



Air Conditioning

Technical Data

Concealed ceiling unit



EEDEN14-100

FDQ-C

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FDQ-C

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1 Features

- Blends unobtrusively with any interior décor: only the suction and discharge grilles are visible
- Easy installation thanks to automatic air flow adjustment towards nominal air flow rate
- Reduction in power consumption thanks to DC inverter fans
- Improved comfort thanks to 3-step air flow control
- Up to 200Pa external static pressure allows extensive ductwork runs and flexible application: ideal for use in large areas
- Less duct calculations are needed; moreover, the air flow can be adjusted during installation via the wired remote control (optional) instead of via channel adjustments
- No optional adapter needed for DIII-connection, link your unit into the wider building management system.
- The air suction direction can be altered from rear to bottom suction
- Standard drain pump with 625mm lift



Home leave operation



Fan only



Auto cooling-heating changeover



Fan speed steps



Dry programme



Air filter



Weekly timer



Wired remote control



Centralised control



Auto-restart



Self diagnosis



Drain pump kit



Twin/triple/double twin application

2 Specifications

2-1 Technical Specifications				FDQ125C	
Cooling capacity	Nom.		kW	12.5	
Heating capacity	Nom.		kW	14.0	
Power input	Cooling	Nom.	kW	0.35	
	Heating	Nom.	kW	0.35	
Casing	Colour			Not painted (galvanised)	
Dimensions	Unit	Height/Width/Depth	mm	300/1,400/700	
	Packed unit	Height/Width/Depth	mm	355/1,620/900	
Required ceiling void \>			mm	350	
Weight	Unit		kg	45	
	Packed unit		kg	53	
Decoration panel	Model			BYBS125DJW1	
	Colour			White (10Y9/0.5)	
	Dimensions	Height/Width/Depth	mm	55/1,500/500	
	Weight		kg	6.5	
Heat exchanger	Length		mm	1,140	
	Rows	Quantity		3	
	Fin pitch		mm	1.75	
	Passes	Quantity		11	
	Face area		m²	0.383	
	Stages	Quantity		16	
	Empty tubeplate hole	Quantity		0	
	Tube type			ø7 Hi-XSS	
	Fin	Type		Symmetric waffle louvre	
		Treatment		Hydrophilic	
Fan	Type			Sirocco fan	
	Quantity			3	
	Air flow rate	Cooling	High	m³/min	39
			Low	m³/min	28
		Heating	High	m³/min	39
			Low	m³/min	28
	External static pressure	High		Pa	200
		Nom.		Pa	50
Fan motor	Quantity			1	
	Model			Brushless DC motor	
	Drive			Direct drive	
	Speed	Steps		9	
		Cooling	High/Low	rpm	1,218/920
		Heating	High/Low	rpm	1,218/920
	Output	High		W	350
Sound power level	Cooling	/	dBA	66	
Sound pressure level	Cooling	High/Low	dBA	40/33	
	Heating	Super high/High/Low	dBA	-/40/33	
Refrigerant	Type			R-410A	
Piping connections	Liquid	Type/OD	mm	Flare connection/9.52	
	Gas	Type/OD	mm	Flare connection/15.9	
	Drain			VP25 (I.D. 25/O.D. 32)	
	Heat insulation			Both liquid and gas pipes	
Air filter	Type			Resin net with mold resistance	
Drain-up height			mm	625	
Safety devices	Item	01/02/03		PC board fuse/PC board fuse (fan driver)/Drain pump fuse	

2 Specifications

2-2 Electrical Specifications			FDQ125C
Power supply	Name		VE
	Phase		1~
	Frequency	Hz	50/60
	Voltage	V	220-240/220

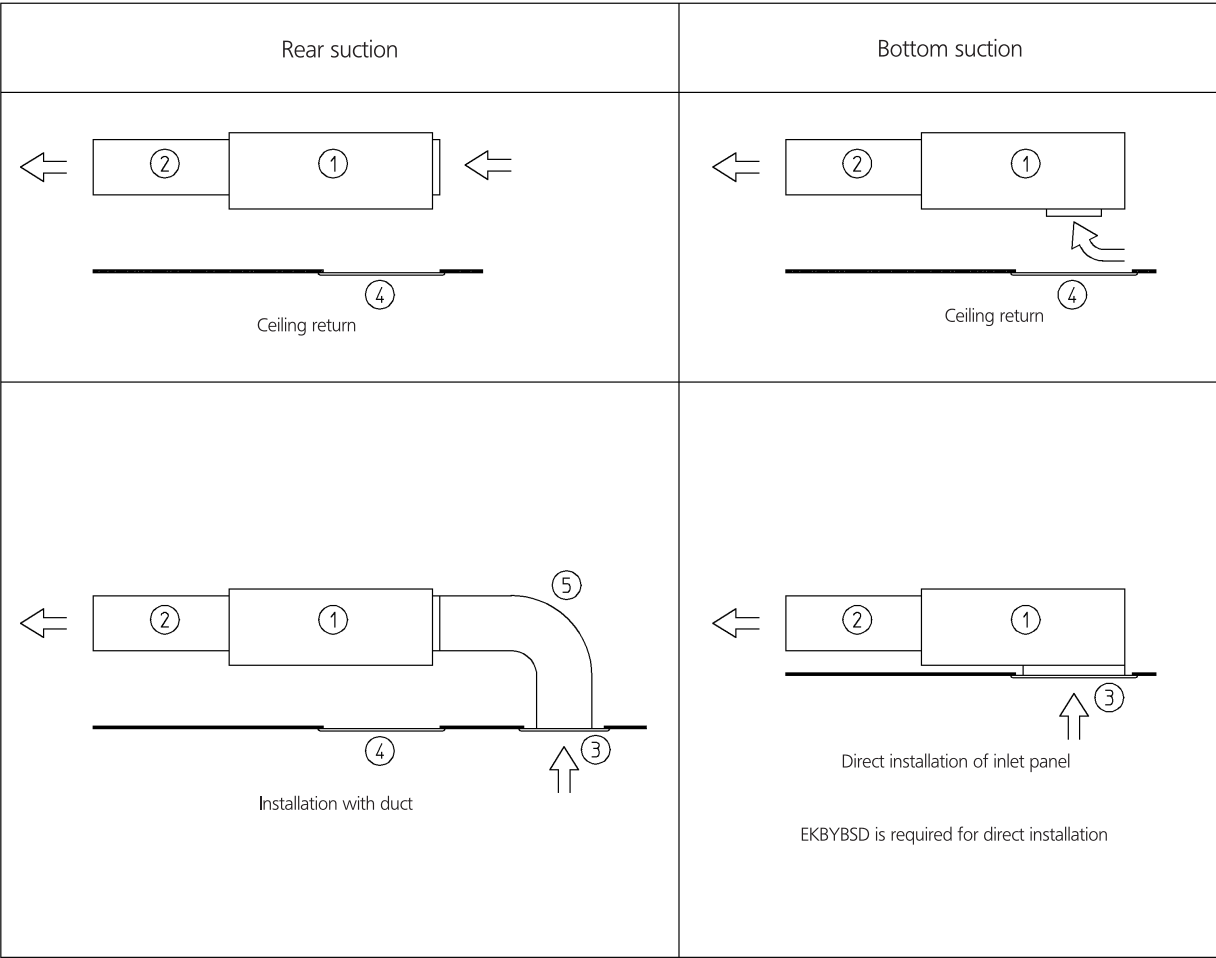
Notes

- (1) Cooling: indoor temp. 27°CDB, 19.0°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m; level difference: 0m
- (2) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m; level difference: 0m
- (3) Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- (4) The sound pressure values are mentioned for a unit installed with rear suction.
- (5) PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC

3 General Characteristics

3 - 1 General characteristics

FDQ125C



Wide variety of installation methods

Number	Description	
1	Main body	
2	Air outlet duct	Field supply
3	Inlet panel	Optional accessory
4	Access panel	Optional accessory
5	Air inlet duct	Field supply

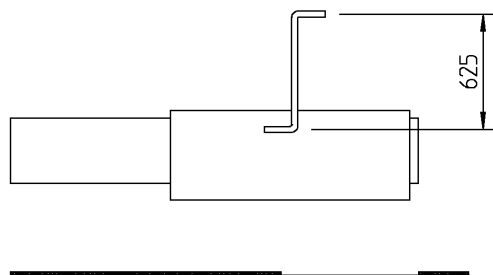
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3 General Characteristics

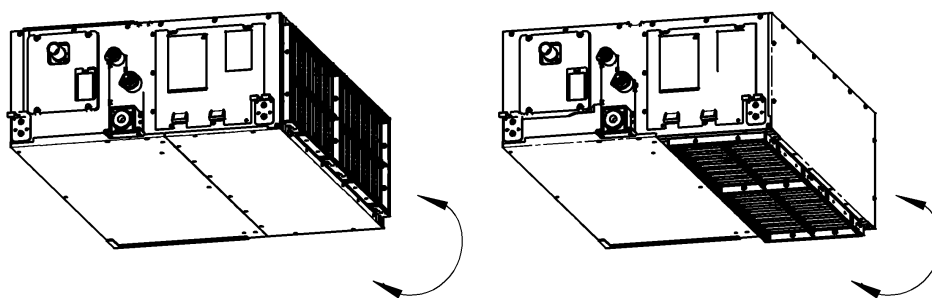
3 - 1 General characteristics

3

FDQ125C



Drain pump up height



Easy modification from rear to bottom suction

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4 Safety device settings

4 - 1 Safety Device Settings

FDQ125C

Safety devices			FDQ125C
FDQ-C	PC board fuse		250V 3.15A
	PC board fuse (Fan driver)		250V 6.3A
	Fan motor thermal protector	°C	---
	Drain pump fuse	°C	145

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5 Options

5 - 1 Options

FDQ125C

OPTIONS

Item		FDQ125
Panel related	Decoration panel (*4)	BYBS125D
Air inlet and air discharge outlet related	Air discharge adapter for round duct	KDAJ25K140A
Panel related	Decoration panel option	EKBY85D

OPERATION CONTROL

Item			FDQ125
Remote controller	Wired type		BRC1D528 / BRC1E52A7 (*5) / BRC1E5287 (*6)
	Infrared type	HP	BRC4C65
		CO	BRC4C66
Option PCB for external electrical heater, humidifier and/or hour meter (*1) (*3)			EKRP182A
Adapter for wiring (interlock for fresh air intake fan) (*3)			KRP1C64
Wiring adapter for electrical appendices (*3)			KRP4A51
Remote sensor			KRCS01-4B
Central remote controller			DCS302CA51
Unified ON/OFF controller			DCS301BA51
Schedule timer			DST301BA51
Remote ON/OFF and FORCED OFF kit			EKRORC3
Mounting plate for adapter PCB			KRP4A96

(*1) Electrical heater and humidifier are field supply. These parts should not be installed inside the equipment. (Refer to installation manual EKR182A).

(*2) If installing an electrical heater, an option PCB for external electrical heater (EKR182) for each indoor unit is required.

(*3) Mounting plate KRP4A96 is required for these options. Maximum 2 option PCB's can be mounted.

(*4) Decoration panel option EBY85D is required for direct mounting of the decoration panel on the unit.

(*5) Included languages are: English, German, French, Dutch, Spanish, Italian, Greek, Portuguese, Russian, Turkish and Polish.

(*6) Included languages are: English, German, Albanian, Bulgarian, Croatian, Czech, Hungarian, Romanian, Serbian, Slovak and Slovenian.

CONTENTS OF ACCESSORY BAG

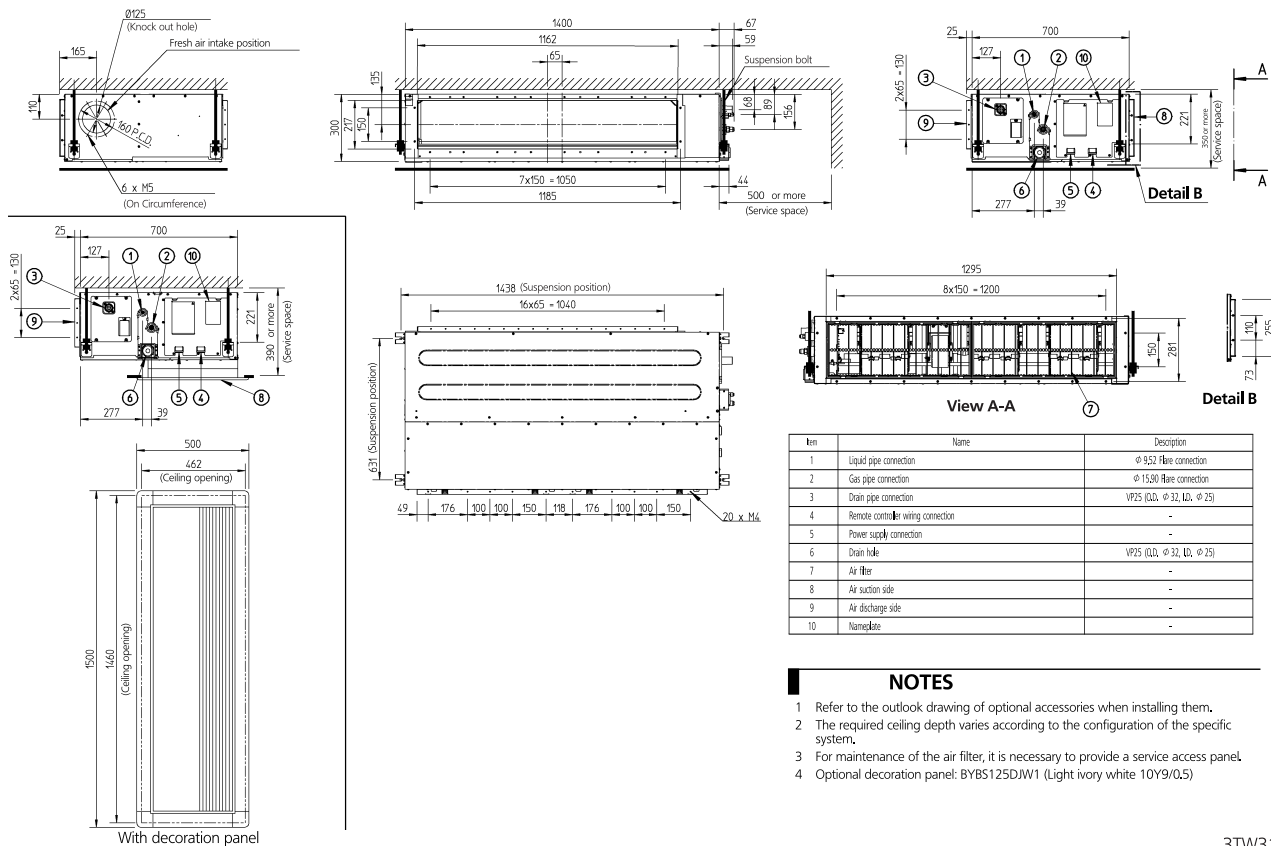
Description	Quantity
	FDQ125
Hexagon tapping screw (M5x16)	16
Round plain washer for wood	8
Installation and operation manual	1
Hose band	1
Insulation for joint (Gas)	1
Insulation for joint (Liquid)	1
Drain hose	1
Drain hose sealing material	1
Sealing material	2

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6 Dimensional drawings

6 - 1 Dimensional Drawings

FDQ125C

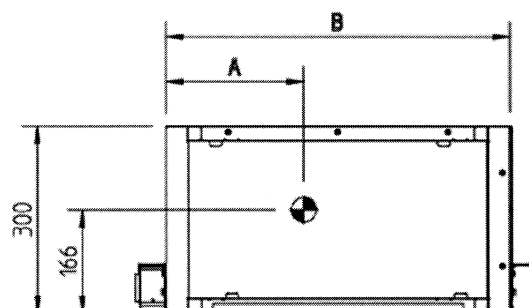
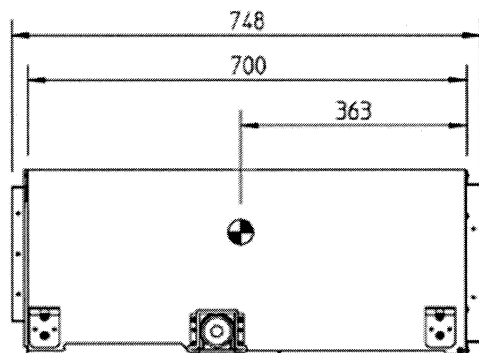


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7 Centre of gravity

7 - 1 Centre of Gravity

FDQ125C



Model	A	B
FDQ125	619	1400

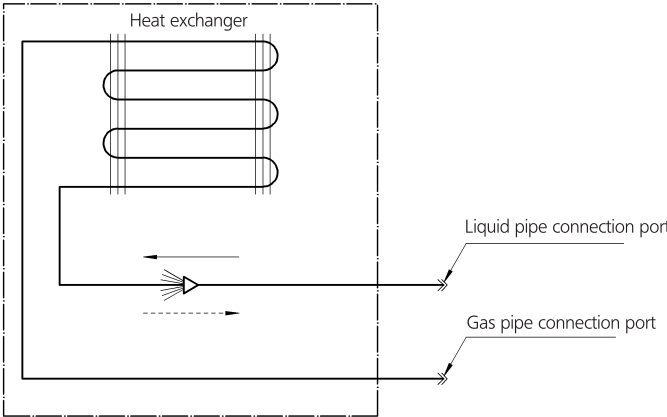
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8 Piping diagrams

8 - 1 Piping Diagrams

FDQ125C

Heat exchanger



Refrigerant flow

Cooling
Heating

Refrigerant pipe connection port diameters

Model	Gas	Liquid
FDQ125C	15.90	9.52

Check valve

Flare connection

Screw connection

Flange connection

Pinched pipe

Spinned pipe

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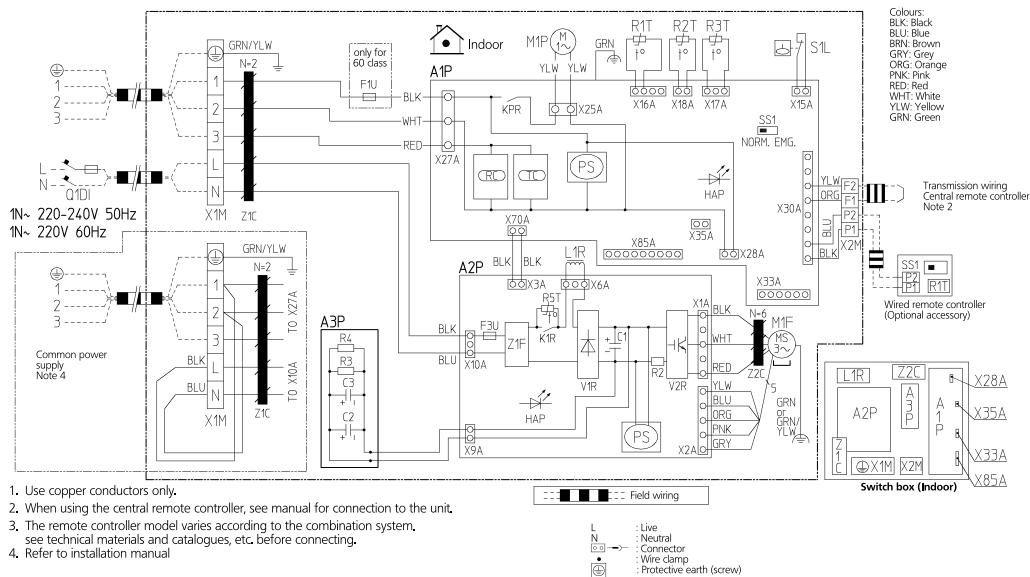
9 Wiring diagrams

9 - 1 Wiring Diagrams - Single Phase

9

FDQ125C

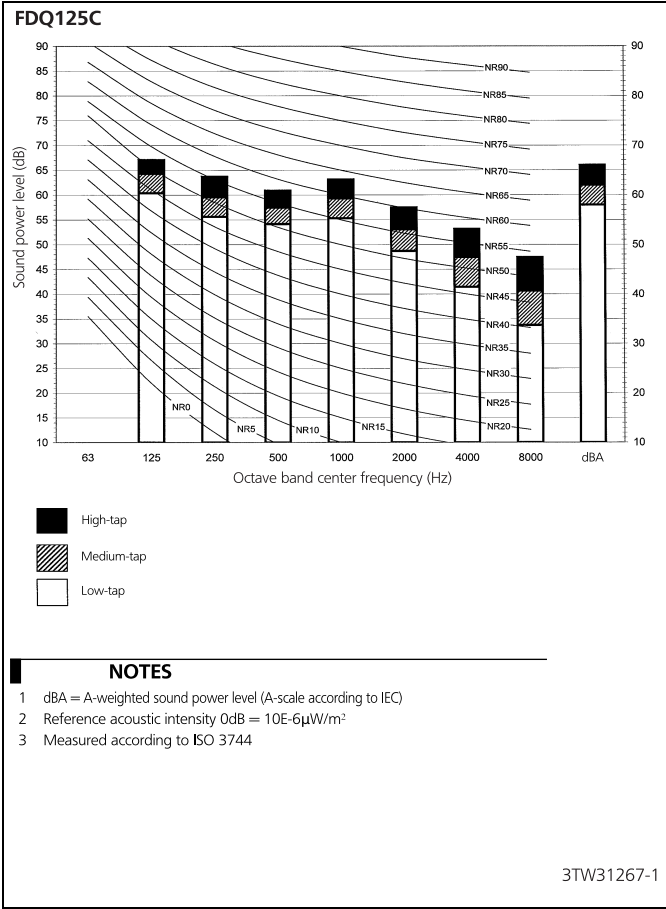
- Indoor unit
- A1P : Printed circuit board
 - A2P : Printed circuit board (Fan)
 - A3P : Printed circuit board (Capacitor)
 - C1,C2,C3 : Capacitor
 - F1U : Fuse (T, 5A, 250V)
 - F3U : Fuse (T, 6.3A, 250V)
 - HAP : Light emitting diode (Service monitor-green)
 - KPR,K1R : Magnetic relay
 - L1R : Reactor
 - M1F : Motor (Fan)
 - M1P : Motor (Drain pump)
 - PS : Switching power supply
 - Q1DI : Earth leak detector
 - R2 : Current sensing device
 - R3,R4 : Resistor (Electric discharge)
 - R1T : Thermistor (Suction air)
 - R2T : Thermistor (Liquid)
 - R3T : Thermistor (Coil)
 - R5T : Thermistor NTC (current limiting)
 - SS1 : Selector switch (emergency)
 - S1L : Float switch
 - V1R : Diode bridge
 - V2R : Power module
 - X1M : Terminal strip (Power supply)
 - X2M : Terminal strip (Control)
 - Z1C,Z2C : Noise filter (Ferrite core)
 - Z1F : Signal receiver circuit
 - C1P : Signal transmission circuit
- Connector optional accessory
- X28A : Connector (Power supply for wiring)
 - X33A : Connector (For wiring)
 - X35A : Connector (Adapter)
 - X85A : Connector (For multi zoning)
- Wired remote controller
- R1T : Thermistor (air)
 - SS1 : Selector switch (main/sub)



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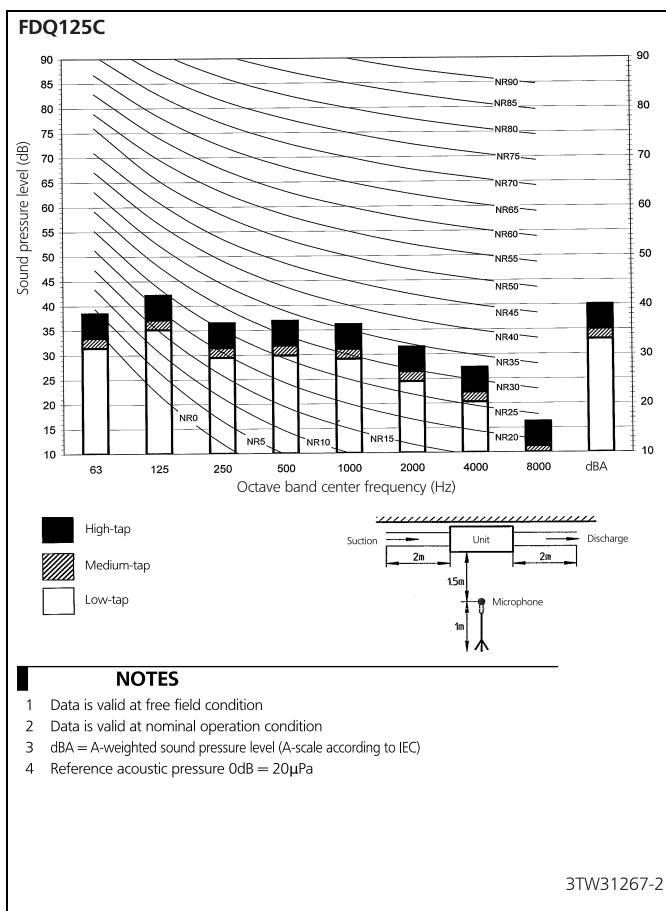
10 Sound data

10 - 1 Sound Power Spectrum



10 Sound data

10 - 2 Sound Pressure Spectrum - Cooling

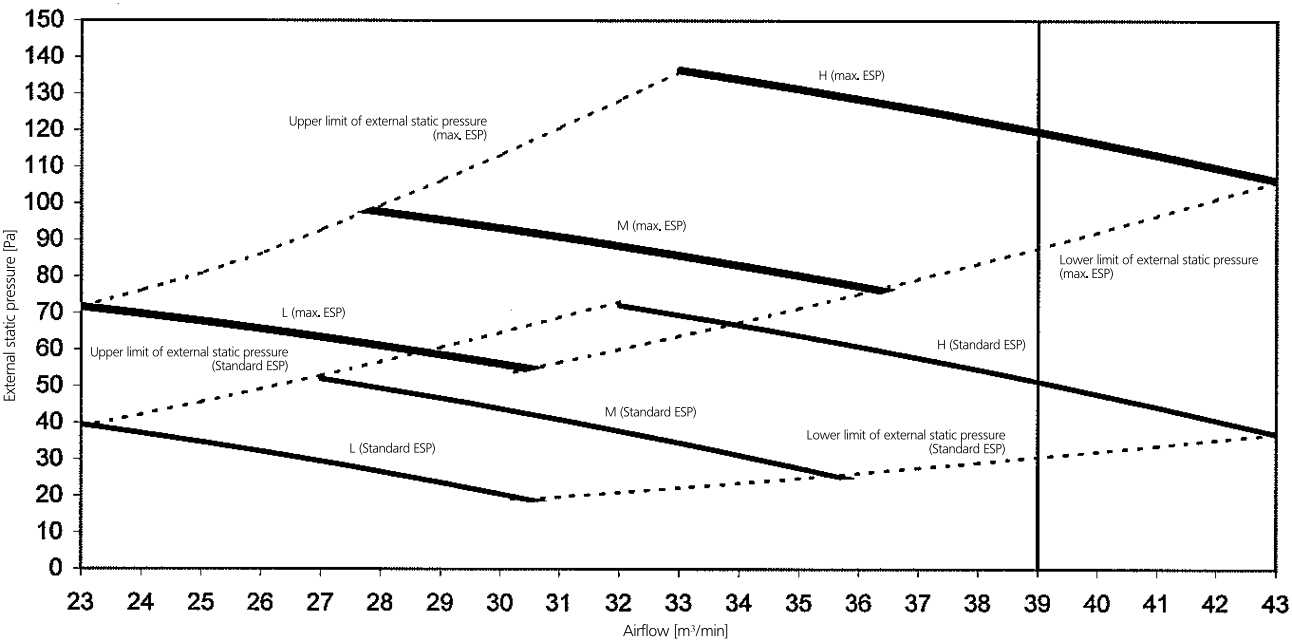


11 Fan characteristics

11 - 1 Fan Characteristics

FDQ125C

Fan characteristics (1)



NOTES

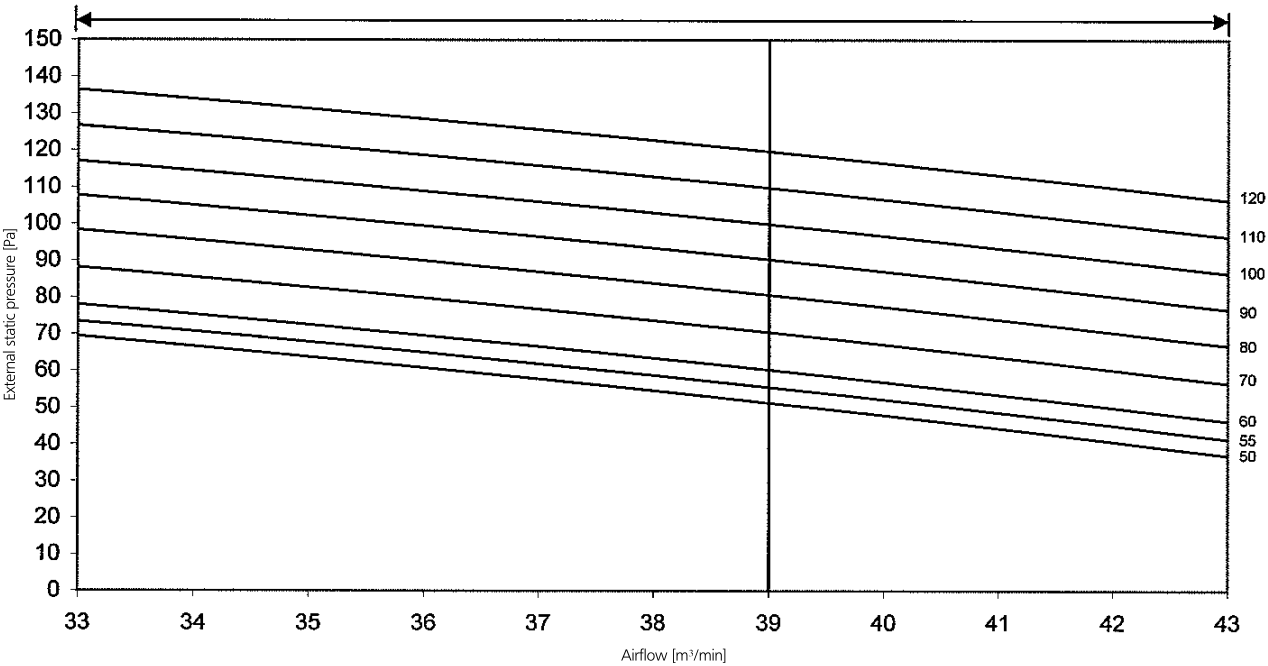
- 1 Fan characteristics as shown are in 'fan only' mode
- 2 ESP: External static pressure

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FDQ125C

Fan characteristics (2)
(Field setting with remote controller)

Range of available air flow rate (H)



NOTES

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

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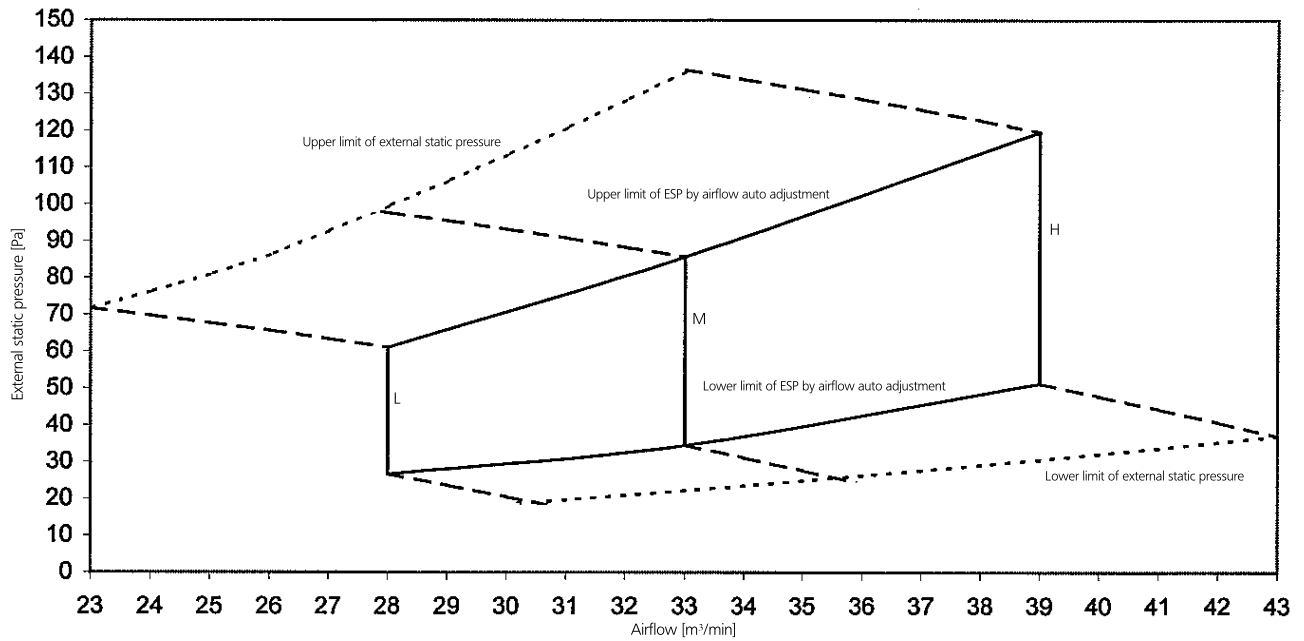
11 Fan characteristics

11 - 1 Fan Characteristics

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FDQ125C

Fan characteristics (3)
(airflow auto adjustment)



NOTES

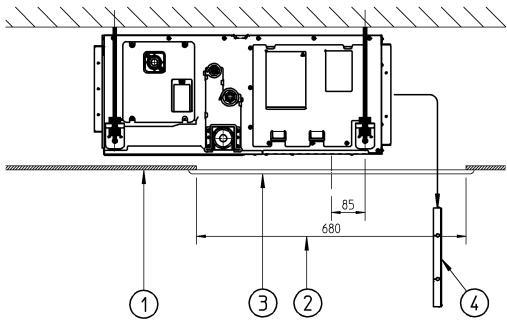
- 1 Fan characteristics as shown are in 'fan only' mode
- 2 ESP: External static pressure

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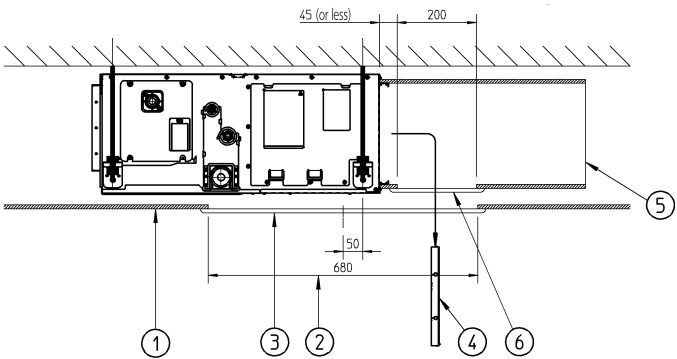
12 Installation

12 - 1 Installation Method

FDQ125C

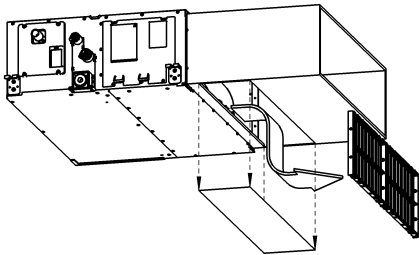


Installation without air inlet duct



Installation with air inlet duct

Number	Description
1	Suspended ceiling
2	Ceiling opening
3	Service access panel (optional)
4	Air filter
5	Air inlet duct
6	Duct service opening



NOTES

- When installing the unit with rear suction, a service opening is necessary for the maintenance of the air filters.
- When installing the unit with a suction duct, a service opening must be provided in the duct.

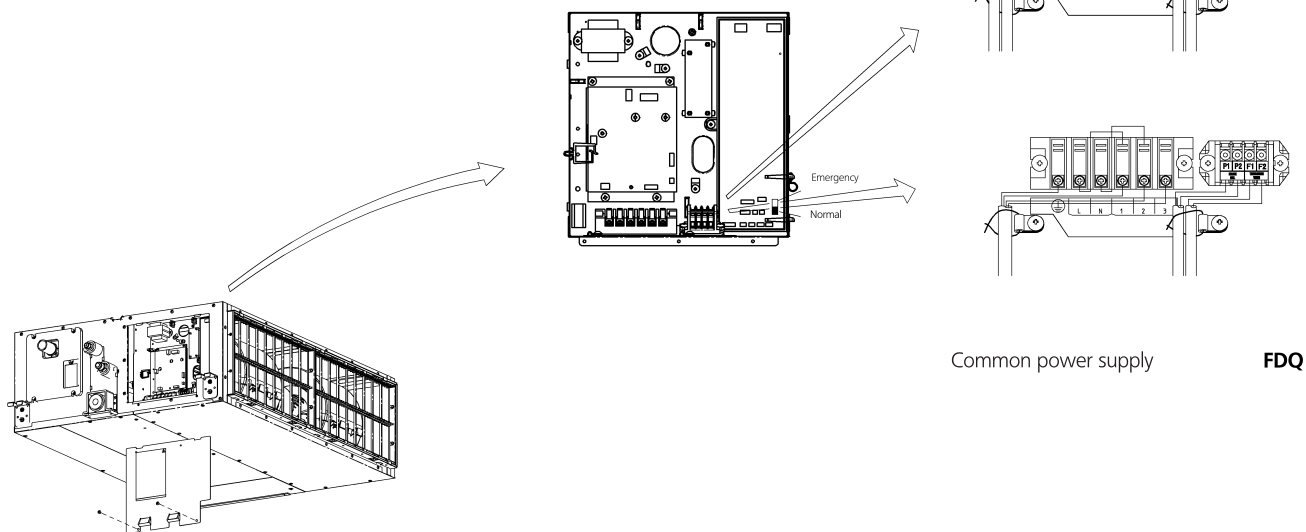
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12 Installation

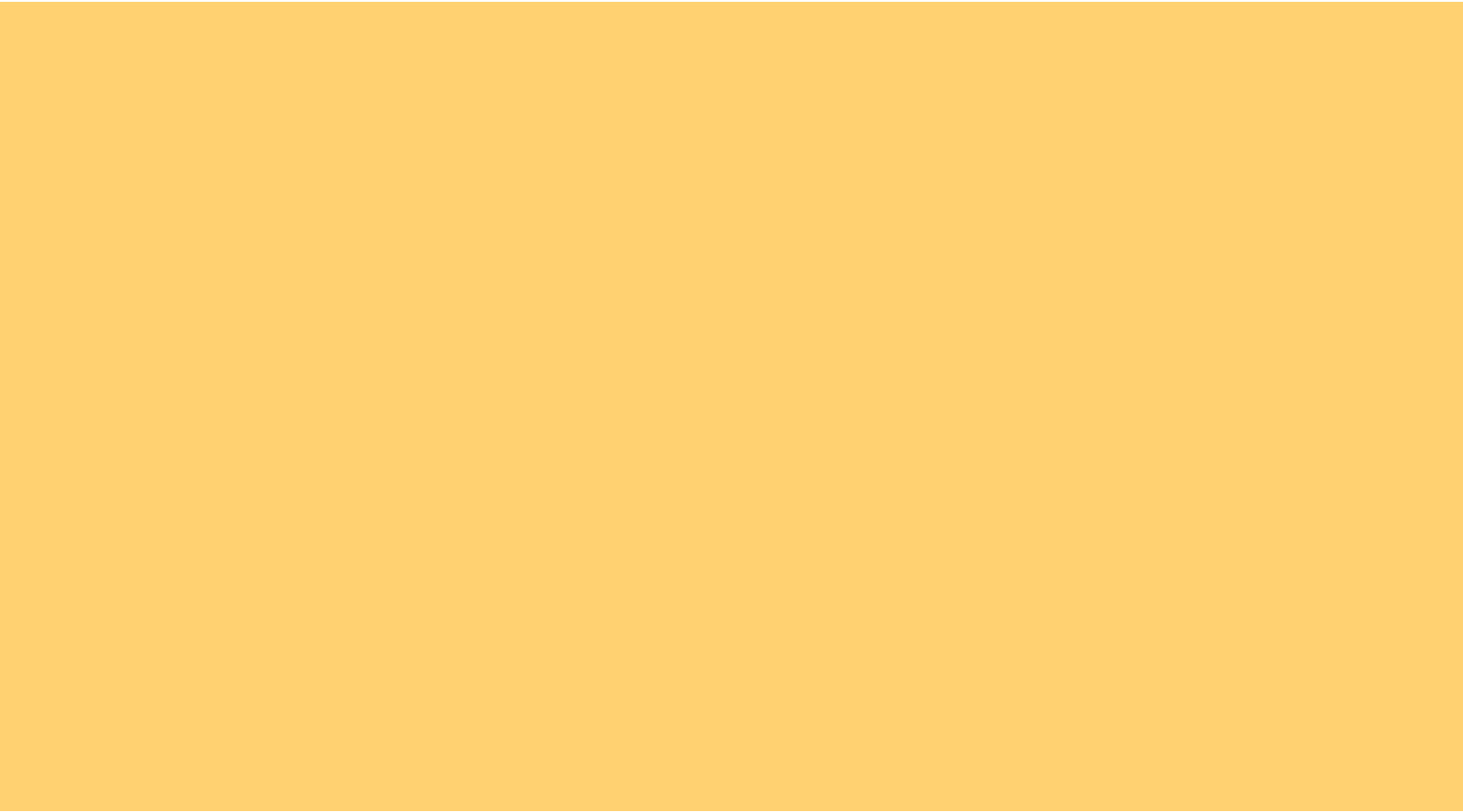
12 - 2 Switch Box Connection

FDQ125C

12



3TW31184-5B



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