

Air Conditioners

Technical Data

Concealed ceiling unit



EEDEN12-100

FDQ-C7

TABLE OF CONTENTS

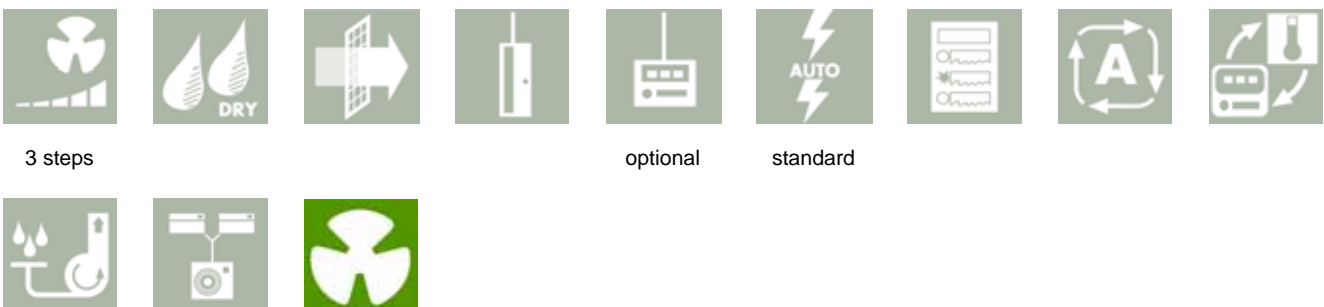
FDQ-C

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

1 Features

1

- Seasonal efficiency, optimized for all seasons.
- Seasonal efficiency gives an indication on how efficient an air conditioner operates over an entire heating or cooling season.
- Blends unobtrusively with any interior décor: only the suction and discharge grilles are visible
- New casing: reduced height to fit flush into false ceilings
- Reduction in power consumption thanks to DC inverter fans.
- 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
- During start up, the room can be cooled down or heated very quickly; once the temperature in the room has reached its set point, the low power operation starts to save energy.
- Standard air filter removes airborne dust particles to ensure a steady supply of clean air
- No optional adapter needed for DIII-connection: standard plug and play connection with centralised control systems, intelligent touch controller, intelligent manager, ...
- Standard drain pump
- Home leave operation maintains the indoor temperature at your specified comfort level during absence, thus saving energy



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	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		m ²	0.383	
	Stages	Quantity		16	
	Empty tubeplate hole	Quantity		0	
	Tube type			ø7 Hi-XSS	
	Fin	Fin	Type		Symmetric waffle louvre
			Treatment		Hydrophilic
Fan	Type			Sirocco fan	
	Quantity			3	
	Air flow rate	Cooling	High	m ³ /min	39
			Low	m ³ /min	28
		Heating	High	m ³ /min	39
			Low	m ³ /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
Output	High	W	350		
Sound power level	Cooling	Nom.	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				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
Current - 60Hz	Nominal running current	A	-

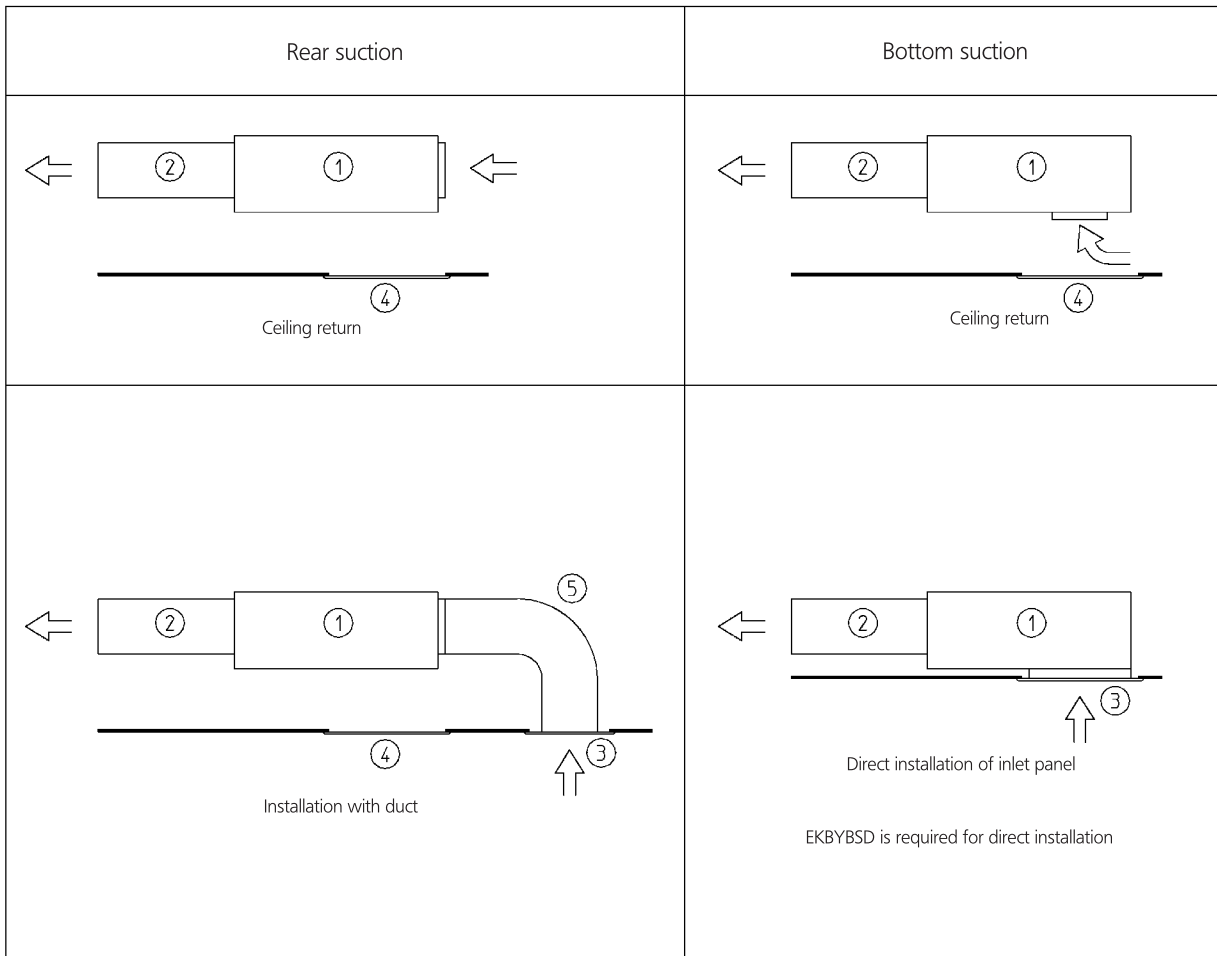
Notes

- (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

FDQ125C7



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

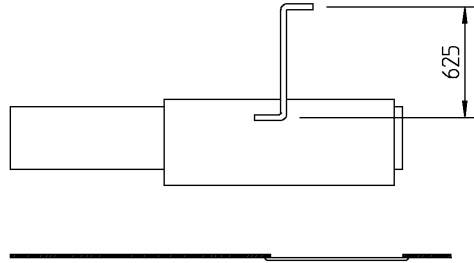
3TW31183-1A

3 General Characteristics

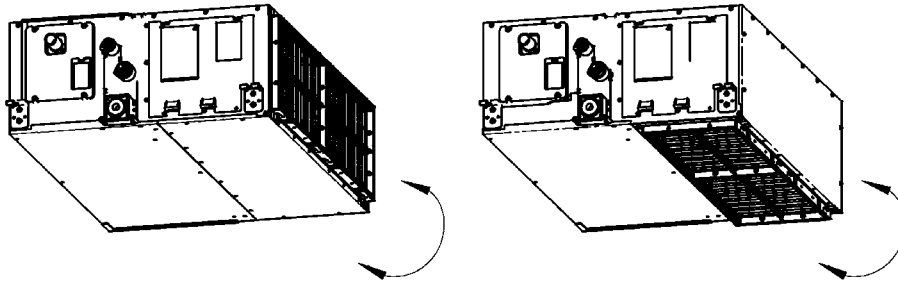
3 - 1 General characteristics

3

FDQ125C7



Drain pump up height



Easy modification from rear to bottom suction

3TW31183-1A

4 Safety device settings

4 - 1 Safety Device Settings

FDQ125C7

Model	Safety devices	35	50	60	71	100	125	140
FDQ	PC board fuse	250V 3,15A	250V 3,15A	250V 3,15A	250V 3,15A	250V 3,15A	250V 3,15A	250V 3,15A
	PC board fuse (Fan driver)	250V 5A	250V 5A	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

3TW31279-2

5 Options

5 - 1 Options

5

FDQ125C7

OPTIONS

Item		FDQ125
Panel related	Decoration panel (*4)	BYBS125D
Air inlet and air discharge outlet related	Air discharge adapter for round duct	IDA025K140A
Panel related	Decoration panel option	EKBYBS0

OPERATION CONTROL

Item			FDQ125
Remote controller	Wired type		BRC1D528 / BRC1E52A7 (*5) / BRC1E52B7 (*6)
	Infrared type	HP	BRC4C65
CO		BRC4C66	
Option PCB for external electrical heater, humidifier and/or hour meter (*1) (*3)			EKRP1B2A
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			DCS302CAS1
Unified ON/OFF controller			DCS301BAS1
Schedule timer			DST301BAS1
Remote ON/OFF and FORCED OFF kit			EXROR03
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 EKRP1B2A).

(*2) If installing an electrical heater, an option PCB for external electrical heater (EKRP1B2) 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 EKBYBS0 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

3TW33989-2A

6 Dimensional drawings

6 - 1 Dimensional Drawings

FDQ125C7

Top View (Fresh Air Intake): Shows a circular knock-out hole with a diameter of $\phi 125$. The fresh air intake position is indicated. The unit has a diameter of 700 mm and a height of 165 mm. It features 6 x M5 mounting points on the circumference.

Side View (Suspension): Shows the unit's height of 390 mm and a width of 1400 mm. The suspension bolt is positioned 67 mm from the top edge. The service space below is 500 mm or more.

Front View (Service Space): Shows the unit's width of 700 mm and a height of 25 mm. It includes a service space of 271 mm. Callouts 1 through 10 indicate connection points.

Top View (Suspension Position): Shows the unit's width of 700 mm and a height of 25 mm. It includes a service space of 271 mm. Callouts 1 through 10 indicate connection points.

Side View A-A: Shows the unit's width of 1295 mm and a height of 150 mm. The service space below is 261 mm.

Front View (Ceiling Opening): Shows the unit's width of 500 mm and a height of 1460 mm. The ceiling opening is 462 mm wide. The unit is shown with a decoration panel.

Item	Name	Description
1	Liquid pipe connection	$\phi 9.52$ Flare connection
2	Gas pipe connection	$\phi 15.80$ Flare connection
3	Drain pipe connection	VP25 (O.D. $\phi 32$, I.D. $\phi 25$)
4	Remote controller wiring connection	-
5	Power supply connection	-
6	Drain hole	VP25 (O.D. $\phi 32$, I.D. $\phi 25$)
7	Air filter	-
8	Air suction side	-
9	Air discharge side	-
10	Nameplate	-

NOTES

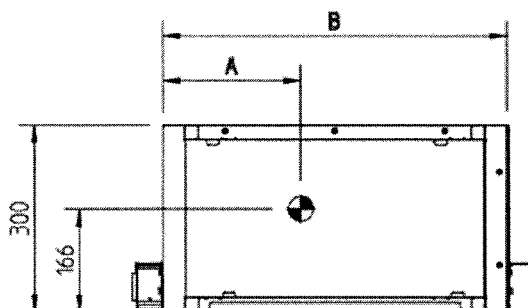
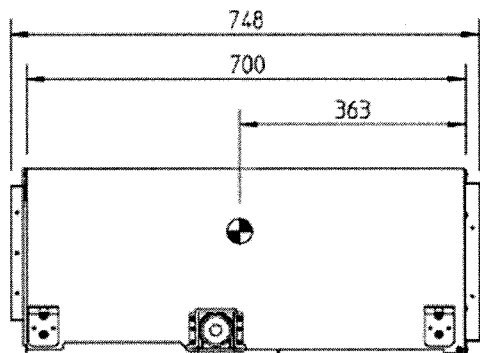
- Refer to the outlook drawing of optional accessories when installing them.
- The required ceiling depth varies according to the configuration of the specific system.
- For maintenance of the air filter, it is necessary to provide a service access panel.
- Optional decoration panel: BYBS125DJW1 (Light ivory white 10Y9/0.5)

3TW31254-1B

7 Centre of gravity

7 - 1 Centre of Gravity

FDQ125C7



Model	A	B
FDQ125	619	1400

4TW33989-1

8 Piping diagrams

8 - 1 Piping Diagrams

FDQ125C7

Refrigerant flow
 Cooling ———→
 Heating - - - - -→

Refrigerant pipe connection port diameters

Model	Gas	Liquid
FDQ125C	15.90	9.52

Heat exchanger

Liquid pipe connection port

Gas pipe connection port

←← Check valve ← Flare connection — Screw connection — Flange connection × Pinched pipe → Spinned pipe

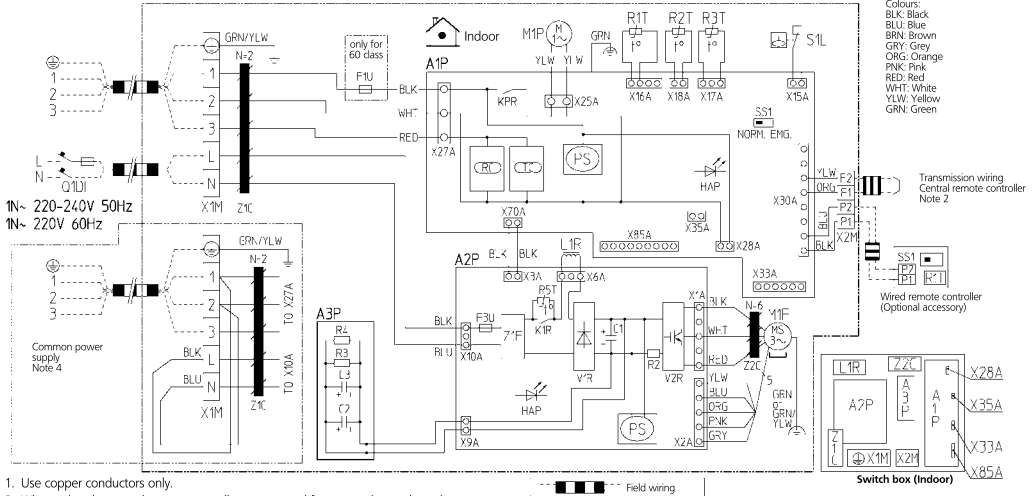
3TW31275-1A

9 Wiring diagrams

9 - 1 Wiring Diagrams - Single Phase

FDQ125C7

- 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)
 - H4P : Light emitting diode (Service monitor-green)
 - KPR,K1R : Magnetic relay
 - L1R : Reactor
 - L1F : Motor (Fan)
 - M1P : Motor (Drain pump)
 - Q1D1 : Switching power supply
 - R2 : 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 : Noise filter
 - Z2F : Signal receiver circuit
 - Z3F : 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)

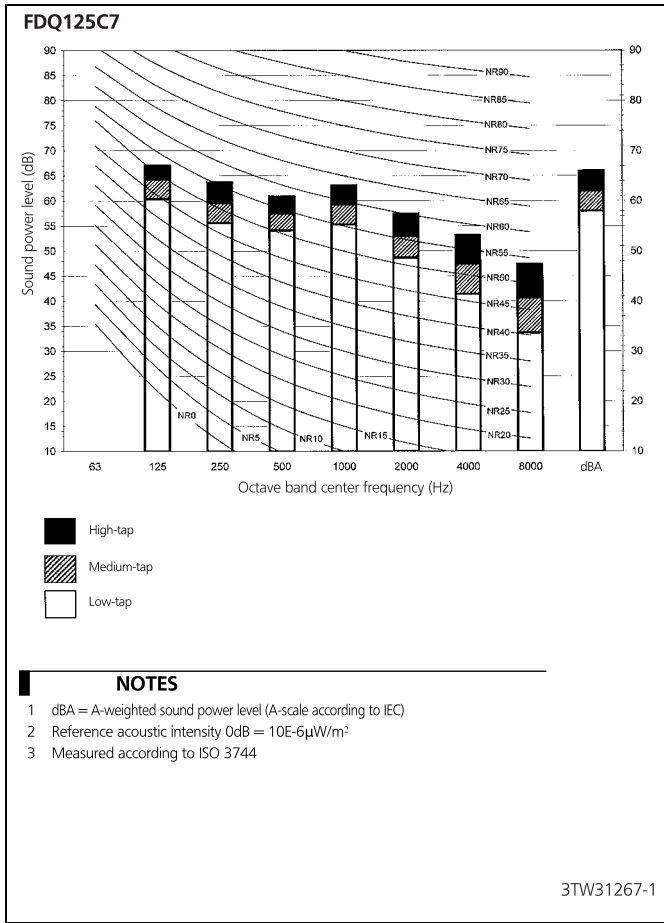


1. Use copper conductors only.
2. When using the central remote controller, see manual for connection to the unit.
3. The remote controller model varies according to the combination system. see technical materials and catalogues, etc. before connecting.
4. Refer to installation manual

2TW31296-3

10 Sound data

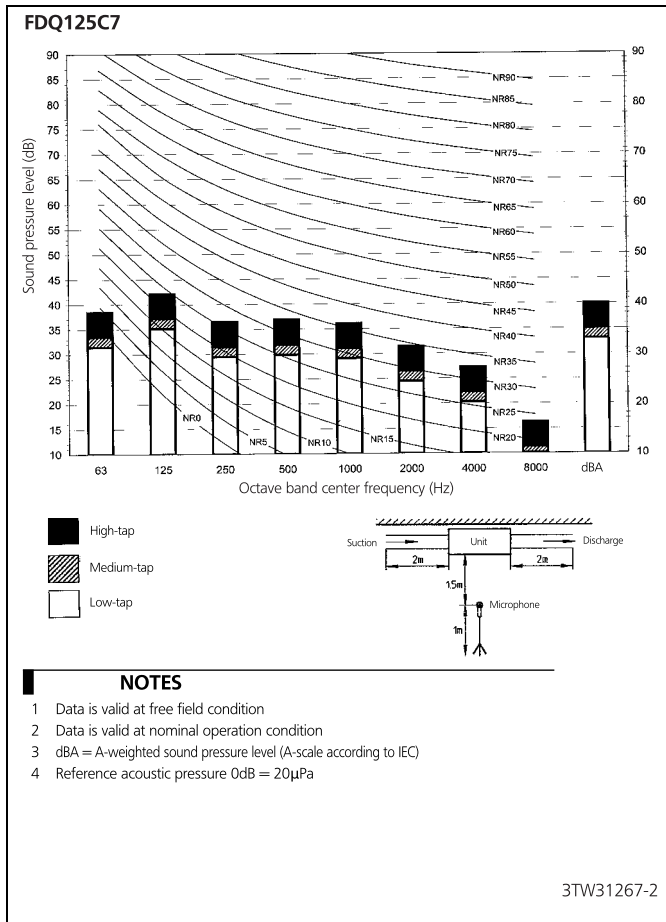
10 - 1 Sound Power Spectrum



10 Sound data

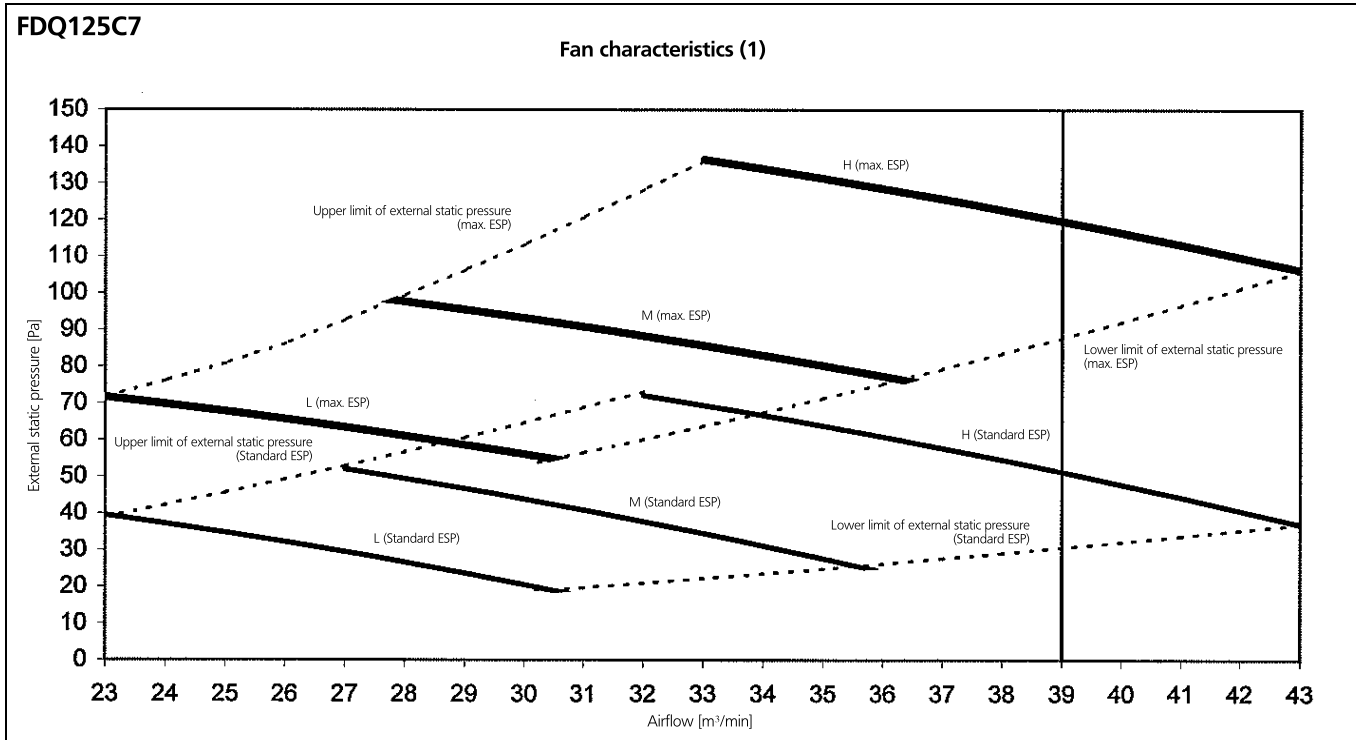
10 - 2 Sound Pressure Spectrum

10



11 Fan characteristics

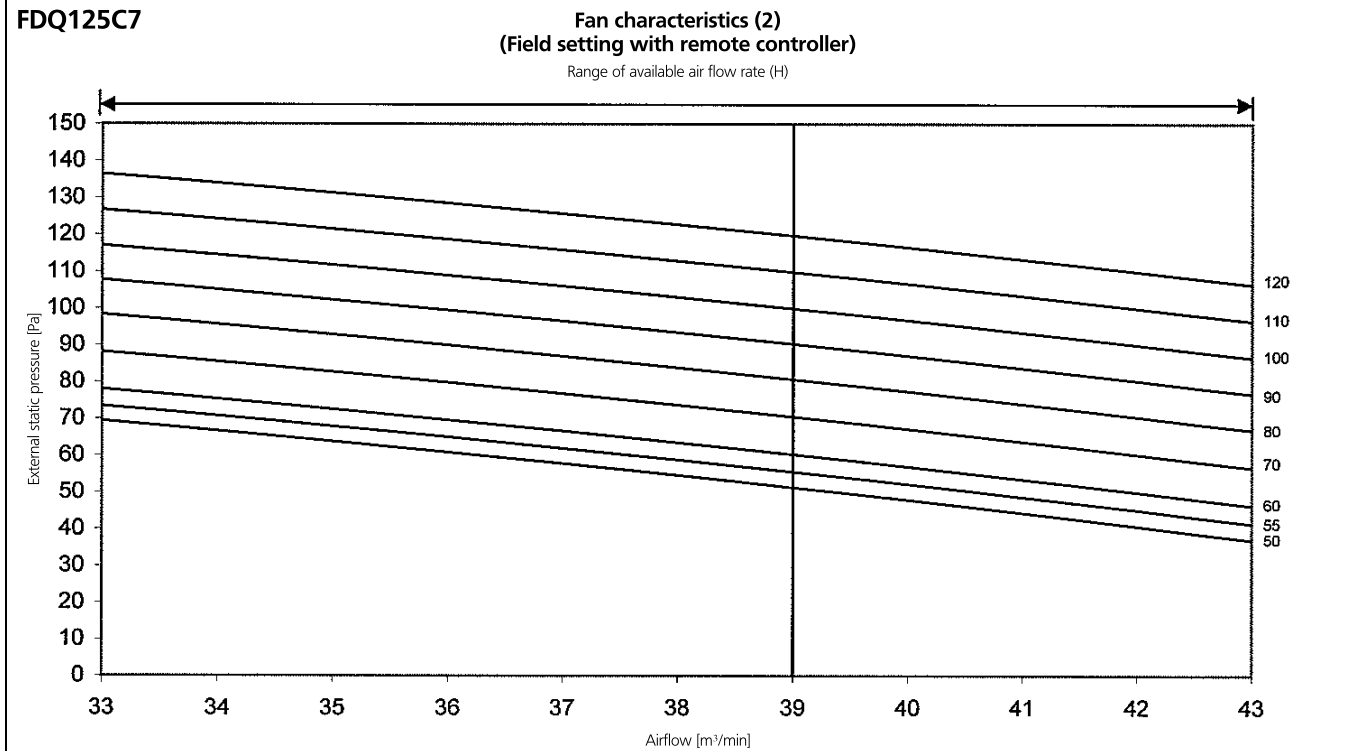
11 - 1 Fan Characteristics



NOTES

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

3TW31268-1



NOTES

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

3TW31268-1

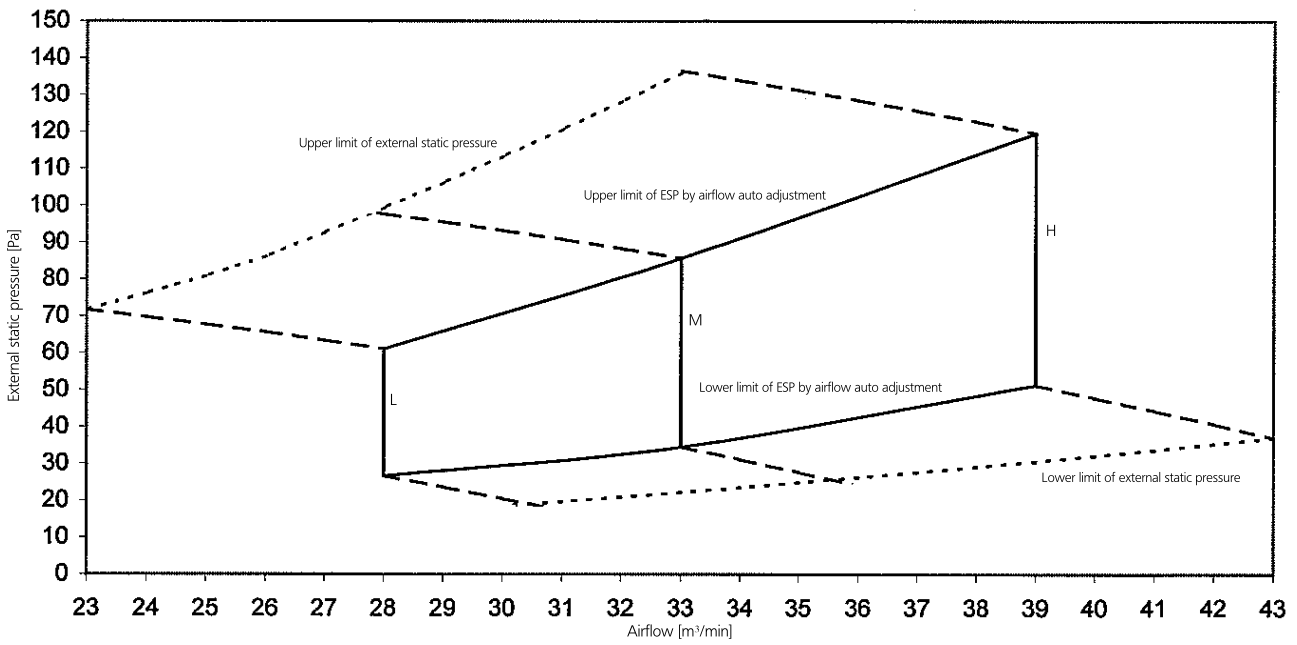
11 Fan characteristics

11 - 1 Fan Characteristics

11

FDQ125C7

Fan characteristics (3)
(airflow auto adjustment)



NOTES

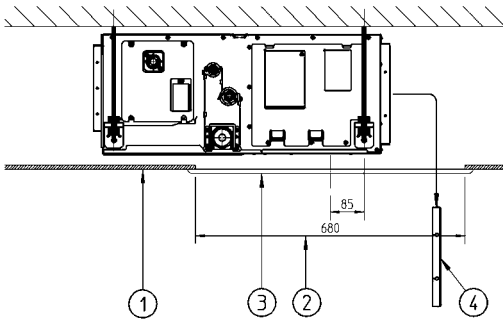
- 1 Fan characteristics as shown are in 'fan only' mode
- 2 ESP: External static pressure

3TW31268-1

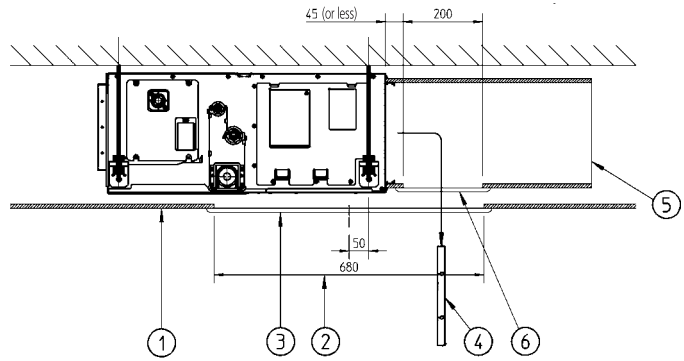
12 Installation

12 - 1 Installation Method

FDQ125C7

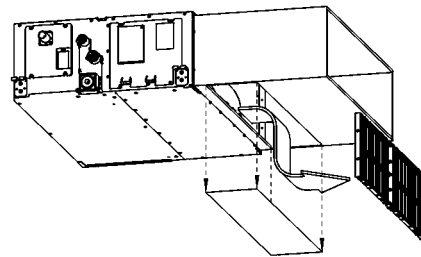


Installation without air inlet duct



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.

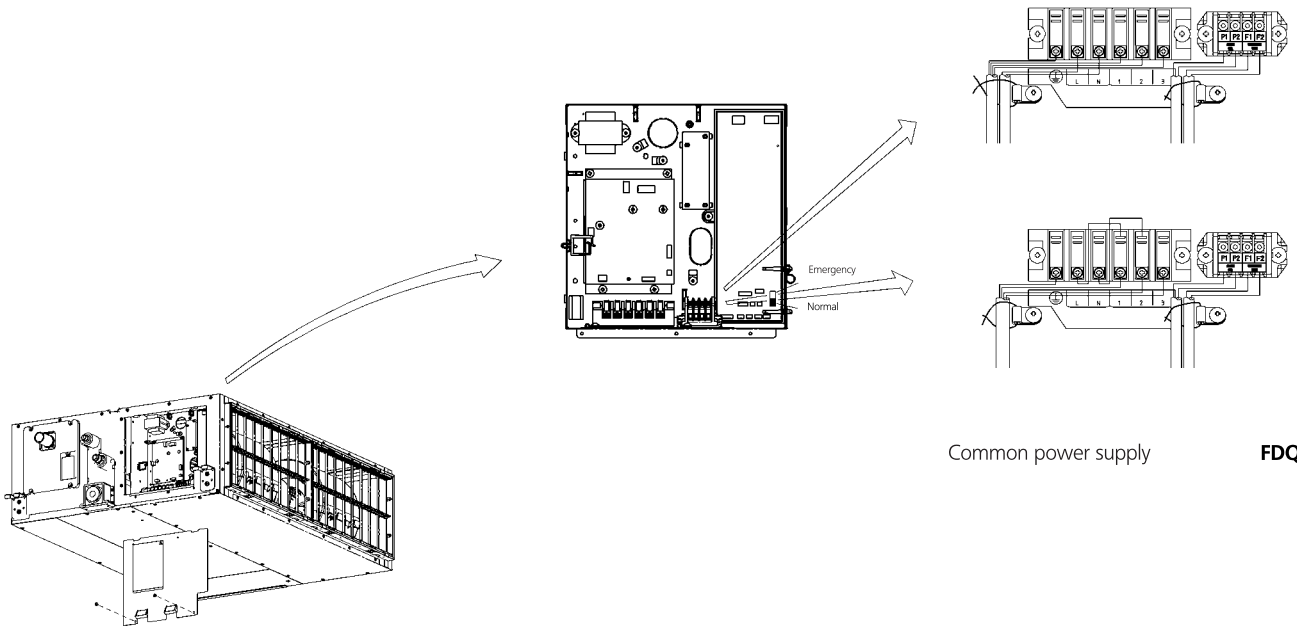
3TW31184-4

12 Installation

12 - 2 Switch Box Connection

12

FDQ125C7



Common power supply

FDQ

3TW31184-5B

In all of us,
a green heart



Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.

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.



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



EEDEN12-100

Daikin products are distributed by: