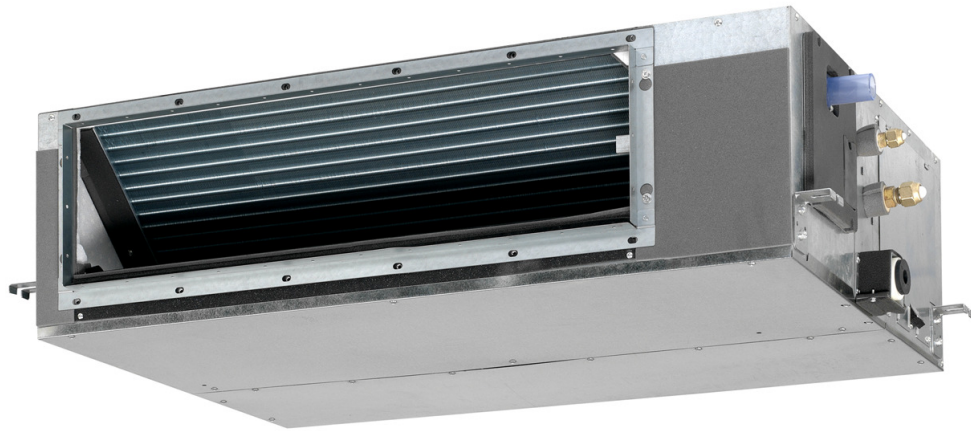


1 Features

- Reduction in power consumption thanks to DC inverter fans
- Improved comfort thanks to 3-step airflow control
- Maximum external static pressure (ESP) is 100Pa
- Possibility to change ESP through wired remote control allows optimisation of the supply air volume
- Blends unobtrusively with any interior décor: only the suction and discharge grilles are visible
- Energy efficient: up to class A energy labels
- Home leave operation saves energy during absence
- Whisper quiet operation: down to 26 dBA sound pressure level
- Standard air filter: removes airborne dust particles to ensure a steady supply of clean air
- Easy installation thanks to automatic air flow adjustment towards nominal air flow rate
- Built-in drain pump as standard increases reliability of the drain system



			optional	standard				3 steps
via wired remote control							optional	

2 Specifications

2-1 FOR INDOOR UNITS ONLY			FBQ35C7VEB	FBQ50C7VEB	FBQ60C7VEB	FBQ71C7VEB	FBQ100C7VEB	FBQ125C7VEB	FBQ140C7VEB
Nominal input (Indoor only)	Cooling	kW	0.14	0.14	0.35	0.35	0.35	0.35	0.35
	Heating	kW	0.14	0.14	0.35	0.35	0.35	0.35	0.35

2-2 TECHNICAL SPECIFICATIONS				FBQ35C7VEB	FBQ50C7VEB	FBQ60C7VEB	FBQ71C7VEB	FBQ100C7VEB	FBQ125C7VEB	FBQ140C7VEB	
Casing	Colour		Non painted								
	Material		Galvanised steel								
Dimensions	Packing	Height	mm	355	355	355	355	355	355	355	
		Width	mm	920	920	1,220	1,220	1,620	1,620	1,620	
		Depth	mm	900	900	900	900	900	900	900	
	Unit	Height	mm	300	300	300	300	300	300	300	
		Width	mm	700	700	1,000	1,000	1,400	1,400	1,400	
		Depth	mm	700	700	700	700	700	700	700	
Weight	Unit		kg	25	25	34	34	45	45	45	
	Packed Unit		kg	28	28	41	41	53	53	53	
Required Ceiling Void			mm	>350							
Heat Exchanger	Dimensions	Length	mm	440	440	740	740	1,140	1,140	1,140	
		Nr of Rows			3	3	3	3	3	3	
		Fin Pitch	mm	1.75	1.75	1.75	1.75	1.75	1.75	1.75	
		Nr of Passes			4	4	7	7	11	11	11
		Face Area	m ²	0.148	0.148	0.249	0.249	0.383	0.383	0.383	
		Nr of Stages			16	16	16	16	16	16	
	Tube type		Hi-XSS (7)								
	Fin	Type		Symmetric waffle louvre							
Treatment		Hydrophilic									
Fan	Type		Sirocco fan								
	Quantity			1	1	2	2	3	3	3	
Air Flow Rate	Cooling	High	m ³ /min	16	16	18	18	32	39	39	
		Low	m ³ /min	11	11	15	15	23	28	28	
	Heating	High	m ³ /min	16	16	18	18	32	39	41	
		Low	m ³ /min	11	11	15	15	23	28	29	
Fan	Max	High	Pa	100	100	100	100	100	100	100	
		Standard	Pa	30	30	30	30	40	50	50	
	Motor	Quantity			1	1	1	1	1	1	
		Model		Brushless DC							
		Number of steps			10	10	8	8	9	9	
Motor	Speed (cooling)	High	rpm	1,186	1,186	942	942	1,060	1,218	1,218	
		Low	rpm	875	875	823	823	813	920	920	
	Speed (heating)	High	rpm	1,186	1,186	942	942	1,060	1,218	1,280	
		Low	rpm	875	875	823	823	813	920	967	
Fan	Motor	Output (high)	W	140	140	350	350	350	350	350	
		Drive		Direct drive							
Cooling	Sound Power	High	dBA	63	63	57	57	61	66	66	
		Low	dBA	29	29	29	29	32	33	33	
	Sound Pressure	High	dBA	37	37	37	37	38	40	40	
Heating	Sound Pressure	High	dBA	37	37	37	37	38	40	41	
		Low	dBA	29	29	29	29	32	33	34	
Refrigerant	Type		R-410A								
Piping connections	Liquid (OD)	Type		Flare connection							
		Diameter (OD)	mm	6.35	6.35	6.35	9.52	9.52	9.52	9.52	
	Gas	Type		Flare connection							
		Diameter (OD)	mm	9.52	12.7	12.7	15.9	15.9	15.9	15.9	
	Drain	Diameter (OD)		VP25 (O.D. 32 / I.D. 25)							
	Heat Insulation		Both liquid and gas pipes								
Drain-up Height			mm	625	625	625	625	625	625	625	

2 Specifications

2-2 TECHNICAL SPECIFICATIONS			FBQ35C7VEB	FBQ50C7VEB	FBQ60C7VEB	FBQ71C7VEB	FBQ100C7VEB	FBQ125C7VEB	FBQ140C7VEB	
Decoration Panel	Model		BYBS45DJW1	BYBS45DJW1	BYBS71DJW1	BYBS71DJW1	BYBS125DJW1	BYBS125DJW1	BYBS125DJW1	
	Colour		White (10Y9/0,5)							
	Dimensions	H	mm	55	55	55	55	55	55	55
		W	mm	800	800	1,100	1,100	1,500	1,500	1,500
		D	mm	500	500	500	500	500	500	500
Weight		kg	3.5	3.5	4.5	4.5	6.5	6.5	6.5	
Air Filter			Resin net with mold resistance							
Safety Devices			PC board fuse							
			PC board fuse (fan driver)							
			Drain pump fuse							
Notes			Nominal cooling capacities are based on : indoor temperature : 27°CDB, 19°CWB, outdoor temperature : 35°CDB, equivalent refrigerant piping : 7.5m, level difference : 0m.							
			Nominal heating capacities are based on : indoor temperature : 20°CDB, outdoor temperature : 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							
Remote Control	Wired		BRC1D528							

1
2

3 Safety device settings

Safety devices		35	50	60	71	100	125	140
FBQ	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

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3

4 Options

FBQ35-140C

Options

Item	Type	FBQ35	FBQ50	FBQ60,71	FBQ100,125,140
Panel related	Decoration panel	BYBS45D		BYBS71D	BYBS125D
Air inlet and air discharge outlet related	Air discharge adapter for round duct	KDAJ25K56A		KDAJ25KA71A	KDAJ25KA140A

Operation Control

Item	Type	FBQ35	FBQ50	FBQ60,71	FBQ100,125,140
Remote Control	Wired Type		BRC1D528		
Option BCB for external el. heater, humidifier and/or hour meter (*1), (*3)			EKRP1B2A		
Adapter for wiring (interlock for fresh air intake fan) (*3)			KRP1BA54		
Wiring adapter for electrical appendices (*3)			KRP4A51		
Central remote control			DCS302CA51		
Unified ON/OFF control			DCS301BA51		
Schedule timer			DST301BA51		
Interface adapter for sky air series			DTA112BA51		
Remote ON/OFF and FORCED OFF kit			EKROR03		
Mounting plate for adapter PCB			KRP4A96		

NOTES

- (*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 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.

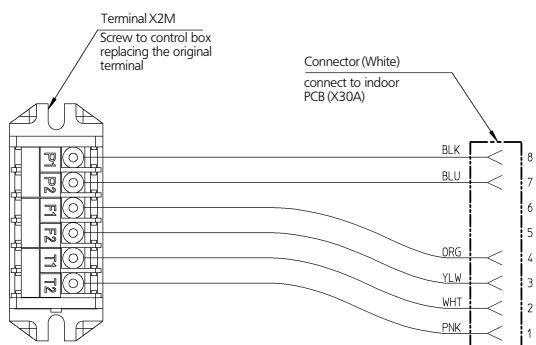
Contents of accessory bag

Description	Quantity	
	FBQ35,50,60,71,100,125,140	
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	

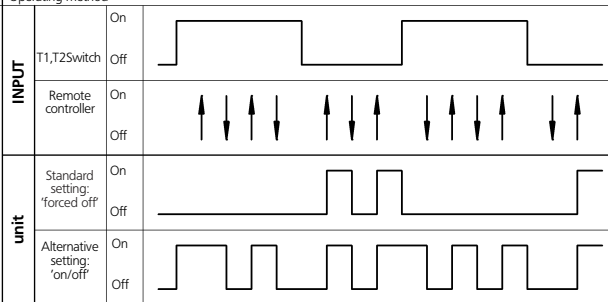
3TW31279-3A

EKROR03

Wire specifications



Operating method



Input 'ON' = closed contact.

Forced off	On/off operation
Input 'on' stops operation + disables control	Input off → on: starts operation, remote control is still enabled.
Input 'off' enables control	Input on → off: stops operation, remote control is still enabled.

Selection of 'FORCED OFF' and 'ON/OFF' operation

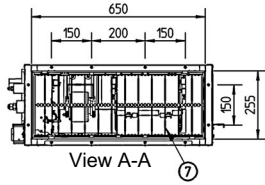
Setting	Mode No.	First code NO	Second code NO
Forced off	12 (22)	1	01
On/off operation			02

3TW31601-1

5 Dimensional drawing & centre of gravity

5 - 1 Dimensional drawing

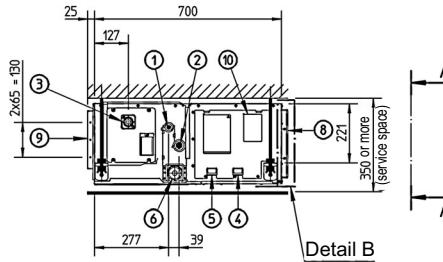
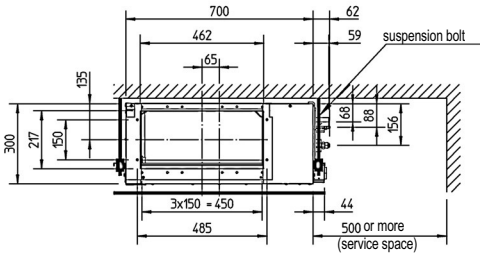
FBQ35C



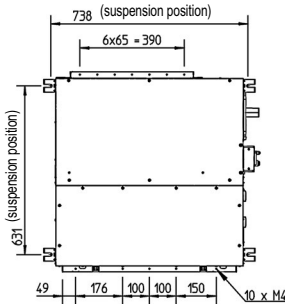
Detail B

NOTES

- 1 Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
- 2 The required ceiling depth varies according to the configuration of the specific system.
- 3 For maintenance of the air filter, it is necessary to provide a service access panel. Refer to the 'filter installation method' drawing



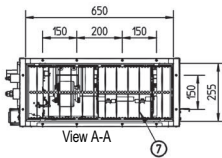
Detail B



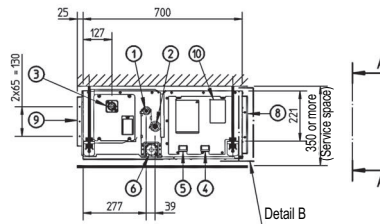
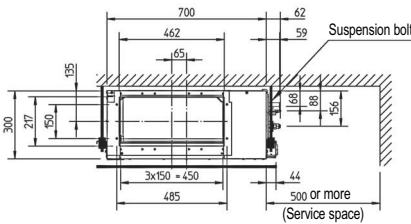
Item	Name	Description
1	Liquid pipe connection	Ø6.35 flare connection
2	Gas pipe connection	Ø9.52 flare connection
3	Drain pipe connection	VP25 (OD Ø32, ID Ø25)
4	Remote control wiring connection	-
5	Power supply connection	-
6	Drain hole	VP25 (OD Ø32, ID Ø25)
7	Air filter	-
8	Air suction side	-
9	Air discharge side	-
10	Nameplate	-

3TW31274-1

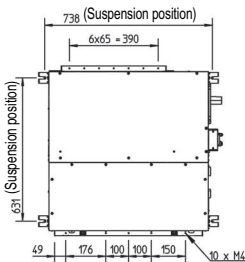
FBQ50C



Detail B



Detail B



Nr	Name	Description
1	Liquid pipe connection	ø 6.35 flare (connection)
2	Gas pipe connection	ø 12.70 (flare connection)
3	Drain pipe connection	VP25 (O.D. ø 32 /I.D. ø 25)
4	Remote control wiring connection	
5	Power supply connection	
6	Drain hole	VP25 (OD ø 32 /I.D. ø 25)
7	Air filter	
8	Air suction side	
9	Air discharge side	
10	Nameplate	

NOTE

- 1 Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
- 2 The required ceiling depth varies according to the configuration of the specific system.
- 3 For maintenance of the air filter, it is necessary to provide a service access panel. Refer to the 'filter installation method' drawing.

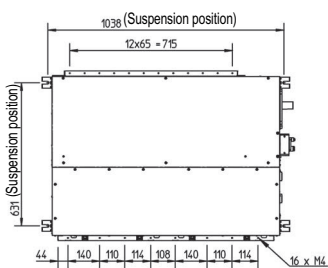
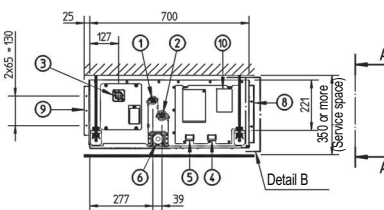
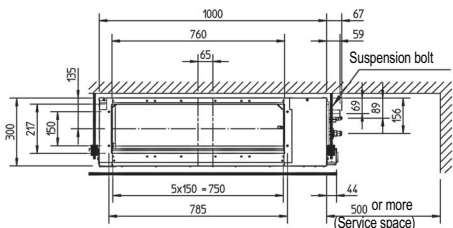
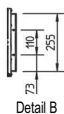
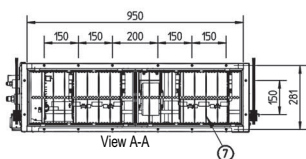
3TW31214-1

5 Dimensional drawing & centre of gravity

5 - 1 Dimensional drawing

FBQ60C

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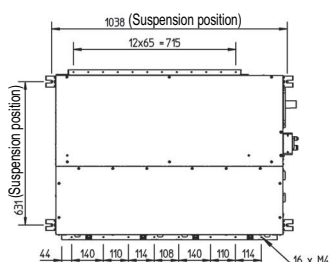
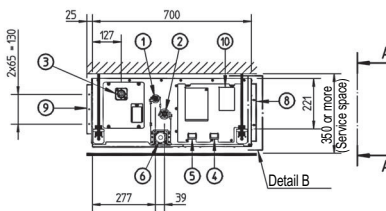
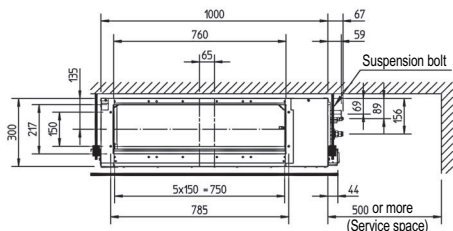
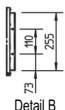
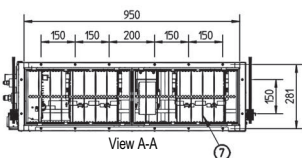
Nr	Name	Description
1	Liquid pipe connection	ø 6.35 flare (connection)
2	Gas pipe connection	ø 12.70 (flare connection)
3	Drain pipe connection	VP25 (O.D. ø 32 / I.D. ø 25)
4	Remote control wiring connection	
5	Power supply connection	
6	Drain hole	VP25 (OD ø 32 / I.D. ø 25)
7	Air filter	
8	Air suction side	
9	Air discharge side	
10	Nameplate	

NOTE

- Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
- 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. Refer to the 'filter installation method' drawing.

3TW31294-1

FBQ71C



Nr	Name	Description
1	Liquid pipe connection	ø 9.52 flare (connection)
2	Gas pipe connection	ø 15.90 (flare connection)
3	Drain pipe connection	VP25 (O.D. ø 32 / I.D. ø 25)
4	Remote control wiring connection	
5	Power supply connection	
6	Drain hole	VP25 (OD ø 32 / I.D. ø 25)
7	Air filter	
8	Air suction side	
9	Air discharge side	
10	Nameplate	

NOTE

- Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
- 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. Refer to the 'filter installation method' drawing.

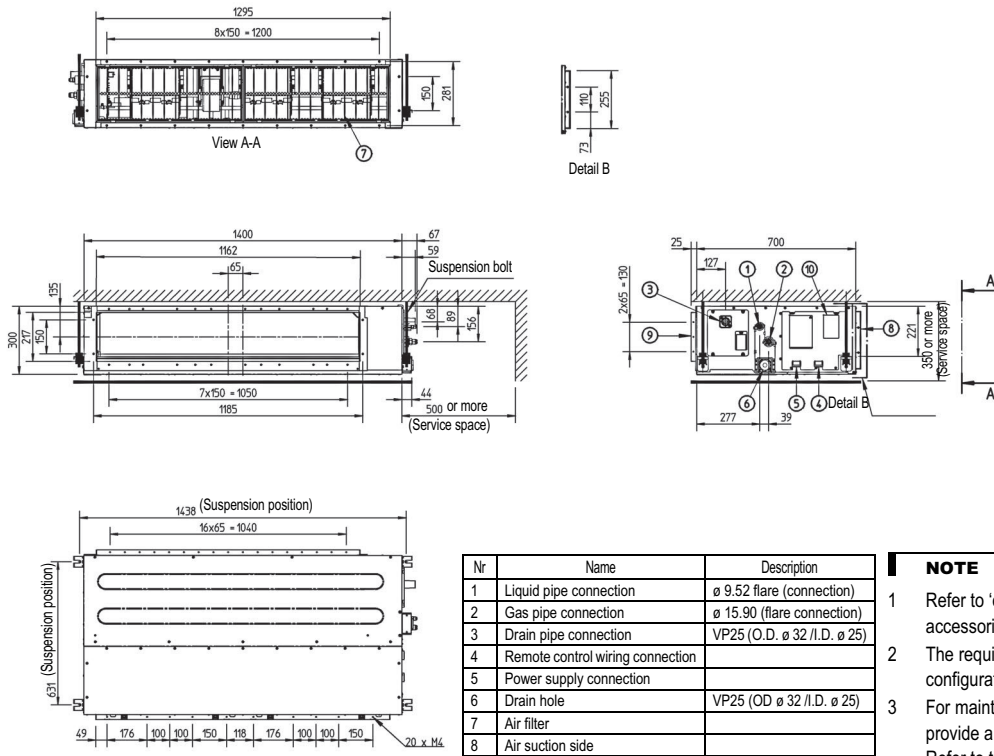
3TW31234-1

7

5 Dimensional drawing & centre of gravity

5 - 1 Dimensional drawing

FBQ100-140C



Nr	Name	Description
1	Liquid pipe connection	ø 9.52 flare (connection)
2	Gas pipe connection	ø 15.90 (flare connection)
3	Drain pipe connection	VP25 (O.D. ø 32 / I.D. ø 25)
4	Remote control wiring connection	
5	Power supply connection	
6	Drain hole	VP25 (OD ø 32 / I.D. ø 25)
7	Air filter	
8	Air suction side	
9	Air discharge side	
10	Nameplate	

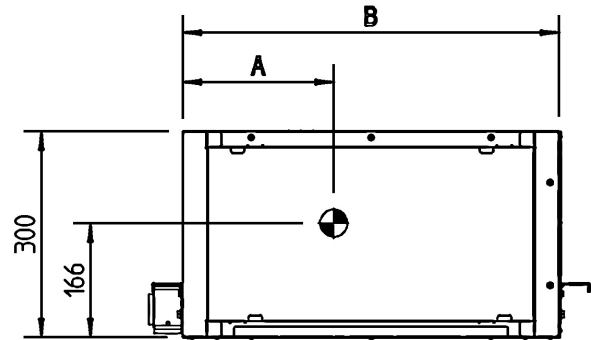
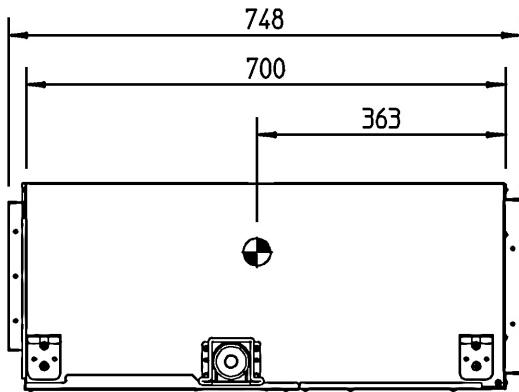
- NOTE**
- 1 Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
 - 2 The required ceiling depth varies according to the configuration of the specific system.
 - 3 For maintenance of the air filter, it is necessary to provide a service access panel. Refer to the 'filter installation method' drawing.

3TW31254-1

5 Dimensional drawing & centre of gravity

5 - 2 Centre of gravity

FBQ35-140C

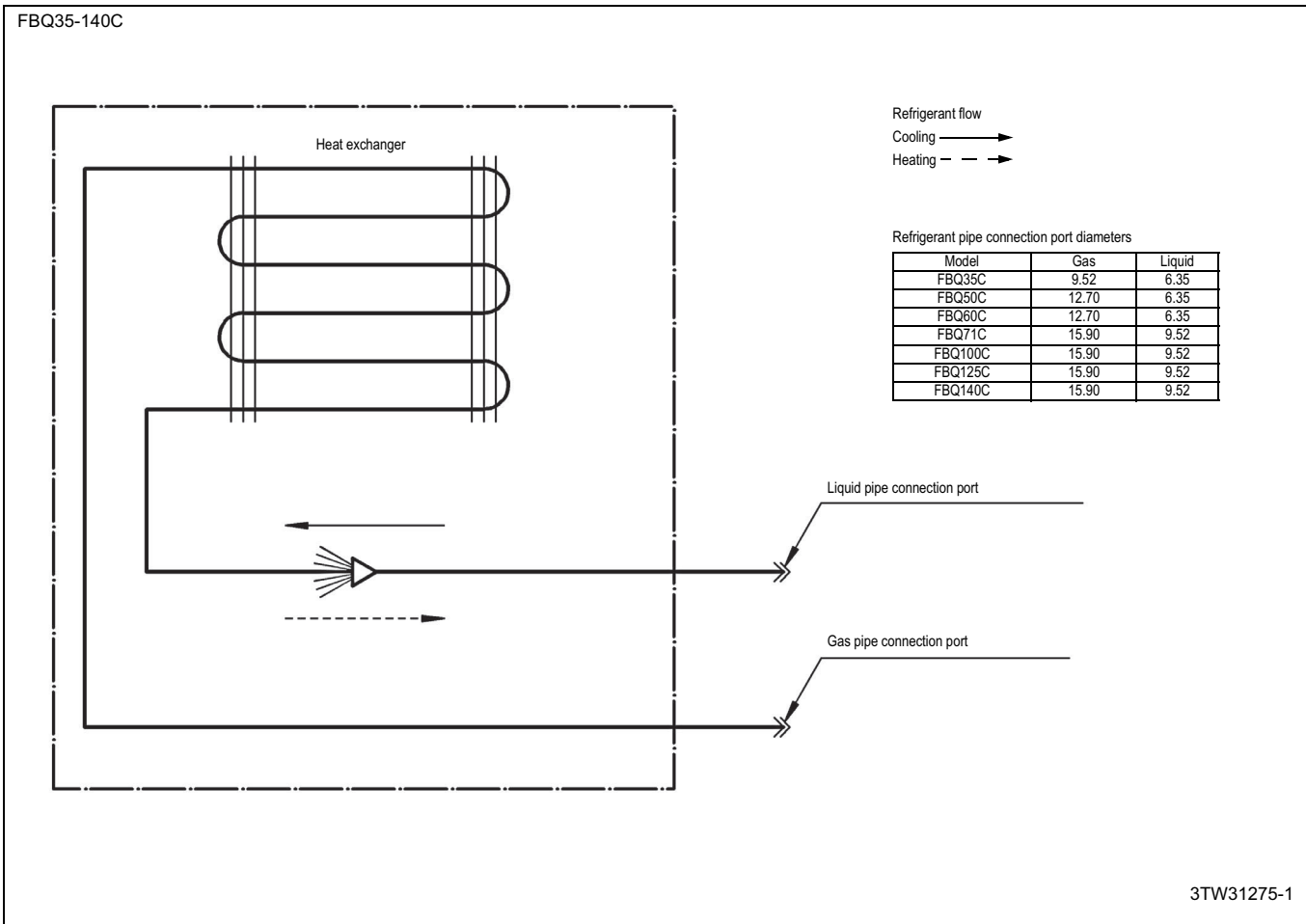


MODEL	A	B
FBQ35,50	283	700
FBQ60,71	441	1000
FBQ100~140	619	1400

4TW31189-1A

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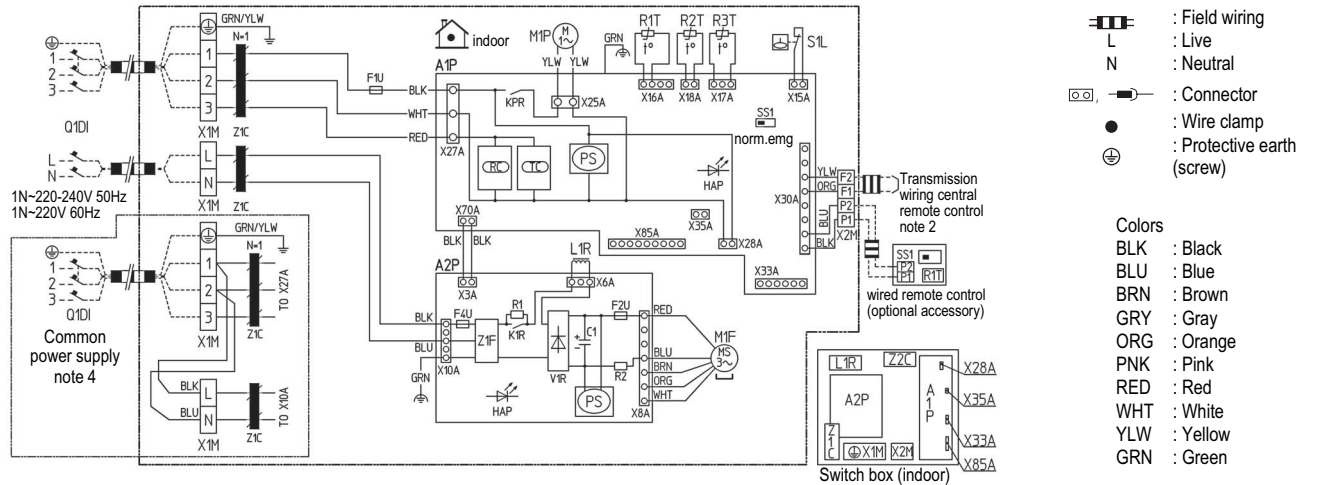
6 Piping diagram



7 Wiring diagram

7 - 1 Wiring diagram

FBQ35-50C7VEB



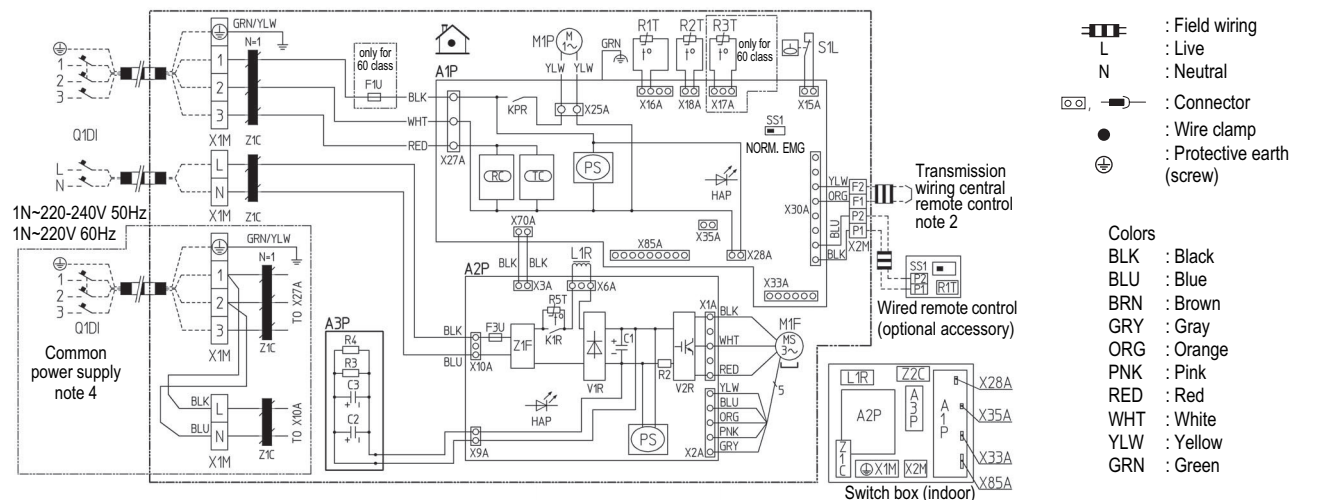
Indoor unit		M1F	Motor (fan)	SS1	Selector switch (emergency)	(TC)	Signal transmission circuit
A1P	Printed circuit board	M1P	Motor (drain pump)	S1L	Float switch	Connector optional accessory	
A2P	Printed circuit board (fan)	PS	Switching power supply	V1R	Diode bridge	X28A	Connector (Power supply for wiring)
C1	Capacitor	Q1DI	Earth leak detector	V2R	Power module	X33A	Connector (for wiring)
F1U, F2U	Fuse (T, 5A, 250V)	R1	Resistor (current limiting)	X1M	Terminal strip (power supply)	X35A	Connector (adapter)
F4U	Fuse (T, 6.3A, 250V)	R2	Current sensing device	X2M	Terminal strip (control)	X85A	Connector (for multi zoning)
HAP	Light emitting diode (Service monitor green)	R1T	Thermistor (suction air)	Z1C	Noise filter (ferrite core)	X33A	Connector (for wiring)
KPR, K1R	Magnetic relay	R2T	Thermistor (liquid)	Z1F	Noise filter	Wired remote control	
L1R	Reactor	R3T	Thermistor (gas)	(RC)	Signal receiver circuit	SS1	Selector switch (emergency)

2TW31276-1A

NOTES

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

FBQ60-140C7VEB



Indoor unit		L1R	Reactor	R3T	Thermistor (gas)	(TC)	Terminal strip (control)
A1P	Printed circuit board	M1F	Motor (fan)	R5T	Thermistor NTC (Current limiting)	Y1E	Electronic expansion valve
A2P	Printed circuit board (fan)	M1P	Motor (drain pump)	SS1	Selector switch (emergency)	Connector optional accessory	
A3P	Printed circuit board (capacitor)	PS	Switching power supply	S1L	Float switch	X33A	Connector (for wiring)
C1, C2, C3	Capacitor	Q1DI	Earth leak detector	V1R	Diode bridge	X35A	Connector (adapter)
F1U	Fuse (T, 5A, 250V)	R2	Current sensing device	V2R	Power module	X38A	Connector (for wiring)
F3U	Fuse (T, 6.3A, 250V)	R3, R4	Resistor (electric discharge)	Z1C	Noise filter (ferrite core)	Wired remote control	
HAP	Light emitting diode (service monitor green)	R1T	Thermistor (suction air)	Z1F	Noise filter	R1T	Thermistor (air)
KPR, K1R	Magnetic relay	R2T	Thermistor (liquid)	(RC)	Terminal strip (power supply)	SS1	Selector switch (main/sub)

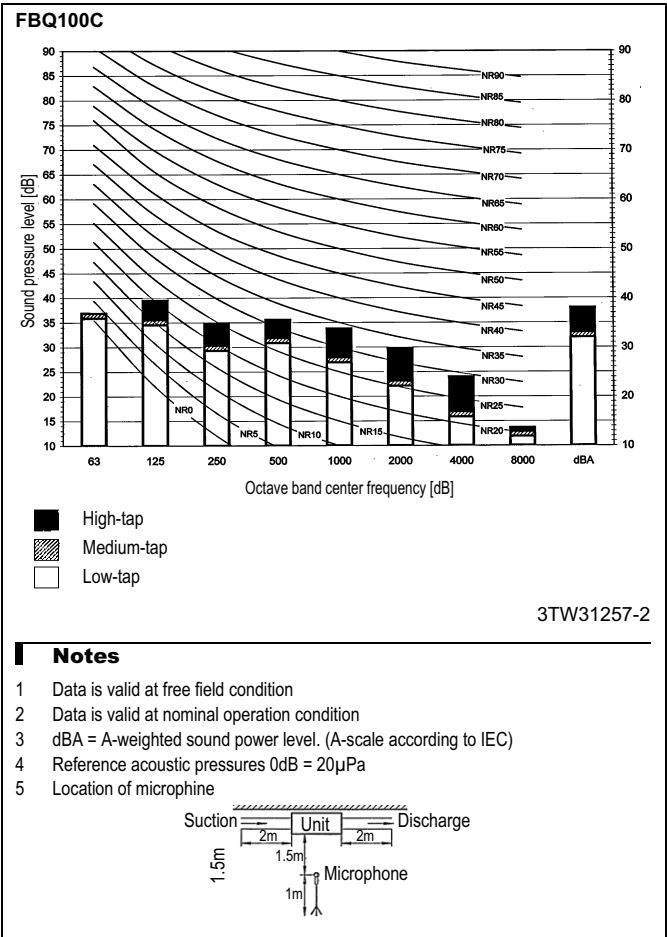
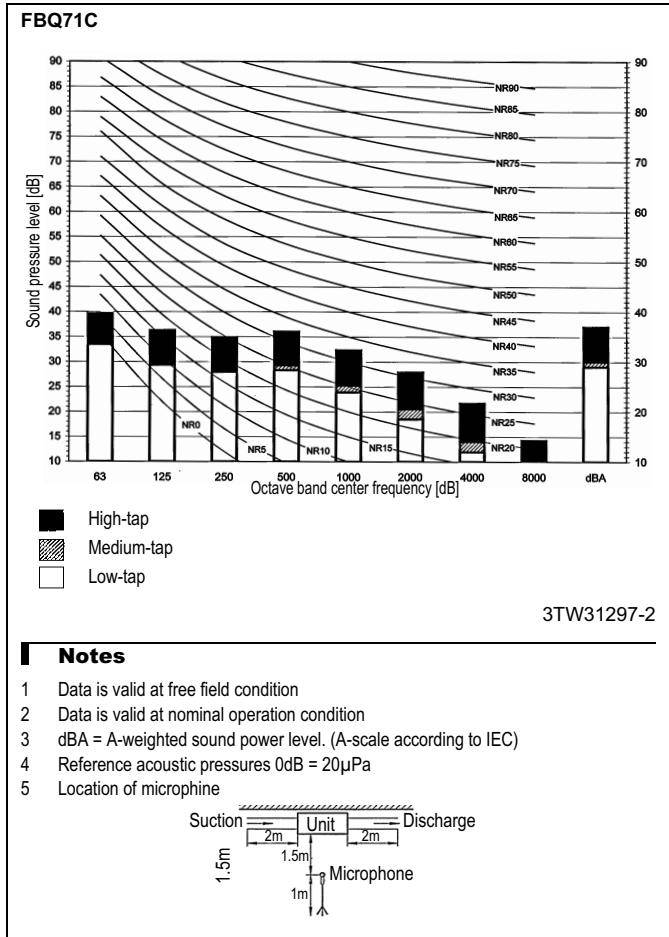
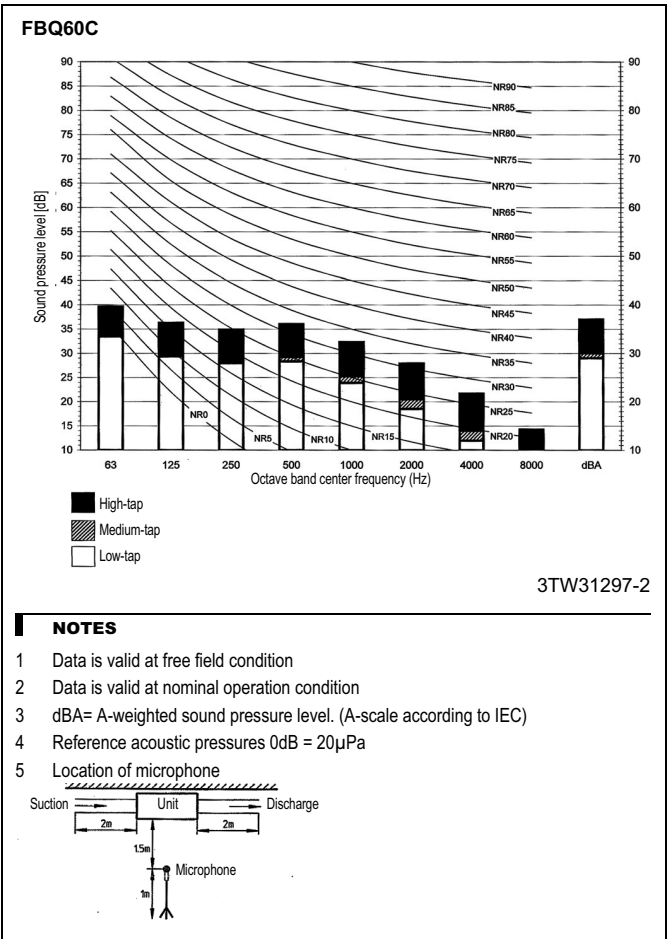
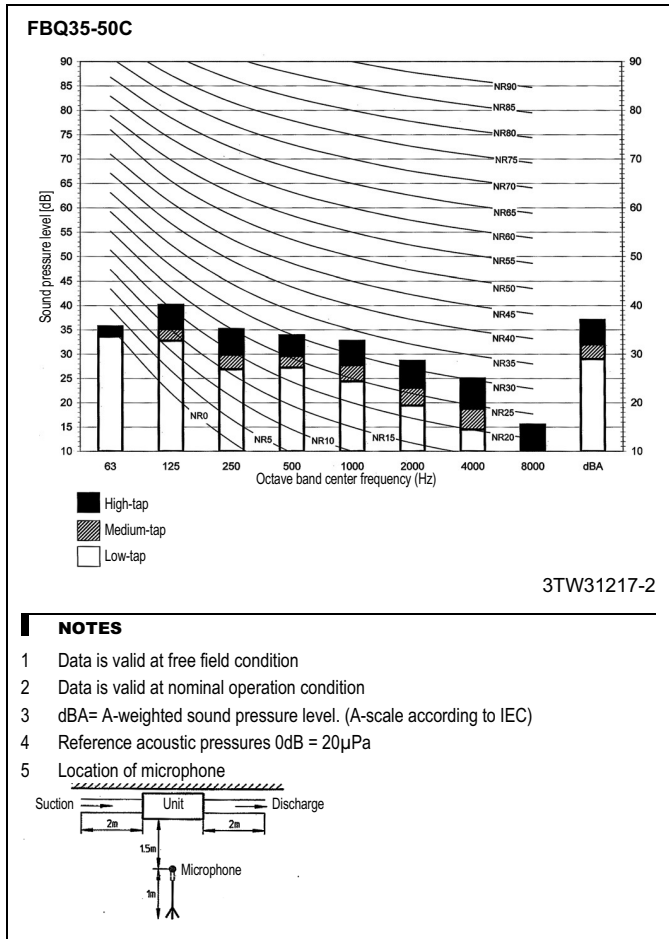
2TW31296-1A

NOTES

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

8 Sound data

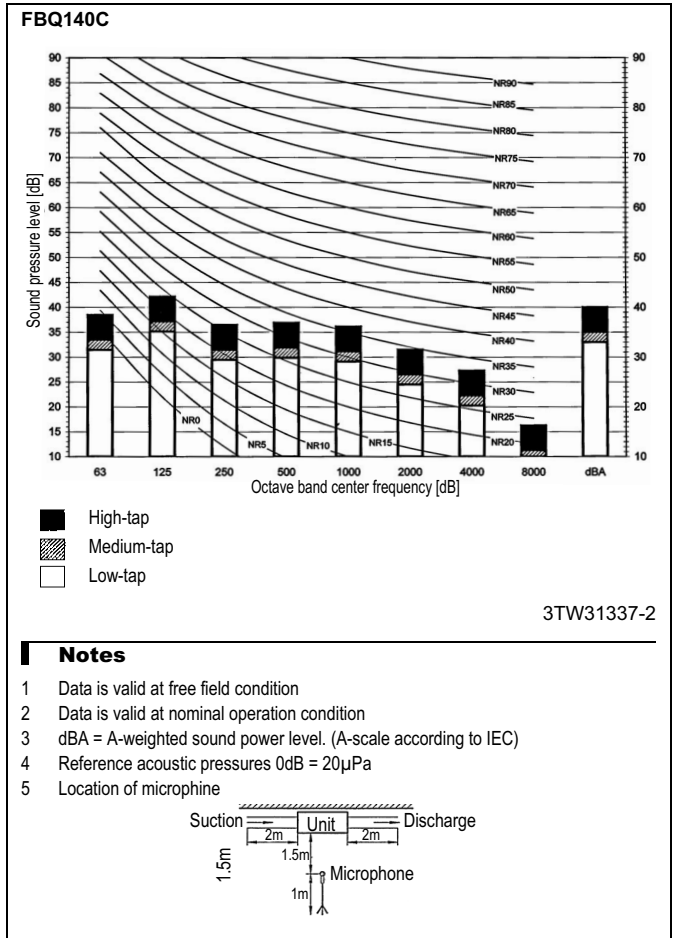
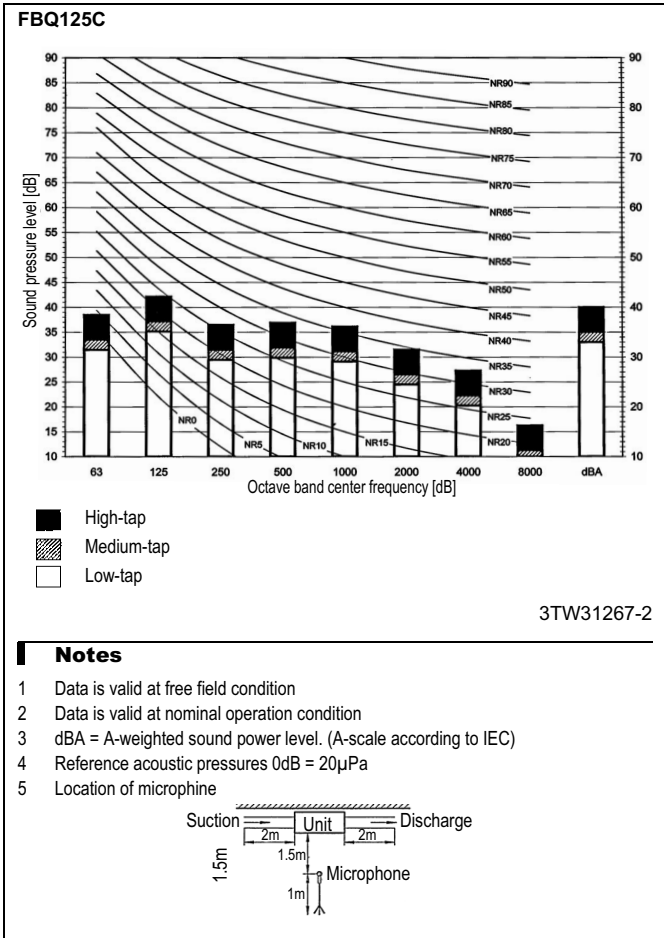
8 - 1 Sound pressure spectrum



8 Sound data

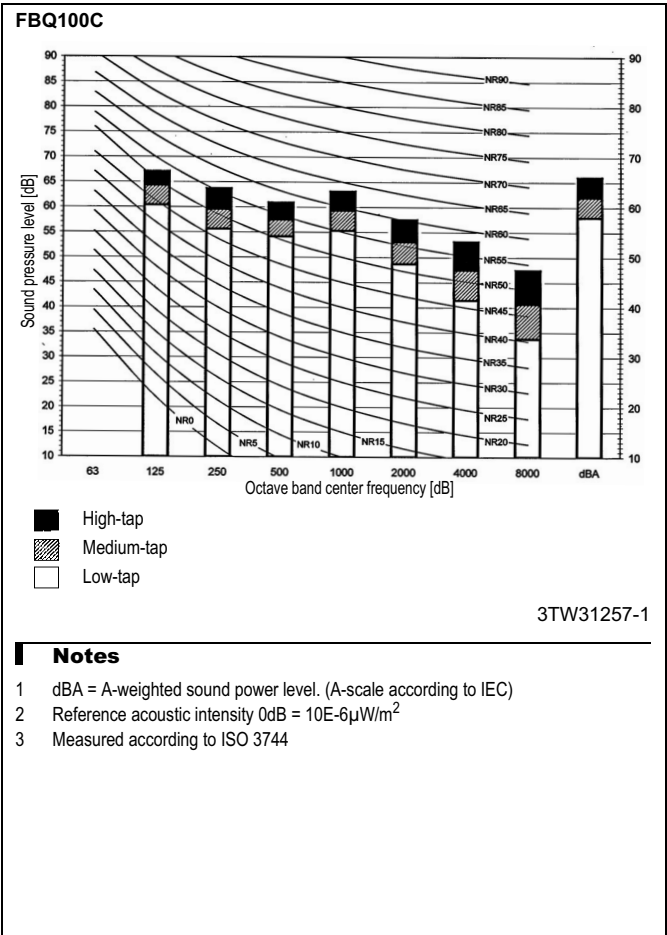
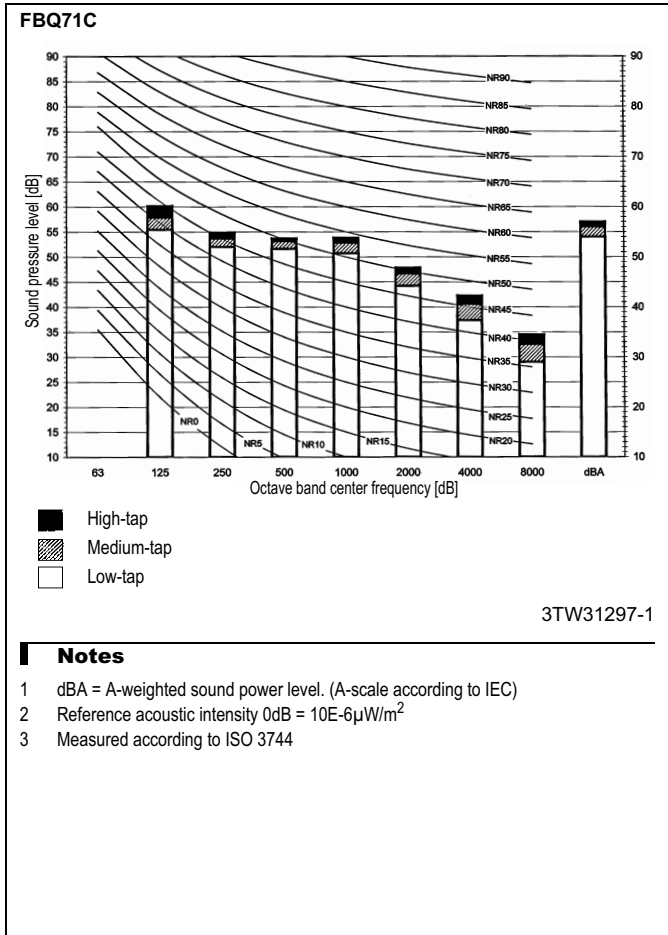
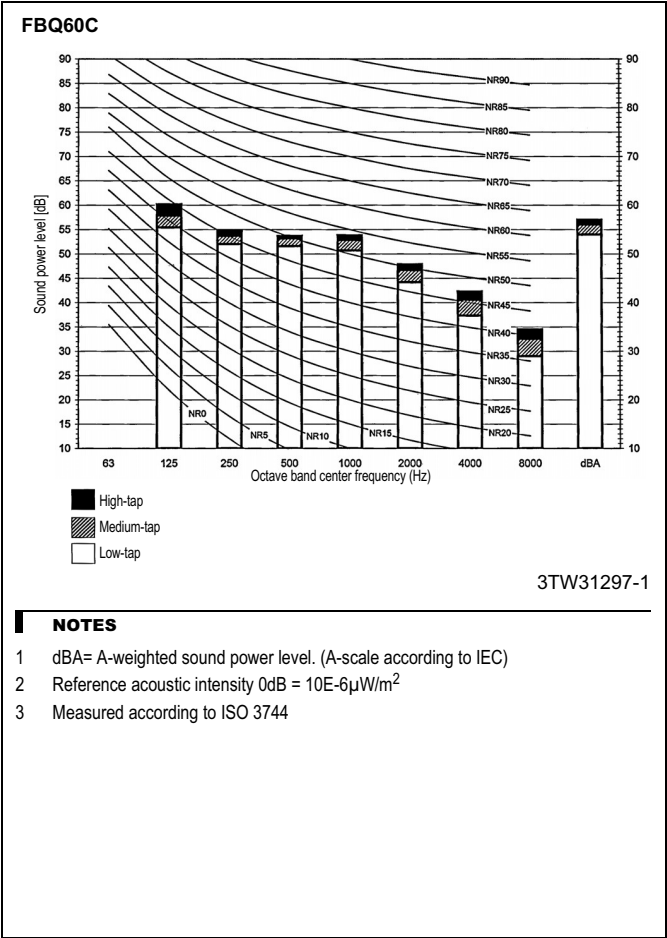
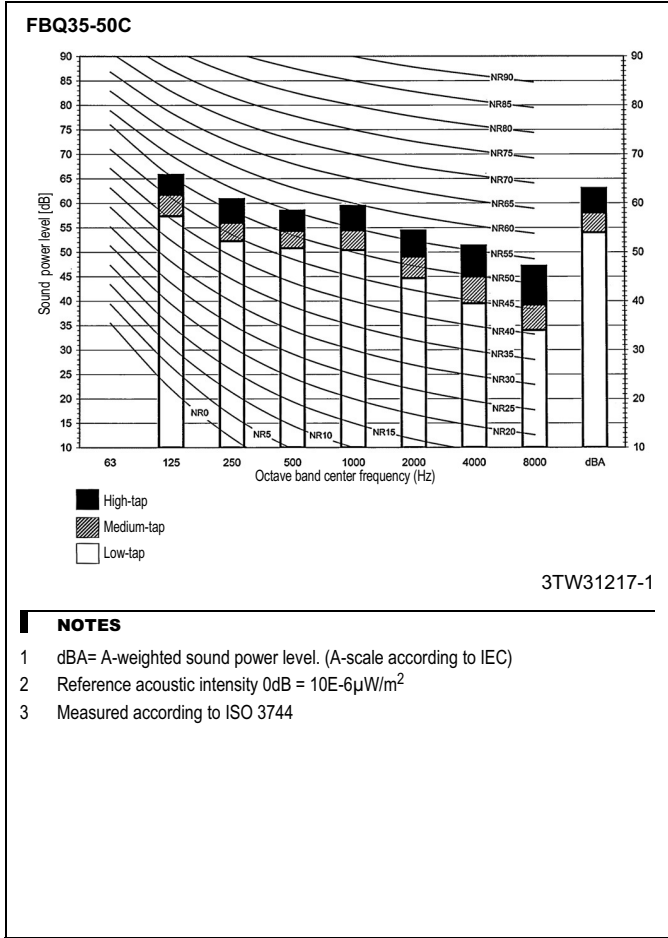
8 - 1 Sound pressure spectrum

1
8



8 Sound data

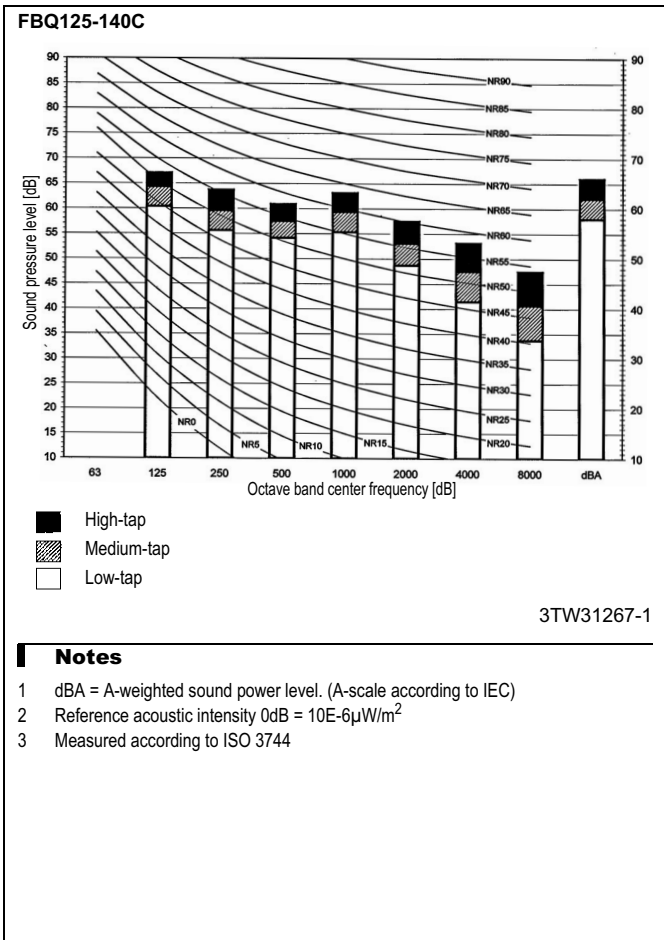
8 - 2 Sound power spectrum



8 Sound data

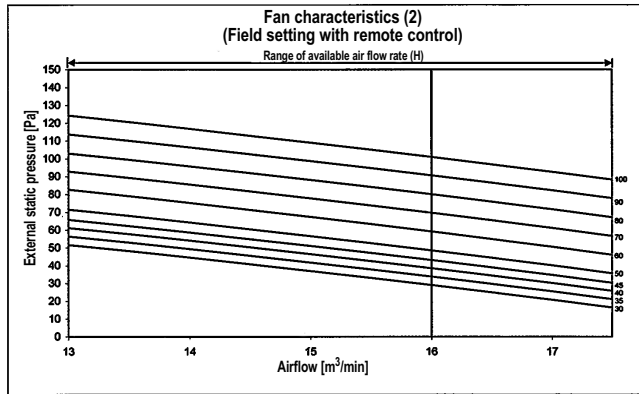
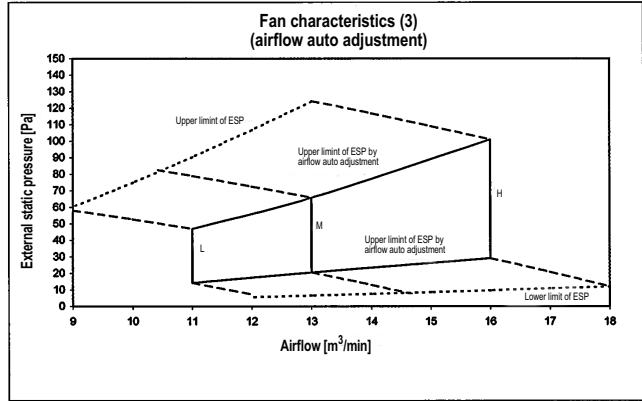
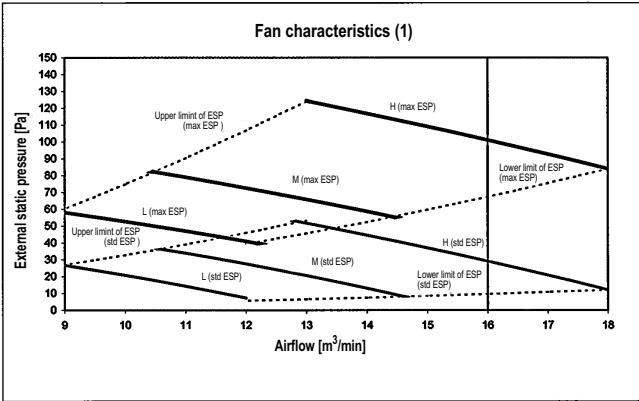
8 - 2 Sound power spectrum

1
8



9 Fan characteristics

FBQ35-50C

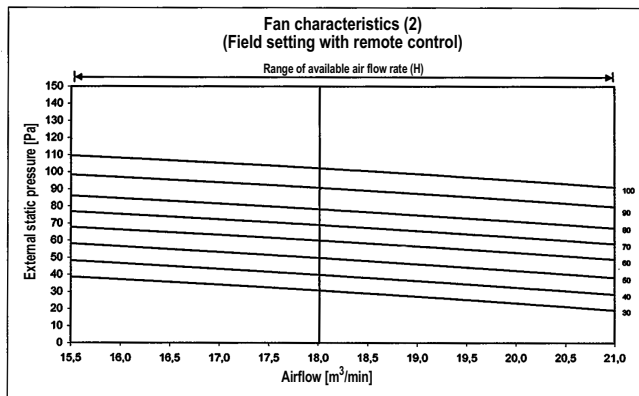
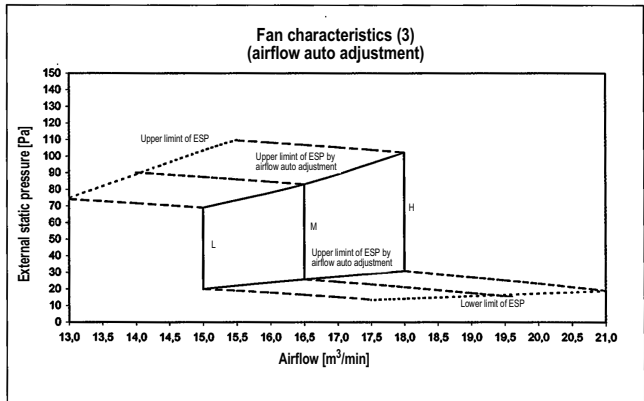
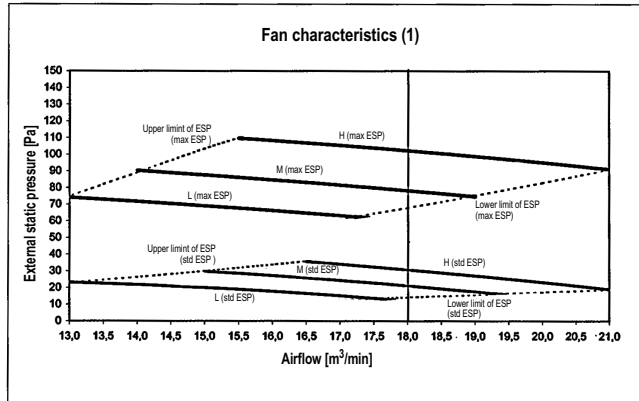


NOTES

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

3TW31218-1

FBQ60C



NOTES

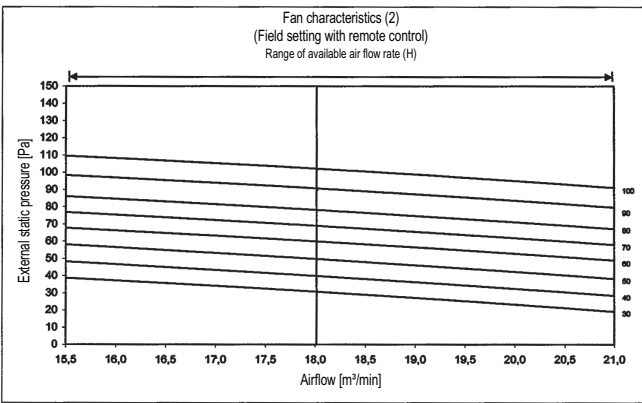
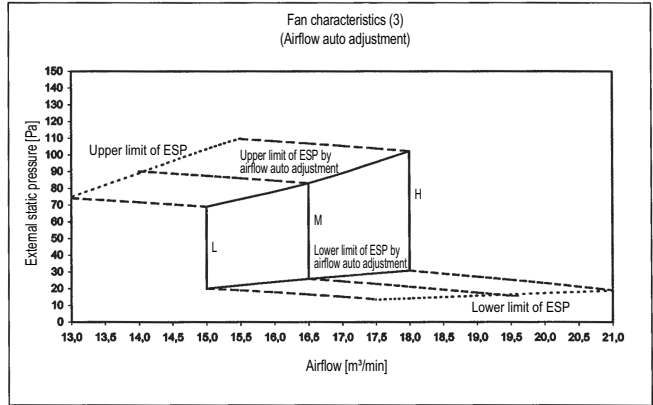
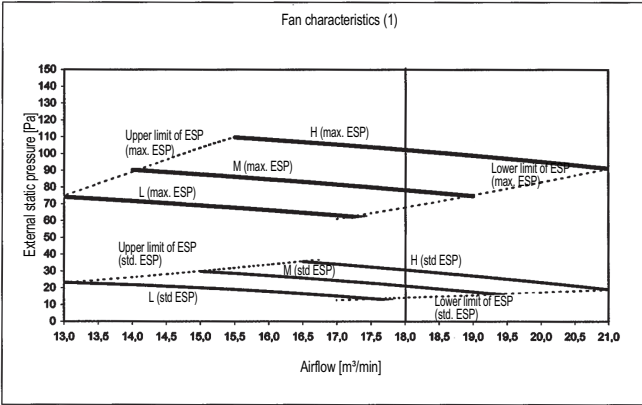
- 1 Fan characteristics as shown are in "fan only" mode.
- 2 ESP: External static pressure

3TW31298-1

9 Fan characteristics

1
9

FBQ71C

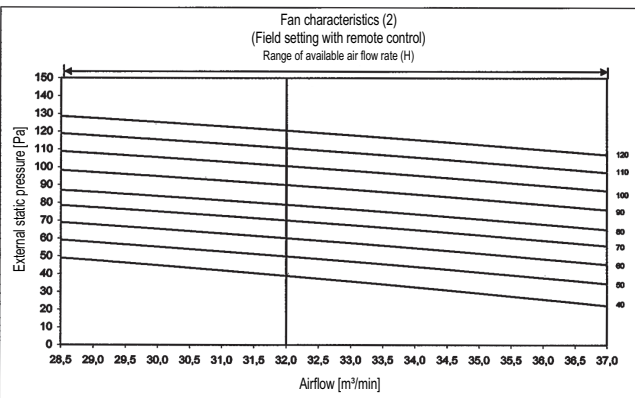
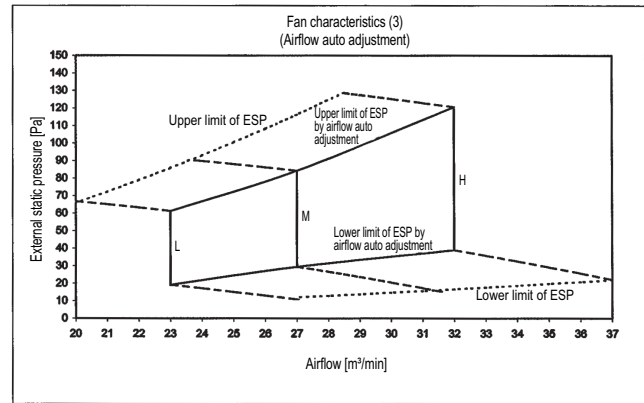
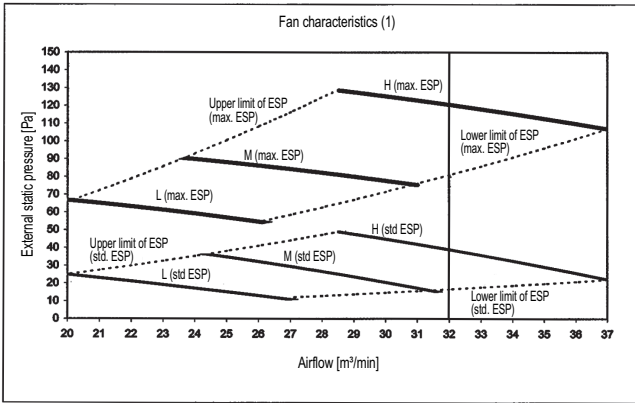


NOTES

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

3TW31298-1

FBQ100C



NOTES

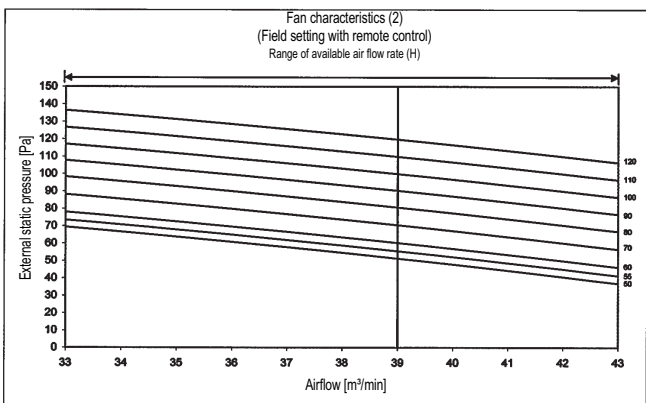
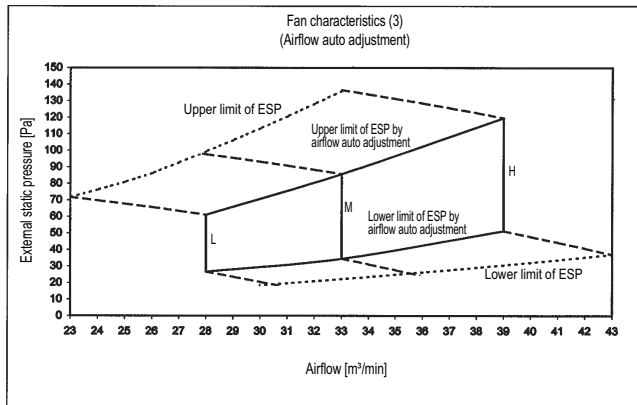
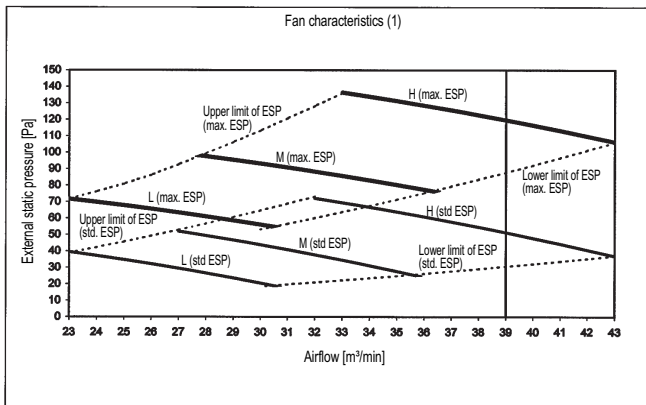
- 1 Fan characteristics as shown ar in "fan only" mode.
- 2 ESP: External static pressure

3TW31258-1

9 Fan characteristics

FBQ125C

1
9

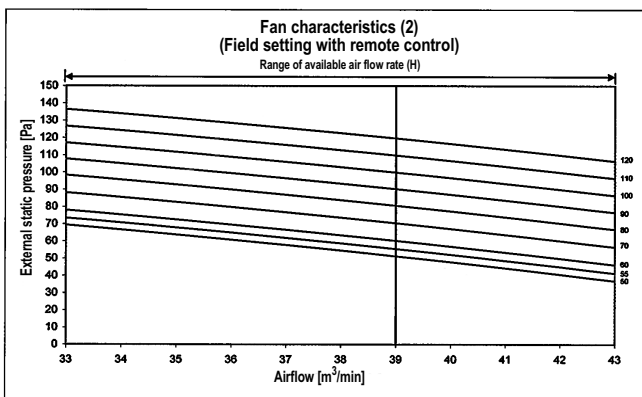
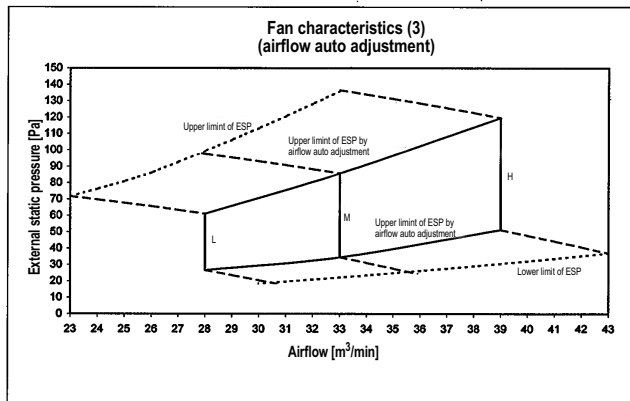
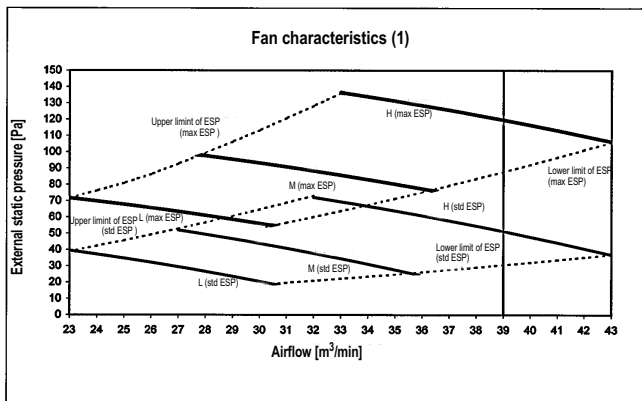


NOTES

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

3TW31268-1

FBQ140C



NOTES

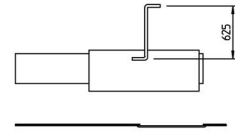
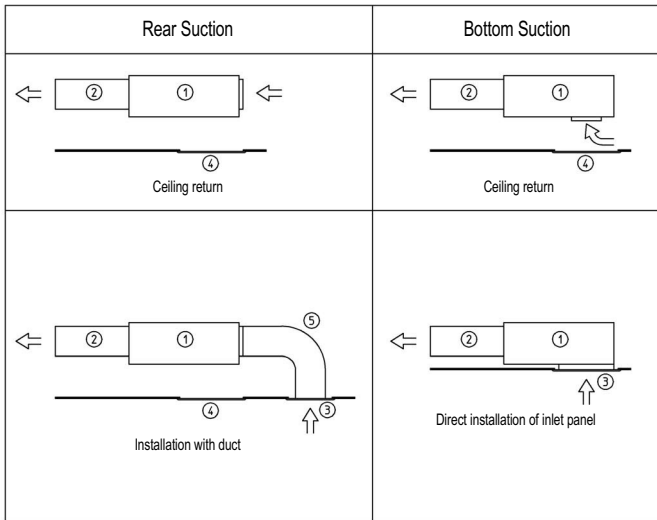
- 1 Fan characteristics as shown are in "fan only" mode.
- 2 ESP: External static pressure

3TW31268-1

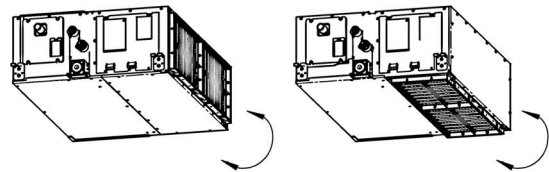
10 Installation

10 - 1 Installation method

FBQ35-140C



Drain pump up height



Easy modification from rear to bottom suction

Wide variety of installation methods

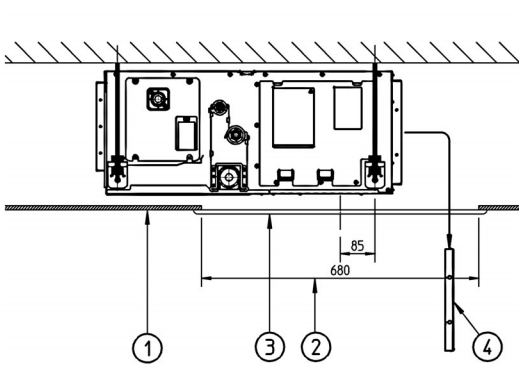
Number	Description	
1	Main body	
2	Air outlet duct	Field supply
3	Inlet panel	Optional accessory
4	Access panel	optional accessory
5	Air inlet duct	Field supply

3TW31183-1

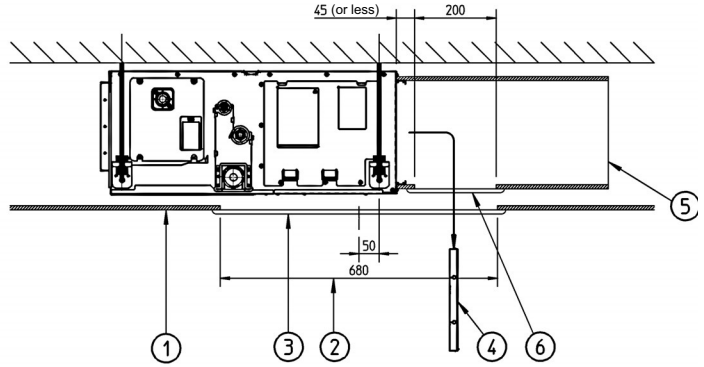
10 Installation

10 - 2 Filter installation method

FBQ35-140C



Installation without air inlet duct

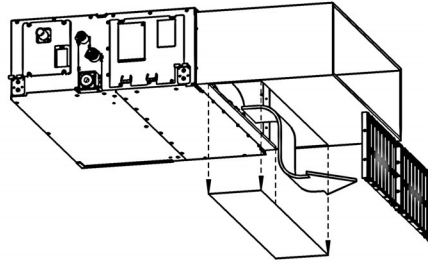


Installation with air inlet duct

Nr.	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.



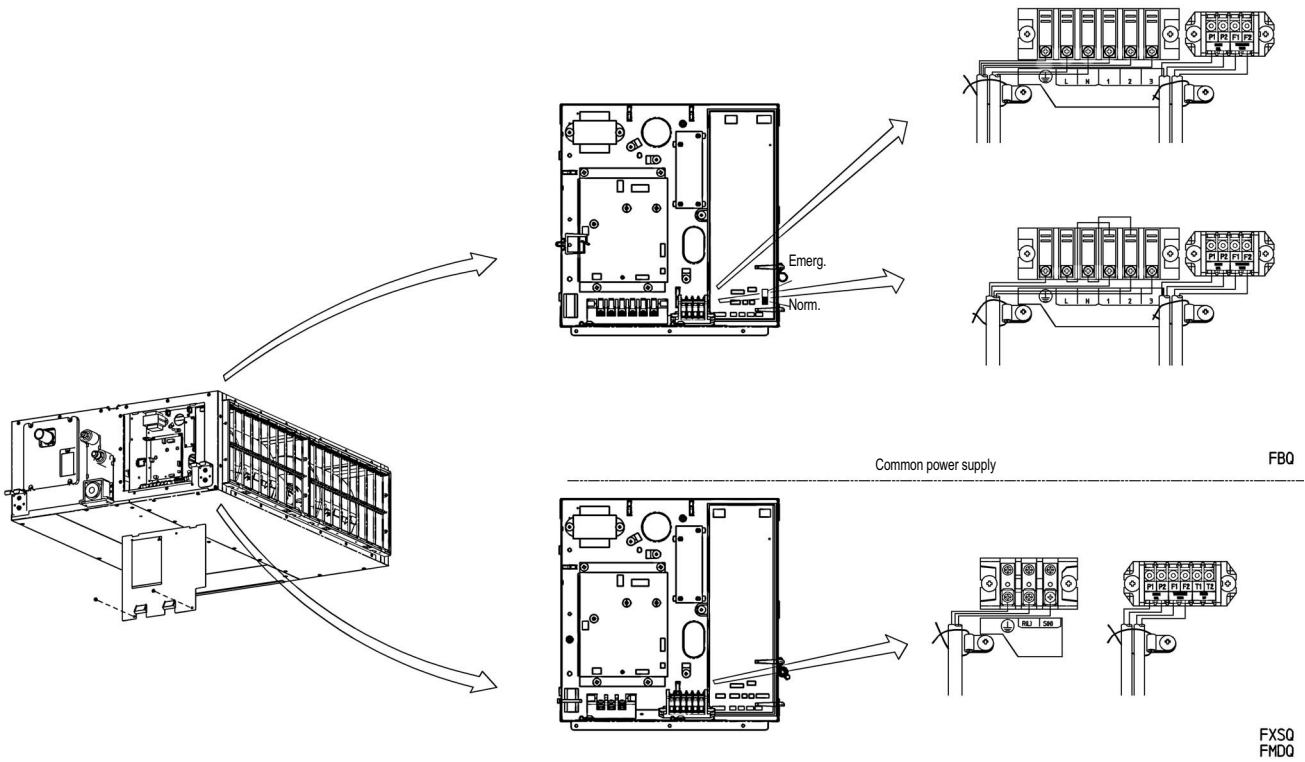
3TW31184-4

10 Installation

10 - 3 Switch box connection

FBQ35-140C

1
10



3TW31184-5