

technical data



FBQ-B8V1_FBQ-B8V3B

Concealed ceiling unit

air conditioning systems

Split Sky Air

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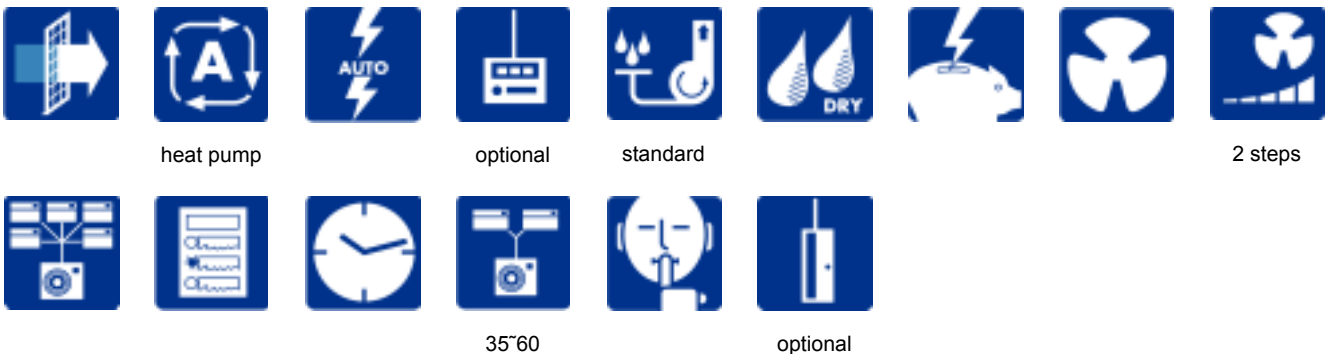
FBQ-B8V1_FBQ-B8V3B

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1 Features

- Slim design for flexible installation
- Lightweight and compact
- Ideal for shops, restaurants or offices requiring maximum floor space for furniture, decorations and fittings
- Fits flush into each ceiling
- The position of individual air discharge grilles can be altered, enabling efficient temperature distribution, even in irregularly shaped rooms.
- Extremely quiet in operation
- Up to 4 indoor units can be connected to 1 Multi outdoor unit. All indoor units are individually controllable with remote control and do not need to be installed in the same room or at the same time. They operate simultaneously within the same cooling operation
- Daikin remote controls give you easy control at your fingertips.
- The wired remote control provides you with a schedule timer, enabling to program the air conditioning daily or weekly.
- The optional remote ON/OFF enables you to start/stop the air conditioning from a mobile phone via a telephone remote control (field supply).
- The optional forced OFF enables you to switch off the unit automatically. E.g. when a window is opened, the unit switches off.
- The 'home leave' operation button prevents large temperature differences by continuously operating at a minimum (heating mode) or maximum (cooling mode) preset level while you're out or sleeping. It also allows the indoor temperature to return quickly to your favourite comfort level.

1



2 Specifications

2-1 FOR INDOOR UNITS ONLY			FBQ35B8V1	FBQ50B8V1	FBQ60B8V1	FBQ71B8V3B	FBQ100B8V3B	FBQ125B8V3B
Nominal Input	Cooling	kW	0.065	0.085	0.125			
	Heating	kW	0.065	0.085	0.125			

2-2 TECHNICAL SPECIFICATIONS				FBQ35B8V1	FBQ50B8V1	FBQ60B8V1	FBQ71B8V3B	FBQ100B8V3B	FBQ125B8V3B	
Casing	Colour						Non painted	Non painted	Non painted	
	Material			Galvanised steel plate						
Dimensions	Packing	Height	mm	400	400	400	400	400	400	
		Width	mm	931	931	1231	1231	1631	1631	
		Depth	mm	991	991	991	991	991	991	
	Unit	Height	mm	300	300	300	300	300	300	
		Width	mm	700	700	1000	1000	1400	1400	
		Depth	mm	800	800	800	800	800	800	
Weight	Unit		kg	30.0	31.0	41.0	41.0	51.0	52.0	
	Packed Unit		kg	41.0	42.0	50.0	47.0	58.0	59.0	
Required Ceiling Void			mm				350	350	350	
Heat Exchanger	Dimensions	Length	mm	450	450	750	750	1150	1150	
		Nr of Rows			3	3	3	3	3	3
		Fin Pitch	mm	1.75	1.75	1.75	1.75	1.75	1.75	
		Nr of Passes			4	6	6	7	13	13
		Face Area	m ²	0.132	0.132	0.221	0.221	0.338	0.338	
		Nr of Stages			14	14	14	14	14	14
		Empty Tubeplate Hole			4	0	14	0	0	0
	Tube type			Hi-XA (7)	Hi-XA (7)	Hi-XA (7)	Hi-XSS (7)	Hi-XSS (7)	Hi-XSS (7)	
Fin	Type	Rhombus								
	Treatment					Hydrophilic	Hydrophilic	Hydrophilic		
Fan	Type			Sirocco fan						
	Quantity			1	1	1	2	3	3	
Air Flow Rate	Cooling	High	m ³ /min	11.5	14.0	19.0	19.0	27.0	35.0	
		Low	m ³ /min	9.0	10.0	14.0	14.0	20.0	24.0	
	Heating	High	m ³ /min	11.5	14.0	19.0	19.0	27.0	35.0	
		Low	m ³ /min	9.0	10.0	14.0	14.0	20.0	24.0	
Fan	Max	High	Pa	88	88	88	86	86	86	
		Standard	Pa	49	49	49	48	48	48	
		Low	Pa	20	20	20	20			
	Motor	Quantity			1	1	1	1	1	1
		Number of steps			2	2	2	3	3	3
		Output (high)	W	65	85	125	125	135	225	
		Drive			Direct drive					
Cooling	Sound Power	High	dBA	52.0	53.0	60.0	60.0	62.0	63.0	
		Low	dBA	29.0	29.0	30.0	30.0	31.0	32.0	
	Sound Pressure	High	dBA	33.0	33.0	34.0	34.0	36.0	38.0	
Heating	Sound Power	High	dBA	52.0	53.0	60.0				
		Low	dBA	29.0	29.0	30.0	30.0	31.0	32.0	
	Sound Pressure	High	dBA	33.0	33.0	34.0	34.0	36.0	38.0	
Refrigerant	Type			R-410A						
Piping connections	Liquid (OD)	Type					Flare connection	Flare connection	Flare connection	
		Diameter (OD)	mm	6.4	6.4	6.4	9.5	9.5	9.5	
	Gas	Type					Flare connection	Flare connection	Flare connection	
		Diameter (OD)	mm	9.5	12.7	12.7	15.9	15.9	15.9	
	Drain	Diameter (OD)	mm	I.D. 25/O.D. 32	I.D. 25/O.D. 32	I.D. 25/O.D. 32	VP25 (I.D. 25/O.D. 32)	VP25 (I.D. 25/O.D. 32)	VP25 (I.D. 25/O.D. 32)	
	Heat Insulation			Both liquid and gas pipes						
Drain-up Height			mm				625	625	625	

2 Specifications

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2-2 TECHNICAL SPECIFICATIONS				FBQ35B8V1	FBQ50B8V1	FBQ60B8V1	FBQ71B8V3B	FBQ100B8V3B	FBQ125B8V3B
Decoration Panel	Model			BYBS45DAW1	BYBS45DAW1	BYBS71DAW1	BYBS71DAW1	BYBS125DAW1	BYBS125DAW1
	Colour			White					
	Dimensions	H	mm	55	55	55	55	55	55
		W	mm	800	800	1100	1100	1500	1500
		D	mm	500	500	500	500	500	500
Weight			kg	3.5	3.5	4.5	4.5	6.5	6.5
Air Filter				Resin net with mold resistance	Resin net with mold resistance	Resin net with mold resistance	As option	As option	As option
Air direction control							Up and downwards	Up and downwards	Up and downwards
Temperature control				Computerized control	Computerized control	Computerized control	Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Safety Devices				Fan motor thermal fuse					
				Inline fuse	Inline fuse				
Standard Accessories	Item			Metal clamp for drain hose					
	Quantity			1	1	1	1	1	1
	Item			Installation and operation manual					
	Quantity			1	1	1	1	1	1
	Item			Drain hose					
	Quantity			1	1	1	1	1	1
	Item			Insulation for piping	Insulation for piping	Insulation for piping	Insulation for fitting	Insulation for fitting	Insulation for fitting
	Quantity						2	2	2
	Item			Washer for hanger bracket					
	Quantity						8	8	8
	Item			Screws	Screws	Screws	Screws for duct flanges	Screws for duct flanges	Screws for duct flanges
	Quantity						12	12	12
	Item						Paper pattern fixing screws	Paper pattern fixing screws	Paper pattern fixing screws
	Quantity						6	6	6
Item						Paper pattern for installation	Paper pattern for installation	Paper pattern for installation	
Quantity						1	1	1	
Notes				Sound values are measured in an anechoic room.					
				Sound pressure level is a relative value, depending on the distance and acoustic environment.					
				The sound pressure level is measured via a microphone at 1m distance of the unit.					
				Sound power level is an absolute value that a sound source generates.					

2-3 ELECTRICAL SPECIFICATIONS				FBQ35B8V1	FBQ50B8V1	FBQ60B8V1	FBQ71B8V3B	FBQ100B8V3B	FBQ125B8V3B
Power Supply	Name			V1	V1	V1	V3	V3	V3
	Phase			1	1	1	1	1	1
	Frequency		Hz	50	50	50	50	50	50
	Voltage		V	230	230	230	230	230	230
Current	Nominal running current (RLA)	Cooling	A	0.50	0.70	0.90			
		Heating	A	0.50	0.70	0.90			
Voltage range	Minimum			-10%					
	Maximum			+10%					
Power Supply Intake				Outdoor unit only					

4

3 Safety device settings

Model	Safety devices	35	50	60	71	100	125
FBQ-B	Fuse	5A/250V	5A/250V	5A/250V	—	—	—
	Fan motor thermal fuse (°C)	152±2	152±2	152±2	152±2	152±2	152±2
	Fan motor thermal protector (°C)	—	—	—	—	—	—

3TW21009-2E

4 Options

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OPTIONS

Nr	Item	FBQ35,50B	FBQ60,71B	FBQ100,125B	
1	Panel related	Decoration panel	BYBS45D	BYBS125D	
		Service access panel	KTBJ25K56W	KTBJ25K80W	KTBJ25K160W
2	Filter related	High-efficiency filter 65% (colorimetric method) *1	KAFJ252L56	KAFJ252L80	KAFJ252L160
		High-efficiency filter 90% (colorimetric method) *1	KAFJ253L56	KAFJ253L80	KAFJ253L160
		Filter chamber for bottom suction	KAJ25L56D	KAJ25L80D	KAJ25L160D
		Filter chamber for rear suction	KAJ25L56B	KAJ25L80B	KAJ25L160B
3	Air inlet and air discharge outlet related	Air suction canvas	KSA-25K56	KSA-25K80	KSA-25K160
		Blind board/screening door	KBBJ25K56	KBBJ25K80	KBBJ25K160
		Air discharge adapter for round duct	KDAJ25K56	KDAJ25K71	KDAJ25K140

OPERATION CONTROL

Nr	Item	Type	FBQ35,50B	FBQ60,71B	FBQ100,125B
1	Remote control	Wired type	BRC1D52		
2	Central remote control		DCS302C51		
3	Unified ON/OFF control		DCS301B51		
4	Schedule timer		DST301B51		
5	Adapter for wiring (interlock for fresh air intake fan)		KRP1B54		
6	Wiring adaptor for electrical appendices		KRP4A51		
7	Interface adapter for Sky Air series		DTA112B51		
8	Remote "On/Off" and "Forced Off" kit		EKRORO		
9	Option PCB for external electrical heater, humidifier and/or hour meter *2		EKRP1B2		

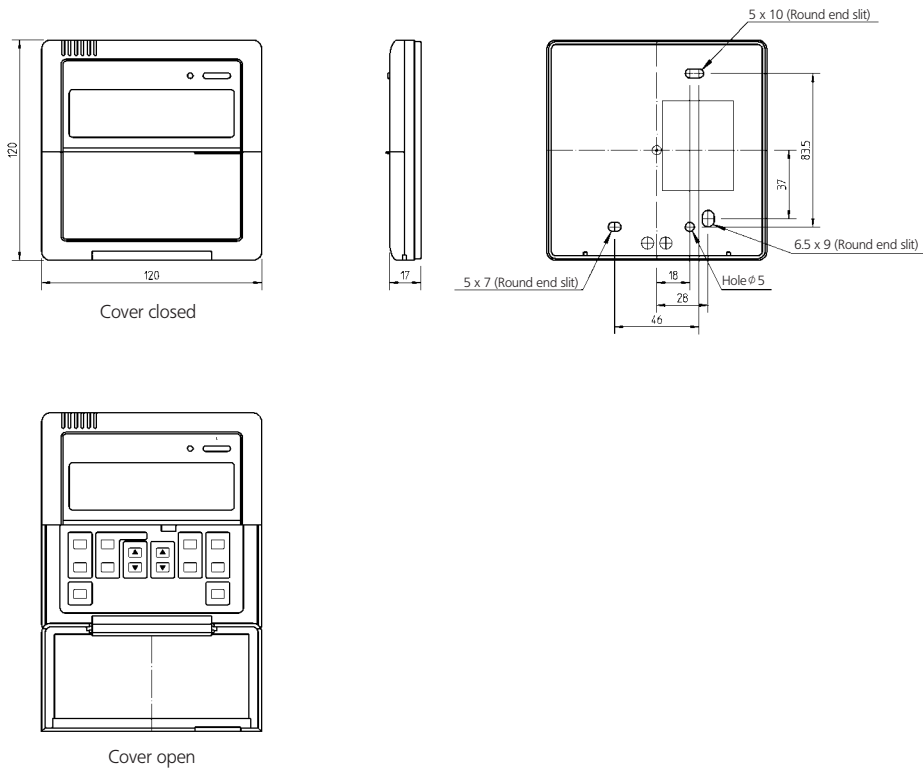
3TW25119-1E

*1 If installing a high efficiency filter on the unit, an assembly chamber for either bottom or rear suction is required.

*2 Electrical heater, humidifier and hour meter are field supply. These parts should not be installed inside the equipment. (Refer to installation manual EKRP1B2).

5 Control systems

BRC1D52



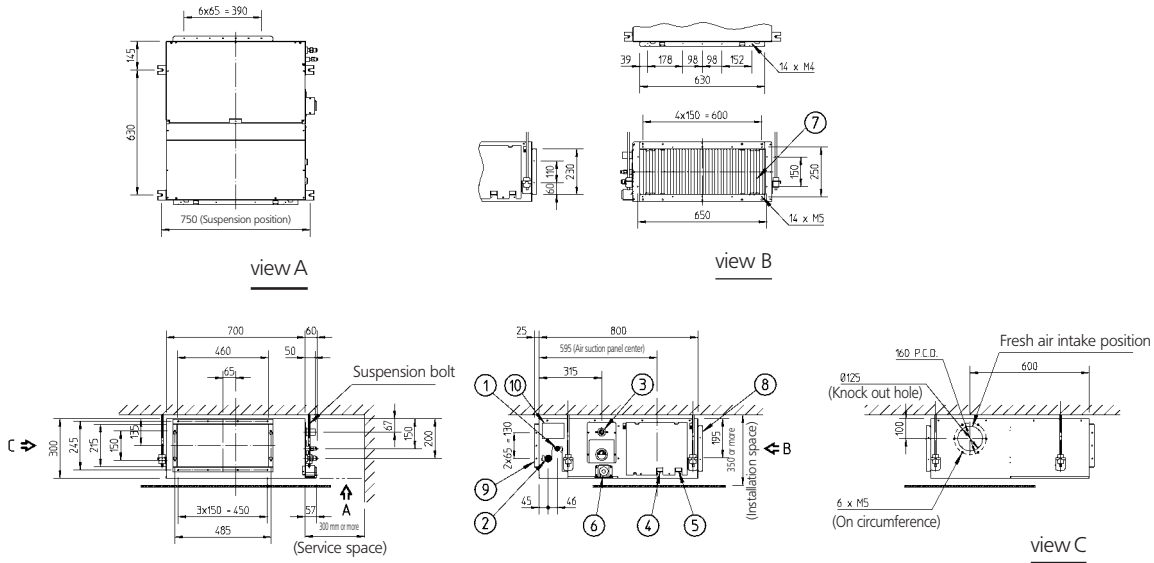
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6 Dimensional drawing & centre of gravity

6 - 1 Dimensional drawing

6

FBQ35-50B



Notes:

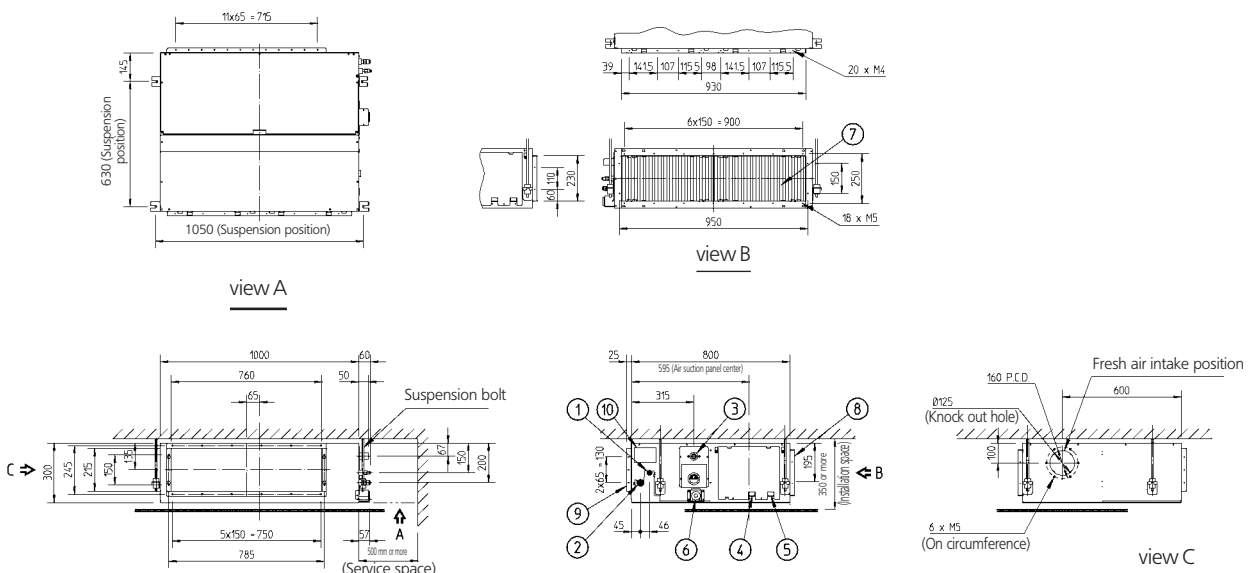
1. Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
2. The required ceiling depth varies according to configuration of the specific system.
3. For maintenance of the air filter, it is necessary to provide a service access panel according to the installation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

- 1 Liquid pipe connection φ A Flare connection
- 2 Gas pipe connection φ B Flare connection
- 3 Drain pipe connection VP25 (I.D. φ 32, I.D. φ 25)
- 4 Remote control wiring connection
- 5 Power supply connection
- 6 Drain hole VP25 (I.D. φ 32, I.D. φ 25)
- 7 Air filter
- 8 Air suction side
- 9 Air discharge side
- 10 Name plate

Model	A	B
FBQ35	6.35	9.52
FBQ50	6.35	12.70

3TW22224-1C

FBQ60-71B



Notes:

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

- 1 Liquid pipe connection φ A Flare connection
- 2 Gas pipe connection φ B Flare connection
- 3 Drain pipe connection VP25 (I.D. φ 32, I.D. φ 25)
- 4 Remote control wiring connection
- 5 Power supply connection
- 6 Drain hole VP25 (I.D. φ 32, I.D. φ 25)
- 7 Air filter
- 8 Air suction side
- 9 Air discharge side
- 10 Name plate

Model	A	B
FBQ60	6.35	12.70
FBQ71	9.52	15.90

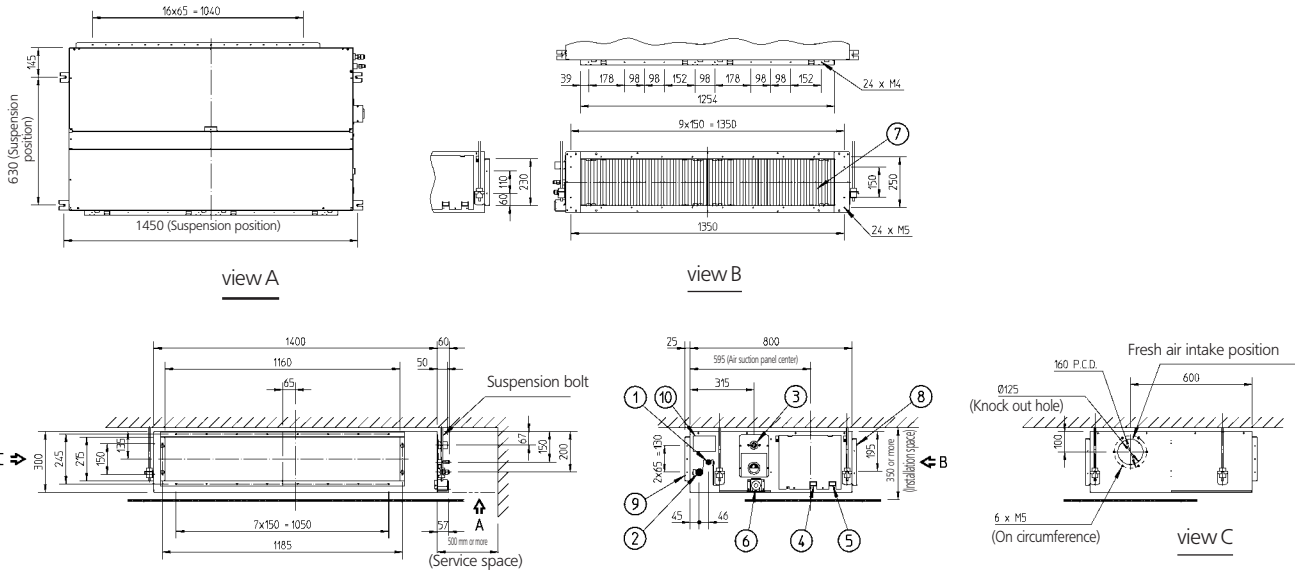
3TW22244-1D

8

6 Dimensional drawing & centre of gravity

6 - 1 Dimensional drawing

FBQ100-125B



Notes:

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

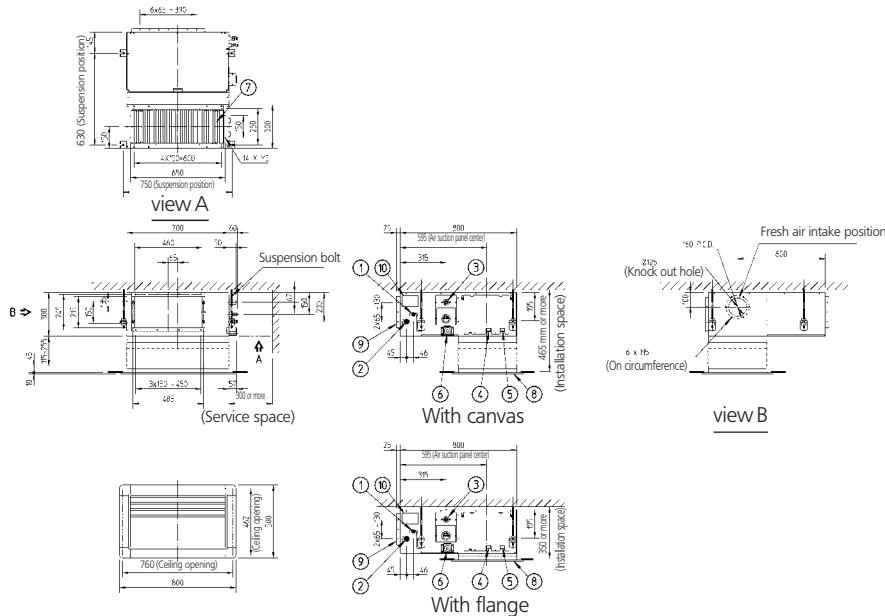
1. Liquid pipe connection ϕ A Flare connection
2. Gas pipe connection ϕ B Flare connection
3. Drain pipe connection VP25 (I.D. ϕ 32, I.D. ϕ 25)
4. Remote control wiring connection
5. Power supply connection
6. Drain hole VP25 (I.D. ϕ 32, I.D. ϕ 25)
7. Air filter
8. Air suction side
9. Air discharge side
10. Name plate

Model	A	B
FBQ100	9.52	15.90
FBQ125	9.52	15.90

3TW22254-1C

FBQ35-50B

With canvas



Notes:

1. Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
2. Optional decoration panel : BYBS45DAW1 (Light ivory white 10Y9/0.5)
3. The required ceiling depth varies according to configuration of the specific system

1. Liquid pipe connection ϕ A Flare connection
2. Gas pipe connection ϕ B Flare connection
3. Drain pipe connection VP25 (I.D. ϕ 32, I.D. ϕ 25)
4. Remote control wiring connection
5. Power supply connection
6. Drain hole VP25 (I.D. ϕ 32, I.D. ϕ 25)
7. Air filter
8. Air suction side
9. Air discharge side
10. Name plate

Model	A	B
FBQ35	6.35	9.52
FBQ50	6.35	12.70

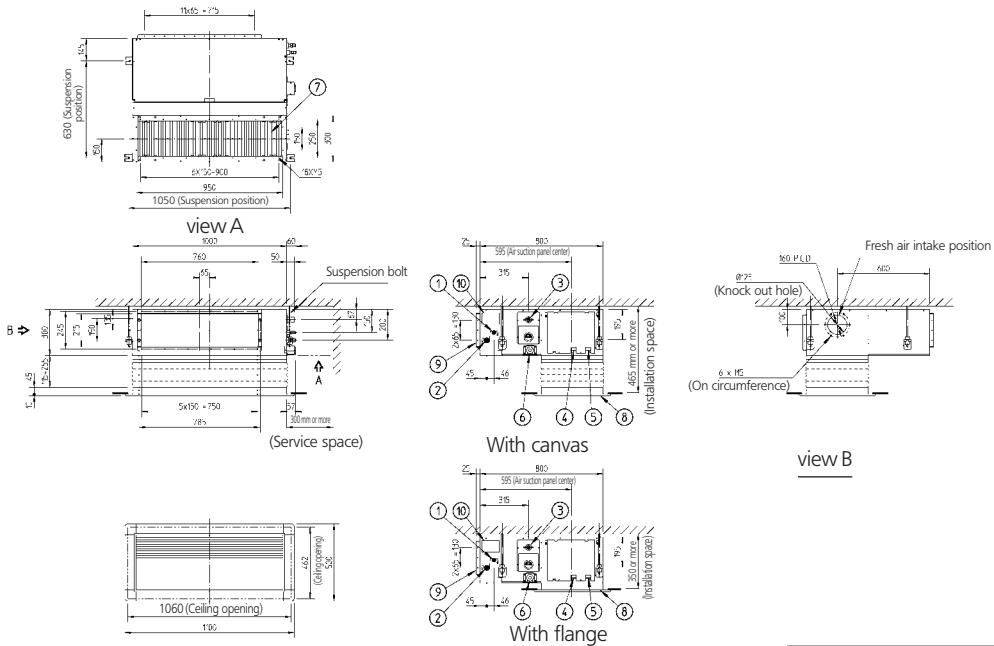
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6 Dimensional drawing & centre of gravity

6 - 1 Dimensional drawing

6

FBQ60-71B With canvas



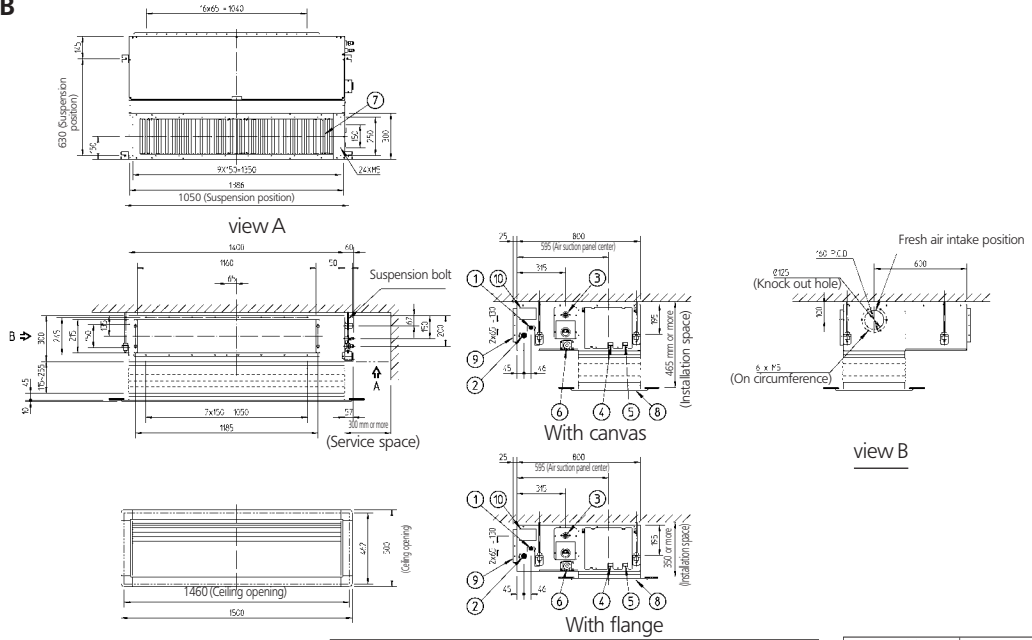
- Notes:**
 1. Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
 2. Optional decoration panel: BYB5125DAW1 (Light ivory white 10Y9/0.5)
 3. The required ceiling depth varies according to configuration of the specific system

- 1 Liquid pipe connection ϕ A Flare connection
- 2 Gas pipe connection ϕ B Flare connection
- 3 Drain pipe connection VP25 (I.D. ϕ 32, I.D. ϕ 25)
- 4 Remote control wiring connection
- 5 Power supply connection
- 6 Drain hole VP25 (I.D. ϕ 32, I.D. ϕ 25)
- 7 Air filter
- 8 Air suction side
- 9 Air discharge side
- 10 Name plate

Model	A	B
FBQ60	6.35	12.70
FBQ71	9.52	15.90

3TW22244-2D

FBQ100-125B With canvas



- Notes:**
 1. Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
 2. Optional decoration panel: BYB5125DAW1 (Light ivory white 10Y9/0.5)
 3. The required ceiling depth varies according to configuration of the specific system

- 1 Liquid pipe connection ϕ A Flare connection
- 2 Gas pipe connection ϕ B Flare connection
- 3 Drain pipe connection VP25 (I.D. ϕ 32, I.D. ϕ 25)
- 4 Remote control wiring connection
- 5 Power supply connection
- 6 Drain hole VP25 (I.D. ϕ 32, I.D. ϕ 25)
- 7 Air filter
- 8 Air suction side
- 9 Air discharge side
- 10 Name plate

Model	A	B
FBQ100	9.52	15.90
FBQ125	9.52	15.90

3TW22254-2C

6 Dimensional drawing & centre of gravity

6 - 2 Centre of gravity

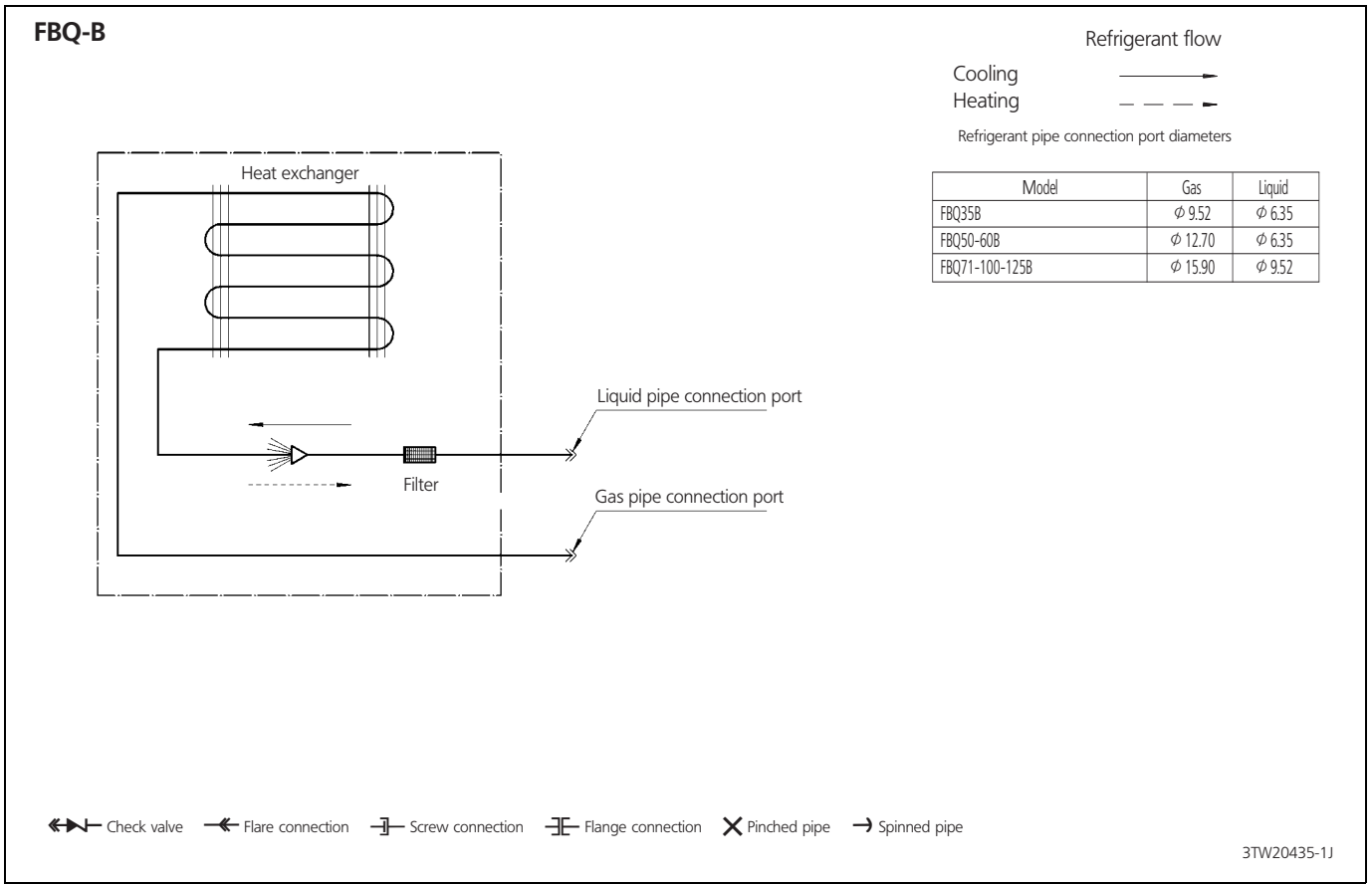
FBQ-B

Model	A	B
FBQ35,50	700	300
FBQ60	1,000	460
FBQ71	1,000	460
FBQ100,125	1,400	640

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7 Piping diagram

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8 Wiring diagram

8 - 1 Wiring diagram

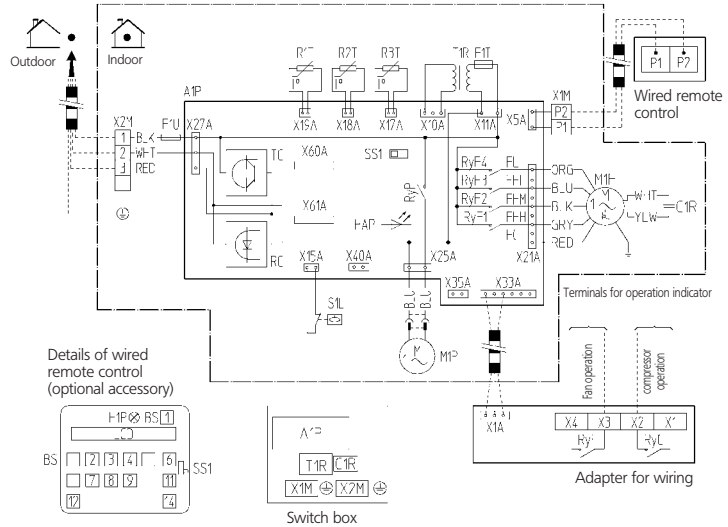
FBQ35-60B

Notes

- When using the central remote control, see manual for connection to the unit.
- The infrared remote control model varies according to the combination system, refer to technical materials and catalogues, etc. before connecting.

Field wiring Terminal
 Connector
 Wire clamp
 Protective earth (screw)

Colours
 BLK: Black / WHT: White / RED: Red / BLU: Blue / GRY: Grey / ORG: Orange



S1L	Float switch	R1T	Thermistor (air)	Wired remote control	BS14	Filter sign reset button	Adapter for wiring
A1P	Printed circuit board	R2T	Thermistor (liquid)	BS1	On/Off button	H1P	Light emitting diode (service monitor red)
T1R	Power supply transformer (transformer 230-240V/210V)	R3T	Thermistor (coil)	BS2	Timer mode start/stop button	LC	Liquid crystal display (LCD)
C1R	Capacitor (fan)	RyF1-4	Magnetic relay (fan)	BS3,BS8	Programming time button	SS1	Selector switch (main/sub)
F1U	Fuse (SA, 250V)	RyP	Magnetic relay (drain pump)	BS5,BS9	Temperature setting button		
F1T	Thermal fuse (152°C) (M1F embedded)	SS1	Selector switch (emergency)	BS6	Operation mode selector button		
HAP	Light emitting diode (service monitor green)	X1M	Terminal strip	BS7	Timer on/off button		
M1F	Motor (fan)	X2M	Terminal strip	BS11	Fan speed control button		
M1P	Motor (drain pump)	TC	Signal transmission circuit	BS12	Inspection/test button		

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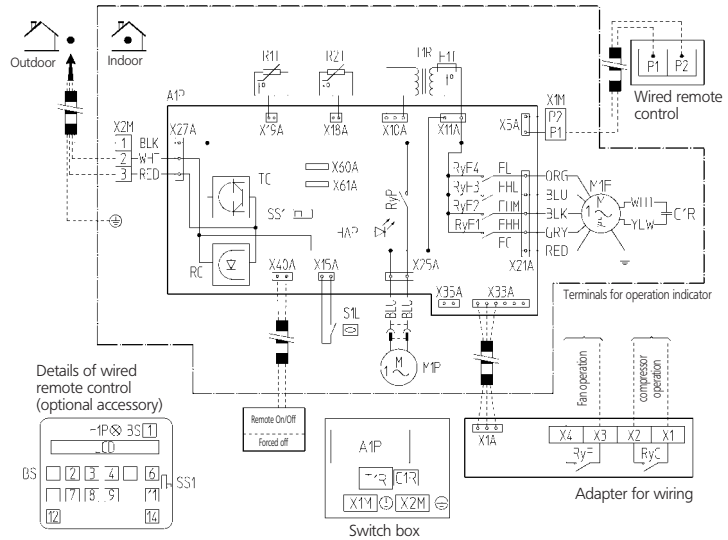
FBQ71B

Notes

- When using the central remote control, see manual for connection to the unit.
- The infrared remote control model varies according to the combination system, refer to technical materials and catalogues, etc. before connecting.

Field wiring Terminal
 Connector
 Wire clamp
 Protective earth (screw)

Colours
 BLK: Black / WHT: White / RED: Red / BLU: Blue / GRY: Grey / ORG: Orange



S1L	Float switch	R1T	Thermistor (air)	Wired remote control	BS14	Filter sign reset button	Adapter for wiring
A1P	Printed circuit board	R2T	Thermistor (coil)	BS1	On/Off button	H1P	Light emitting diode (service monitor red)
T1R	Power supply transformer (transformer 230-240V/210V)	RyF1-4	Magnetic relay (fan)	BS2	Timer mode start/stop button	LC	Liquid crystal display (LCD)
C1R	Capacitor (fan)	RyP	Magnetic relay (drain pump)	BS3,BS8	Programming time button	SS1	Selector switch (main/sub)
F1U	Fuse (SA, 250V)	SS1	Selector switch (emergency)	BS5,BS9	Temperature setting button		
F1T	Thermal fuse (152°C) (M1F embedded)	X1M	Terminal strip	BS6	Operation mode selector button		
HAP	Light emitting diode (service monitor green)	X2M	Terminal strip	BS7	Timer on/off button		
M1F	Motor (fan)	TC	Signal transmission circuit	BS11	Fan speed control button		
M1P	Motor (drain pump)			BS12	Inspection/test operation button		

2TW26026-1A

8 Wiring diagram

8 - 1 Wiring diagram

FBQ100-125B

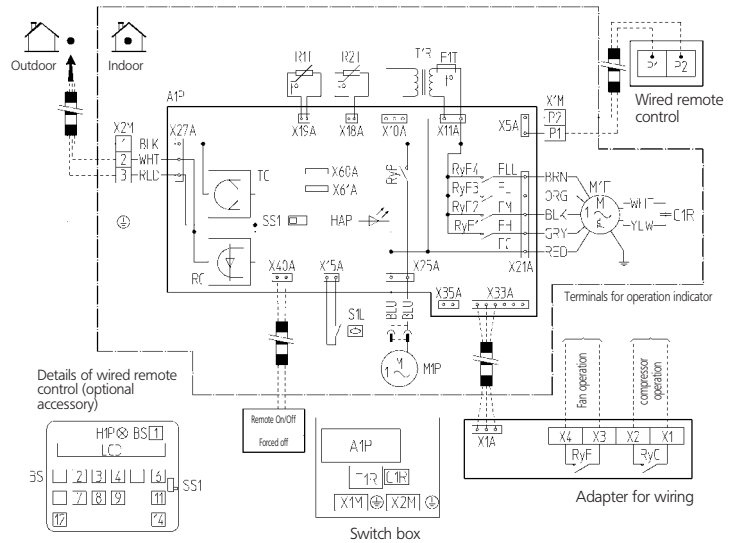
Notes

- When using the central remote control, see manual for connection to the unit.
- The infrared remote control model varies according to the combination system. refer to technical materials and catalogues, etc. before connecting.

- Field wiring
- Terminal
- Connector
- Wire clamp
- Protective earth (screw)

Colours

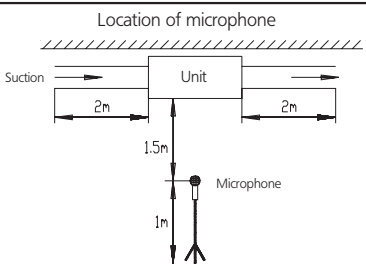
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2TW26056-1A

9 Sound data

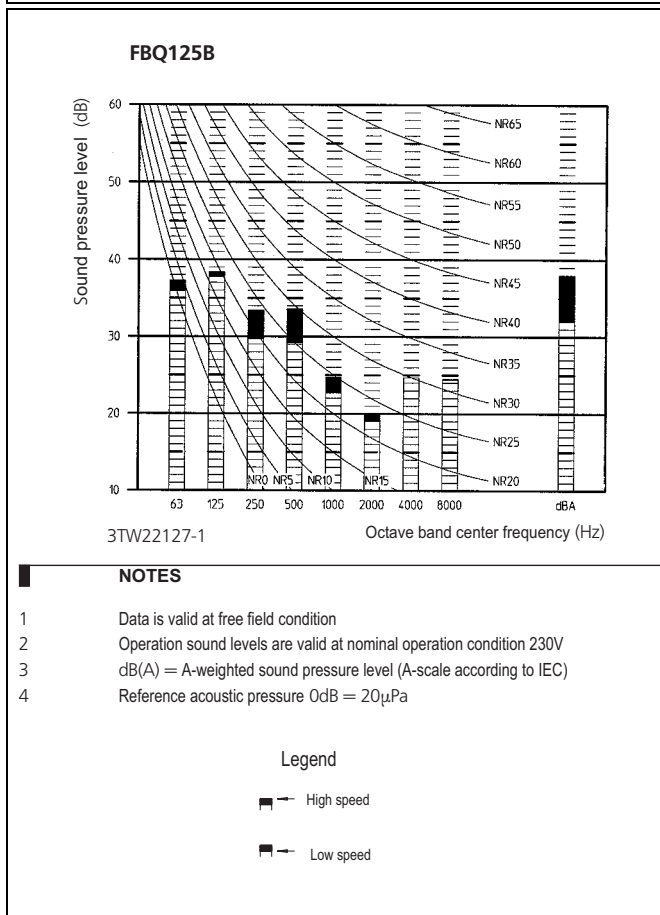
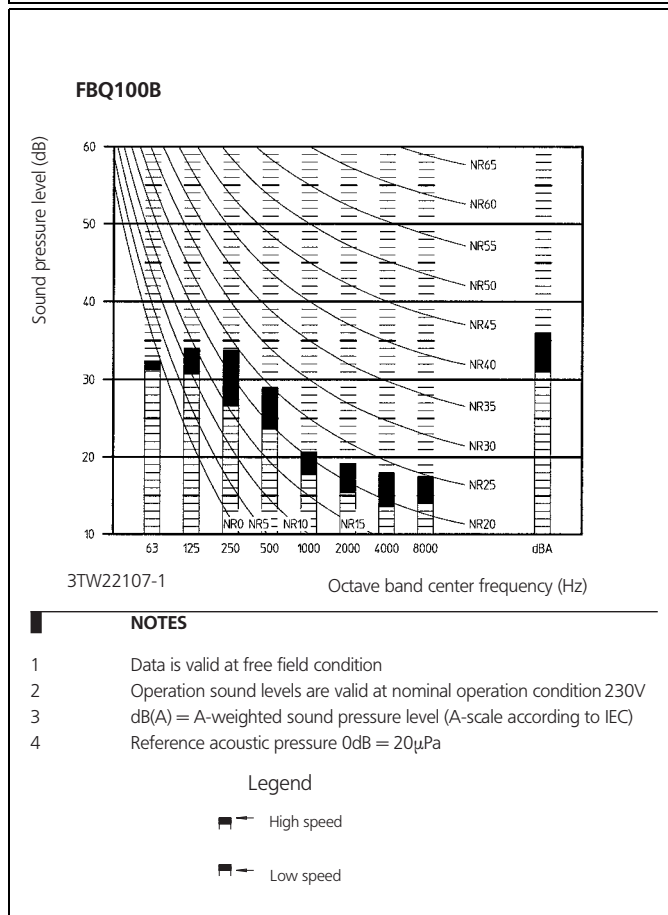
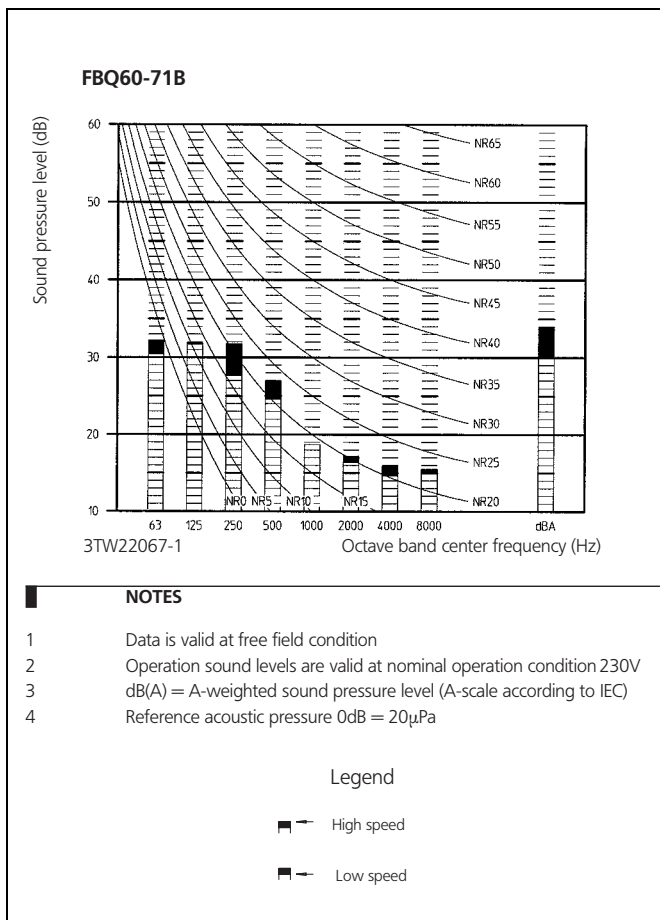
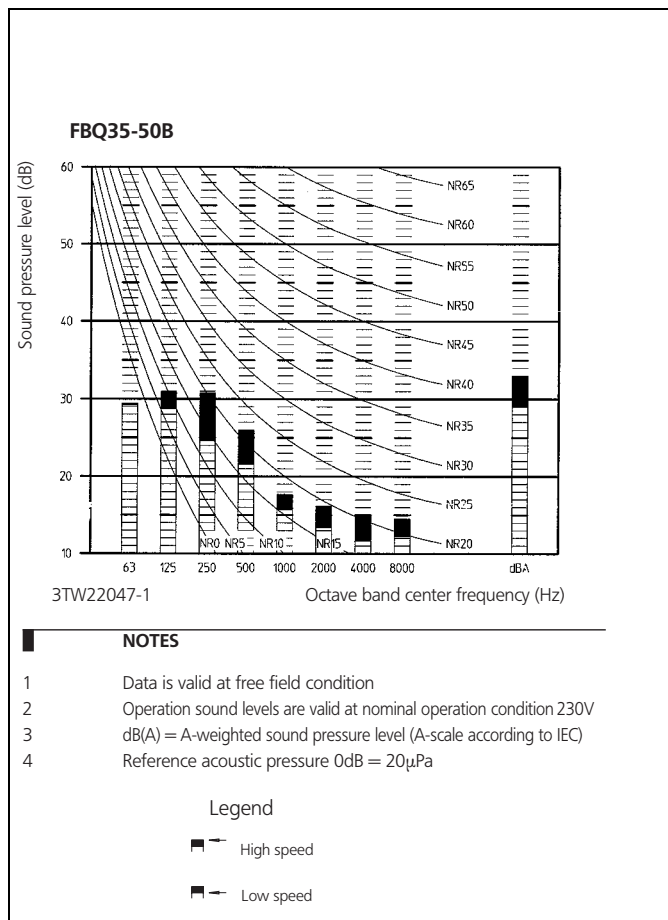
9 - 1 Sound level data

Model	Sound pressure level		Measuring location 	Sound power level (H) (cooling/heating)
	230V, 50Hz			
	Cooling/Heating			
	H	L		
FBQ35B	33/33	29/29	52/52	
FBQ50B	33/33	29/29	53/53	
FBQ60B	34/34	30/30	60/60	
FBQ71B	34/34	30/30	60/-	
FBQ100B	36/36	31/31	62/-	
FBQ125B	38/38	32/32	63/-	

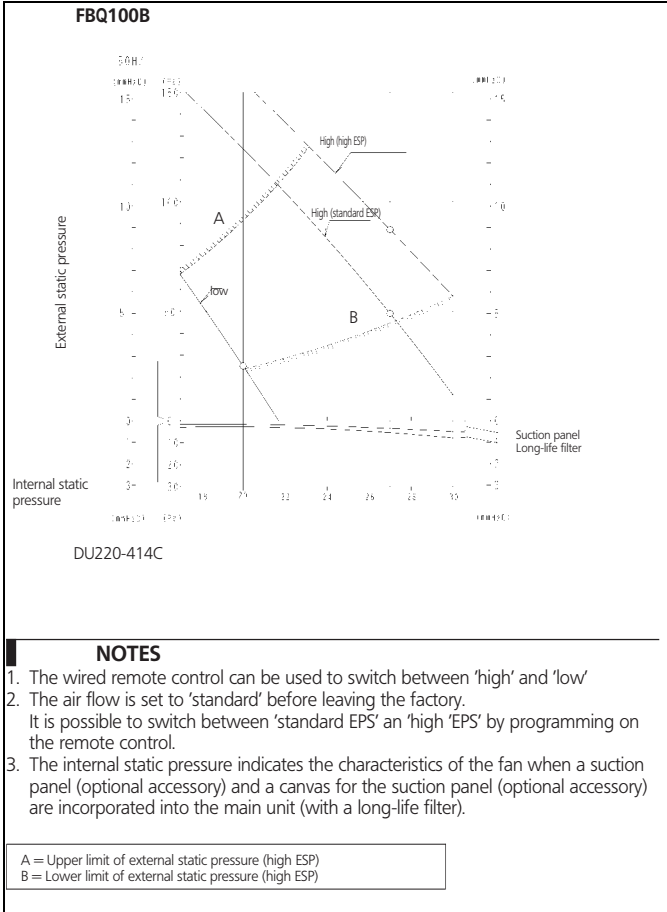
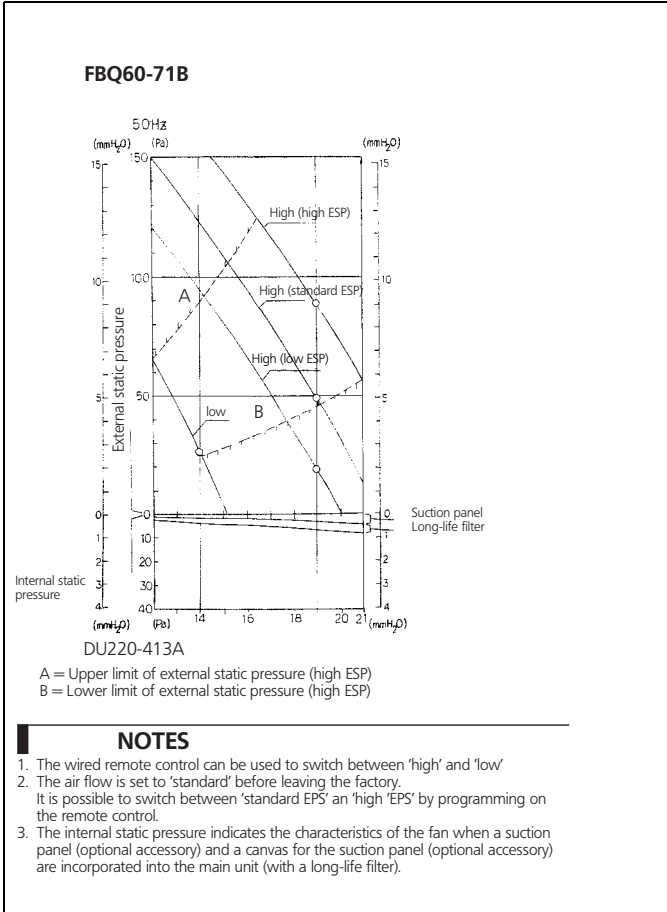
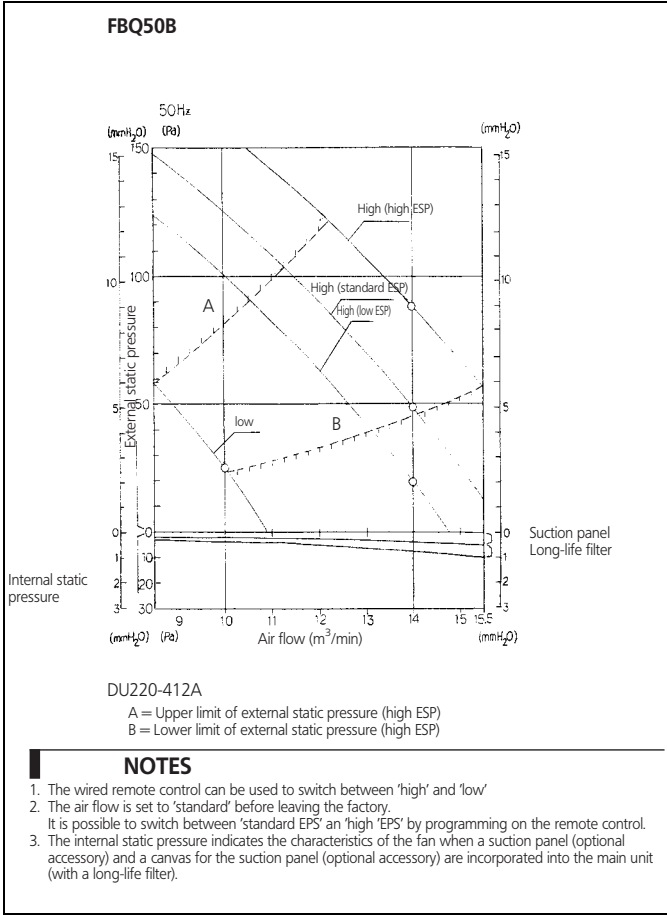
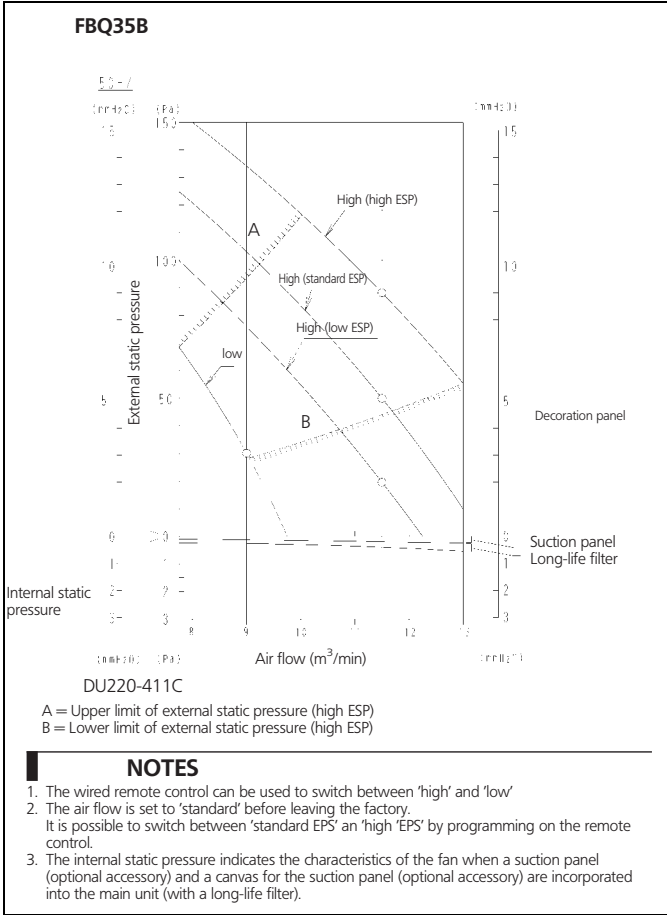
9 Sound data

9 - 2 Sound pressure spectrum

9

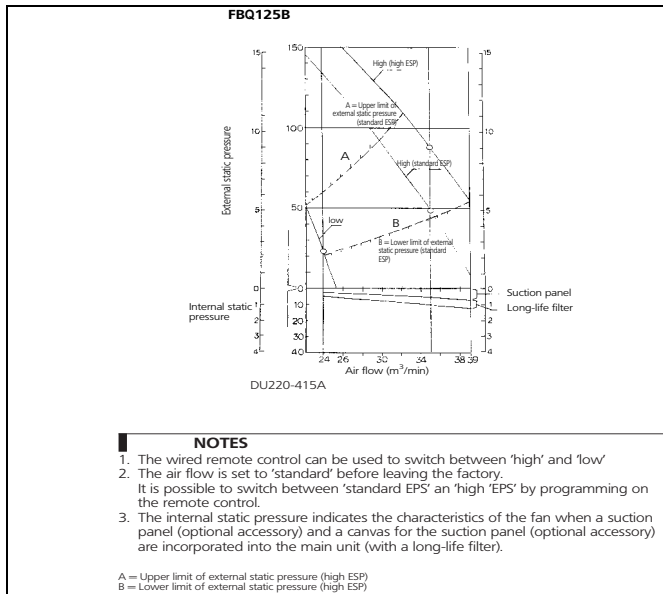


10 Fan characteristics



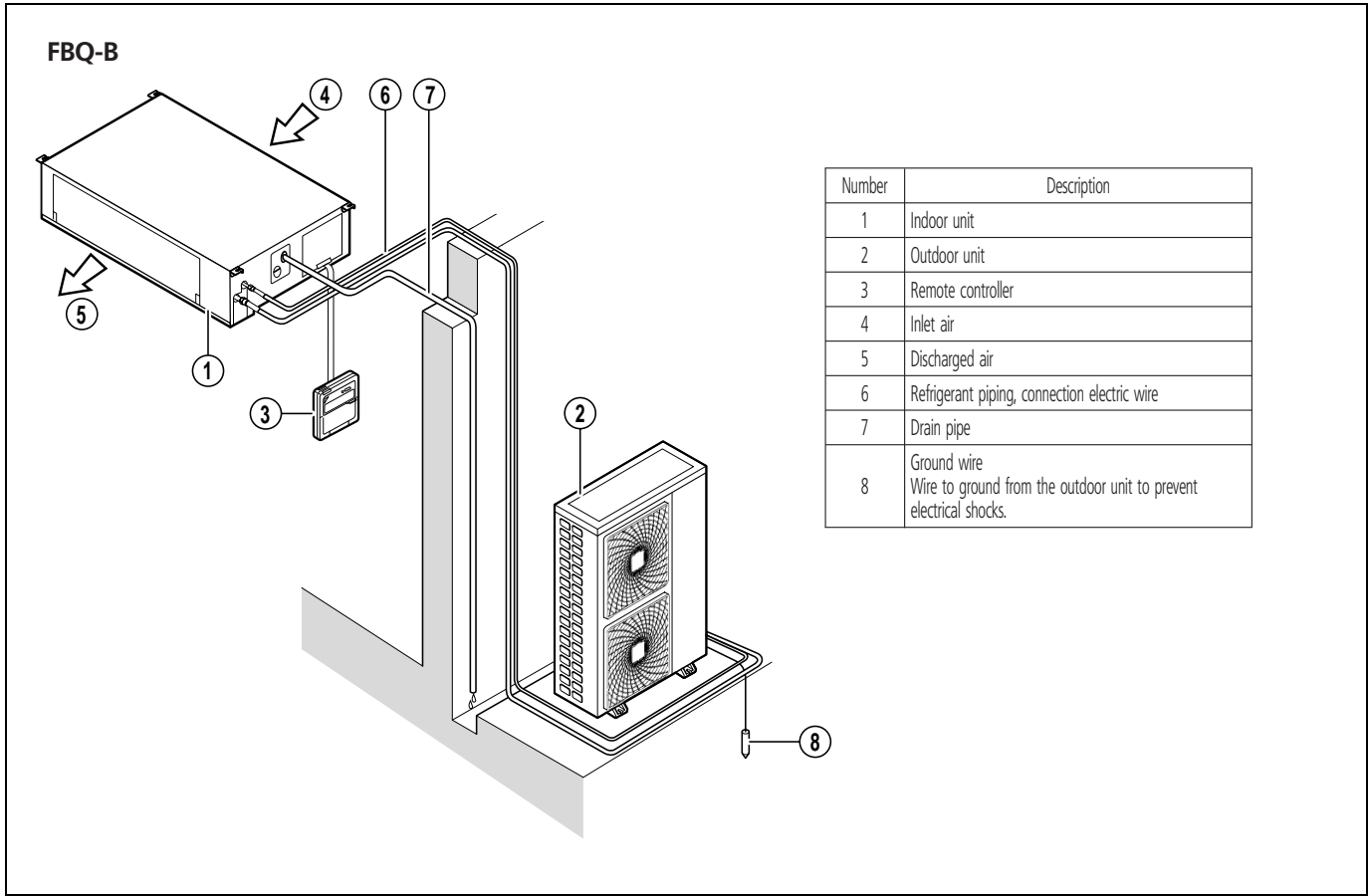
10 Fan characteristics

10



11 Installation

11 - 1 Installation method

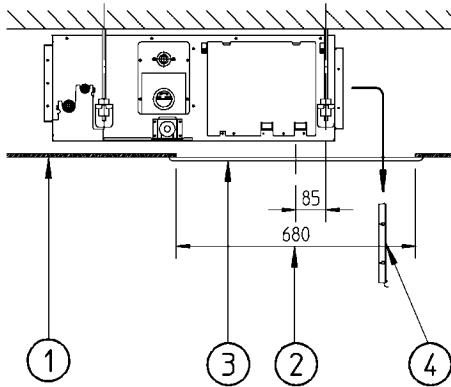


11 Installation

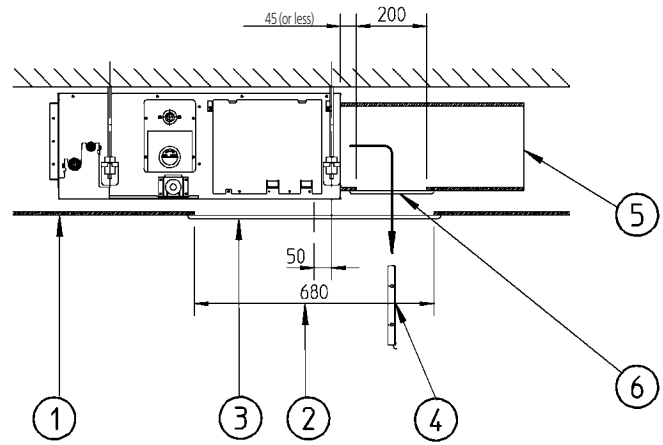
11 - 2 Filter installation method

11

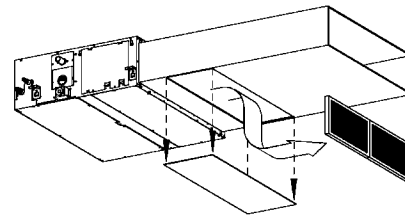
FBQ-B



Installation without duct



Installation with duct

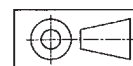


Number	Description
1	False ceiling
2	Ceiling opening
3	Service access panel (optional)
4	Air filter
5	Air inlet duct
6	Duct service opening

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.
- An optional service access panel is available:

Model	Service access panel
FBQ35,50	KTBJ25KA56W
FBQ60,71	KTBJ25KA80W
FBQ100,125	KTBJ25KA160W

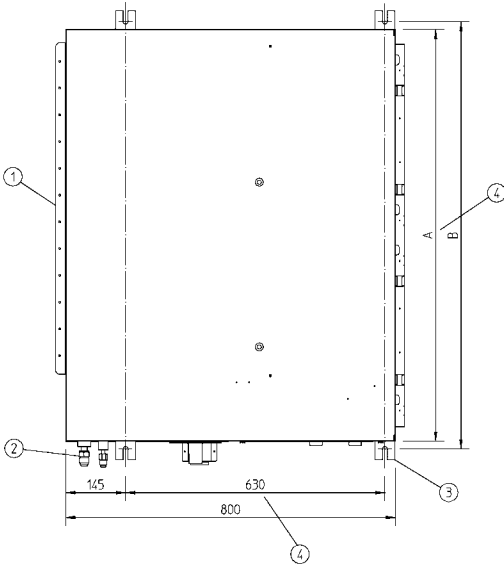


3TW22044-3B

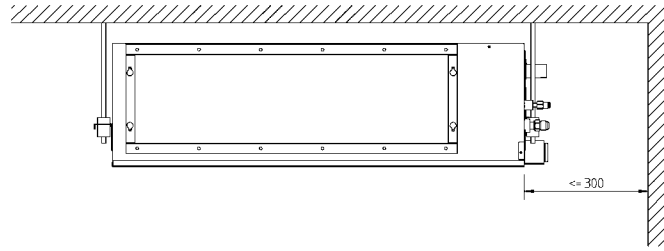
11 Installation

11 - 2 Filter installation method

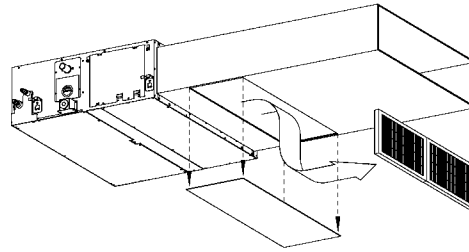
FBQ-B



Suspension bolt pitch

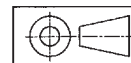


Service space



Number	Description
1	Indoor unit
2	Pipe connections
3	Suspension bolt pitch (4x)
4	Suspension bolt pitch distance

Unit	A	B
FBQ35,50	700	750
FBQ60	1000	1050



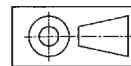
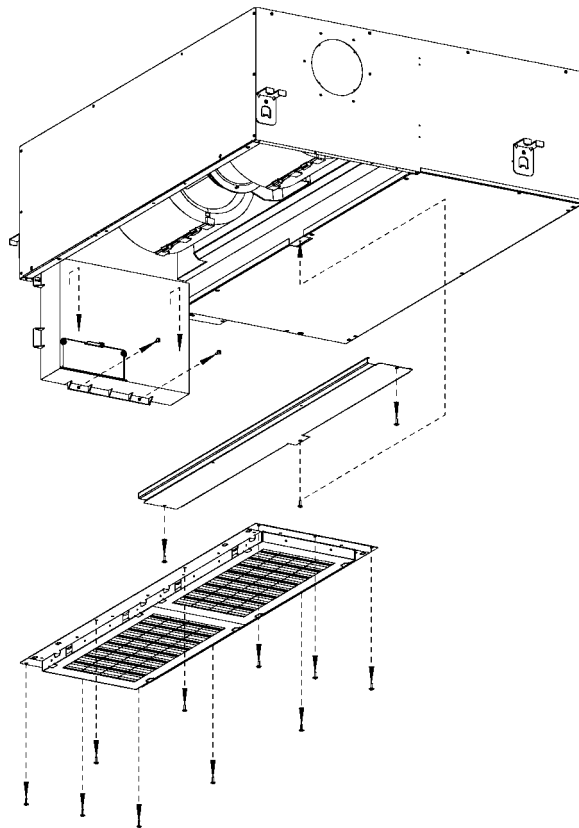
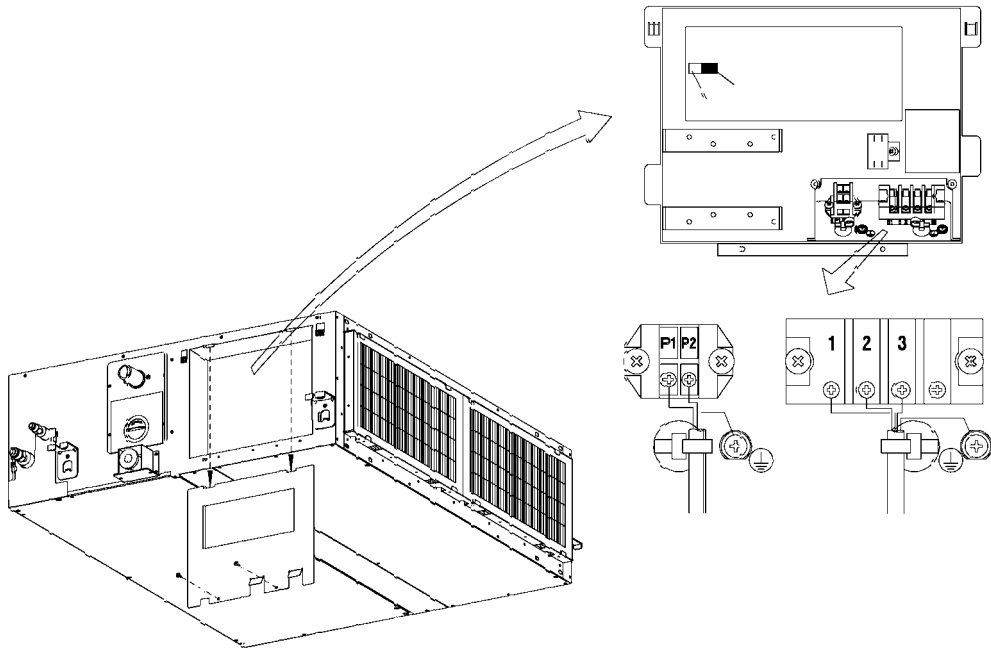
3TW22043-6A

11 Installation

11 - 3 Switch box connection

11

FBQ-B



3TW22043-5A

Split - Sky Air

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