

Concealed ceiling unit  
with high ESP  
Air Conditioning  
Technical Data  
FDA200-250A



FDA200AXVEB  
FDA250AXVEB



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## FDA200-250A

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# Features

## 1 - 1 FDA200-250A

ESP up to 250 Pa, ideal for large sized spaces

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- › High external static pressure up to 250Pa facilitates extensive duct and grille network
- › 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
- › Built-in drain pump (625mm) increases the flexibility and installation speed (standard for FDA125, optional for FDA200-250)
- › Standard supplied suction filter simplifies installation
- › Up to 26.4kW in heating mode



Home leave operation



Fan only



Auto cooling-heating changeover



Fan speed steps



Dry programme



Air filter



Weekly timer



Wired remote control



Centralised control



Infrared remote control (optional)



Auto-restart double twin application



Self diagnosis



Drain pump kit



Twin/triple/



Onecta app (optional)

## 2 Specifications

### 2 - 1 Specifications

Technical specifications					FDA200A		FDA250A		
Cooling capacity	Sensible capacity	Nom.	kW		14.60		16.60		
	Latent capacity	Nom.	kW		4.40		5.40		
	Total capacity	Nom.	kW		19.00		22.00		
Heating capacity	Total capacity	Nom.	kW		22.4		24.0		
Power input - 50Hz	Cooling	Nom.	kW		0.32		0.40		
	Heating	Nom.	kW		0.32		0.40		
Power input - 60Hz	Cooling	Nom.	kW		0.32		0.40		
	Heating	Nom.	kW		0.32		0.40		
Casing	Colour				Unpainted				
	Material				Galvanised steel plate				
Dimensions	Unit	Height	mm		470				
		Width	mm		1,490				
		Depth	mm		1,100				
	Packed unit	Height	mm		1,319				
		Width	mm		1,724				
		Depth	mm		511				
Weight	Unit	kg		104		115			
	Packed unit	kg		124		135			
Heat exchanger	Inside length		mm		1,260				
	Outside length		mm		1,260				
	Rows	Quantity		2		3			
	Fin pitch	mm		1.40					
	Passes	Quantity		16					
	Face area	m²		0.850					
	Stages	Quantity		32					
	Empty tubeplate hole	Quantity		0					
	Tube type		ø7 Hi-XU						
	Fin	Type		Raise Lance					
Fan	Type		Sirocco fan						
	Quantity		2						
	Air flow rate	Cooling	High	m³/min	64.0		69.0		
			Medium	m³/min	50		56		
			Low	m³/min	36.0		43.0		
		Heating	High	m³/min	64.0		69.0		
			Medium	m³/min	50.0		56.0		
			Low	m³/min	36.0		43.0		
Fan	External static pressure	High	Pa		250				
		Nom.	Pa		62				
Fan motor	Quantity		1						
	Model		DMUD8C4DK				ERC8804ADS		
	Drive		Direct drive						
	Speed	Steps	3						
	Output	Rated	W		648		750		
	Full load amps (FLA)	Cooling	A		4.0		4.3		
		Heating	A		4.0		4.3		
Sound power level	Cooling			dBA		69.0		71.0	
Sound pressure level	Cooling	High	dBA		43.0		44.0		
		Medium	dBA		39.0		40.0		
		Low	dBA		36.0		37.0		
	Heating	High	dBA		43.0		44.0		
		Medium	dBA		39.0		40.0		
		Low	dBA		36.0		37.0		
Refrigerant	Type		R-32 / R-410A						
Piping connections	Liquid	Type	Flare connection						
		OD	mm		9.52				
	Gas	Type	Flange						
		OD	mm		19.1		22.2		
	Drain		BSP1						
Heat insulation		Both liquid and gas pipes							
Air filter	Type		Resin net						
Safety devices	Item	01	Fuse						
		02	Fan driver overload protector						
Control systems	Wired remote control		BRC1H52W/S/K / BRC1E53A / BRC1E53B / BRC1E53C / BRC1D52						
Packing	Material		Carton + OSB board + EPS						

Standard accessories: Screws;Quantity: 2;

Standard accessories: Washer;Quantity: 12;

## 2 Specifications

### 2 - 1 Specifications

Standard accessories: General safety precautions;Quantity: 1;

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

Standard accessories: Operation manual;Quantity: 1;

Standard accessories: Installation manual;Quantity: 1;

Standard accessories: Gas connection pipe;Quantity: 1;

Standard accessories: Wire clamp material;Quantity: 1;

Standard accessories: Spring washer;Quantity: 2;

Standard accessories: Screw+Washer;Quantity: 45;

Standard accessories: Hexagon head screw with washer;Quantity: 49;

Standard accessories: Hexagon head screw;Quantity: 2;

Standard accessories: Plain washer;Quantity: 8;

Electrical specifications		FDA200A	FDA250A
Power supply	Name	VE	
	Phase	1~	
	Frequency	50/60	
	Voltage	220-240/220	

### 3 Safety device settings

#### 3 - 1 Safety Device Settings

FDA200-250A

Model		FDA200AXVEB	FDA250AXVEB
Safety devices	PCB fuse (fan driver)	250V 20A	250V 20A

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## 4 Options

### 4 - 1 Options

#### FDA-A

Option kit	Product name	Availability
		FDA200AXVEB FDA250AXVEB
Wired remote control	BRC1H519W/S/K	✓
Wireless remote control ·H/P·	BRC4C65	✓
Simplified remote control (with operation mode selector button)	BRC2E52C7 ①	✓
Simplified remote control (without operation mode selector button)	BRC3E52C7 ①	✓
Optional PCB for external electric heaters, humidifiers and/or hour meters	EKRP1C13	✓
Adaptor for wiring (interlock for fresh air intake fan)	KRP1C65	✓
Wiring adaptor for electrical appendices	KRP4A51 ②	✓
Wiring adaptor for electrical appendices	KRP2A51 ②	✓
Central remote control	DCS302C51	✓
Unified ON/OFF controller	DCS301B51	✓
Schedule timer	DST301B51	✓
Digital input adaptor	BRP7A54 ⑤	✓
External temperature sensor option kit	KRCS01-6B	✓
Long-life replacement filter	BAFL502A250 ④	✓
Filter chamber	BDD500B250	✓
Drain pump kit	BDU510B250VM	✓
Wi-Fi adaptor for smartphones	BRP069B82 ③	✓
Wire harness for external wireless temperature sensor	EKEWTSC-1 ⑥	✓

①: 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.

②: Option cannot be combined with ·BRP069B82·.

③: Option cannot be combined with ·KRP4A51, KRP2A51·.

④: Requires ·BDD500B250·.

⑤: Only possible in combination with remote control ·BRC2/3E52C7, BRC1H519W/S/K·.

⑥: ·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.

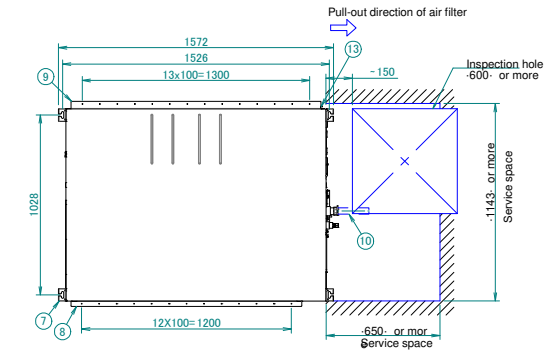
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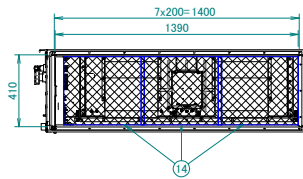
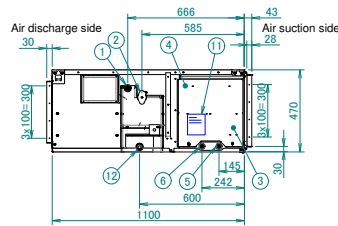
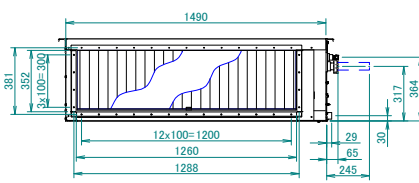
# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

FDA-A



Number	Part name	Description
1	Liquid pipe connection port	Flare connection
2	Gas pipe connection port	Brazed connection
3	Grounding terminal	Located inside of the unit
4	Control box	
5	Power supply wiring intake	
6	Control wiring intake	
7	Hook	M10
8	Air outlet flange	
9	Air inlet flange with air filter	
10	Accessory pipe	Standard accessory
11	Manufacturer label	
12	Drain pipe connection	-1 inch- BSP (female thread)
13	Maintenance cover	Air filter
14	Air filter	



Piping connections Ø		
Indoor unit	Gas pipe	Liquid pipe
FDA200AXVER	Φ19, 1 Accessory pipe	Φ9, 5
FDA250AXVER	Φ22, 2 Accessory pipe	Φ9, 5

### Notes

1. The unit nameplate is located on the control box cover.

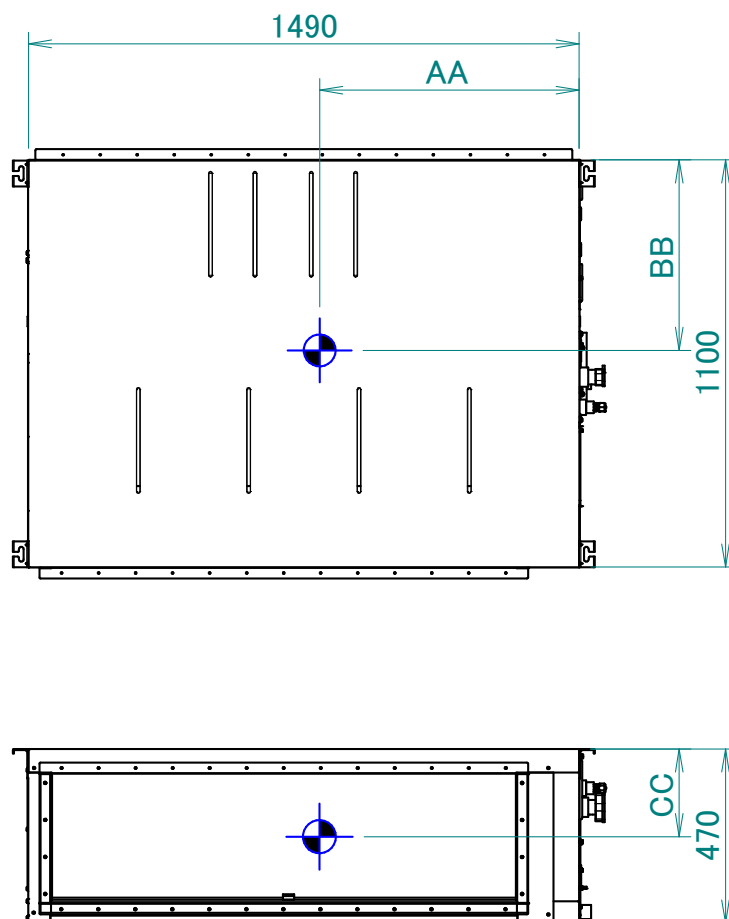
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## 6 Centre of gravity

6 - 1 Centre of Gravity

### FDA-A

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Model	AA	BB	CC
FDA200AXVEB	680	500	235
FDA250AXVEB	700	510	255

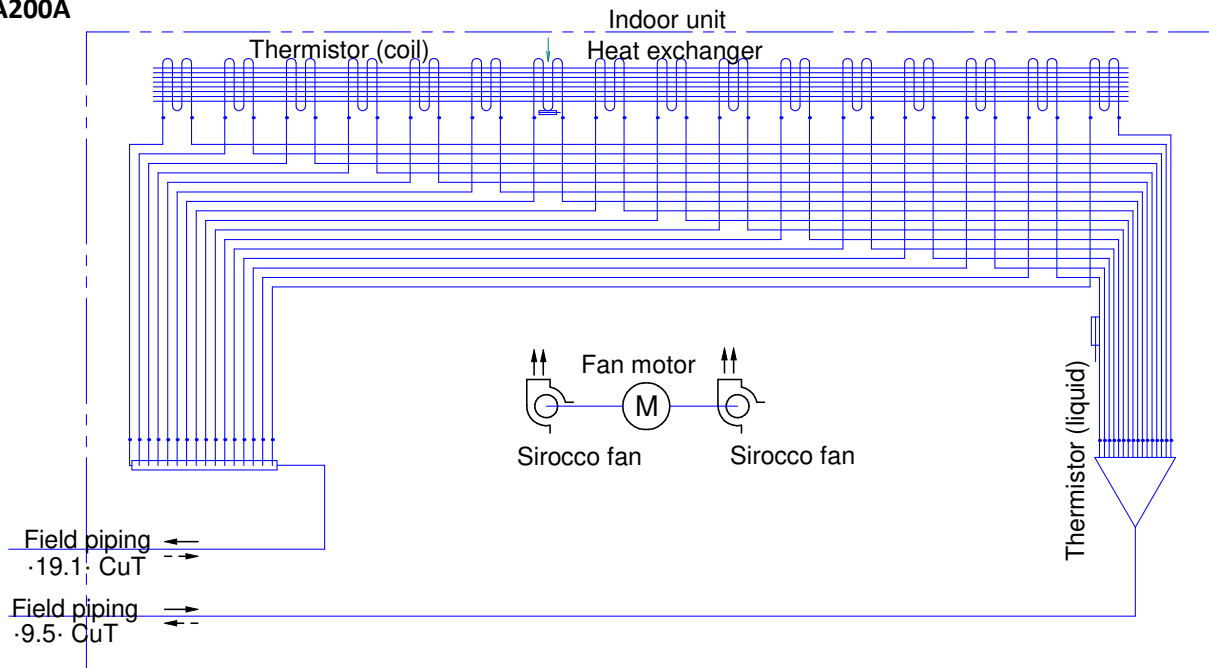
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# 7 Piping diagrams

## 7 - 1 Piping Diagrams

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### FDA200A



Refrigerant flow  
 → Cooling  
 - - - Heating

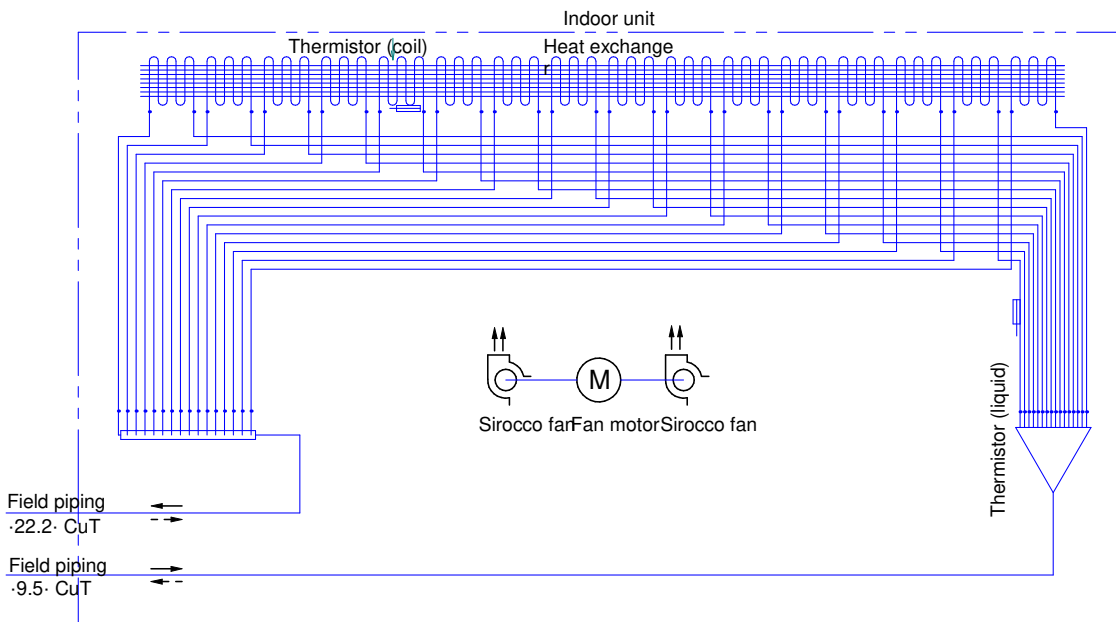
Gas header

Distributor

Thermistor

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### FDA250A



Refrigerant flow  
 → Cooling  
 - - - Heating

Gas header

Distributor

Thermistor

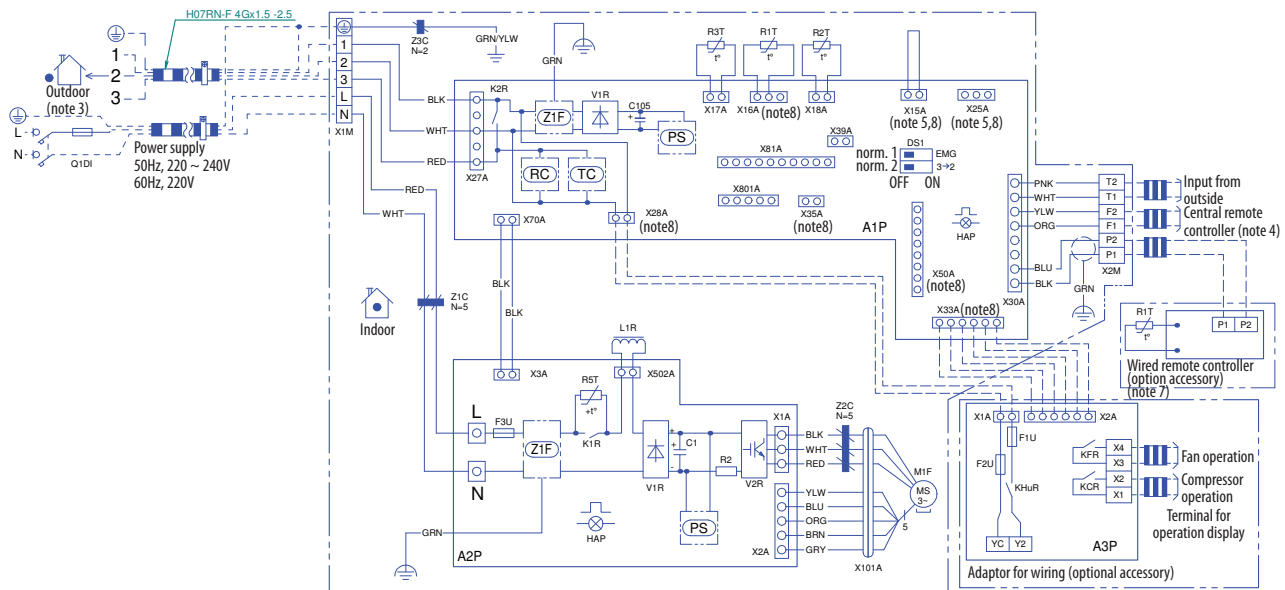
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# 8 Wiring diagrams

## 8 - 1 Wiring Diagrams - Three Phase

### FDA200-250A

#### Wiring diagram

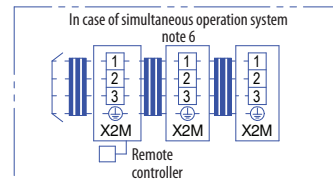
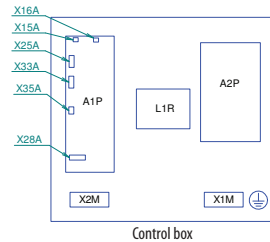


#### NOTES

1. : terminal block, : connector, : field wiring, : short circuit connector
2. In case of simultaneous operation indoor unit system, see the indoor unit wiring only.
3. For the detail, see wiring diagram attached to outdoor unit.
4. In case using central remote controller, connect it to the unit in accordance with the attached installation manual.
5. X15A, X25A ARE connected when the drain pump kit is being used. Before installing of drain pump kit remove short circuit connector connected to X15A.
6. In case of simultaneous operation system, connected quantity of the indoor units varies according to the connection outdoor unit. Confirm technical guide and catalogue, etc. Before connecting.
7. In case of main/sub changeover see the installation manual attached to remote controller
8. X15A, X16A, X25A, X28A, X33A, X35A, X50A are (re)connected when the optional accessories are being used.

#### Wire colors

BLK	: Black	YLW	: Yellow
WHT	: White	PNK	: Pink
BRN	: Brown	BLU	: Blue
GRY	: Grey	GRN	: Green
RED	: Red	ORG	: Orange



Indoor unit			
A1P	Printed circuit board (control)	X1M	Terminal strip (power supply)
A2P	Printed circuit board (fan)	X2M	Terminal strip (control)
C1	Capacitor	Z1C	Noise filter (ferrite core)
C105	Capacitor	Z2C	Noise filter (ferrite core)
DS1	Dip switch on PCB	Z3C	Noise filter (ferrite core)
F3U	Fuse (T, 20A, 250V)	Z1F	Noise filter (surge absorber)
HAP	Light emitting diode (Service monitor green)	Connectors for optional parts	
K1R, K2R	Magnetic relay	X25A	Connector (drain pump)
L1R	Reactor	X15A	Connector (float switch)
M1F	Motor (fan)	X16A	Connector (external wired temperature sensor)
PS	Switching power supply (A1P, A2P)	X28A	Connector (power supply of wiring)
Q1DI	Earth leakage breaker	X33A	Connector (adaptor for wiring)
R1T	Thermistor (suction)	X35A	Power supply (adaptor)
R2T	Thermistor (liquid)	X50A	Connector (wlan adaptor)
R3T	Thermistor (coil)	Adaptor for wiring	
R5T	PTC thermistor (current limited)	A3P	Adaptor PCB
RC	Receiving circuit	F1U, F2U	Fuse (5A, 250V)
TC	Transmitting circuit	KHuR	Magnetic relay
V1R	Diode bridge	KCR, KFR	Magnetic relay
V2R	Power module	X1~2A	Connector
X1~801A	Connector	Wired remote controller	
		R1T	Thermistor (air)

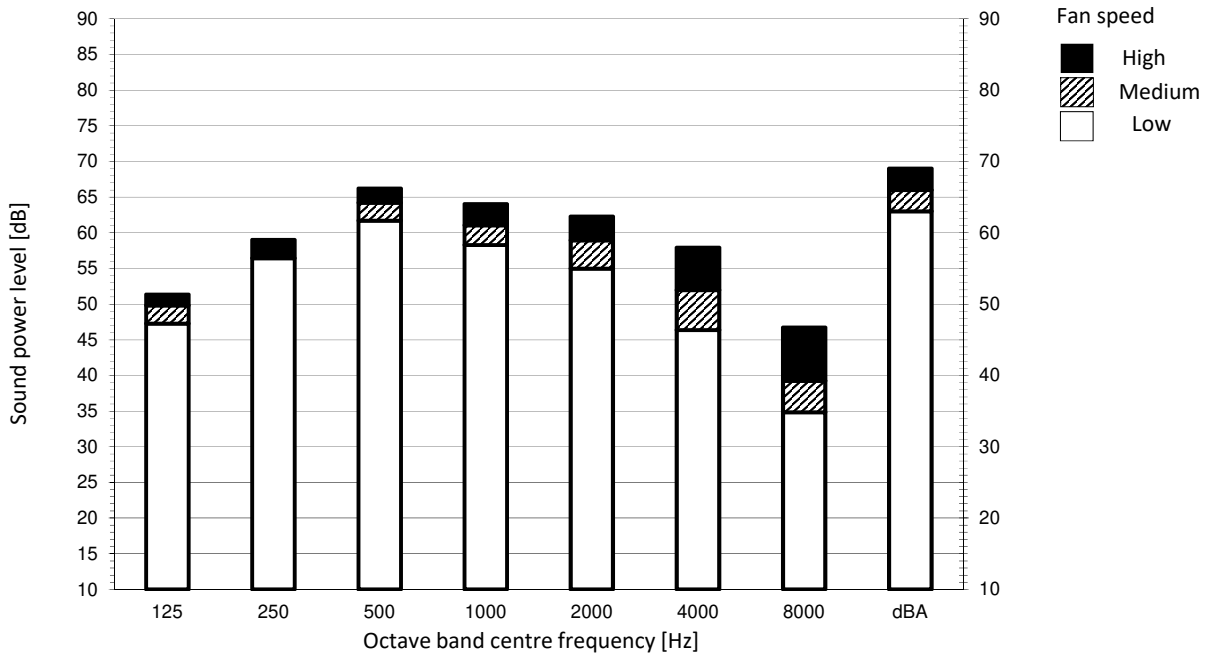
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## 9 Sound data

### 9 - 1 Sound Power Spectrum

FDA200A

Cooling mode



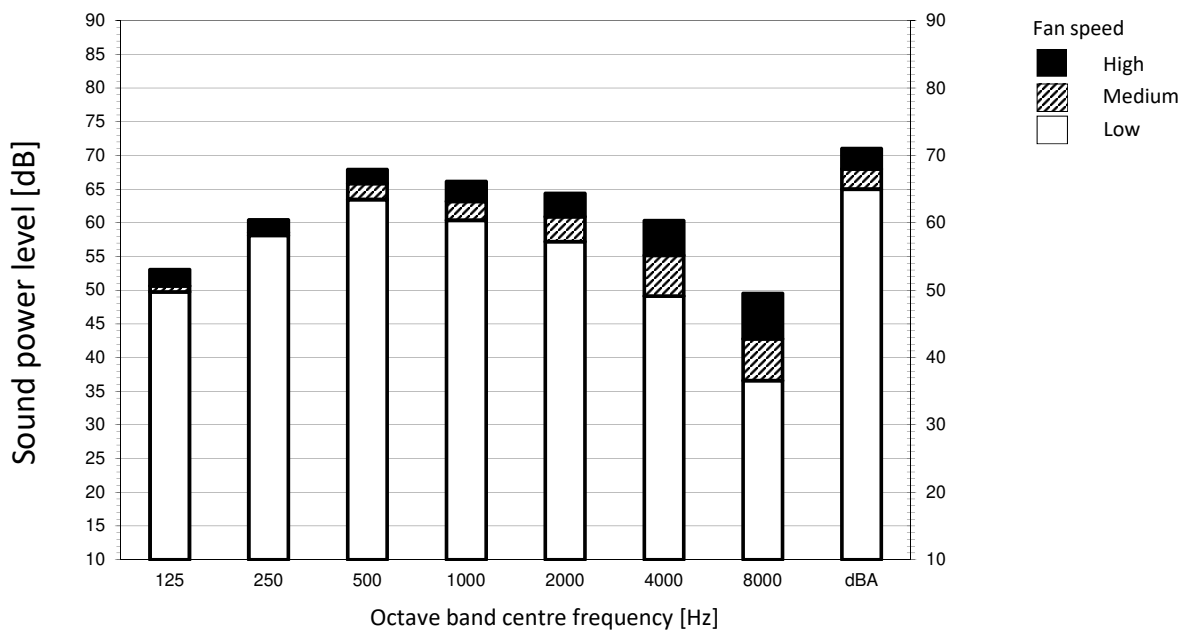
Notes

1. dBA = A-weighted sound power level (A scale according to IEC).
2. Reference acoustic pressure 0 dB = 20  $\mu$ Pa
3. Measured according to ISO 3744

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FDA250A

Cooling mode



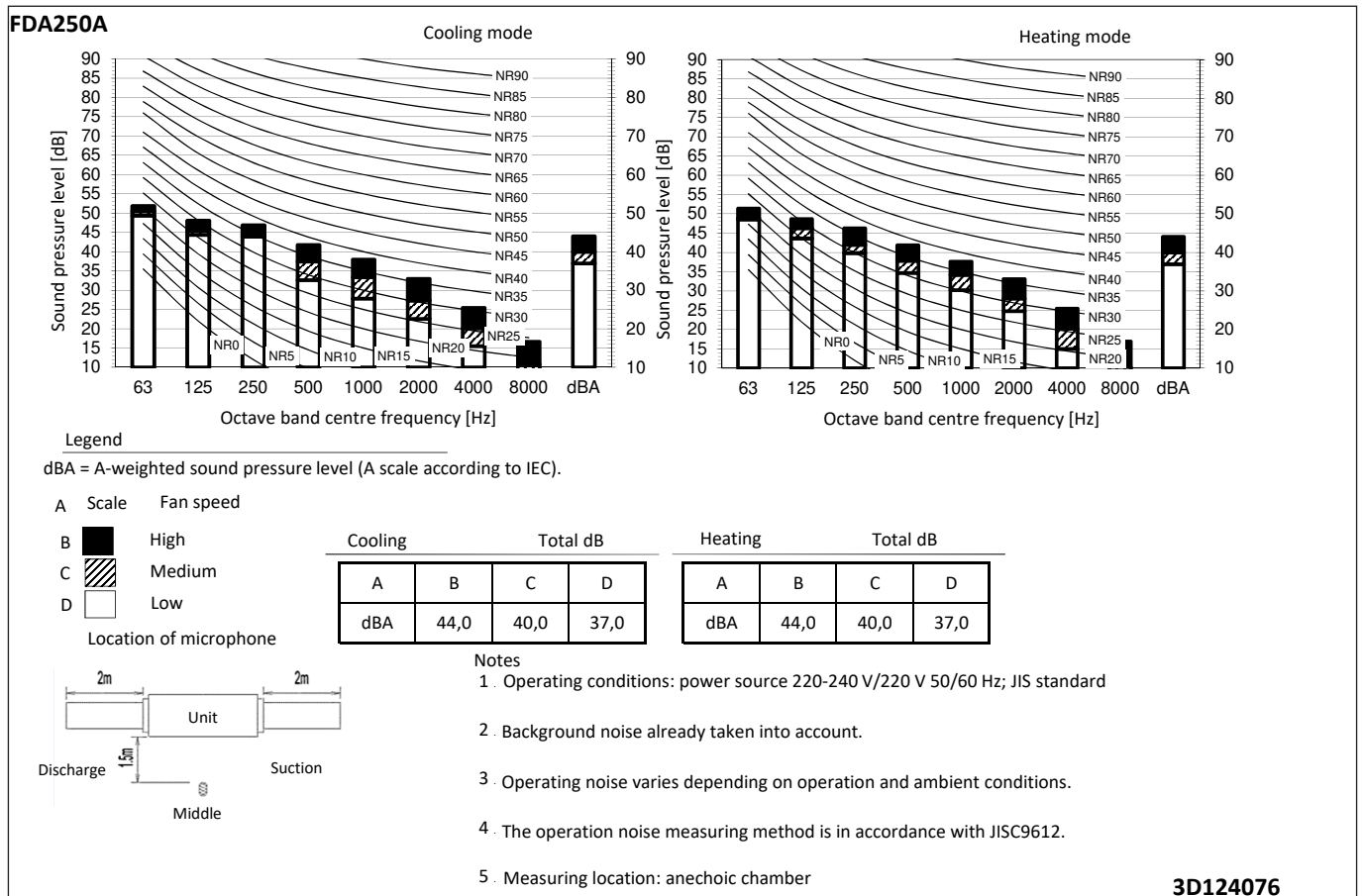
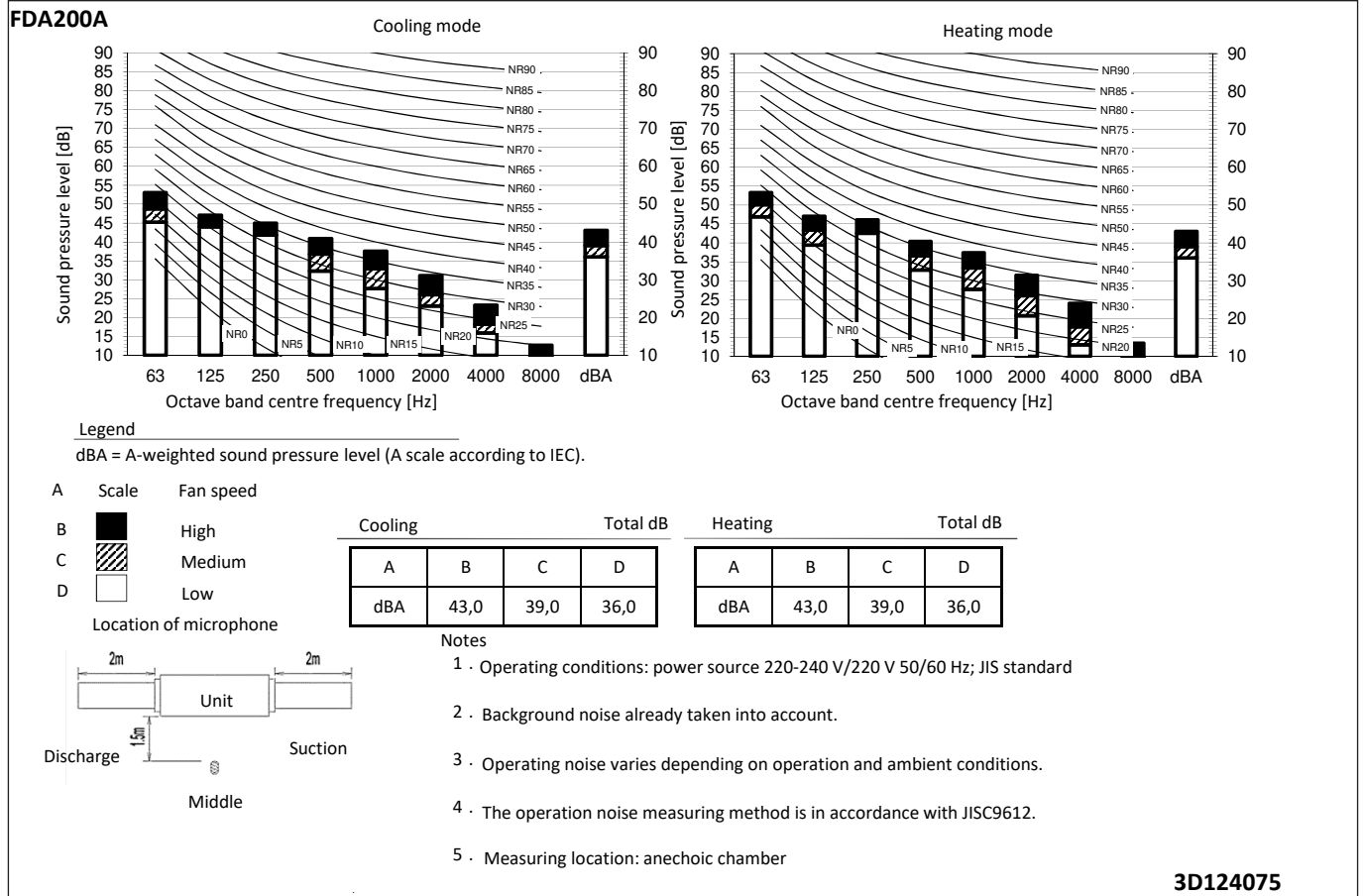
Notes

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2. Reference acoustic pressure 0 dB = 20  $\mu$ Pa
3. Measured according to ISO 3744

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# 9 Sound data

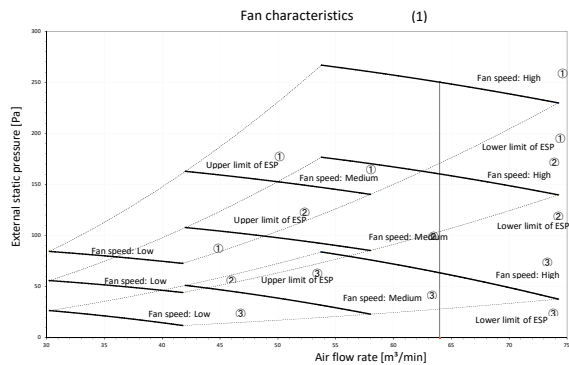
## 9 - 2 Sound Pressure Spectrum



# 10 Fan characteristics

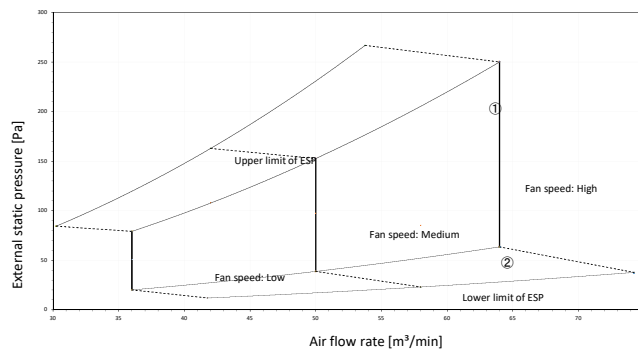
## 10 - 1 Fan Characteristics

### FDA200A

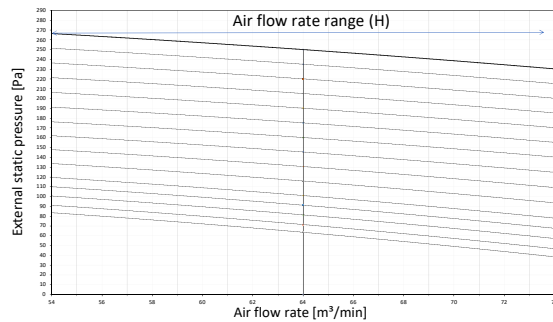


Mark	ESP [Pa]
①	Maximum 250
②	- 160
③	Standard 62

Fan characteristics (3)  
Air flow auto adjustment



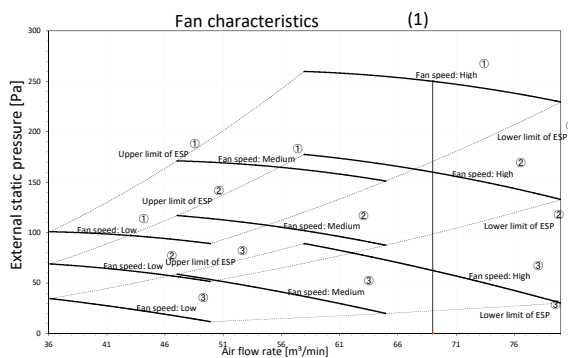
Fan characteristics (2)  
Field setting with remote control



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

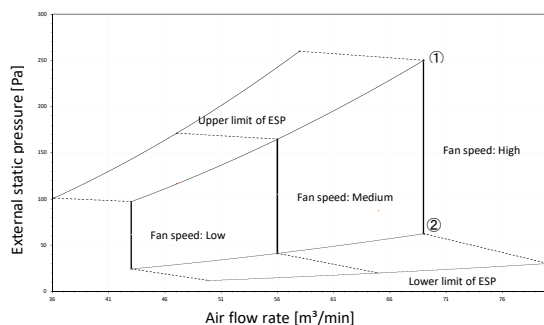
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### FDA250A

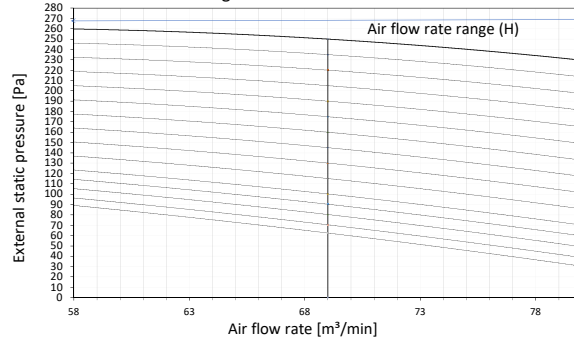


Mark	ESP [Pa]
①	Maximum 250
②	- 160
③	Standard 62

Fan characteristics (3)  
Air flow auto adjustment

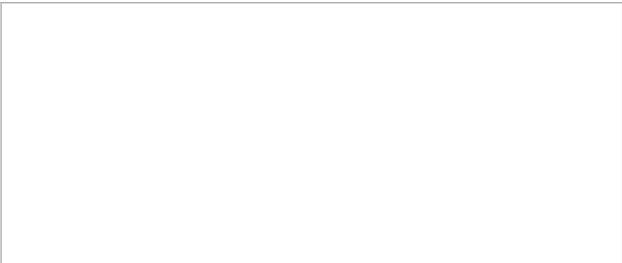


Fan characteristics (2)  
Field setting with remote control



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

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02/2023



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