



# technical data

FBQH-B7V3B

air conditioning systems

Split  
Sky Air

**R-410A**

# Split - Sky Air

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.



Het ISO14001 assures an effective environmental management system in order to help protect human health and the environment from potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.



Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.



Daikin units comply with the European regulations that guarantee the safety of the product.

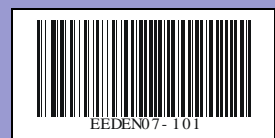


Daikin Europe N.V. participates in the Eurovent Certification Programme for Air Conditioners (AC), Liquid Chilling Packages (LCP) and Fan Coil Units (FC); the certified data of certified models are listed in the Eurovent Directory.

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## **DAIKIN EUROPE N.V.**

Naamloze Vennootschap  
Zandvoordestraat 300  
B-8400 Ostend, Belgium  
www.daikin.eu  
BTW: BE 0412 120 336  
RPR Oostende





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**R-410A**

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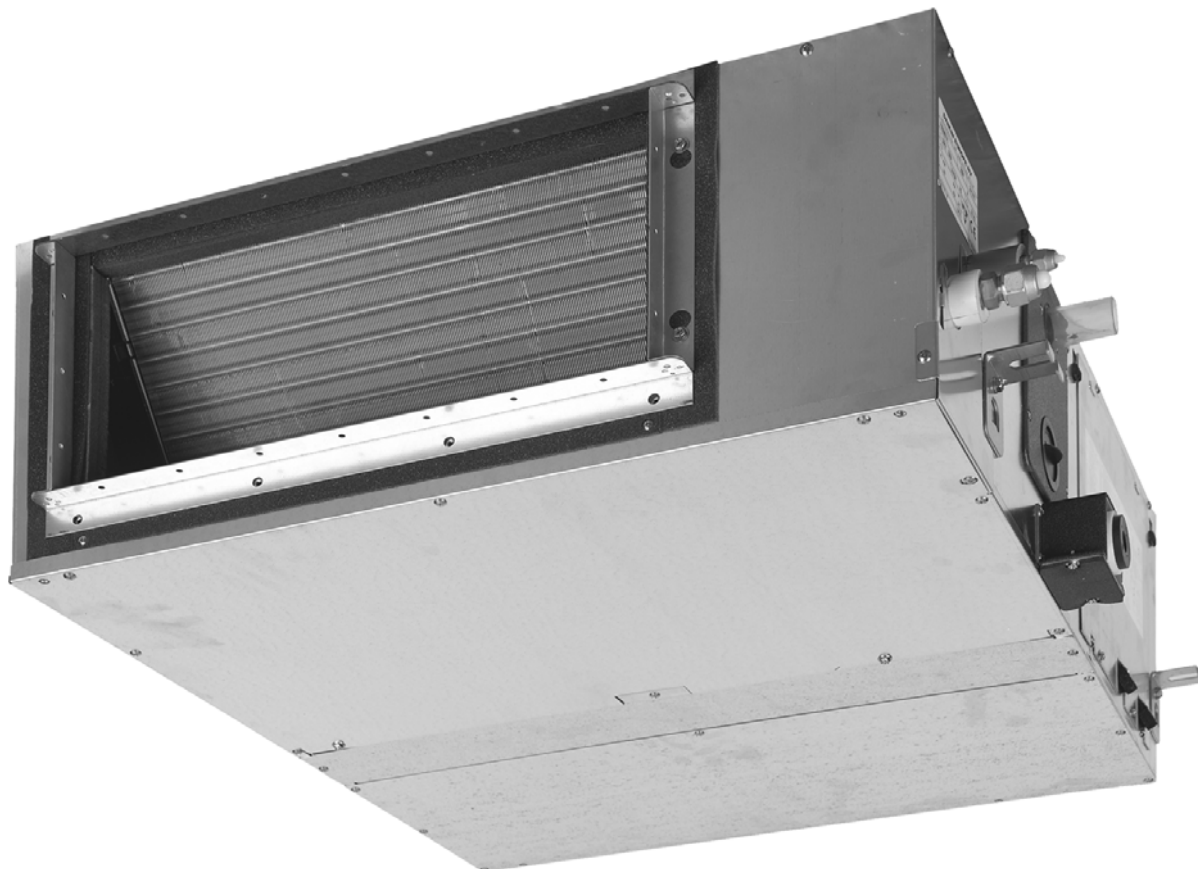
## FBQH-B7V3B

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# 1 Features

- Lightweight and compact
- Slim design for flexible installation
- Blends unobtrusively with any interior décor: only the suction and discharge grilles are visible
- The position of individual air discharge grilles can be altered, enabling efficient temperature distribution, even in irregularly shaped rooms.
- Optimum air distribution
- Quiet operation

1



## 2 Specifications

2-1 TECHNICAL SPECIFICATIONS				FBQH50B7V3B	FBQH60B7V3B	
Casing	Colour				Non painted	
	Material			Galvanised steel		
Dimensions	Packing	Height	mm	400	400	
		Width	mm	931	1231	
		Depth	mm	991	991	
	Unit	Height	mm	300	300	
		Width	mm	700	1000	
		Depth	mm	800	800	
Weight	Unit		kg	31	41	
	Packed Unit		kg	42	47	
Required Ceiling Void			mm	>350 (with flange), >465 (with canvas)		
Heat Exchanger	Dimensions	Length	mm	450	750	
		Nr of Rows			3	3
		Fin Pitch	mm	1.75	1.75	
		Nr of Passes			6	7
		Face Area	m <sup>2</sup>	0.132	0.221	
		Nr of Stages			14	14
	Tube type			Hi-XA (7)	Hi-XSS (7)	
	Fin	Type		Rhombus		
		Treatment		Hydrophilic		
	Fan	Type			Sirocco fan	
Quantity			1	2		
Air Flow Rate	Cooling	High	m <sup>3</sup> /min	14	19	
		Low	m <sup>3</sup> /min	10	14	
	Heating	High	m <sup>3</sup> /min	14	19	
		Low	m <sup>3</sup> /min	10	14	
Fan	Max	High	Pa	88	86	
		Standard	Pa	49	48	
		Low	Pa	20	20	
	Motor	Quantity		1	1	
		Number of steps		2 steps	3 steps	
		Output (high)	W	85	125 (high)	
Drive		Direct drive				
Cooling	Sound Power	High	dBA	53		
		Medium	dBA		60	
	Sound Pressure	High	dBA	33	34	
		Low	dBA	29	30	
Heating	Sound Power	High	dBA	53		
		Low	dBA		60	
	Sound Pressure	High	dBA	33	34	
		Low	dBA	29	30	
Sound Level	Sound Absorbing Insulation			foamed polyurethane		
Refrigerant	Type			R-410A		
Piping connections	Liquid (OD)	Type			Flare connection	
		Diameter (OD)	mm	6.4	9.5	
	Gas	Type			Flare connection	
		Diameter (OD)	mm	12.7	15.9	
	Drain	Diameter (OD)	mm	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		

## 2 Specifications

2

2-1 TECHNICAL SPECIFICATIONS				FBQH50B7V3B	FBQH60B7V3B
Decoration Panel	Model			BYBS45D	BYBS71DJW1
	Colour			White	White (10Y9/0,5)
	Dimensions	H	mm	55	55
		W	mm	800	1000
		D	mm	500	500
Weight			kg	3.5	4.5
Air Filter				Resin net with mold resistance	
Air direction control				Up and downwards	
Temperature control				Computerized control	Microprocessor thermostat for cooling and heating
Safety Devices				Inline fuse	Fan motor thermal fuse
				Fan motor thermal protector	
Standard Accessories	Item			Operation manual	
	Quantity			1	
	Item			Installation manual	
	Quantity			1	
	Item			Drain hose	
	Quantity			1	
	Item			Metal clamp for drain hose	
				Insulation for piping	
Washer for hanger bracket					
Screws					
Notes				The sound pressure level is measured via a microphone at a certain distance from the unit. It 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.
				The sound power level is an absolute value indicating the power which a sound source generates.	Sound values are measured in an anechoic room.
					Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to sound level drawings of this chapter.
					The external static pressure is changeable : change the connectors inside the electrical box, this pressure means : High static pressure - standard
					The external static pressure is changeable : change the connectors inside the electrical box, this pressure means : High static pressure - standard - low static pressure

2-2 ELECTRICAL SPECIFICATIONS				FBQH50B7V3B	FBQH60B7V3B
Power Supply	Name			V1	V3
	Phase			1	1
	Frequency	Hz	50	50	
	Voltage	V	230	230	
Voltage range	Minimum			-10%	
	Maximum			+10%	

### 3 Safety device settings

Model	Safety devices	35	45 - 50	60	71	100	125	140
FBQH	Fuse	—	5A/250V	—	—	—	—	—
	Fan motor thermal fuse (°C)	—	152±2	152±2	—	—	—	—
	Fan motor thermal protector (°C)	—	—	—	—	—	—	—
3TW21009-2H								

## 4 Options

4

FBQH-B				
Nr	Item		FBQH50	FBQH60
1	Panel related	Decoration panel	BYBS45DA	BYBS71DA
		Service access panel	KTBJ25KA56	KTBJ25KA80W
2	Filter related	High-efficiency filter 65% (colorimetric method) *1	KAF252LA56	KAF252L80
		High-efficiency filter 90% (colorimetric method) *1	KAF253LA56	KAF253L80
		Filter chamber for bottom suction	KAJ25LA56D	KAJ25LA80D
		Filter chamber for rear suction	KAJ25LA56B	KAJ25LA80B
3	Air inlet and air discharge outlet related	Air suction canvas	KSA-25KA56	KSA-25KA80
		Blind board/screening door	KBBJ25KA56	KBBJ25KA80
		Air discharge adapter for round duct	KDAJ25KA56	KDAJ25KA71
Nr	Item	Type	FBQH50	FBQH60
1	Remote control	Wired type	BRC1D528	
2	Central remote control		DCS302CA51	
3	Unified ON/OFF control		DCS301BA51	
4	Schedule timer		DST301BA51	
5	Adapter for wiring (interlock for fresh air intake fan)		KRP1BA54	
6	Wiring adaptor for electrical appendices		KRP4A51, KRP4A516, KRP4AA51	
7	Interface adapter for Sky Air series		DTA112BA51	
8	Remote ON/OFF, forced OFF		EKROROA	
9	Option PCB for external electrical heater, humidifier and/or hour meter *2		EKRP1B2A	

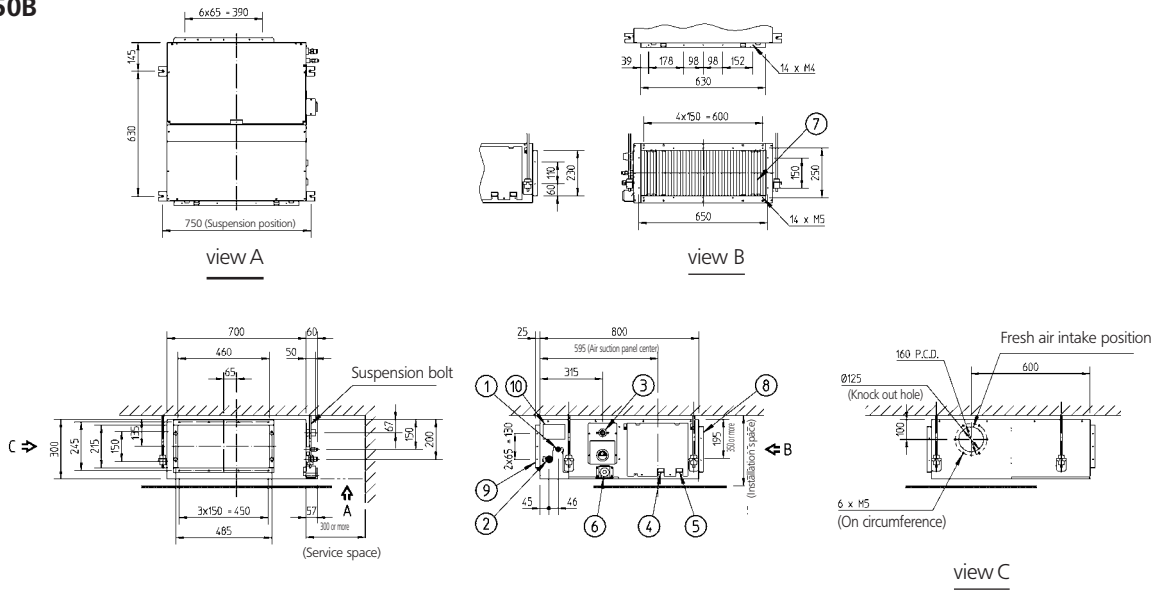
3TW25119-1G

\*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 Dimensional drawing & centre of gravity

## 5 - 1 Dimensional drawing

### FBQH50B



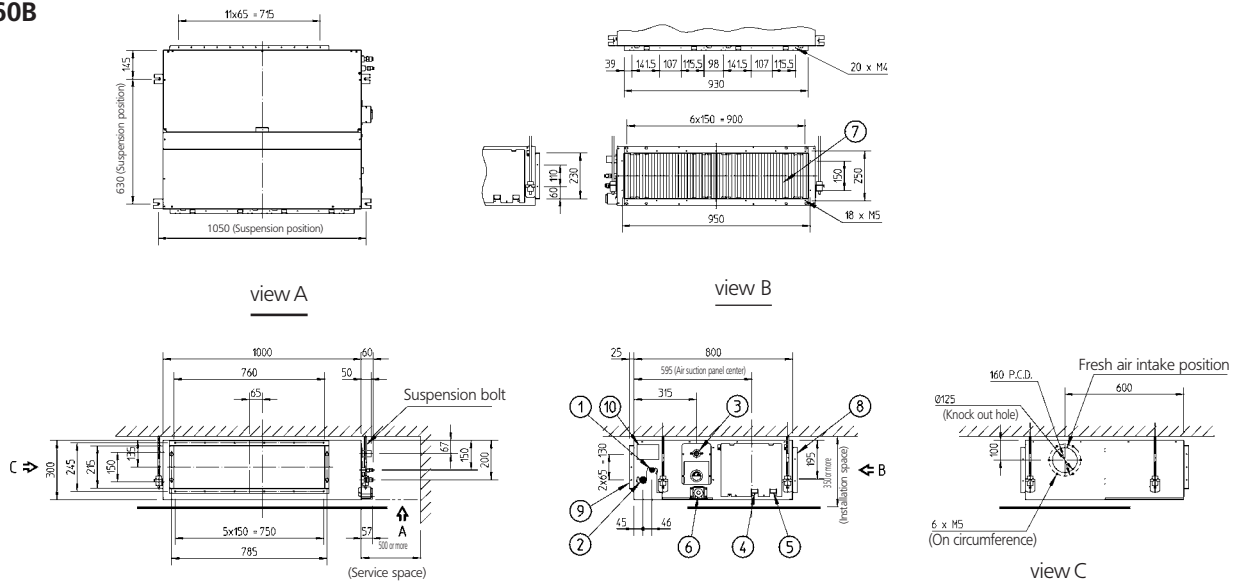
- Notes:**
1. Refer to 'outlook drawing for installing optional accessories' when installing optional accessories.
  2. The required ceiling depth varies according to configuration of the specific system.
  3. For maintenance of the air filter, it is necessary to provide a service access panel according 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 (O.D. φ 32, I.D. φ 25)
- 4 Remote control wiring connection
- 5 Power supply connection
- 6 Drain hole VP25 (O.D. φ 32, I.D. φ 25)
- 7 Air filter
- 8 Air suction side
- 9 Air discharge side
- 10 Name plate

Model	A	B
FBQH50	6.35	12.70

3TW22224-1D

### FBQH60B



- 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 (O.D. φ 32, I.D. φ 25)
- 4 Remote control wiring connection
- 5 Power supply connection
- 6 Drain hole VP25 (O.D. φ 32, I.D. φ 25)
- 7 Air filter
- 8 Air suction side
- 9 Air discharge side
- 10 Name plate

Model	A	B
FBQH60	9.52	15.90

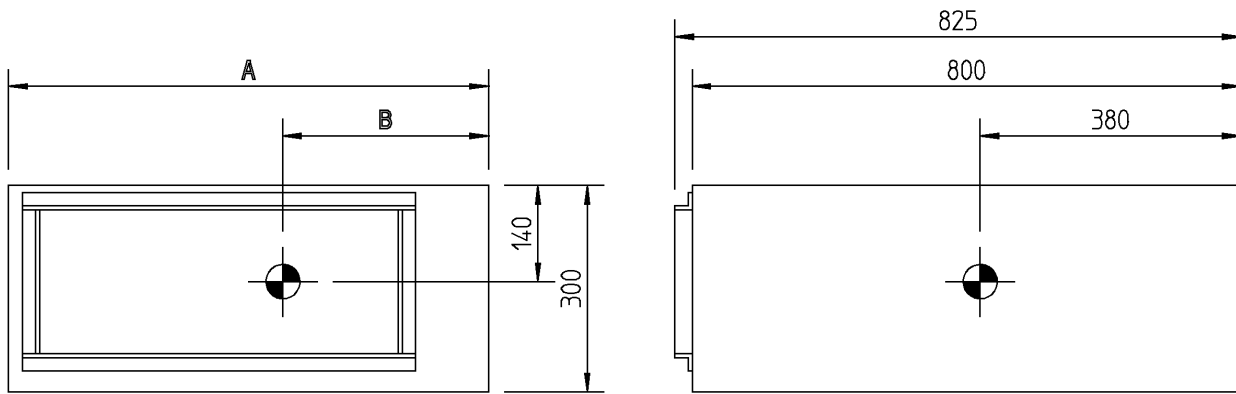
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## 5 Dimensional drawing & centre of gravity

### 5 - 2 Centre of gravity

FBQH50-60B

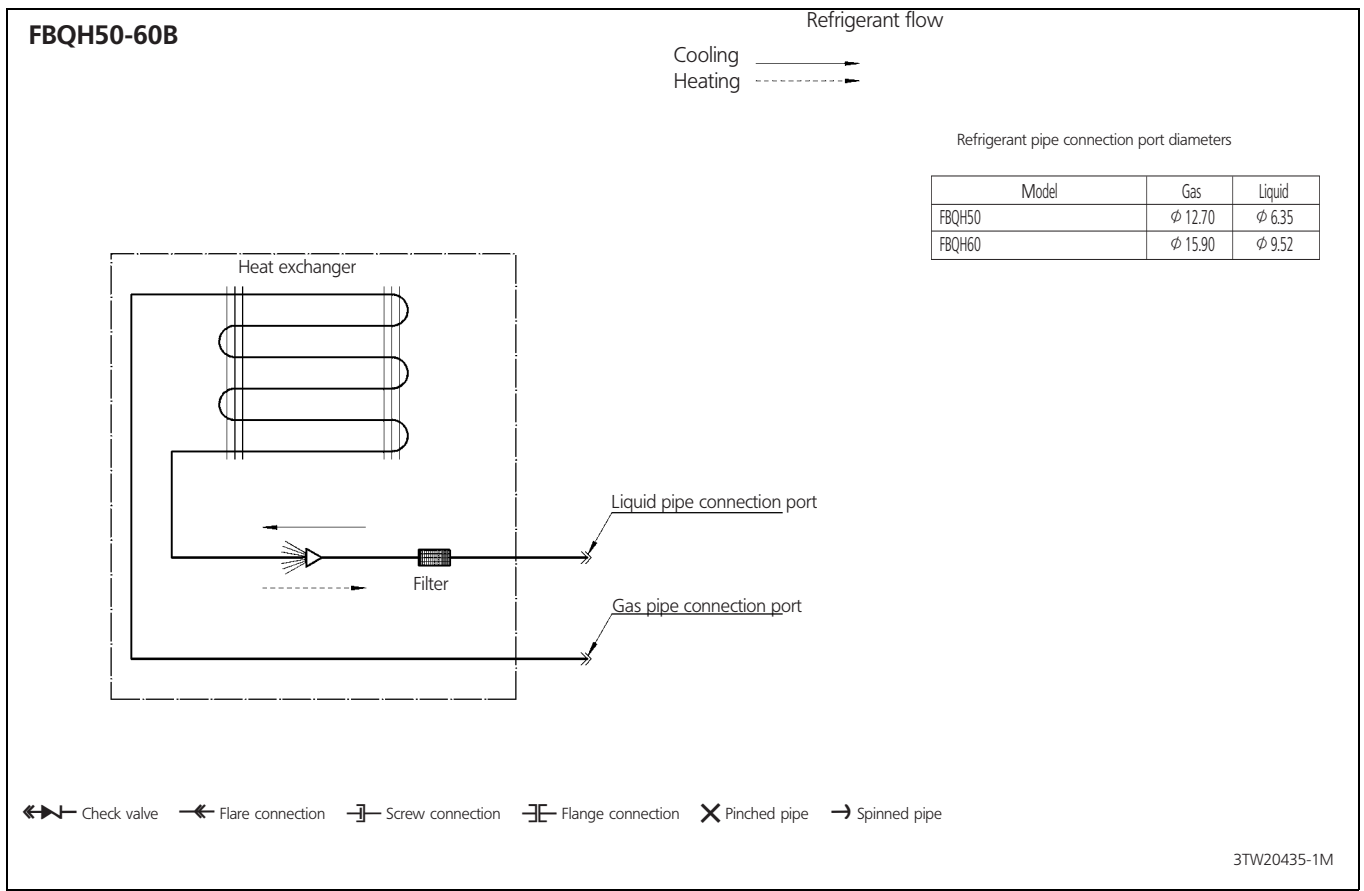


Model	A	B
FBQH50	700	300
FBQH60	1000	460

4TW20169-2H

## 6 Piping diagram

6



# 7 Wiring diagram

## 7 - 1 Wiring diagram

### FBQH50B

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

SIL	Float switch	R1T	Thermistor (air)	Wired remote control	BS14	Filter sign reset button	Adapter for wiring	
A1P	Printed circuit board	R2T	Thermistor (liquid)	BS1	H1P	Light emitting diode (service monitor red)	RyC/RyF	Magnetic relay
T1R	Power supply transformer (transformer 220-240V/218V)	R3T	Thermistor (coil)	BS2	LCD	Liquid crystal display	Connector for optional parts	Connector (interface adapter for sky air series)
C1R	Capacitor (fan)	RyF1-4	Magnetic relay (fan)	BS3,BS8	SS1	Selector switch (main/sub)	X60A, X61A	Connector (group control adapter)
FU	Fuse (5A, 250V)	RyP	Magnetic relay (drain pump)	BS4,BS9			X33A	Connector (remote ON/OFF forced OFF)
F1T	Thermal fuse (152°C) (M1F embedded)	SS1	Selector switch (emergency)	BS6			X35A	
HAP	Light emitting diode (service monitor green)	X1M	Terminal strip	BS7			X40A	
M1F	Motor (fan)	X2M	Terminal strip	BS11				
M1P	Motor (drain pump)	RC	Signal receiver circuit	BS12				
		TC	Signal transmission circuit					

2TW29356-1

### FBQH60B

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 / BRN: Brown

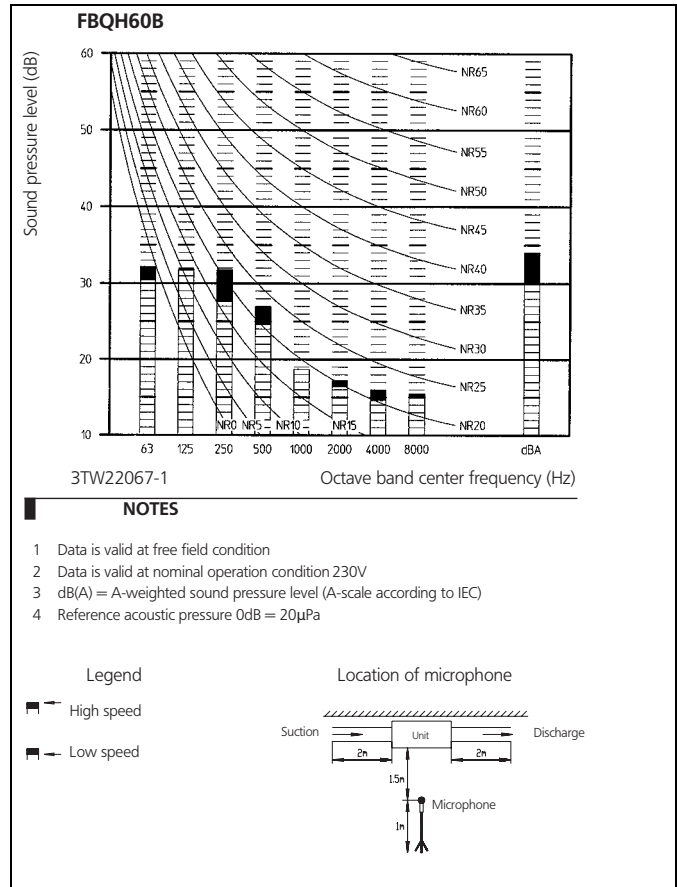
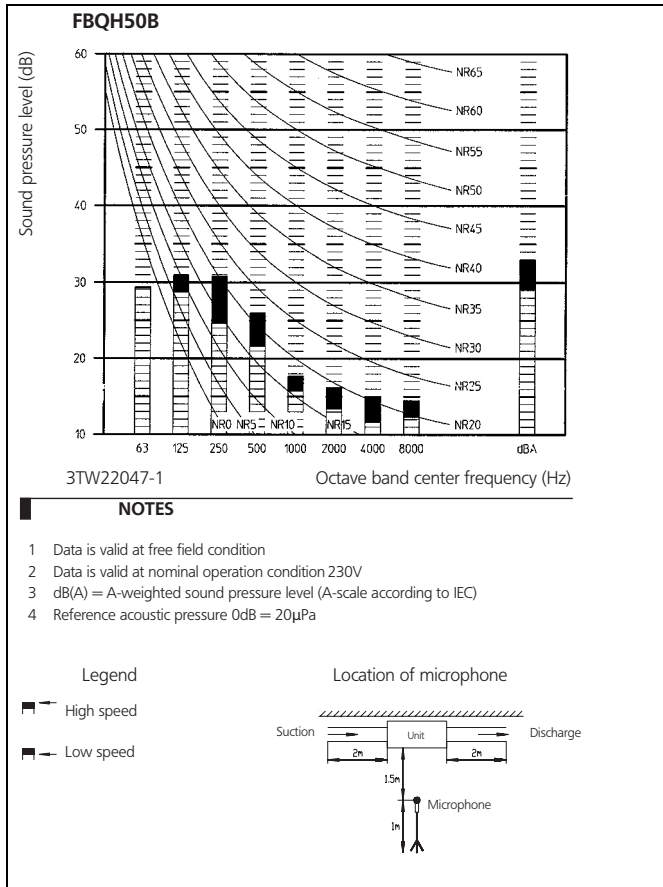
SIL	Float switch	R1T	Thermistor (air)	Wired remote control	BS14	Filter sign reset button	Adapter for wiring	
A1P	Printed circuit board	R2T	Thermistor (coil)	BS1	H1P	Light emitting diode (service monitor red)	RyC/RyF	Magnetic relay
T1R	Power supply transformer (transformer 220-240V/218V)	RyF1-4	Magnetic relay (fan)	BS2	LCD	Liquid crystal display	Connector for optional parts	Connector (interface adapter for sky air series)
C1R	Capacitor (fan)	RyP	Magnetic relay (drain pump)	BS3,BS8	SS1	Selector switch (main/sub)	X60A, X61A	Connector (group control adapter)
FU	Fuse (5A, 250V)	SS1	Selector switch (emergency)	BS4,BS9			X33A	Connector (remote ON/OFF forced OFF, only SKY-AIR Passies)
F1T	Thermal fuse (152°C) (M1F embedded)	X1M	Terminal strip	BS6			X35A	
HAP	Light emitting diode (service monitor green)	X2M	Terminal strip	BS7			X40A	
M1F	Motor (fan)	RC	Signal receiver circuit	BS11				
M1P	Motor (drain pump)	TC	Signal transmission circuit	BS12				

2TW29366-1

# 8 Sound data

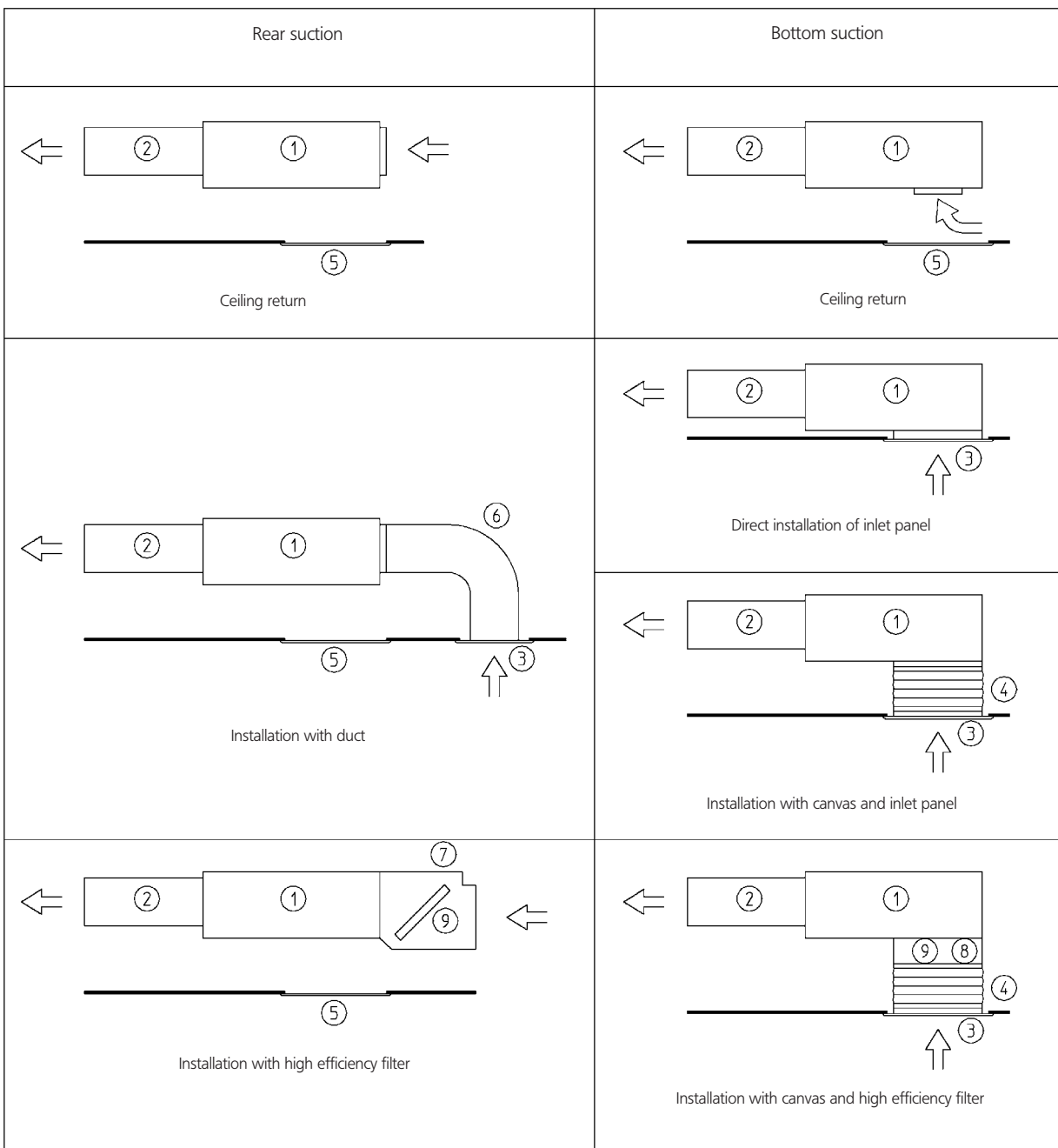
## 8 - 1 Sound pressure spectrum

8



# 9 Installation

## 9 - 1 Installation method



Wide variety of installation methods

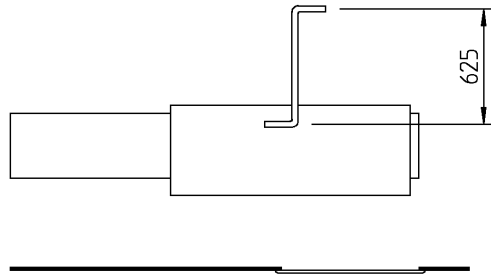
Number	Description	
1	Main body	
2	Air outlet duct	Field supply
3	Inlet panel	Optional accessory
4	Air suction canvas	Optional accessory
5	Access panel	Optional accessory
6	Air inlet duct	Field supply
7	Filter chamber for rear suction	Optional accessory
8	Filter chamber for bottom suction	Optional accessory
9	High efficiency filter	Optional accessory

3TW29353-1

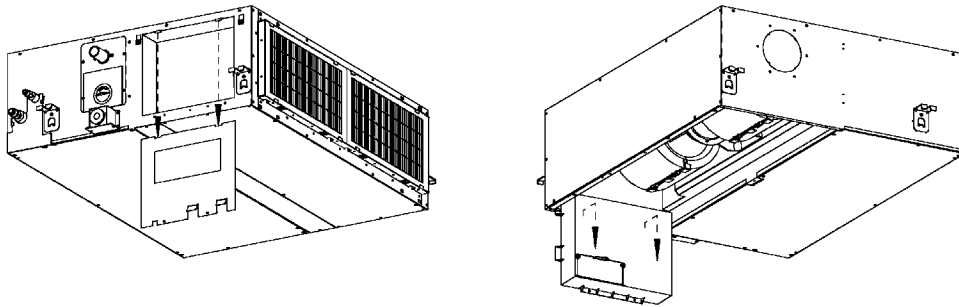
# 9 Installation

## 9 - 1 Installation method

9

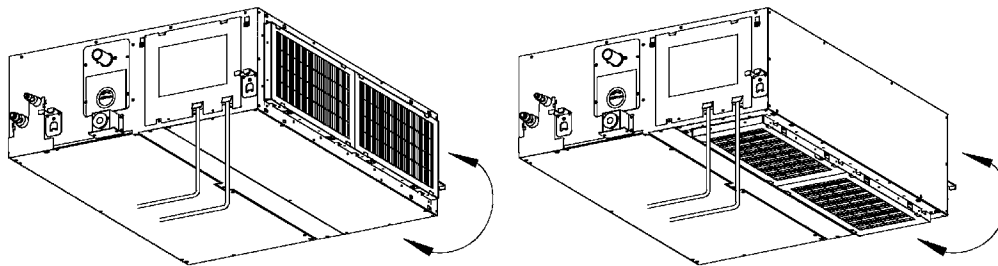


Drain pump up height



From the outside of the switch box:  
remove the switch box cover

Easy access to the switch box



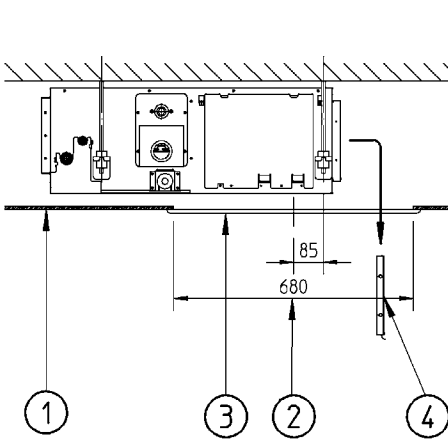
Easy modification from rear to bottom suction

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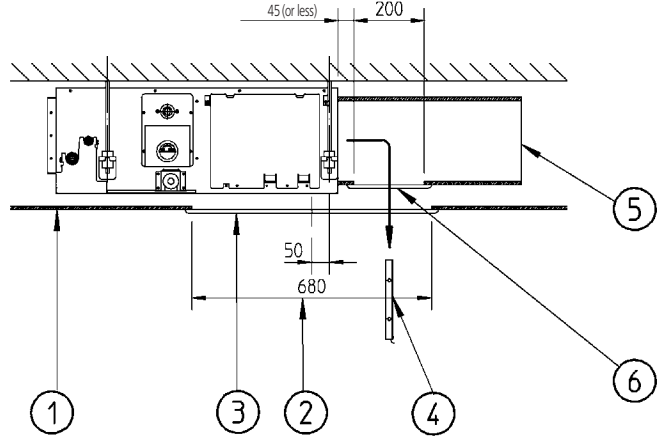
# 9 Installation

## 9 - 1 Installation method

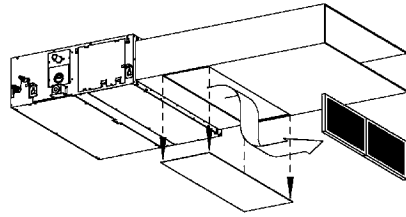
FBQH-B



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
FBQH50	KTB25KA56W
FBQH60	KTB25KA80W

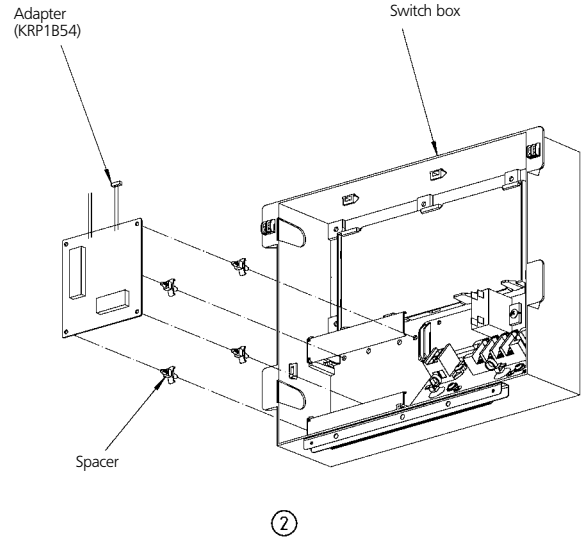
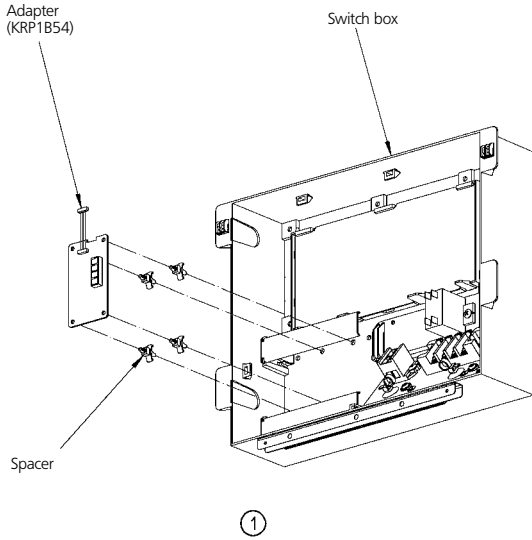
3TW22044-3D

# 9 Installation

## 9 - 1 Installation method

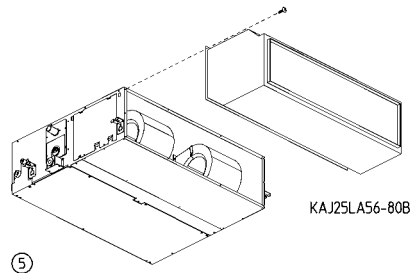
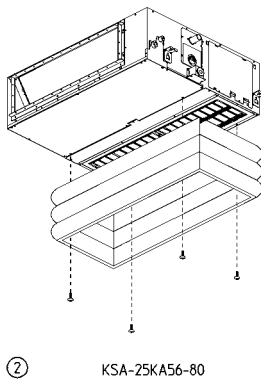
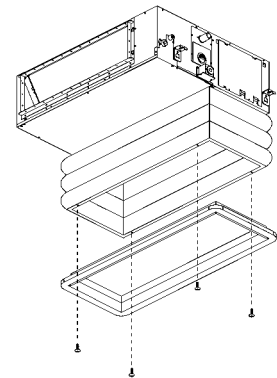
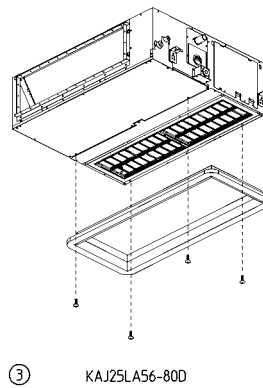
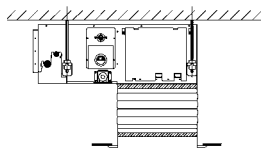
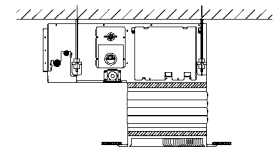
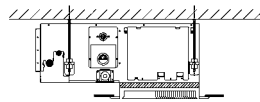
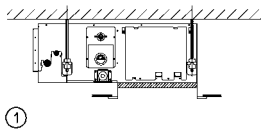
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FBQH-B



3TW29363-4

FBQH-B

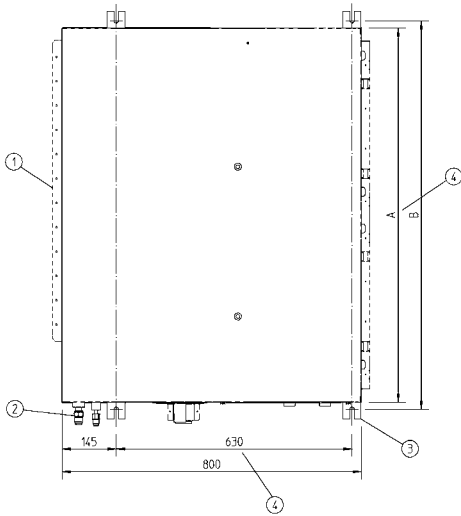


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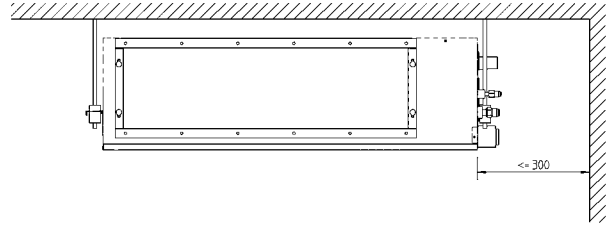
# 9 Installation

## 9 - 2 Filter installation method

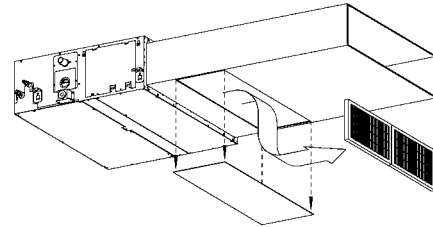
FBQH-B



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
FBQH50B7V3B	700	750
FBQH60B7V3B	1000	1050

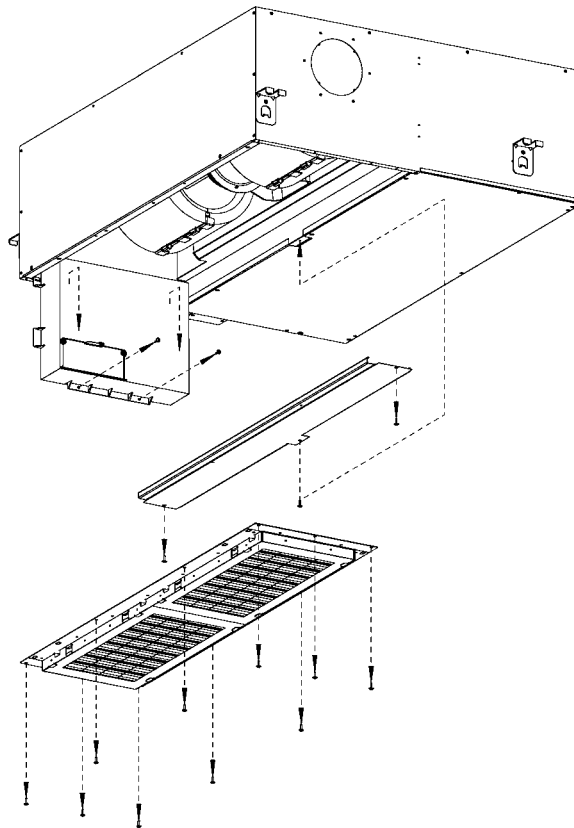
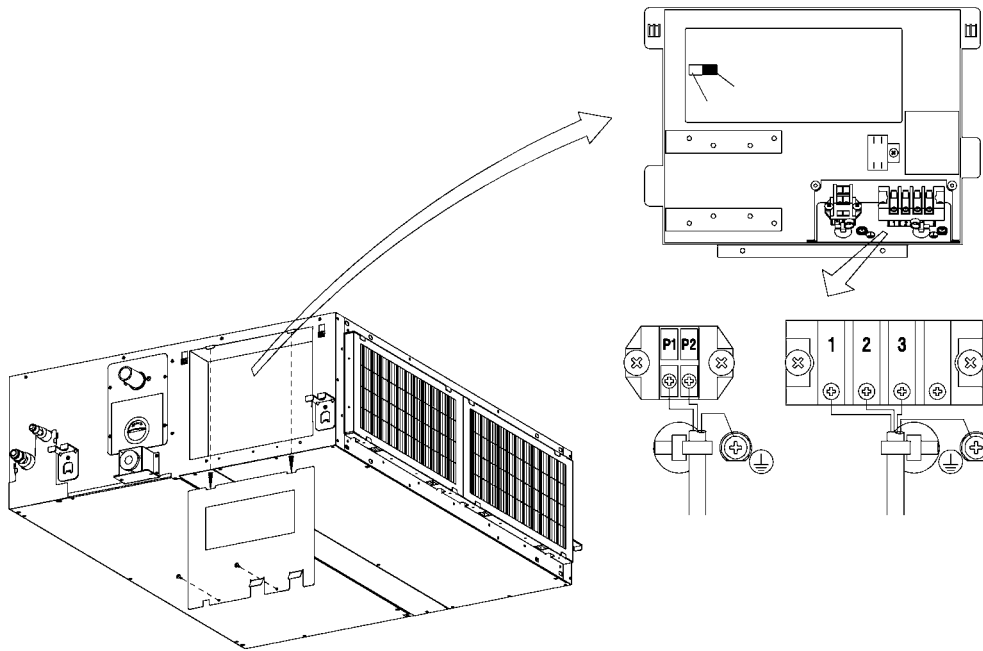
3TW29353-3

# 9 Installation

## 9 - 3 Switch box connection

9

FBQH-B



3TW29353-2