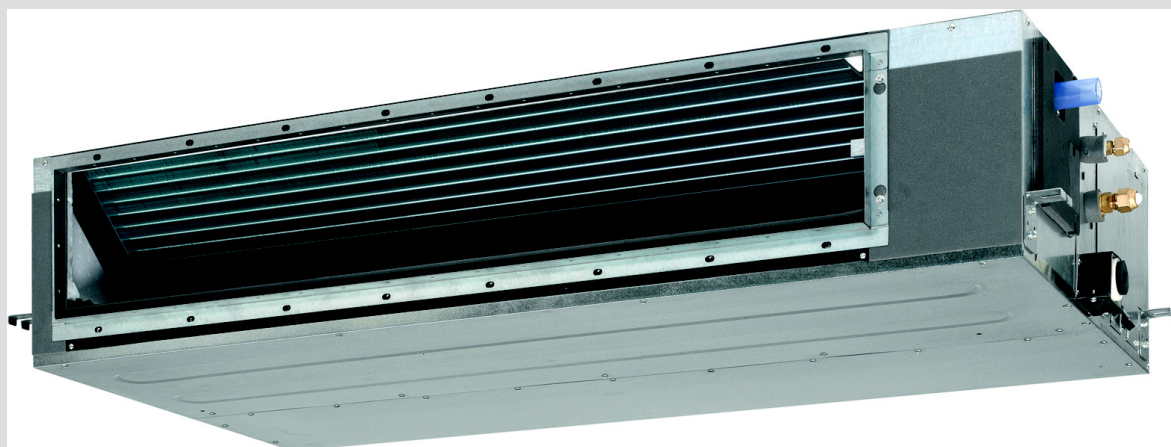


Air Conditioning
Technical Data

FDQ-C



> FDQ125C7VEB

TABLE OF CONTENTS

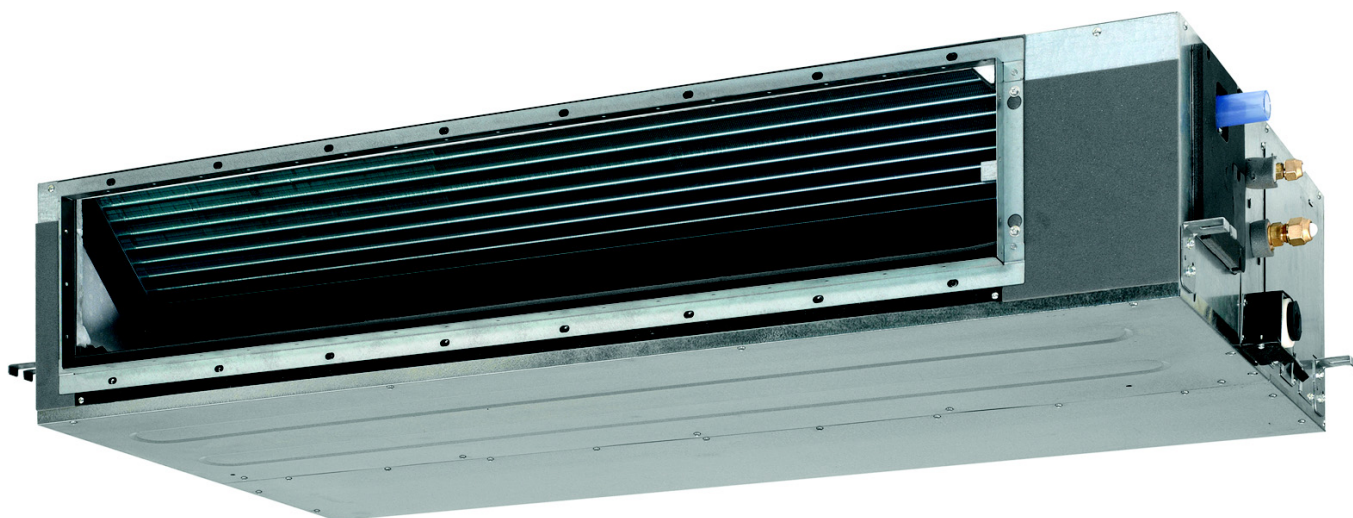
FDQ-C

1	Features	2
2	Specifications	3
	Technical Specifications	3
	Electrical Specifications	4
3	General Characteristics	5
4	Safety device settings	7
5	Options	8
6	Dimensional drawings	9
7	Centre of gravity	10
8	Piping diagrams	11
9	Wiring diagrams	12
	Wiring Diagrams - Single Phase	12
10	Sound data	13
	Sound Power Spectrum	13
	Sound Pressure Spectrum - Cooling	14
11	Fan characteristics	15
12	Installation	17
	Installation Method	17
	Switch Box Connection	18

1 Features

ESP up to 200, ideal for large sized spaces

- High external static pressure up to 200Pa facilitates extensive duct and grille network
- 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
- Reduced energy consumption thanks to specially developed DC fan motor
- No optional adapter needed for DIII-connection, link your unit into the wider building management system.
- Flexible installation, as the air suction direction can be altered from rear to bottom suction
- Standard built-in drain pump with 625mm lift increases flexibility and installation speed



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 (1)	
Heating capacity	Nom.		kW	14.0 (2)	
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	HeightxWidthxDepth	mm	55x1,500x500	
	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 louver	
		Treatment		Hydrophilic	
Air filter	Type			Resin net with mold resistance	
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	
	Heating		dBA	-	
Sound pressure level	Cooling	High/Low	dBA	40/33	
	Heating	High/Low	dBA	40/33	
Control systems	Infrared remote control			BRC4C65	
	Wired remote control			BRC1D52 / BRC1E52A/B	
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	
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

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

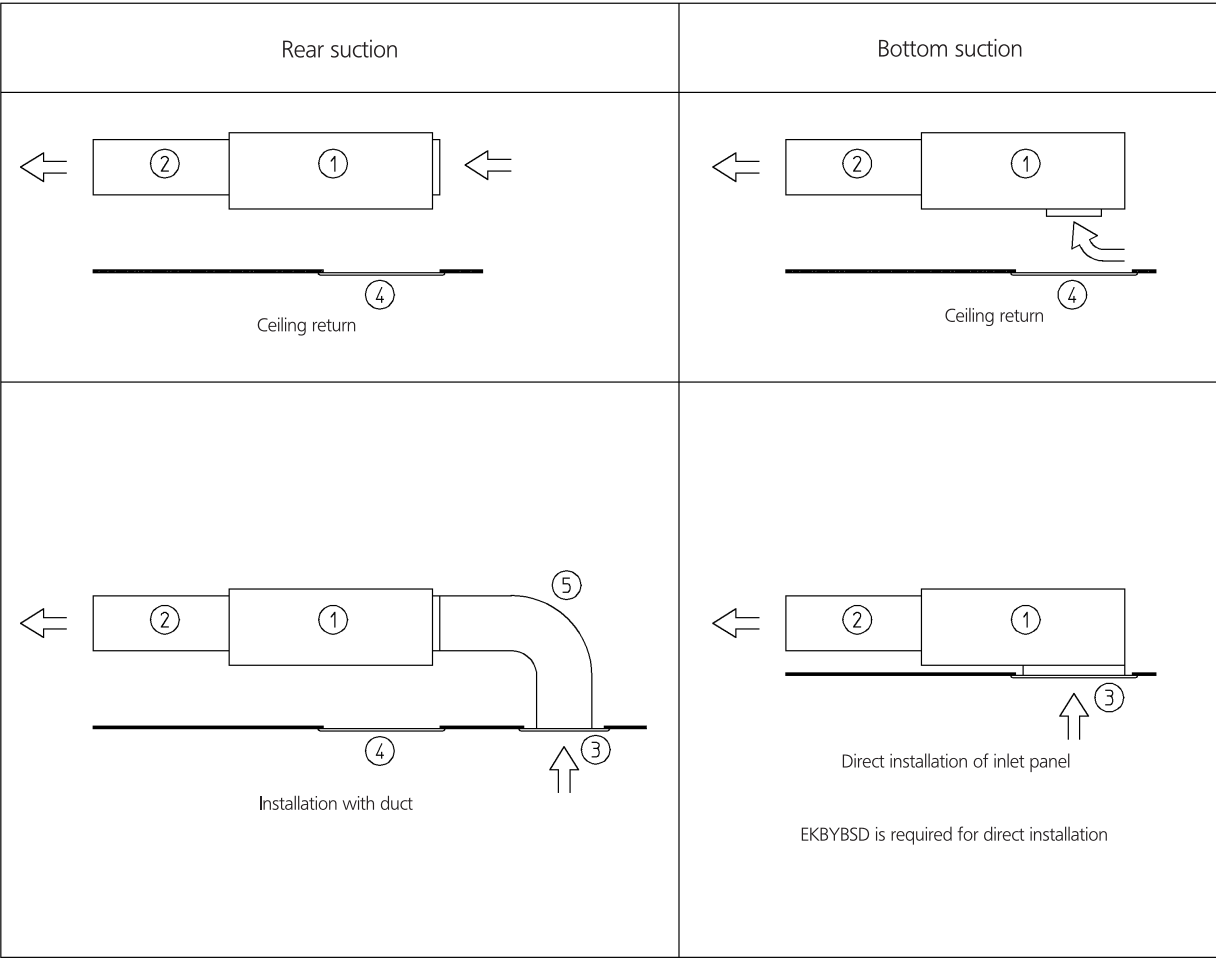
The sound pressure values are mentioned for a unit installed with rear suction.

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

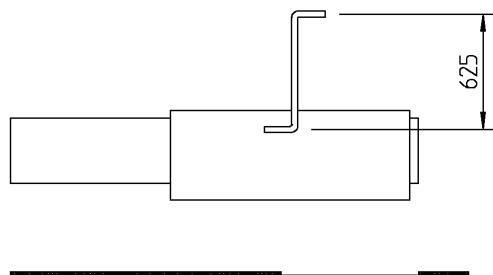
Number	Description	
1	Main body	
2	Air outlet duct	Field supply
3	Inlet panel	Optional accessory
4	Access panel	Optional accessory
5	Air inlet duct	Field supply

3TW31183-1A

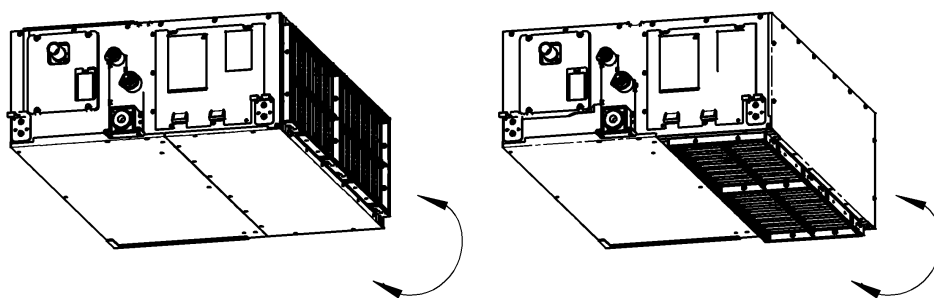
3 General Characteristics

3 - 1 General characteristics

FDQ125C



Drain pump up height



Easy modification from rear to bottom suction

3TW31183-1A

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

3TW31279-2

5 Options

5 - 1 Options

FDQ-C

Options		
Nr.	Item	Type
1	Decoration panel	
	Air discharge adaptor for round ducts	
	Decoration panel option	

Operation control				Type
1	Remote control			Wired
				Wireless
			HP	
			CO	
2	Simplified remote control (with operation mode selector button)			
3	Simplified remote control (without operation mode selector button)			
4	Optional PCB for external electric heaters, humidifiers and/or hour meters			
5	Adaptor for wiring (interlock for fresh air intake fan)			
6	Wiring adaptor for electrical appendices			
7	Remote sensor			
8	Central remote control			
9	Unified ON/OFF controller			
10	Schedule timer			
11	Remote "ON/OFF" and "forced OFF" kit			
12	Mounting plate for adaptor PCB			
13	Digital input adaptor			

FDQ125	
B763125D (*4)	
KDAJ25K140A	
EK8YBSD	

FDQ125	
BRC10528	
BRC1E53A7 (*5)	
BRC1E53B7 (*6)	
BRC1E53C7 (*7) (*10)	
BRC4C65	
BRC4C66	
BRC3E52C7 (*9) (*10)	
BRC3E52C7 (*9) (*10)	
EKRP182A (*1) (*2) (*3)	
KRP1C64 (*3)	
KRP2A51 (*3)	
KRC501-4B	
DCS302CA51	
DCS301BA51	
DST301BA51	
EKROR03	
KRP4A96	
BRP7A54 (*3) (*8)	

- (*1) Electric heaters and humidifiers are field-supplied. Do not install them inside the equipment (refer to installation manual EKR182A).
- (*2) When installing electric heaters, an optional PCB for external electric heaters (EKR182A) is required for each indoor unit.
- (*3) These options require mounting plate KRP4A96.
Maximally 2 optional PCBs can be mounted.
- (*4) For directly mounting the decoration panel on the unit, decoration panel option EK8YBSD is required.
- (*5) Included languages are: English, German, French, Italian, Spanish, Portuguese, and Dutch.
- (*6) Included languages are: English, Czech, Croatian, Hungarian, Slovenian, Romanian, and Bulgarian.
- (*7) Included languages are: English, Russian, Greek, Turkish, Polish, Albanian, and Slovak.
- (*8) Only possible in combination with BRC2/3E52C7 or BRC1E53A/B/C7.
- (*9) Included languages are:
Language pack 1: English, German, French, Dutch, Spanish, Italian, and Portuguese.
- With PC cable EKPCCAB3 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.
- (*10) Language pack 3 of controller BRC1E53C7 is different from that of controller BRC2/3E52C7.

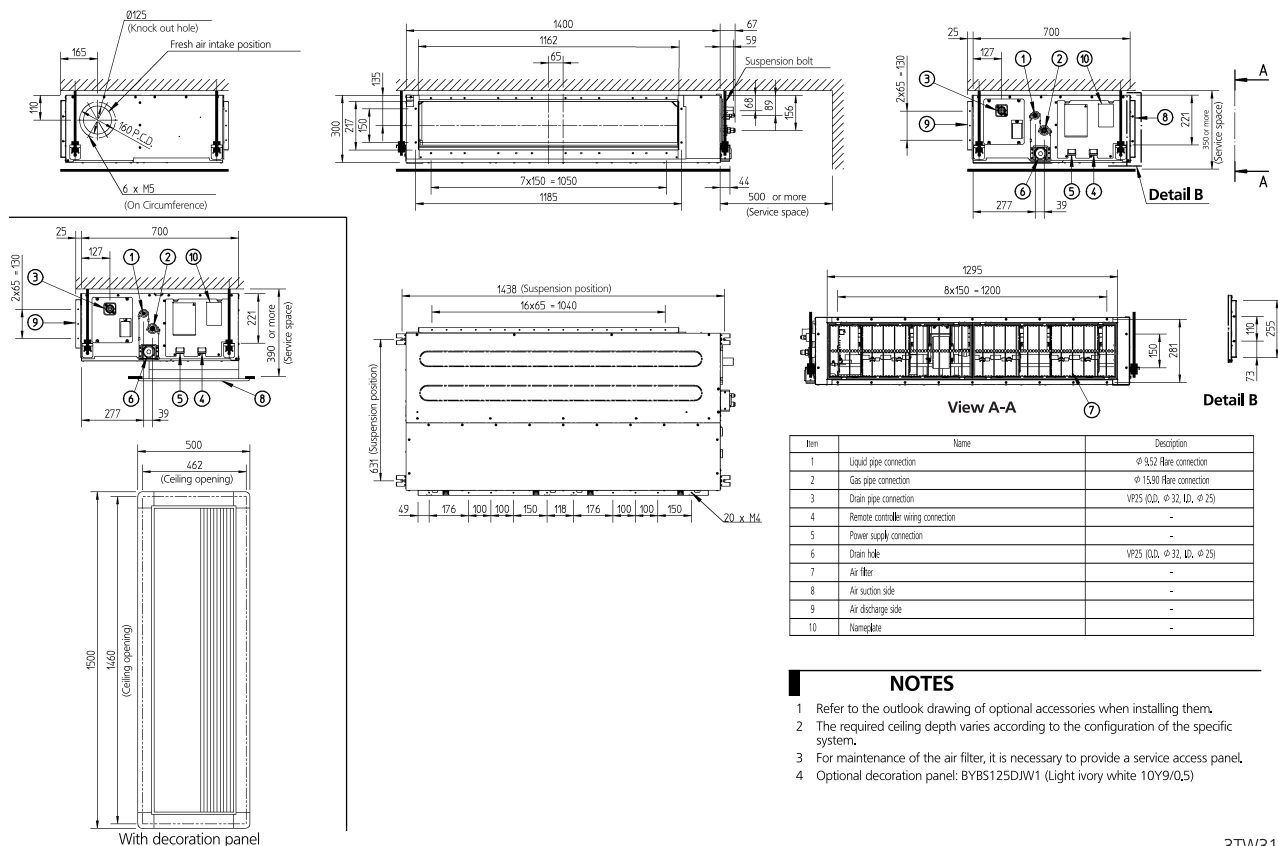
Contents of the accessory bag	
Description	Quantity
Hexagon tapping screw (M5x16)	FDQ125 16
Round plain washer for wood	8
Installation and operation manual	1
Hose band clamp	1
Joint insulation (gas)	1
Joint insulation (liquid)	1
Drain hose	1
Drain hose sealing material	1
Sealing material	2

3TW33989-2D

6 Dimensional drawings

6 - 1 Dimensional Drawings

FDQ125C

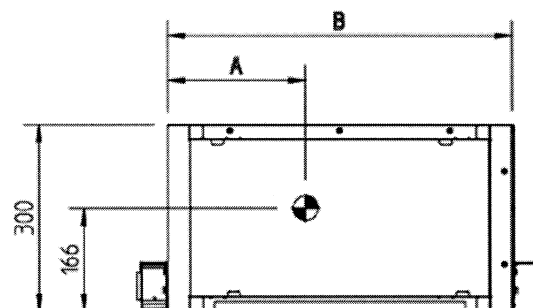
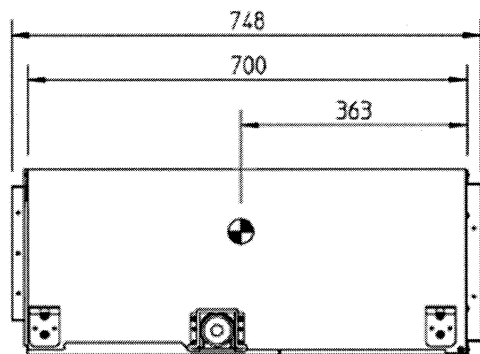


3TW31254-1B

7 Centre of gravity

7 - 1 Centre of Gravity

FDQ125C



Model	A	B
FDQ125	619	1400

4TW33989-1

8 Piping diagrams

8 - 1 Piping Diagrams

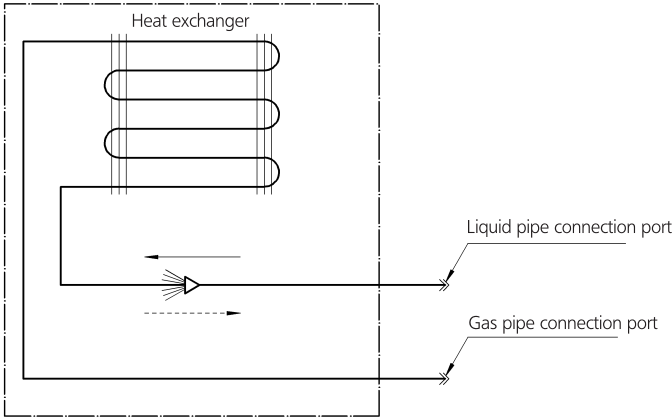
FDQ125C

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 X Pinched pipe → Spinned pipe

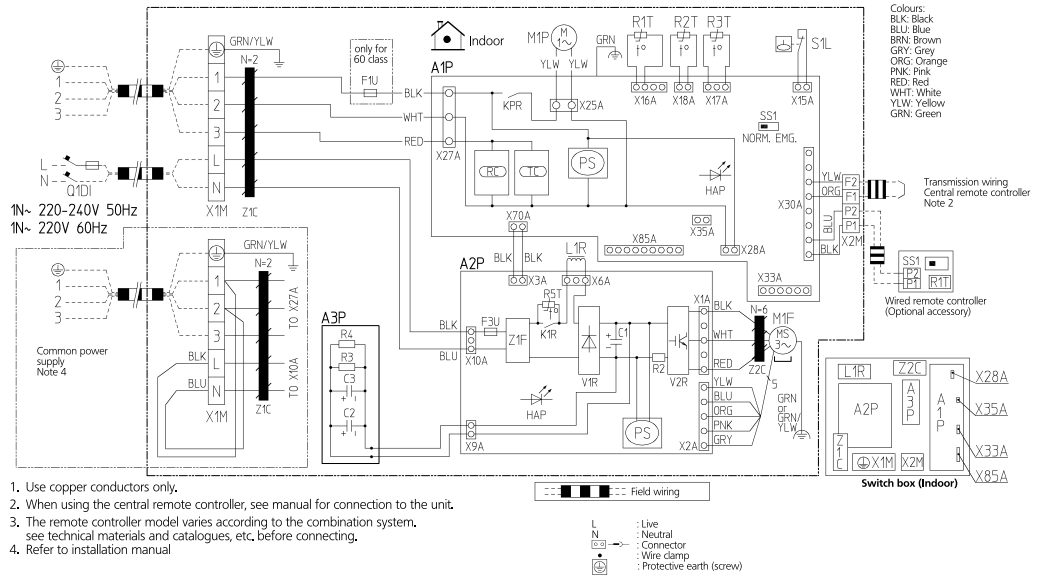
3TW31275-1A

9 Wiring diagrams

9 - 1 Wiring Diagrams - Single Phase

FDQ125C

- Indoor unit
- A1P : Printed circuit board
 - A2P : Printed circuit board (Fan)
 - A3P : Printed circuit board (Capacitor)
 - C1,C2,C3 : Capacitor
 - F1U : Fuse (1.5A, 250V)
 - F3U : Fuse (1.63A, 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 : Current sensing device
 - R2 : Resistor (Electric discharge)
 - R3,R4 : 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 : Noise filter (Ferrite core)
 - Z1F : Noise filter
 - Z1C,Z2C : Signal receiver circuit
 - Z1C : 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)

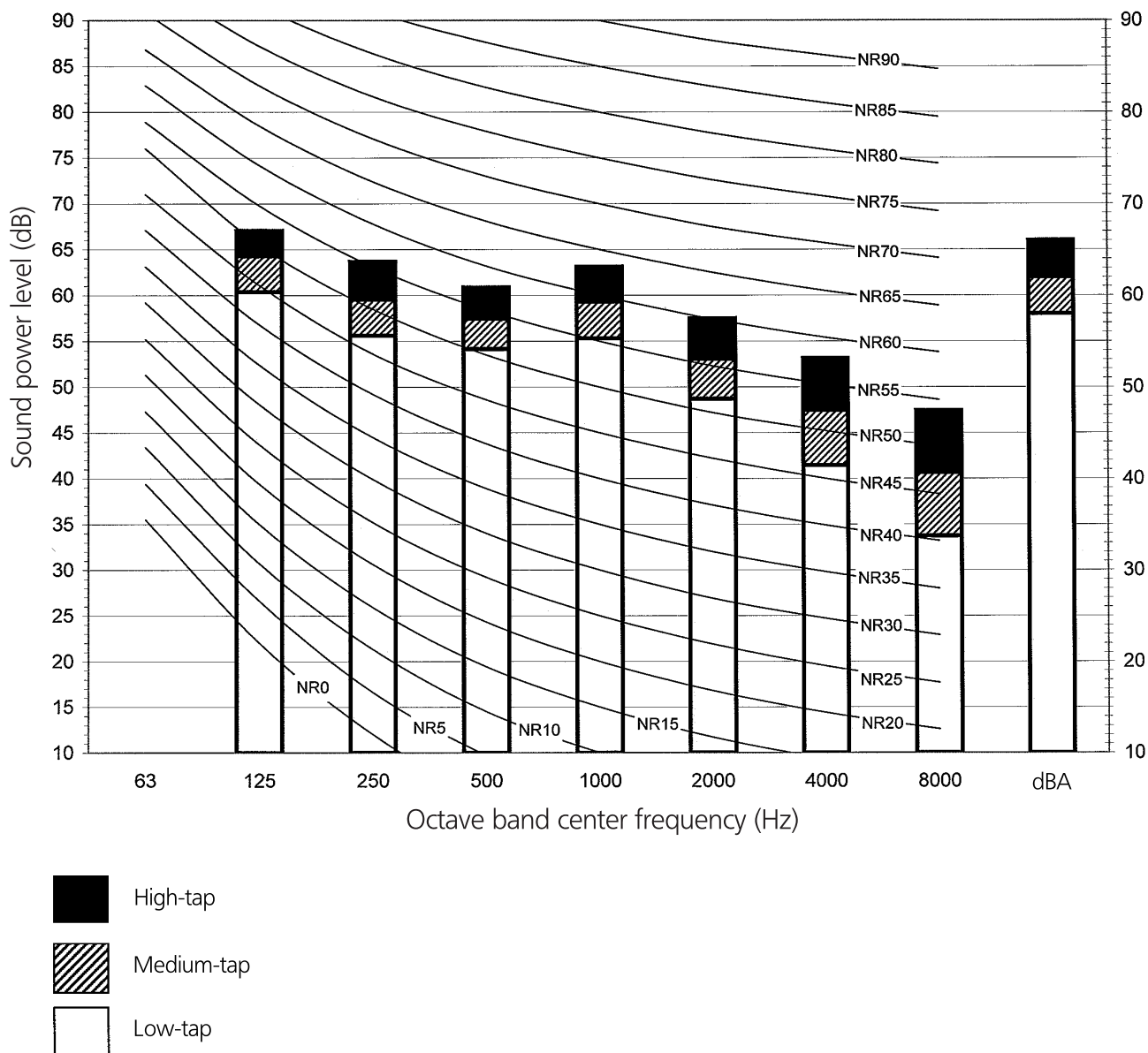


2TW31296-3

10 Sound data

10 - 1 Sound Power Spectrum

FDQ125C



NOTES

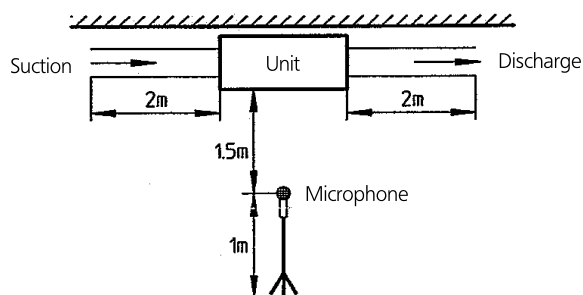
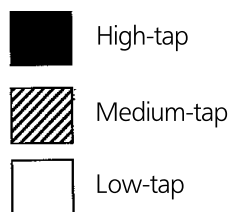
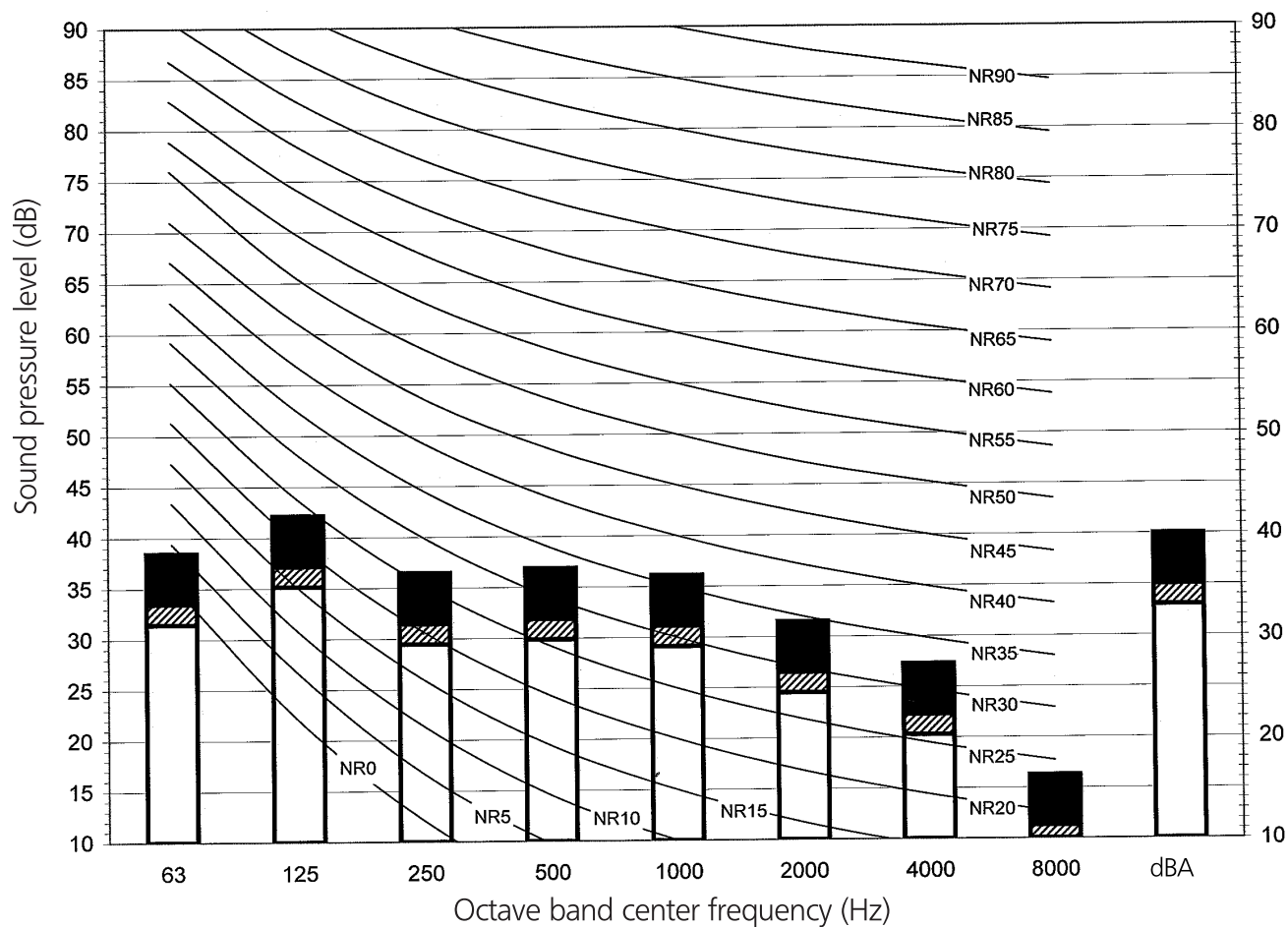
- 1 dBA = A-weighted sound power level (A-scale according to IEC)
- 2 Reference acoustic intensity 0dB = $10^{-6} \mu\text{W}/\text{m}^2$
- 3 Measured according to ISO 3744

3TW31267-1

10 Sound data

10 - 2 Sound Pressure Spectrum - Cooling

FDQ125C



NOTES

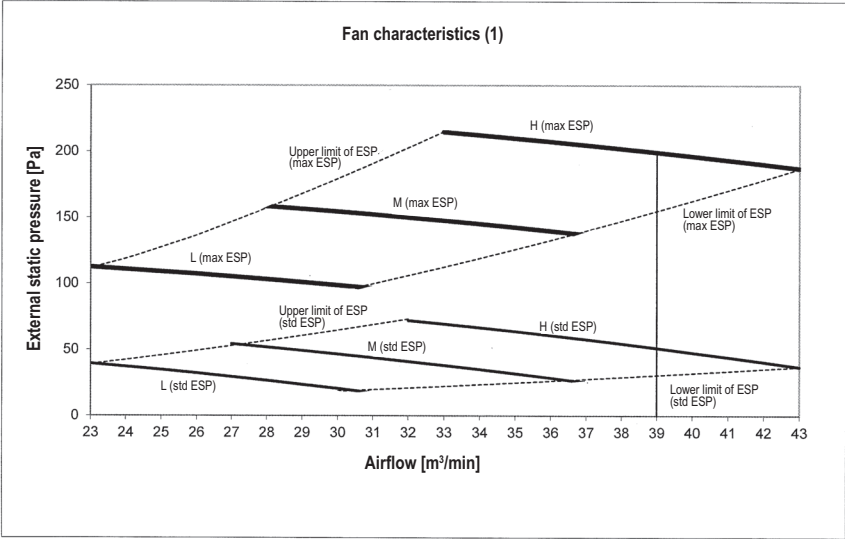
- 1 Data is valid at free field condition
- 2 Data is valid at nominal operation condition
- 3 dBA = A-weighted sound pressure level (A-scale according to IEC)
- 4 Reference acoustic pressure 0dB = 20μPa

3TW31267-2

11 Fan characteristics

11 - 1 Fan Characteristics

FDQ125C

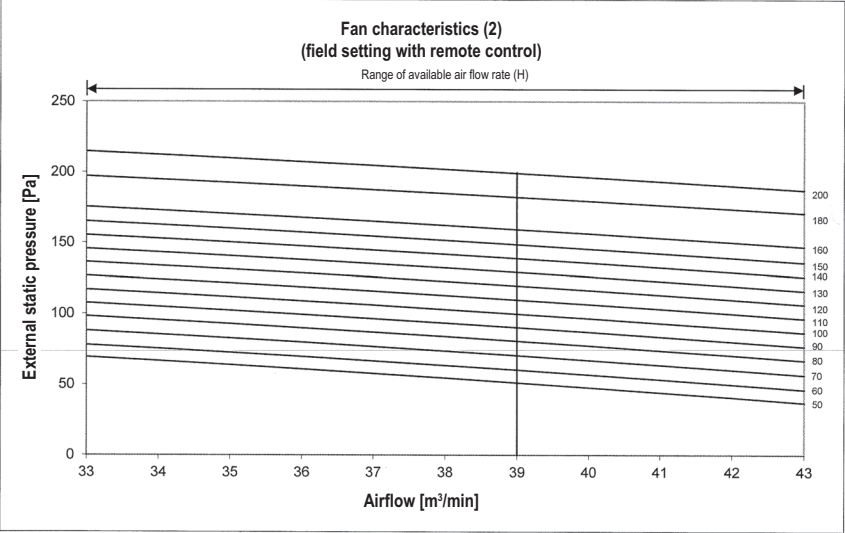


NOTES

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

3D085254

FDQ125C



NOTES

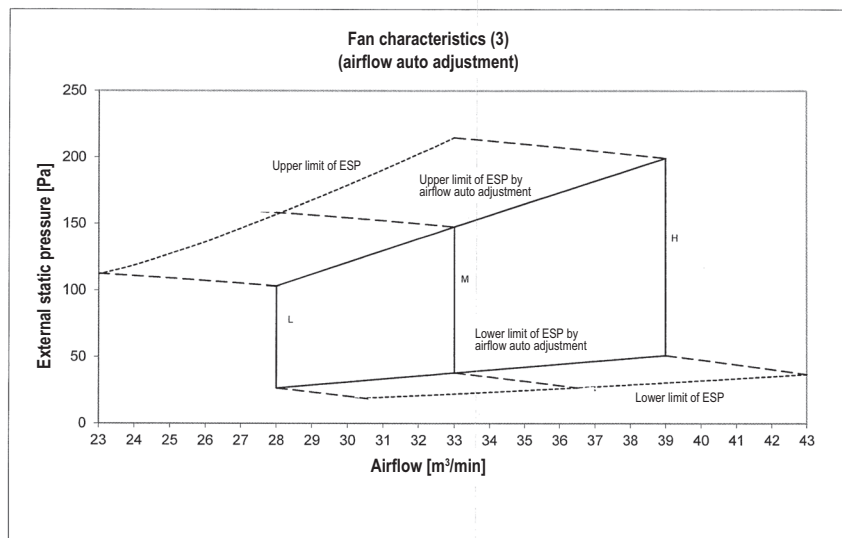
- 1. Fan characteristics as shown are in "fan only" mode.
- 2. ESP: External static pressure

3D085254

11 Fan characteristics

11 - 1 Fan Characteristics

FDQ125C



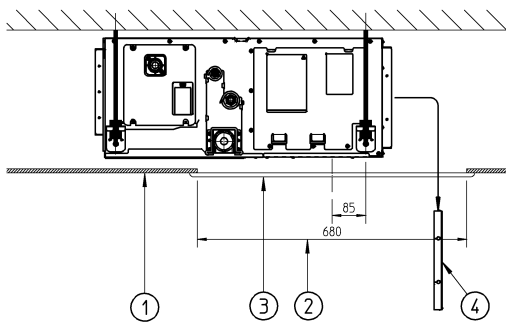
NOTES

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

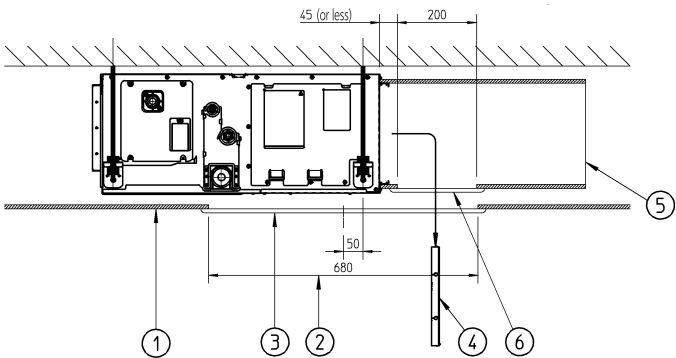
3D085254

12 Installation
12 - 1 Installation Method

FDQ125C

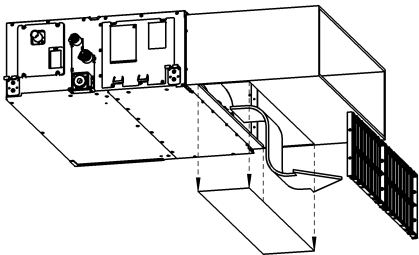


Installation without air inlet duct



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

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

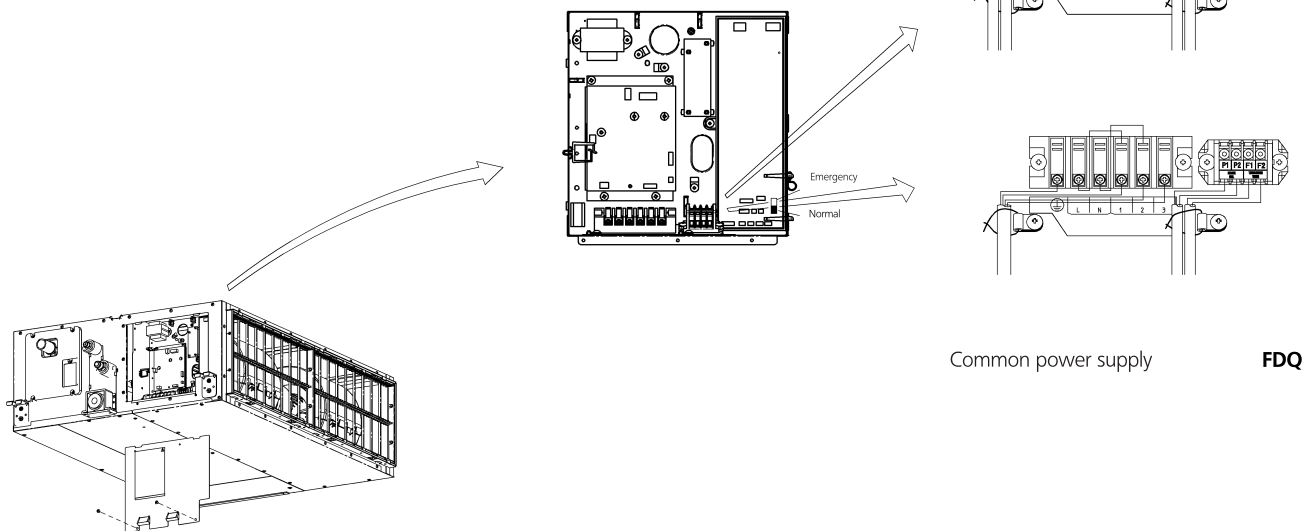
3TW31184-4

12 Installation

12 - 2 Switch Box Connection

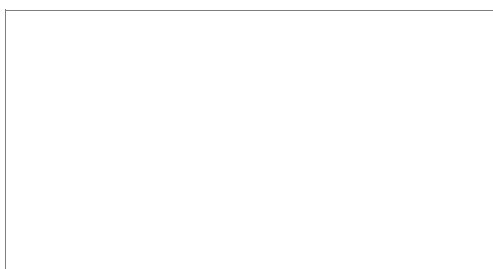
FDQ125C

12



3TW31184-5B

Daikin Europe N.V. Naamloze Vennootschap - Zandvoordestraat 300, B-8400 Oostende - Belgium - www.daikin.eu - BE 0412 120 336 - RPR Oostende



EEDEN

08/16



Daikin Europe N.V. participates in the Eurovent Certification programme for Liquid Chilling Packages (LCP), Air handling units (AHU), Fan coil units (FCU) and variable refrigerant flow systems (VRF) Check ongoing validity of certificate online: www.eurovent-certification.com or using: www.certiflash.com



The present leaflet is drawn up by way of information only and does not constitute an offer binding upon Daikin Europe N.V.. Daikin Europe N.V. has compiled the content of this leaflet to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin Europe N.V. explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this leaflet. All content is copyrighted by Daikin Europe N.V.