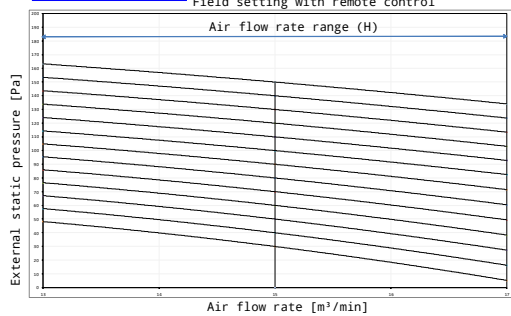
FXSA40A



Mark	ESP [Pa]
*1 Maximum	150
*2 -	100
*3 Standard	30

Air flow rate [m³/min]

Fan characteristics (2)
Field setting with remote control



- 1.Upper limit of ESP by air flow auto adjustment
- 2.Lower limit of ESP by air flow auto adjustment

Notes

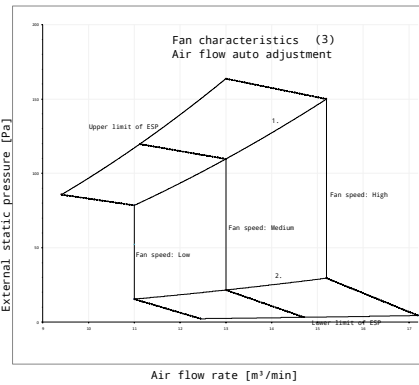
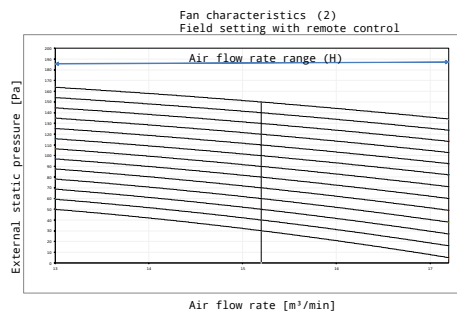
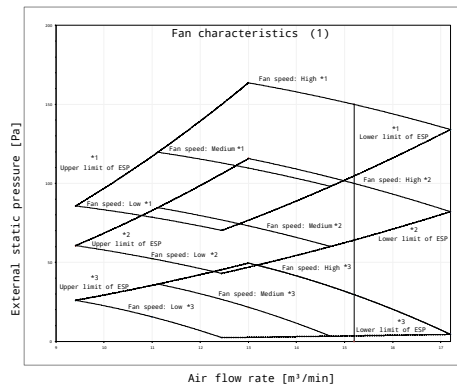
- 1.The fan characteristics shown are in "fan only" mode.
- 2.ESP: External Static Pressure

3D095682B

12 Fan characteristics

12 - 1 Fan Characteristics

FXSA50A



- 1.Upper limit of ESP by air flow auto adjustment
- 2.Lower limit of ESP by air flow auto adjustment

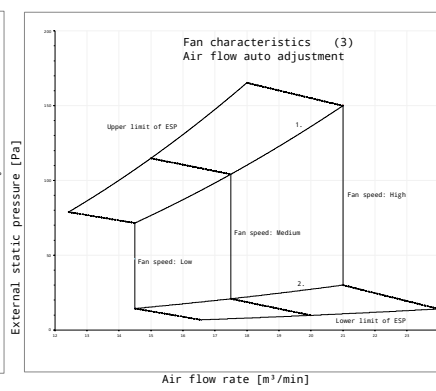
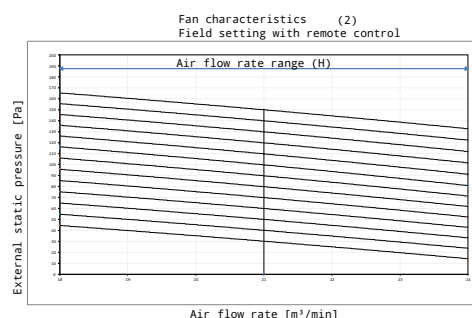
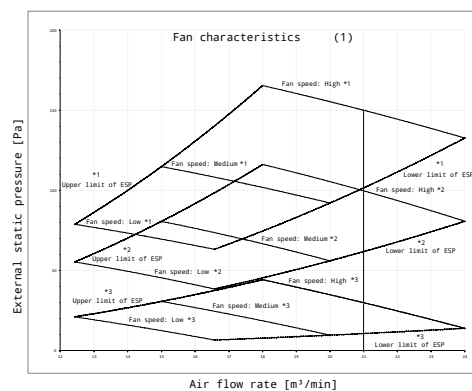
Mark		ESP [Pa]
*1	Maximum	150
*2	-	100
*3	Standard	30

Notes

- 1.The fan characteristics shown are in "fan only" mode.
- 2.ESP: External Static Pressure

3D095688B

FXSA63A



- 1.Upper limit of ESP by air flow auto adjustment
- 2.Lower limit of ESP by air flow auto adjustment

Mark		ESP [Pa]
*1	Maximum	150
*2	-	100
*3	Standard	30

Notes

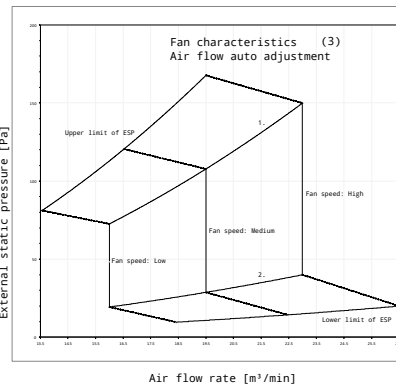
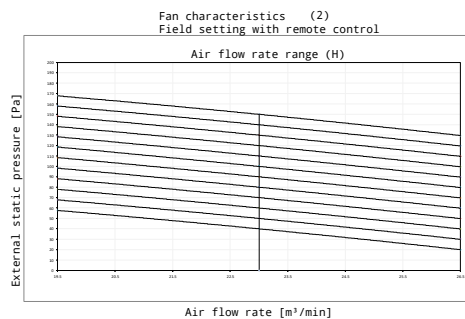
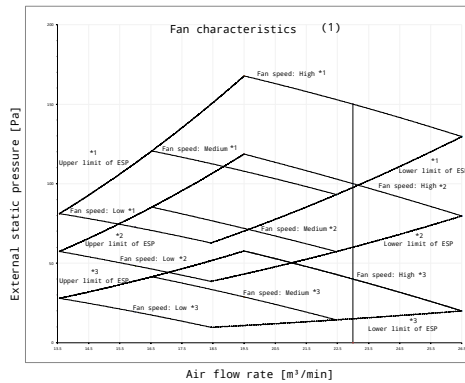
- 1.The fan characteristics shown are in "fan only" mode.
- 2.ESP: External Static Pressure

3D095690B

12 Fan characteristics

12 - 1 Fan Characteristics

FXSA80A



- 1.Upper limit of ESP by air flow auto adjustment
- 2.Lower limit of ESP by air flow auto adjustment

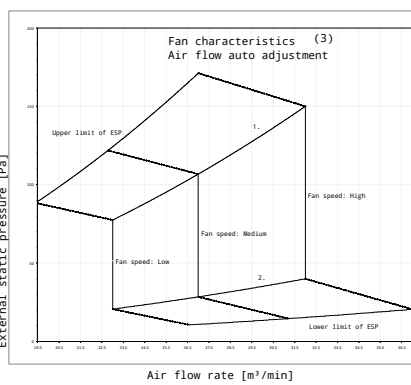
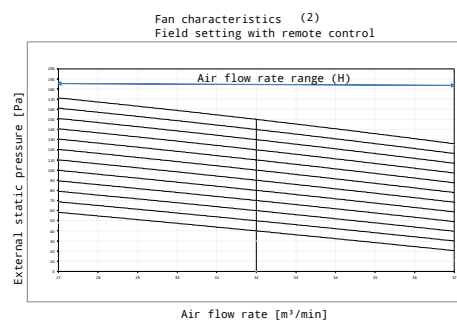
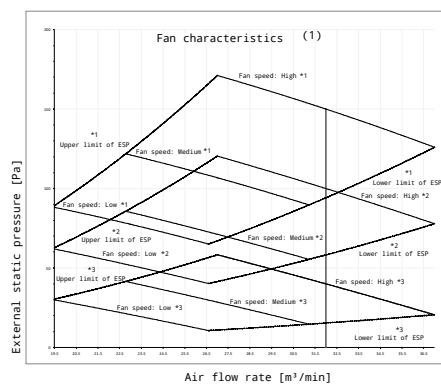
Mark		ESP [Pa]
*1	Maximum	150
*2	-	100
*3	Standard	40

Notes

- 1.The fan characteristics shown are in "fan only" mode.
- 2.ESP: External Static Pressure

3D095692B

FXSA100A



- 1.Upper limit of ESP by air flow auto adjustment
- 2.Lower limit of ESP by air flow auto adjustment

Mark		ESP [Pa]
*1	Maximum	150
*2	-	100
*3	Standard	40

Notes

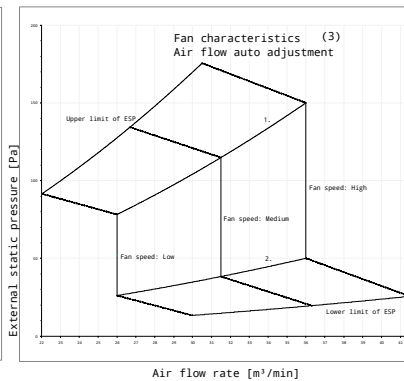
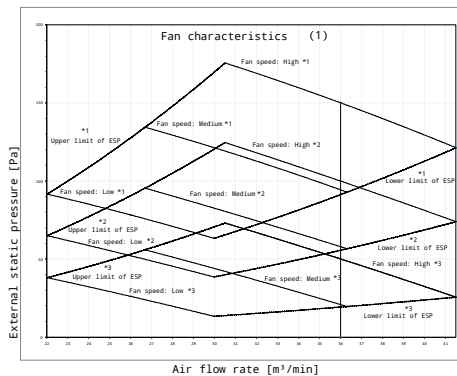
- 1.The fan characteristics shown are in "fan only" mode.
- 2.ESP: External Static Pressure

3D095696B

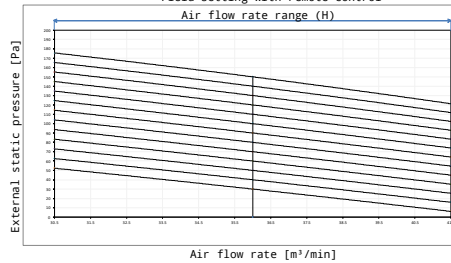
12 Fan characteristics

12 - 1 Fan Characteristics

FXSA125A



Fan characteristics (2)
Field setting with remote control



1.Upper limit of ESP by air flow auto adjustment
2.Lower limit of ESP by air flow auto adjustment

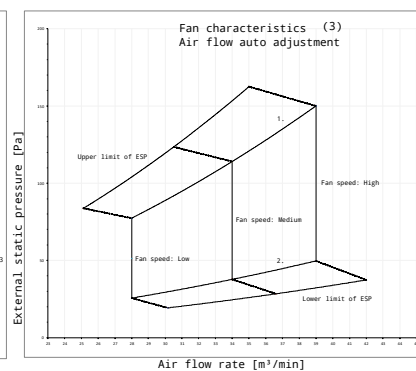
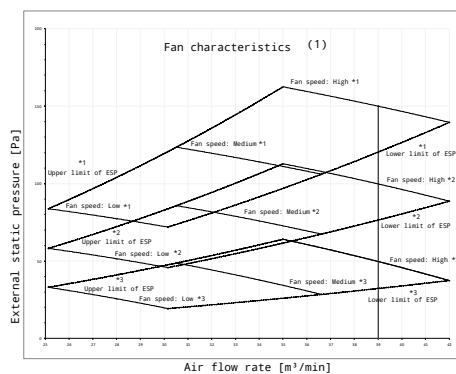
Mark		ESP [Pa]
*1	Maximum	150
*2	-	100
*3	Standard	50

Notes

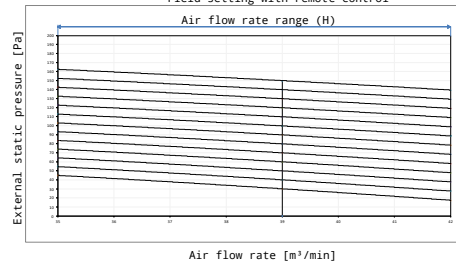
- 1.The fan characteristics shown are in "fan only" mode.
- 2.ESP: External Static Pressure

3D095697B

FXSA140A



Fan characteristics (2)
Field setting with remote control



1.Upper limit of ESP by air flow auto adjustment
2.Lower limit of ESP by air flow auto adjustment

Mark		ESP [Pa]
*1	Maximum	150
*2	-	100
*3	Standard	50

Notes

- 1.The fan characteristics shown are in "fan only" mode.
- 2.ESP: External Static Pressure

3D096688B

13 Installation

13 - 1 Installation Method

13

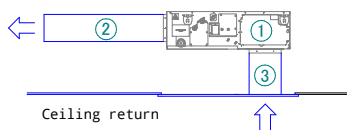
FXSA-A

Installation methods

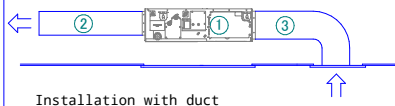
Rear suction



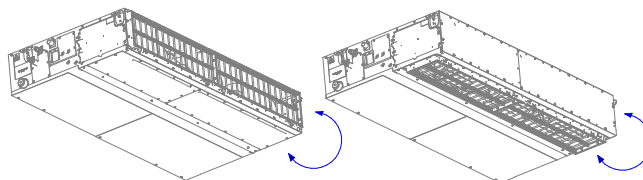
Bottom suction



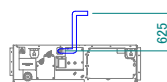
Rear suction



Installation with duct



Easy modification from rear suction to bottom suction



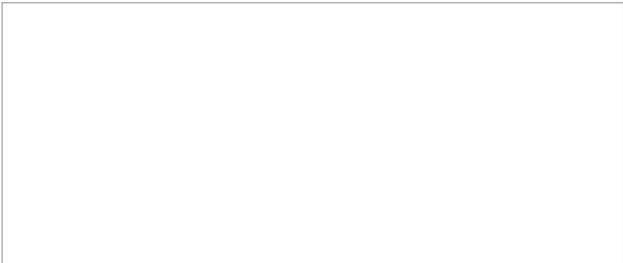
Height of drain pump outlet pipe

Number	Description	
①	Indoor unit	
②	Air outlet duct	Field supply
③	Air inlet duct	Field supply

Notes

1.For more information, refer to the installation manual.

3D129434



EEDEN21

01/2021



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