

Concealed ceiling unit with medium ESP Air Conditioning Technical Data FBA-A(9)



FBA35A2VEB9
FBA50A2VEB9
FBA60A2VEB9
FBA71A2VEB9
FBA100A2VEB
FBA125A2VEB
FBA140A2VEB

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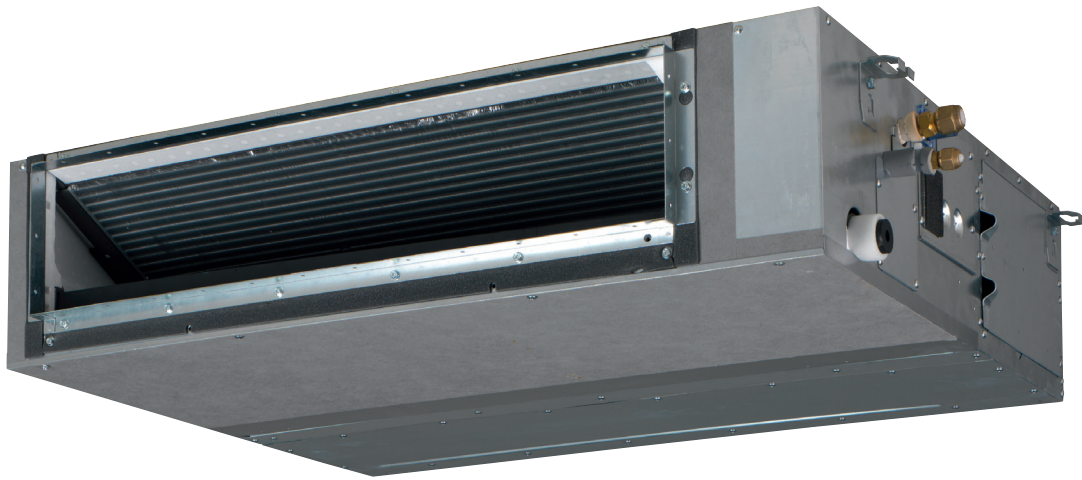
FBA-A(9)

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1 Features

1 - 1 FBA-A(9)

- › Slimmest unit in class, only 245mm (300mm built-in height) and therefore narrow ceiling voids are no longer a challenge
- › Low operation sound level down to 25dBA
- › Medium external static pressure up to 150Pa facilitates using flexible ducts of varying lengths
- › Unified indoor unit range for R-32 and R-410A
- › Combining with R-32 Bluevolution technology, reduces environmental impact with 68% compared to R-410A, leads directly to lower energy consumption thanks to its high energy efficiency and has up to lower 16% refrigerant charge
- › Possibility to change ESP via wired remote control allows optimisation of the supply air volume
- › Discretely concealed in the ceiling; only the suction and discharge grilles are visible
- › Multi zoning kit allows multiple individually-controlled climate zones to be served by one indoor unit
- › Reduced energy consumption thanks to specially developed DC fan motor
- › 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



								
Multi zoning (optional)	Multi zoning (optional)	Onecta app (optional)	Home leave operation	Fan only	Auto cooling-heating changeover	Whisper quiet	Fan speed steps (3 steps)	Dry programme
								
Air filter	Weekly timer	Infrared remote control (optional)	Wired remote control (optional)	Centralised control (optional)	Onecta via app	Auto-restart	Self diagnosis	Drain pump kit (standard)
								
Twin/triple/double twin application	Multi model application	VRV for residential application						

2 Specifications

1 - 1 FBA-A(9)

Technical specifications					FBA35A9	FBA50A9	FBA60A9	FBA71A9	
Casing	Colour				Not painted (galvanised)				
	Material				Galvanised steel plate				
Dimensions	Unit	Height	mm		245				
		Width	mm		700		1,000		
		Depth	mm		800				
	Packed unit	Height	mm		890				
		Width	mm		900		1,200		
		Depth	mm		295				
Weight	Unit	kg		28.0		35.0			
	Packed unit	kg		30.5		38.0			
Heat exchanger	Fin	Type			Cross fin coil (Multi slit fins with hydrophilic treatment and Ø5Hi-XA tubes)				
Fan	Model				QD16A1CM/QD16A1DM				
	Type				Sirocco fan				
	Quantity				1		2		
	Air flow rate	Cooling	High	m³/min	15.0		18.0		
			Medium	m³/min	12.5		15.0		
			Low	m³/min	10.5		12.5		
		Heating	High	m³/min	15.0		18.0		
			Medium	m³/min	12.5		15.0		
			Low	m³/min	10.5		12.5		
	External static pressure	High	Pa		150				
		Nom.	Pa		30				
Fan motor	Quantity				1				
	Model				Brushless DC motor				
	Speed	Steps			3				
	Output	Rated	W		130		230		
Sound power level	Cooling			dBA	60.0		56.0		
Sound pressure level	Cooling	High	dBA		35.0		30.0		
		Medium	dBA		32.0		28.0		
		Low	dBA		29.0		25.0		
	Heating	High	dBA		37.0		31.0		
		Medium	dBA		34.0		28.0		
		Low	dBA		29.0		25.0		
Refrigerant	Type				R-32 / R-410A				
Piping connections	Sound absorbing insulation				Butyl Rubber				
	Liquid	Type			Flare connection				
Piping connections	Liquid	OD	mm		6.35		9.52		
	Gas	Type			Flare connection				
		OD	mm		9.52	12.70		15.90	
	Drain					VP20 (I.D. 20/O.D. 26)			
	Heat insulation					Foamed polystyrene / Foamed polyethylene			
Drain-up height					mm		625		
Air filter	Type				Resin net				
Control systems	Infrared remote control				BRC4C65 / BRC4C66				
	Wired remote control				BRC1H52W/S/K / BRC1E53A / BRC1E53B / BRC1E53C / BRC1D52				

Technical specifications					FBA100A	FBA125A	FBA140A
Cooling capacity	Sensible capacity	Nom.	kW		-	9.06	9.98
	Latent capacity	Nom.	kW		-	4.94	5.42
	Total capacity	Nom.	kW		-	14.00	15.40
Heating capacity	Total capacity	Nom.	kW		-	13.5	15.5
Power input - 50Hz	Cooling	Nom.	kW		-	0.23	
	Heating	Nom.	kW		-	0.23	
Casing	Colour	Not painted (galvanised)					
	Material	Galvanised steel plate					
Dimensions	Unit	Height	mm			245	
		Width	mm			1,400	
		Depth	mm			800	
	Packed unit	Height	mm			890	
		Width	mm			1,600	
		Depth	mm			295	
Weight	Unit		kg			46.0	
	Packed unit		kg			49.0	
Heat exchanger	Fin	Type	Cross fin coil (Multi slit fins with hydrophilic treatment and Ø5Hi-XA tubes)				

2 Specifications

1 - 1 FBA-A(9)

2

Technical specifications				FBA100A	FBA125A	FBA140A
Fan	Model			QD16A1CM/QD16A1DM		
	Type			Sirocco fan		
	Quantity			3		
	Air flow rate	Cooling	High	m³/min	29.0	34.0
			Medium	m³/min	26.0	29.0
			Low	m³/min	23.0	23.5
		Heating	High	m³/min	29.0	34.0
			Medium	m³/min	26.0	29.0
			Low	m³/min	23.0	23.5
External static pressure	High	Pa	150			
	Nom.	Pa	40	50		
Fan motor	Quantity			1		
	Model			Brushless DC motor		
	Speed	Steps		3		
	Output	Rated		W 300		
Sound power level	Cooling		dBA	58.0	62.0	
Sound pressure level	Cooling	High	dBA	34.0	37.0	
		Medium	dBA	32.0	35.0	
		Low	dBA	30.0	32.0	
Sound pressure level	Heating	High	dBA	36.0	38.0	
		Medium	dBA	33.0	35.0	
		Low	dBA	30.0	32.0	
Refrigerant	Type			R-32 / R-410A		
Piping connections	Sound absorbing insulation			Butyl Rubber		
	Liquid	Type		Flare connection		
		OD		mm 9.52		
	Gas	Type		Flare connection		
		OD		mm 15.90		
	Drain	VP20 (I.D. 20/O.D. 26)				
	Heat insulation	Foamed polystyrene / Foamed polyethylene				
Drain-up height	mm			625		
Air filter	Type			Resin net		
Control systems	Infrared remote control			BRC4C65 / BRC4C66		
	Wired remote control			BRC1H52W/S/K / BRC1E53A / BRC1E53B / BRC1E53C / BRC1D52		

Standard accessories: Operation manual; Quantity: 1;

Standard accessories: Installation 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 pads; Quantity: 5;

Standard accessories: Clamps; Quantity: 4;

Electrical specifications				FBA35A9	FBA50A9	FBA60A9	FBA71A9
Power supply	Phase			1~			
	Frequency			Hz			
	Voltage			V			

Electrical specifications				FBA100A	FBA125A	FBA140A
Power supply	Phase			1~		
	Frequency			Hz		
	Voltage			V		

The sound power level is an absolute value indicating the power which a sound source generates. |
See separate drawing for electrical data

3 Safety device settings

3 - 1 Safety Device Settings

FBA35-71A9

FBA100-140A

3

Safety devices		FBA35-71A2VEB(9)	FBA100-140A2VEB
PCB fuse		250V, 3.15A	250V, 3.15A
Fan motor thermal protector	Maximum	110°C	110°C
Drain pump fuse		---	---

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Options

4 - 1 Options

FBA-A(9)

		SA			
Discharge		ADEA35A FBA35A(9) ADEA50A FBA50A(9)	ADEA60A FBA60A(9) ADEA71A FBA71A(9)	ADEA100A FBA100A ADEA125A FBA125A FBA140A	
Description	Option kit				
Air discharge adaptor for round ducts	KDAP25A56A	x			
	KDAP25A71A		x		
	KDAP25A140A			x	
		SA			
Operation control		ADEA35A FBA35A(9) ADEA50A FBA50A(9)	ADEA60A FBA60A(9) ADEA71A FBA71A(9)	ADEA100A FBA100A ADEA125A FBA125A FBA140A	
Description	Option kit				
Wired remote control	BRC1D528, BRC1H51(9)W/S/K, BRC1H81W/S	X	X	X	
	BRC1E53A7	X(*7)	X(*7)	X(*7)	
	BRC1E53B7	X(*8)	X(*8)	X(*8)	
	BRC1E53C7	X(*9,10)	X(*9,10)	X(*9,10)	
Central remote control	DCS302CA51	X	X	X	
Unified ON/OFF controller	DCS301BA51	X	X	X	
Intelligent touch controller	DCS601C51	X	X	X	
Schedule timer	DST301BA51	X	X	X	
Adaptor for wiring (interlock for fresh air intake fan)	KRP1B54	X	X	X	
Wiring adaptor for electrical appendices	KRP4A52	X(*4)	X(*4)	X(*4)	
Wiring adaptor for electrical appendices	KRP4A51	X(*2,4)	X(*2,4)	X(*2,4)	
Optional PCB for external electric heaters, humidifiers and/or hour meters	EKRP1B2A	X(*1,2)	X(*1,2)	X(*1,2)	
Wireless remote control -H/P-	BRC4C65	X	X	X	
Wireless remote control -C/O-	BRC4C66	X	X	X	
Simplified remote control for hotel use	BRC2E52C7	X(*6,10)	X(*6,10)	X(*6,10)	
Remote control for hotel use	BRC3E52C7	X(*6,10)	X(*6,10)	X(*6,10)	
Remote sensor	KRCS01-4B	X	X	X	
Electrical box with earth terminal	KJB411A	X	X	X	
Installation box for adaptor PCB	KRP1BA101	X	X	X	
Digital input adaptor	BRP7A51	X(*3,5)	X(*3,5)	X(*3,5)	
iTouch Manager	DCM601A51	X	X	X	
Wi-Fi adaptor for smartphones	BRP069A81 (*11)	X	X	X	

(*1) Electric heaters and humidifiers are field-supplied. Do not install them inside the equipment (refer to installation manual -EKRP1B2A-).

(*2) When installing electric heaters, an optional PCB for external electric heaters (-EKRP1B2-) is required for each indoor unit.

(*3) These options require mounting plate -KRP4A96-.

(*4) Maximally -2- optional PCBs can be mounted.

(*5) This option needs to be installed together with installation box -KRP1B101/KRP1BA101-.

(*6) Only possible in combination with remote control -BRC2/3E52C7, BRC1E53A/B/C7, BRC1H51(9)W/S/K, BRC1H81W/S-.

Included languages are:

Language pack -1-: English, German, French, Dutch, Spanish, Italian, and Portuguese.

With PC cable -EKPCAB3- in combination with the Updater PC software, you can additionally change the language to:

Language pack -2-: English, Bulgarian, Croatian, Czech, Hungarian, Romanian, and Slovenian.

Language pack -3-: English, Greek, Polish, Russian, Serbian, Slovak, and Turkish.

(*7) Included languages are: English, German, French, Italian, Spanish, Portuguese, and Dutch.

(*8) Included languages are: English, Czech, Croatian, Hungarian, Slovenian, Romanian, and Bulgarian.

(*9) Included languages are: English, Russian, Greek, Turkish, Polish, Albanian, and Slovak.

(*10) Language pack -3- of controller -BRC1E53C7- is different from that of controller -BRC2/3E52C7-.

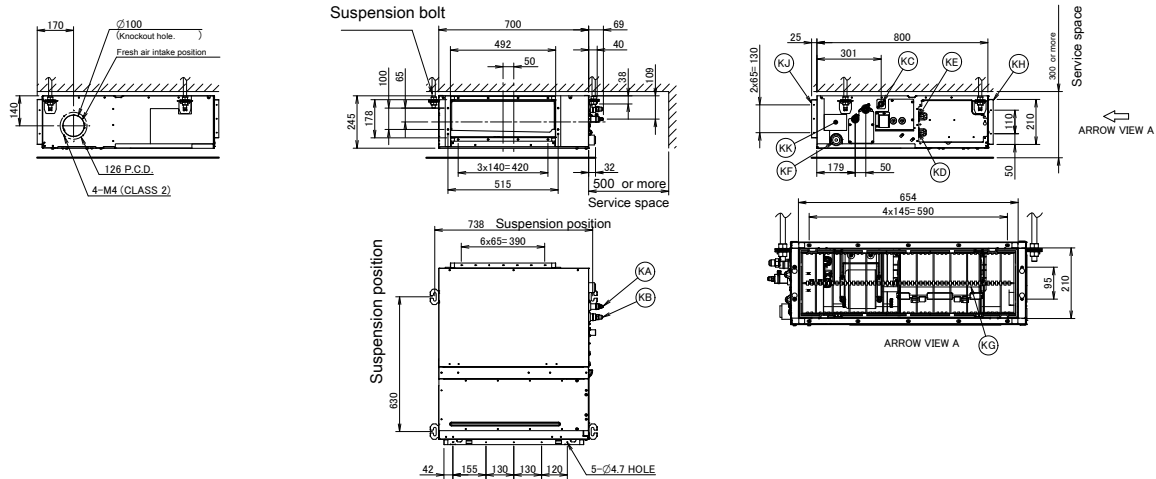
(*11) Only possible in combination with wired or wireless remote control (e.g. -BRC1E*, BRC1H*, BRC7FA*-).

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5 Dimensional drawings

5 - 1 Dimensional Drawings

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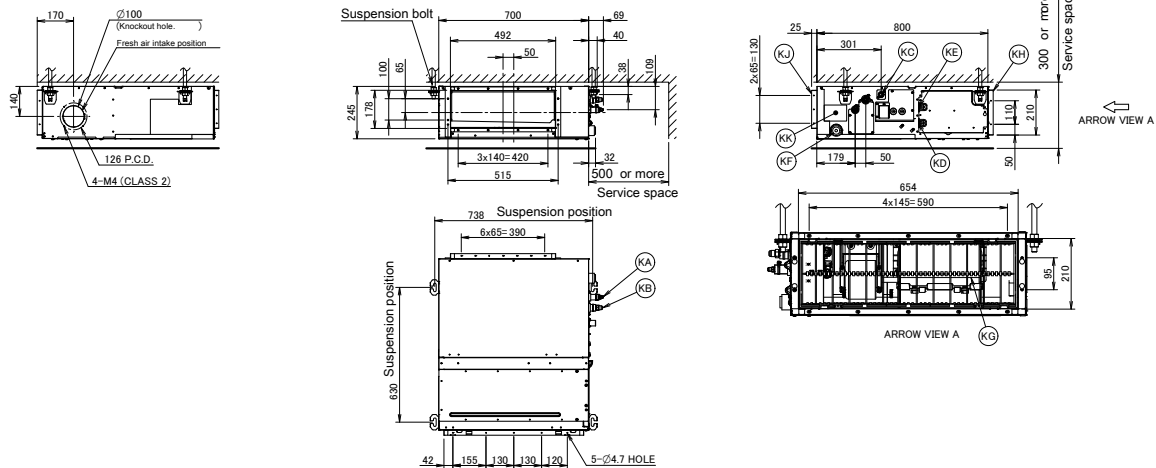
Item	Name	Description
KA	Liquid pipe connection port	Ø6.35 flared connection
KB	Gas pipe connection port	Ø9.52 flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side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

Notes

1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.

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FBA50A9



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

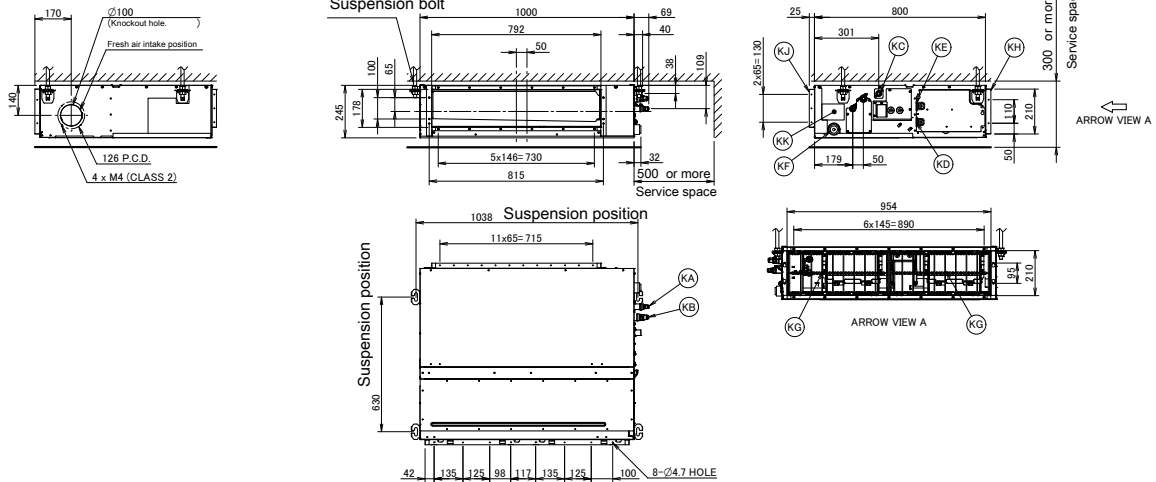
1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.

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5 Dimensional drawings

5 - 1 Dimensional Drawings

FBA60A9



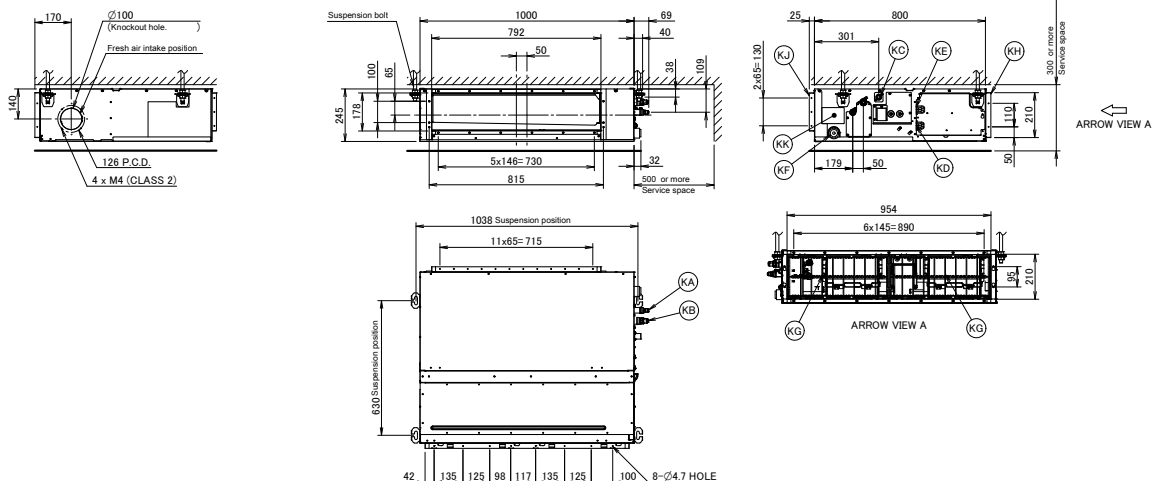
Item	Name	Description
KA	Liquid pipe connection port	Ø6.35 flared connection
KB	Gas pipe connection port	Ø12.70 flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side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

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FBA71A9



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

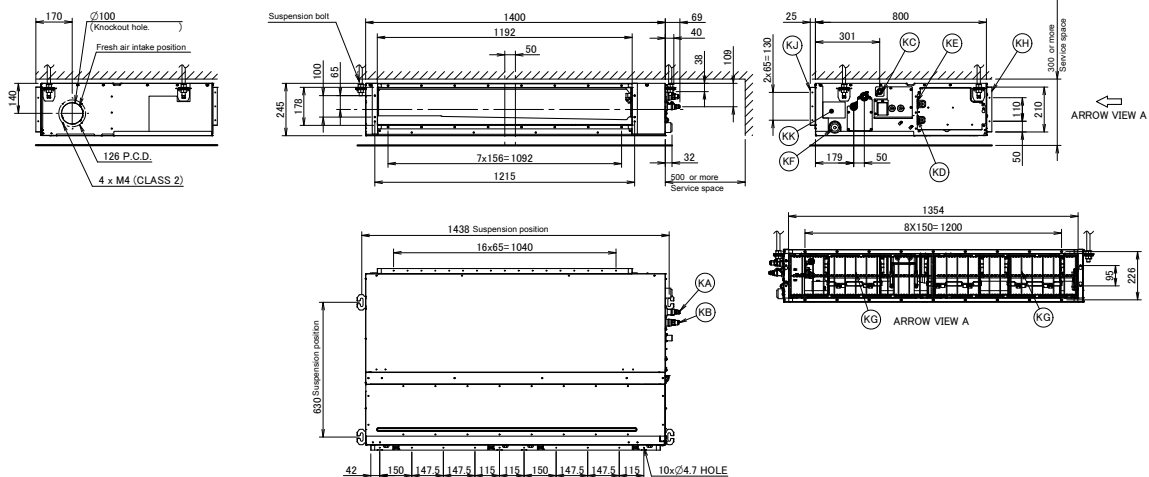
1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.

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5 Dimensional drawings

5 - 1 Dimensional Drawings

FBA100-140A



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

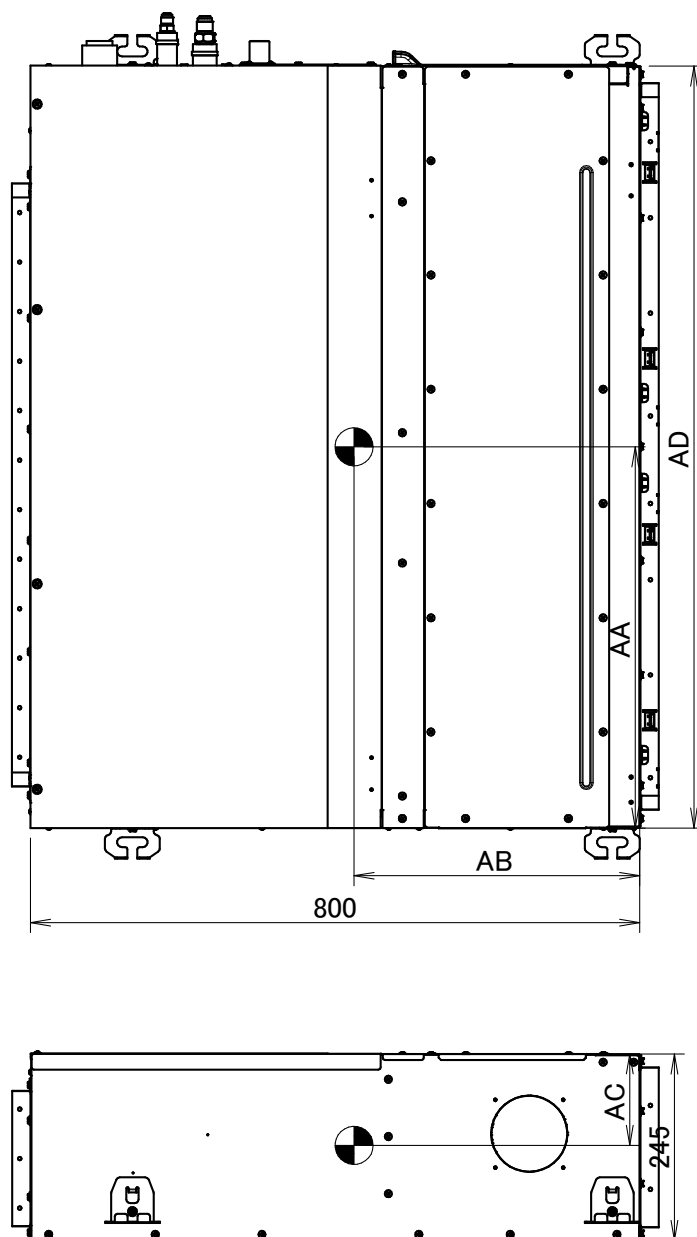
- When installing optional accessories, refer to their respective documentation.
- The ceiling depth varies according to the documentation of the specific system.

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6 Centre of gravity

6 - 1 Centre of Gravity

FBA-A(9)



Applicable models	AA	AB	AC	AD
FBQ35/50, FBA35/50, ADEA35/50	410	375	125	700
FBQ60/71, ADEQ71, FBA60/71, ADEA60/71	525	380	125	1000
FBQ100/125/140, ADEQ100/125, FBA100/125/140, ADEA100/125	760	390	115	1400

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7 Piping diagrams

7 - 1 Piping Diagrams

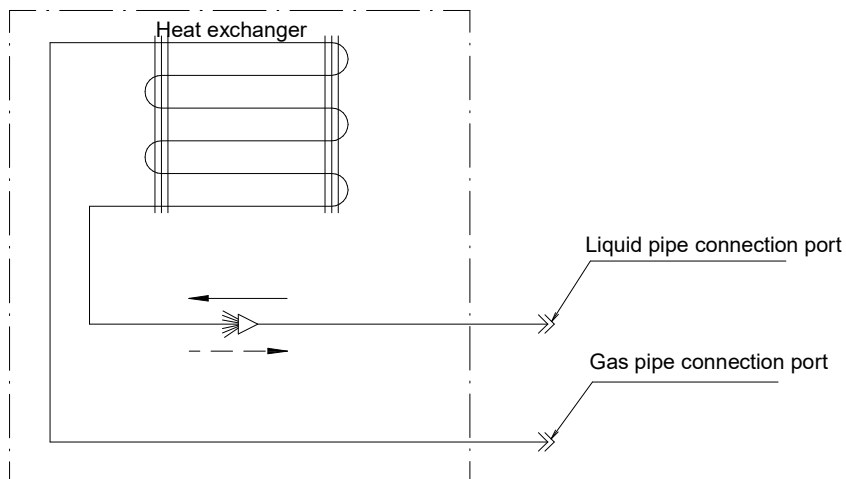
FBA-A(9)

Piping connections Ø

Model	Gas	Liquid
FBQ35D2VEB	Ø 9.52	Ø 6.35
FBQ50D2VEB	Ø 12.70	Ø 6.35
FBQ60D2VEB	Ø 12.70	Ø 6.35
FBQ71D2VEB	Ø 15.90	Ø 9.52
FBQ100D2VEB	Ø 15.90	Ø 9.52
FBQ125D2VEB	Ø 15.90	Ø 9.52
FBQ140D2VEB	Ø 15.90	Ø 9.52
ADEQ71B2VEB	Ø 15.90	Ø 9.52
ADEQ100B2VEB	Ø 15.90	Ø 9.52
ADEQ125B2VEB	Ø 15.90	Ø 9.52
FBA35A2VEB (9)	Ø 9.52	Ø 6.35
FBA50A2VEB (9)	Ø 12.70	Ø 6.35
FBA60A2VEB (9)	Ø 12.70	Ø 6.35
FBA71A2VEB (9)	Ø 15.90	Ø 9.52
FBA100A2VEB	Ø 15.90	Ø 9.52
FBA125A2VEB	Ø 15.90	Ø 9.52
FBA140A2VEB	Ø 15.90	Ø 9.52
ADEA35A2VEB	Ø 9.52	Ø 6.35
ADEA50A2VEB	Ø 12.70	Ø 6.35
ADEA60A2VEB	Ø 12.70	Ø 6.35
ADEA71A2VEB	Ø 15.90	Ø 9.52
ADEA100A2VEB	Ø 15.90	Ø 9.52
ADEA125A2VEB	Ø 15.90	Ø 9.52

Refrigerant flow

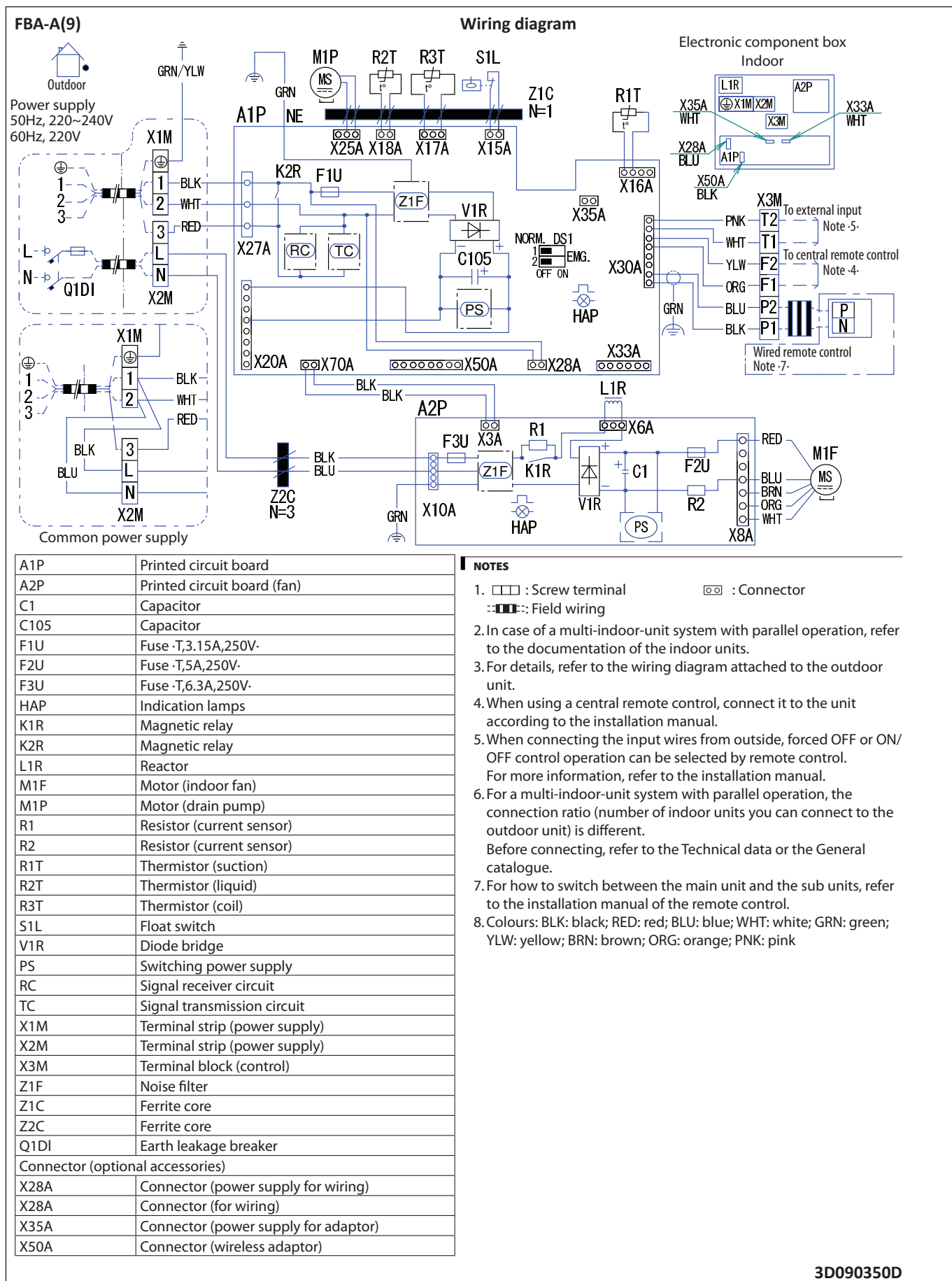
Cooling →
Heating →



3D090271D

8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase



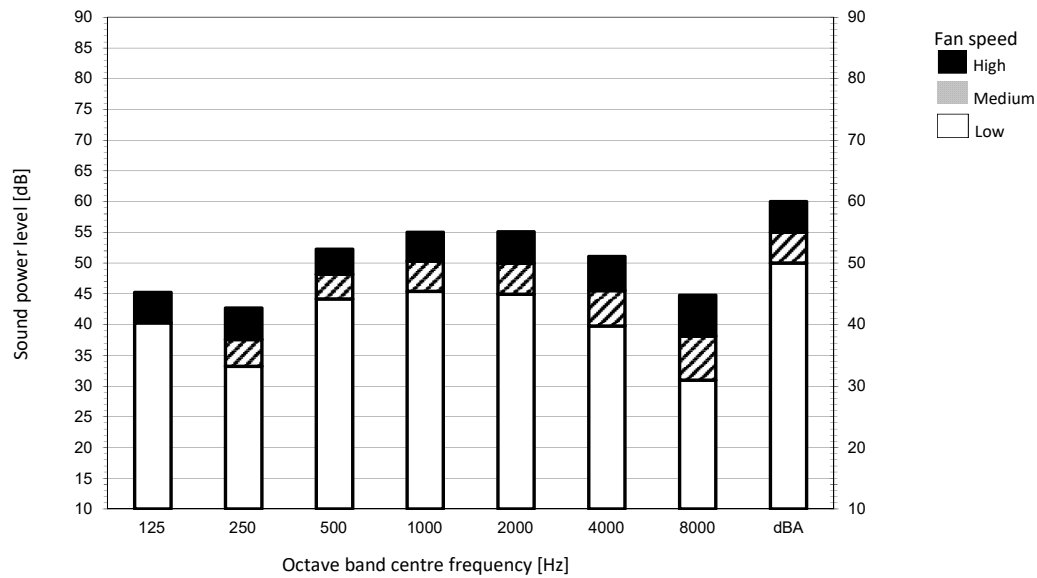
3D090350D

9 Sound data

9 - 1 Sound Power Spectrum

FBA35-50A9

Cooling mode



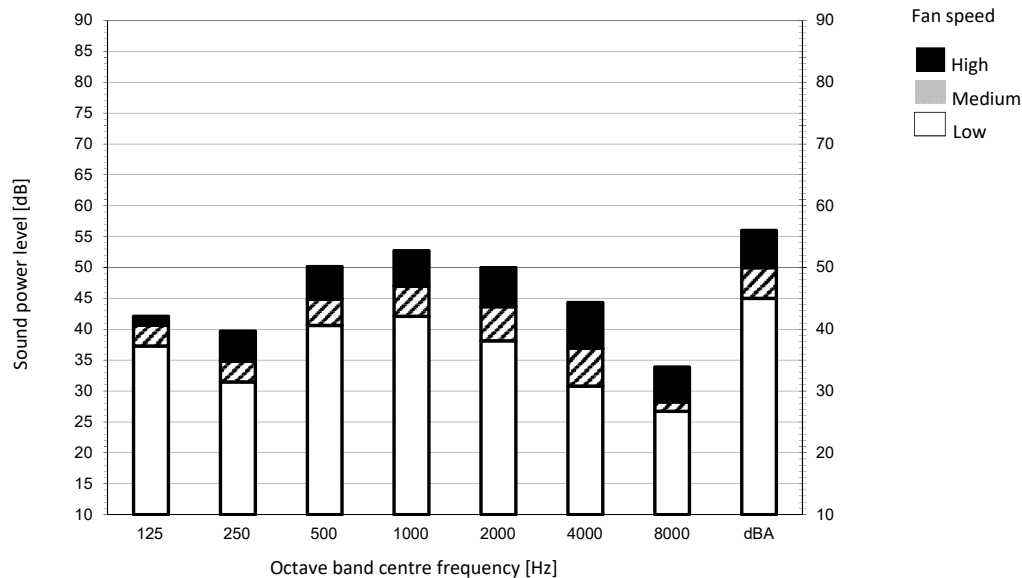
Notes

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

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FBA60-71A9

Cooling mode



Notes

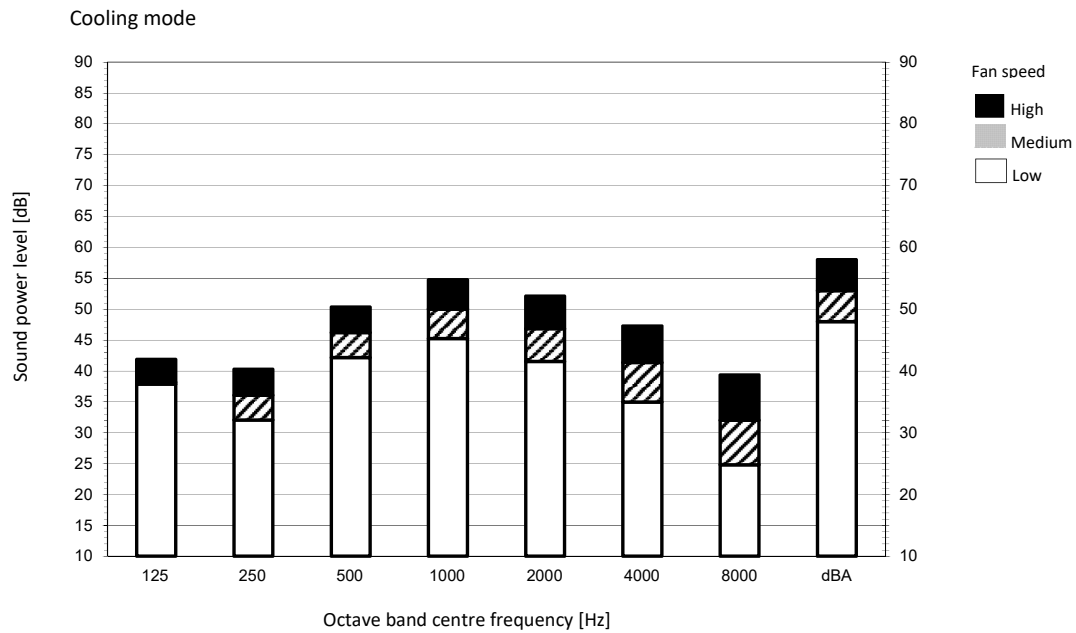
1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity 0dB = $\cdot 10E-6 \mu W/m^2$.
3. Measured according to ISO 3744

3D095587B

9 Sound data

9 - 1 Sound Power Spectrum

FBA100A

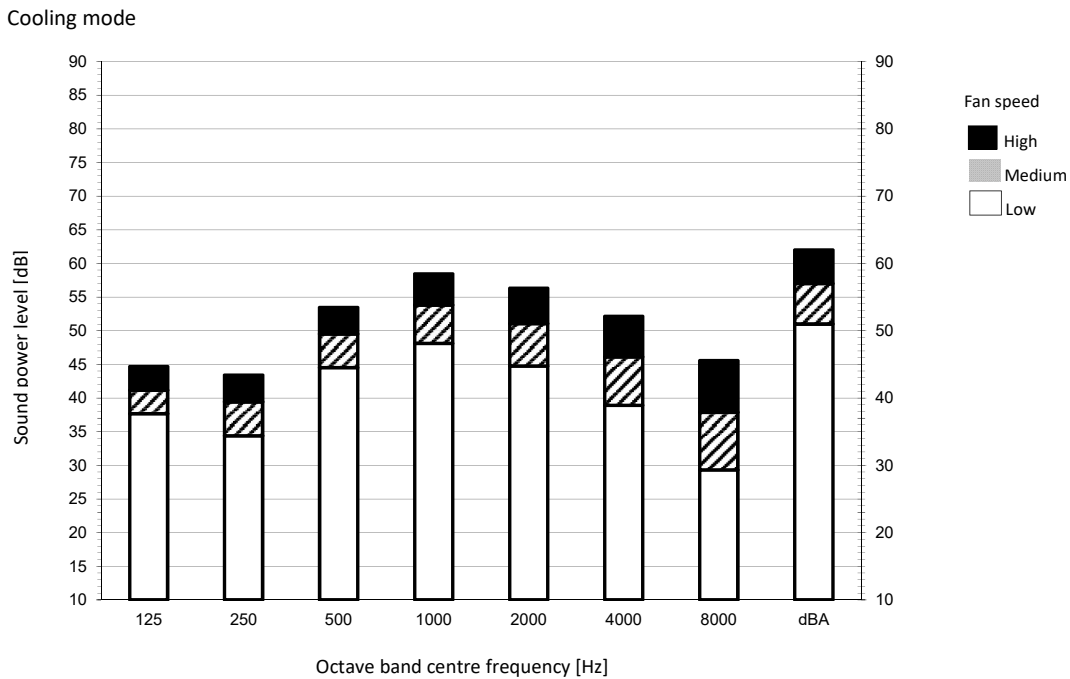


Notes

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

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FBA125-140A



Notes

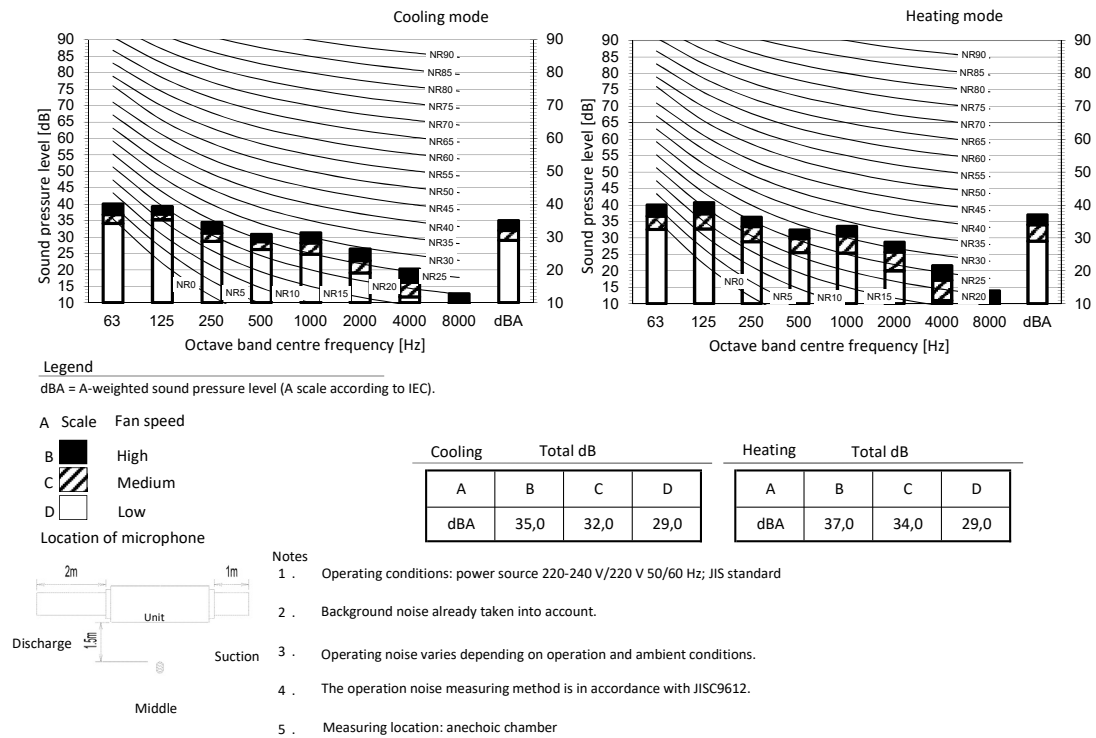
1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic intensity 0dB = $\cdot 10E-6\mu W/m^2$.
3. Measured according to ISO 3744

3D095589B

9 Sound data

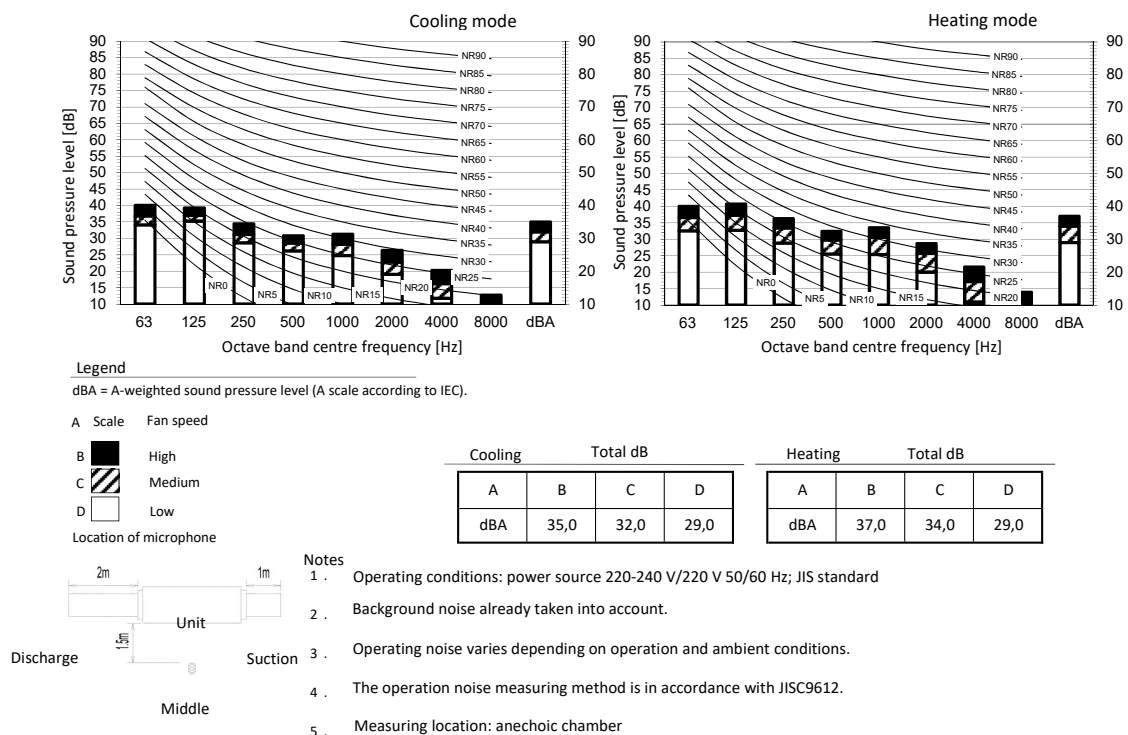
9 - 2 Sound Pressure Spectrum

FBA35A9



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FBA50A9

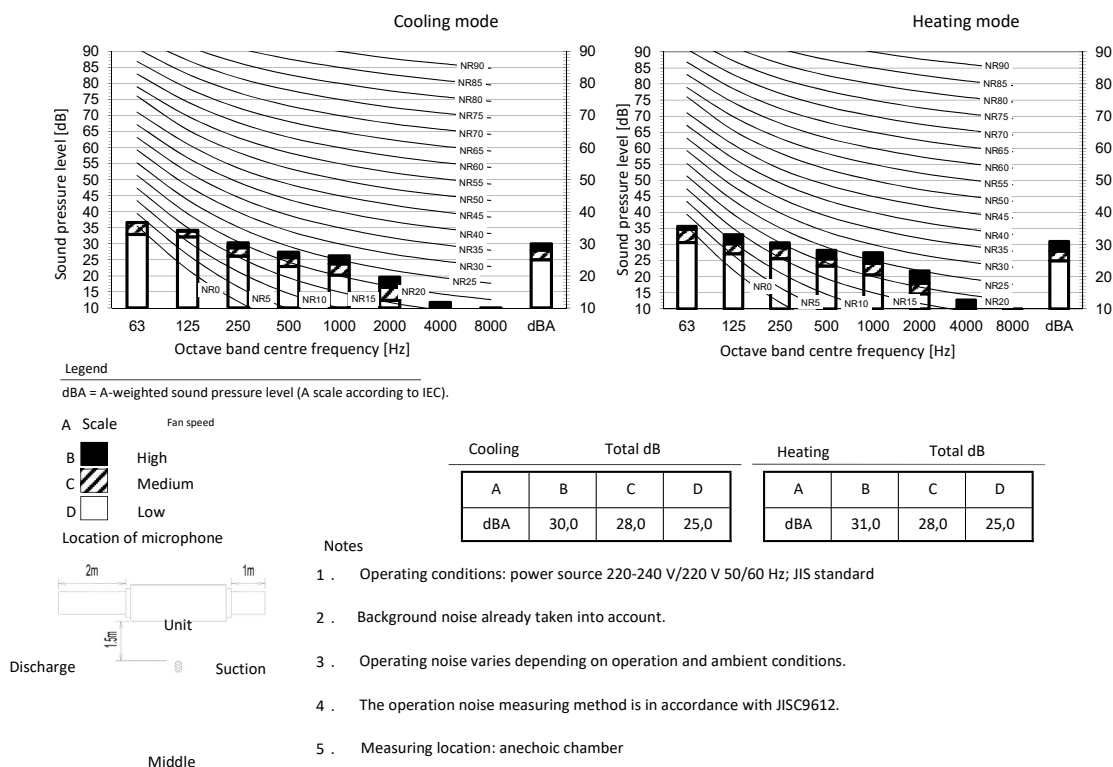


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9 Sound data

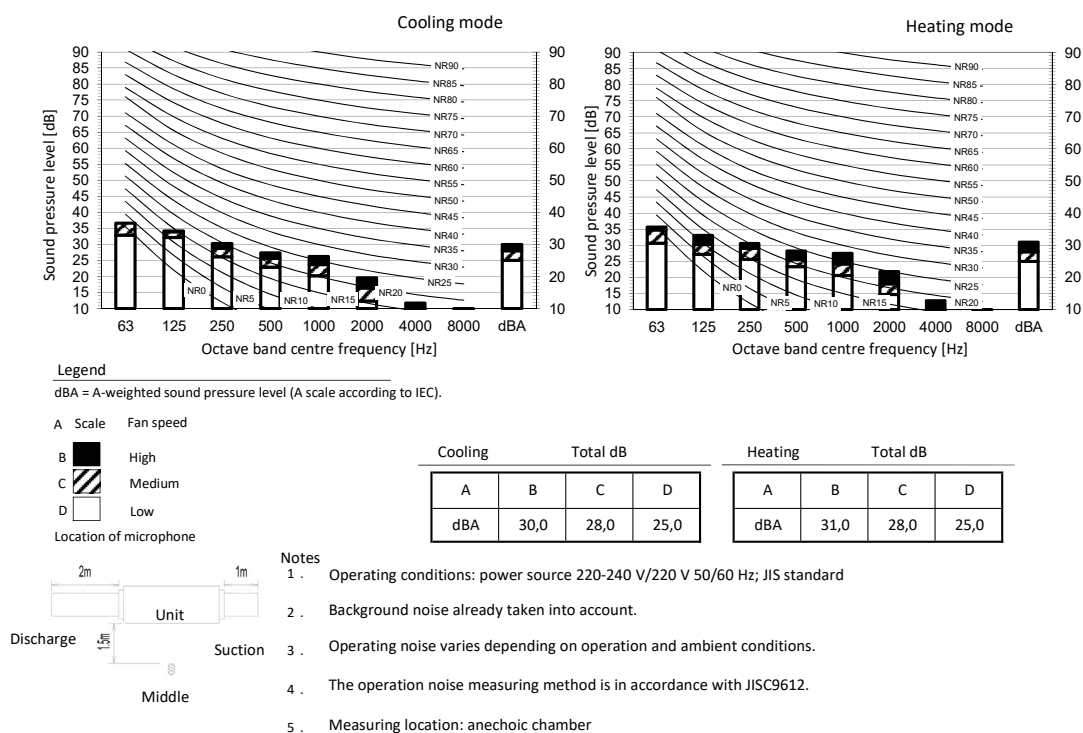
9 - 2 Sound Pressure Spectrum

FBA60A9



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FBA71A9

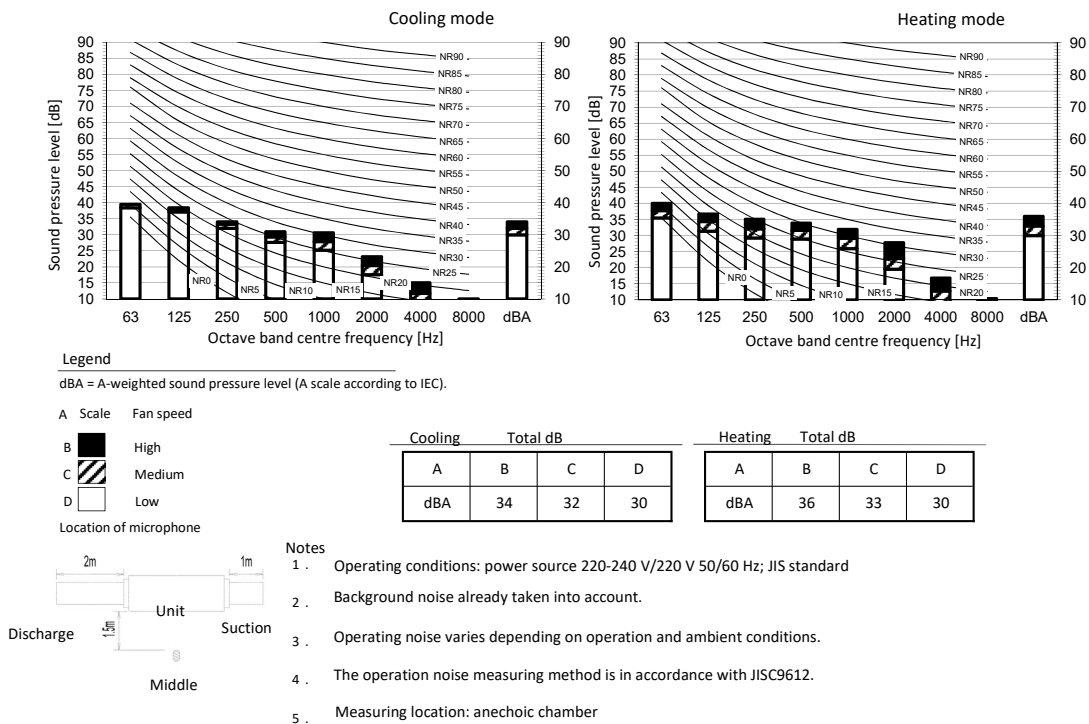


3D110169B

9 Sound data

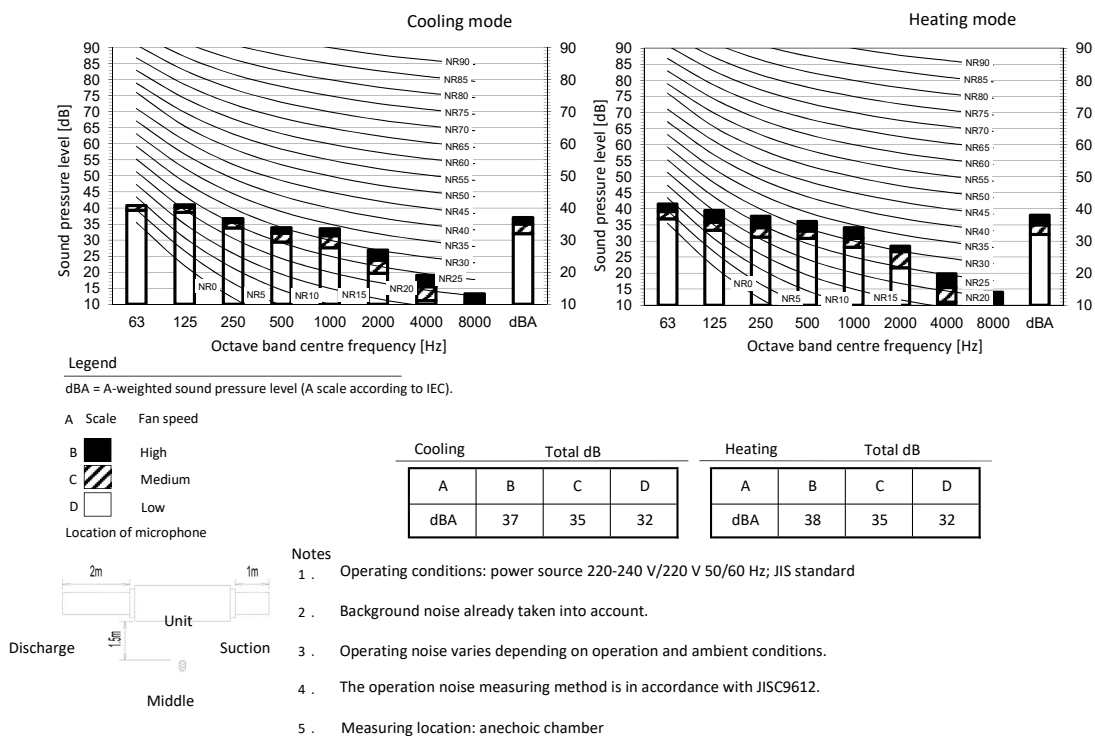
9 - 2 Sound Pressure Spectrum

FBA100A



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FBA125A

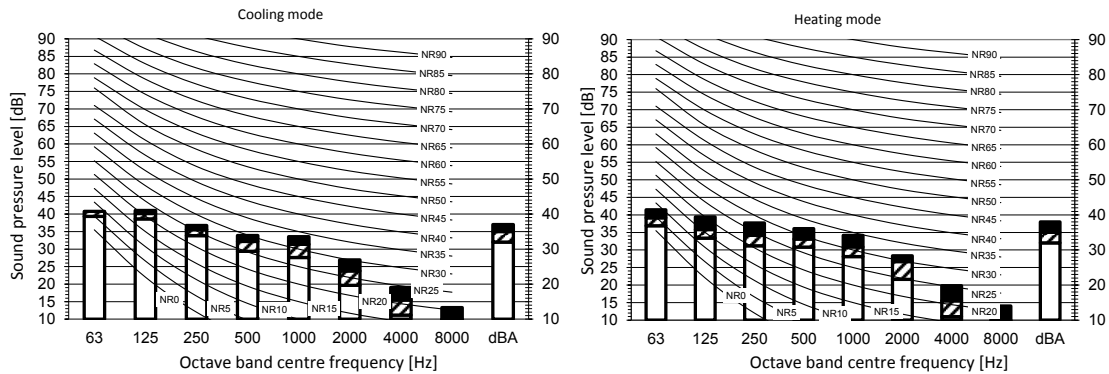


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9 Sound data

9 - 2 Sound Pressure Spectrum

FBA140A



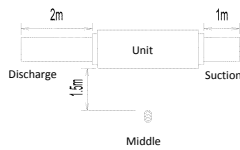
Legend

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

A Scale Fan speed

B	High
C	Medium
D	Low

Location of microphone



Cooling				Heating			
Total dB				Total dB			
A	B	C	D	A	B	C	D
dBA	37	35	32	dBA	38	35	32

Notes

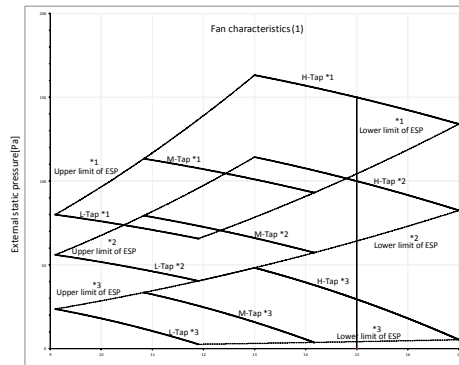
- Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
- Background noise already taken into account.
- Operating noise varies depending on operation and ambient conditions.
- The operation noise measuring method is in accordance with JISC9612.
- Measuring location: anechoic chamber

3D110172

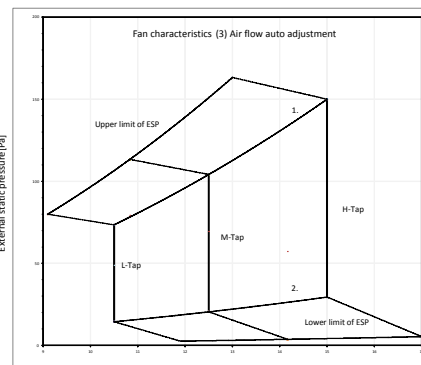
10 Fan characteristics

10 - 1 Fan Characteristics

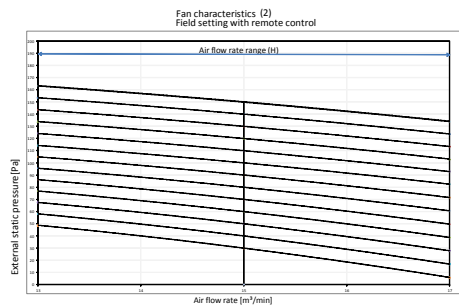
FBA35-50A9



Mark	ESP [Pa]	Air flow rate [m³/min]
*1	MAX	150
*2		100
*3	STD	30



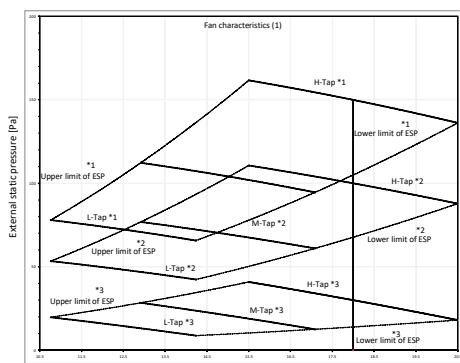
1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment



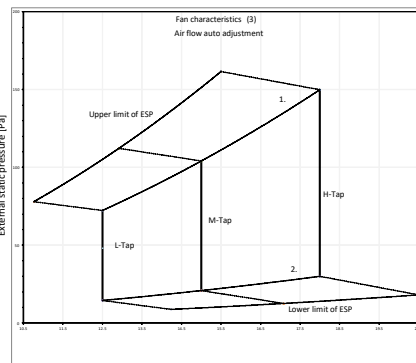
- Notes:
1. The fan characteristics shown are in "fan only" mode.
 2. ESP: External static pressure.

3D095521B

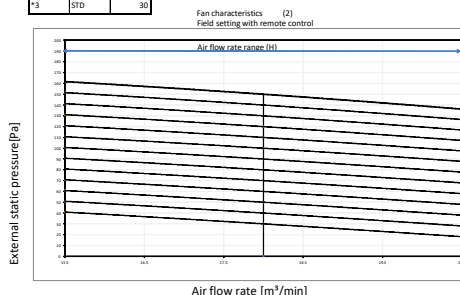
FBA60-71A9



Mark	ESP [Pa]	Air flow rate [m³/min]
*1	MAX	150
*2		100
*3	STD	30



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



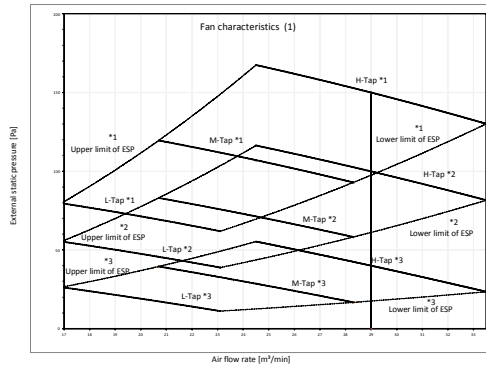
- Notes:
1. Fan characteristics as shown are in "fan only" mode.
 2. ESP: External static pressure.

3D095524B

10 Fan characteristics

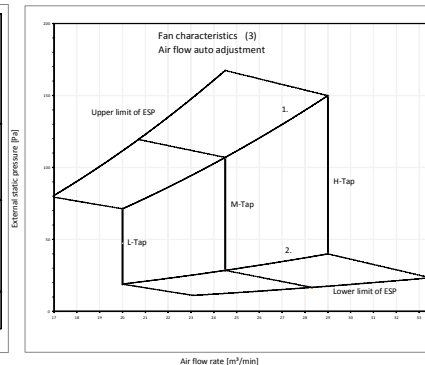
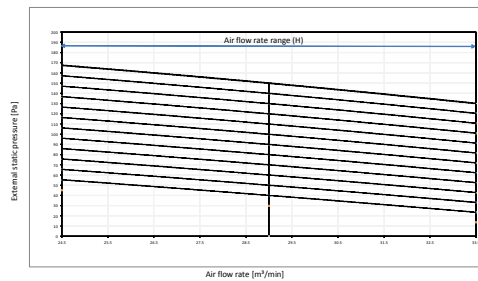
10 - 1 Fan Characteristics

FBA100A



Mark	ESP [Pa]
*1	MAX 150
*2	100
*3	STD 40

Fan characteristics (2)
Field setting with remote control



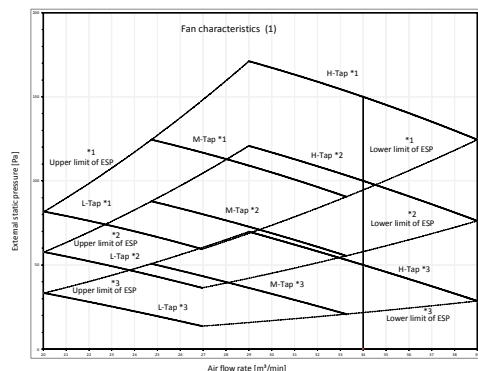
1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment

Notes:

1. Fan characteristics as shown are in "fan only" mode.
2. ESP: External static pressure.

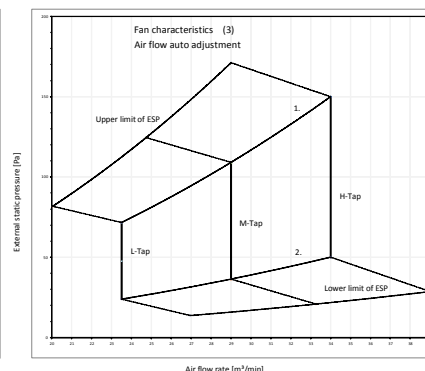
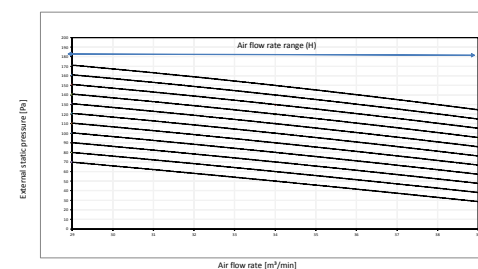
3D095526B

FBA125-140A



Mark	ESP [Pa]
*1	MAX 150
*2	100
*3	STD 40

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. Fan characteristics as shown are in "fan only" mode.
2. ESP: External static pressure.

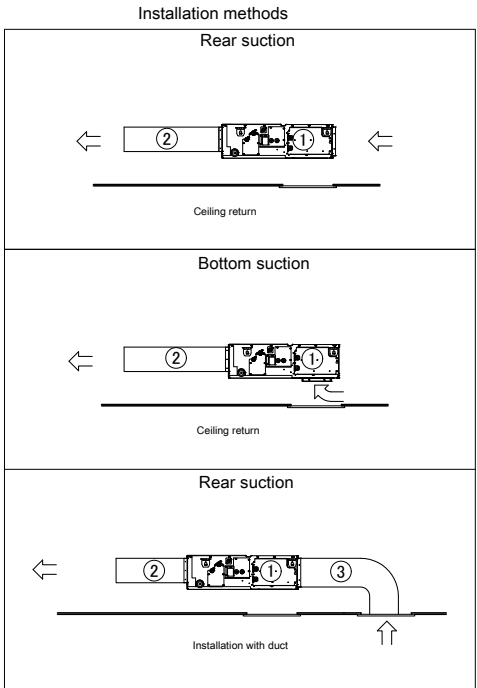
3D095527B

11 Installation

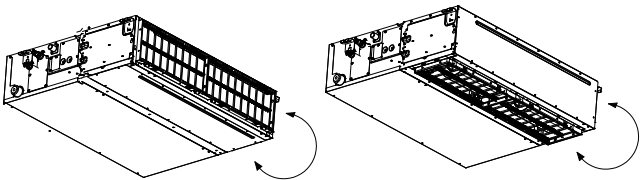
11 - 1 Installation Method

FBA35-71A9

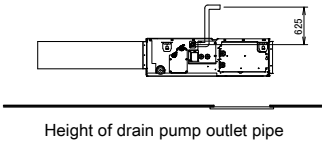
FBA100-140A



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

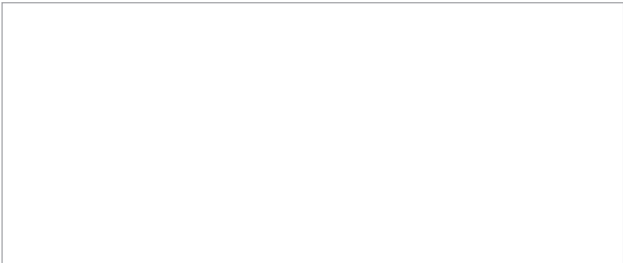


Easy modification from rear suction to bottom suction



Height of drain pump outlet pipe

3D094912A



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07/2022



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