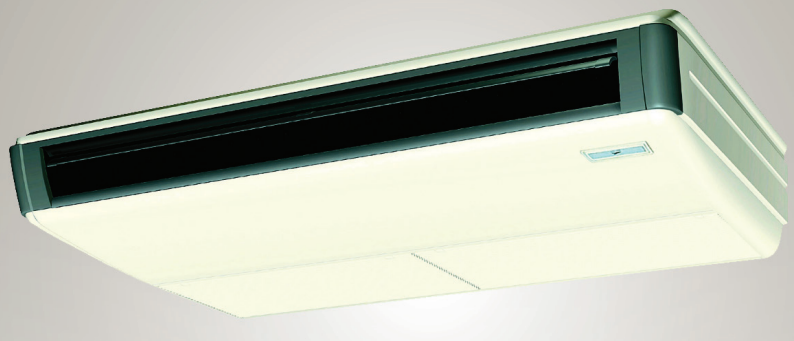
DAIKIN

Air Conditioners

Technical Data

Ceiling suspended unit



EEDEN12-100

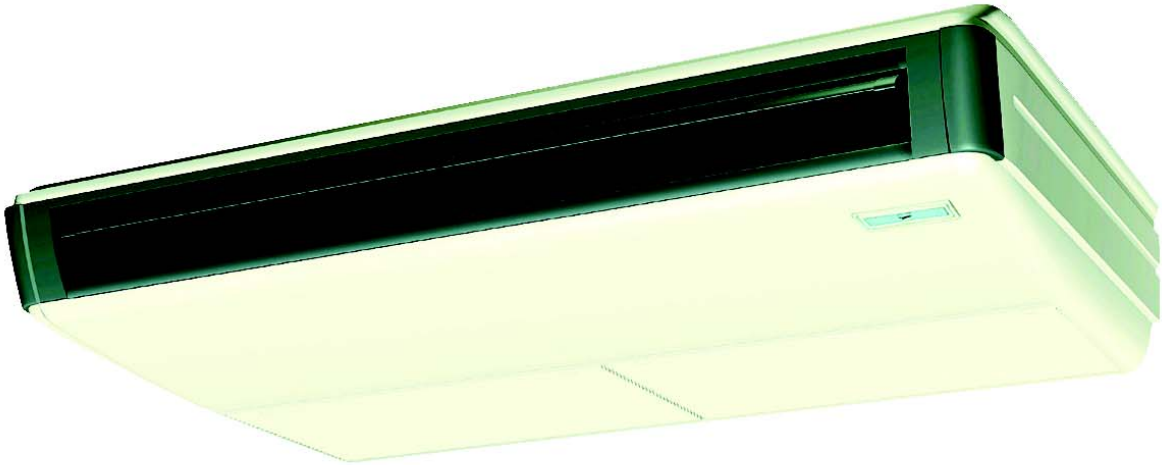
FHQ-B8

TABLE OF CONTENTS

FHQ-B8

1 Features

- 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.
- Can be installed in both new and existing buildings
- Ideal for use in larger areas
- Heat pumps are all-in-one heating & cooling solutions for residential & commercial applications. They extract thermal energy from the ambient air and are therfore more energy efficient and emit far less CO2 than comparable fossil fuel based boiler systems.
- Wider air discharge thanks to Coanda effect: up to 100º
- Air flow distribution for ceiling heights up to 3.8m without capacity loss
- The unit can easily be mounted in corners and narrow spaces, as it only needs 30mm lateral service space



2 steps

2 Specifications

2-1 Technical Specifications					FHQ35B8	FHQ50B8	FHQ60B8
Power input	Cooling	Nom.		kW	0.111		0.115
	Heating	Nom.		kW	0.111		0.115
Casing	Colour				White		
Dimensions	Unit	Height/Width/Depth		mm	195/960/680		195/1,160/680
	Packed unit	Height/Width/Depth		mm	279/1,046/818		279/1,246/818
Weight	Unit			kg	24	25	27
	Packed unit			kg	31	32	35
Heat exchanger	Length			mm	722		922
	Rows	Quantity			2	3	2
	Fin pitch			mm	1.75		
	Passes	Quantity			6		
	Face area			m²	0.182		0.233
	Stages	Quantity			12		
	Empty tubeplate hole	Quantity			0	2	0
	Tube type				Cross fin coil (Multi louver fins and N-hix tubes)		
Fan	Type				Sirocco fan		
	Quantity				3		4
	Air flow rate	Cooling	High	m³/min	13		17
			Low	m³/min	10		13
		Heating	High	m³/min	13		16
			Low	m³/min	10		13
Fan motor	Model				3D12K1AA1		4D12K1AA1
	Speed	Steps			2		
	Output	High		W	62		
	Phase x Voltage			V	1 x 220-240		
Sound power level	Cooling	High/Low		dBA	53/48	54/49	55/49
	Heating	High/Low		dBA	53/48	54/49	55/49
Sound pressure level	Cooling	High/Low		dBA	37/32	38/33	39/33
	Heating	Super high/High/Low		dBA	-/37/32	-/38/33	-/39/33
Refrigerant	Type				R-410A		
Piping connections	Sound absorbing insulation				Foamed polyurethane / Glass wool		
	Liquid	Type/OD		mm	Flare connection/6.35		
	Gas	Type/OD		mm	Flare connection/9.5	Flare connection/12.7	
	Drain				VP20 (I.D. 20/O.D. 26)		
	Heat insulation				Foamed polystyrene / Foamed polyethylene		

Standard Accessories : Operation manual;

Standard Accessories : Installation manual;

Standard Accessories : Paper pattern for installation;

Standard Accessories : Drain hose;

Standard Accessories : Clamp metal;

Standard Accessories : Insulation for fitting;

Standard Accessories : Sealing pads;

Standard Accessories : Clamps;

Standard Accessories : Washer for hanger bracket;

2-2 Electrical Specifications			FHQ35B8	FHQ50B8	FHQ60B8
Power supply	Name		V1		
	Phase		1~		
	Frequency	Hz	50		
	Voltage	V	220-240		
Current - 60Hz	Nominal running current	A	-		

3 Safety device settings

3 - 1 Safety Device Settings

FHQ-B8

	Safety devices		35	50	60
FHQ~BWV1B	Fuse		250V 5A	250V 5A	250V 5A
	Fan motor thermal fuse	°C	-	-	-
	Fan motor thermal protector	°C	OFF: 130±5 ON: 83±20	OFF: 130±5 ON: 83±20	OFF: 130±5 ON: 83±20

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4 Options

4 - 1 Options

FHQ-B8

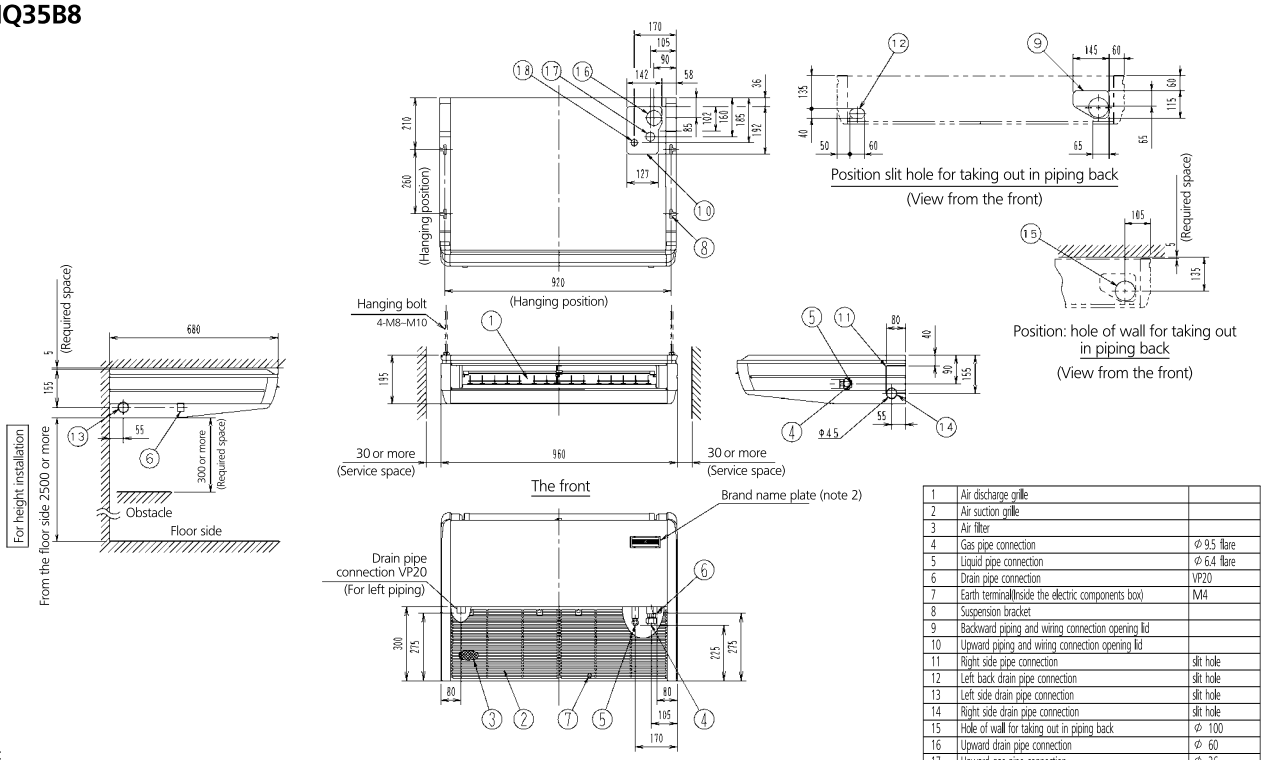
Name of option	Remark		FHQ~BVV1B		
			35	50	60
Replacement long-life filter			KAF501DA56		KAF501DA80
Drain up kit			KDU50N60VE		
L-type piping kit (for upward direction)			KHFP5MA35	KHFP5MA63	
Remote controller	Wired type		BRC1D528		
	Infrared type	For Heat pump	BRC7EA63W		
		For cooling only	BRC7EA66		
Central remote controller			DCS302CA51		
Unified ON/OFF controller			DCS301BA51		
Schedule timer			DST301BA51		
Adapter for wiring			KRP1BA54		
Wiring adapter for electrical appendices			KRP4AA52 ··· ※		
Interface adapter for Sky Air series			DTA112BA51		
Installation box for adapter PCB			KRP1CA93		

Note) 3D038056B
※ :Installation box for adapter PCB (KRP1C93) is necessary.

5 Dimensional drawings

5 - 1 Dimensional Drawings

FHQ35B8



1	Air discharge grille	
2	Air suction grille	
3	Air filter	
4	Gas pipe connection	∅ 9.5 flare
5	Liquid pipe connection	∅ 6.4 flare
6	Drain pipe connection	VP20
7	Earth terminal(Inside the electric components box)	M4
8	Suspension bracket	
9	Backward piping and wiring connection opening lid	
10	Upward piping and wiring connection opening lid	
11	Right side pipe connection	slit hole
12	Left back drain pipe connection	slit hole
13	Left side drain pipe connection	slit hole
14	Right side drain pipe connection	slit hole
15	Hole of wall for taking out in piping back	∅ 100
16	Upward drain pipe connection	∅ 60
17	Upward gas pipe connection	∅ 36
18	Upward liquid pipe connection	∅ 26

Note:
1. Location of unit's name plate: bottom of fan housing inside the suction grille.
2. In case of using infrared remote controller, this position will be a signal receiver. Refer to the drawing of infrared remote controller in detail.
3. The remote control code is the standard (about 3m outside the machine) attached.
   (0,5mm^{2}x2Wicksx0.D.∅ 5.4)
   (It is not attached to VRV.)

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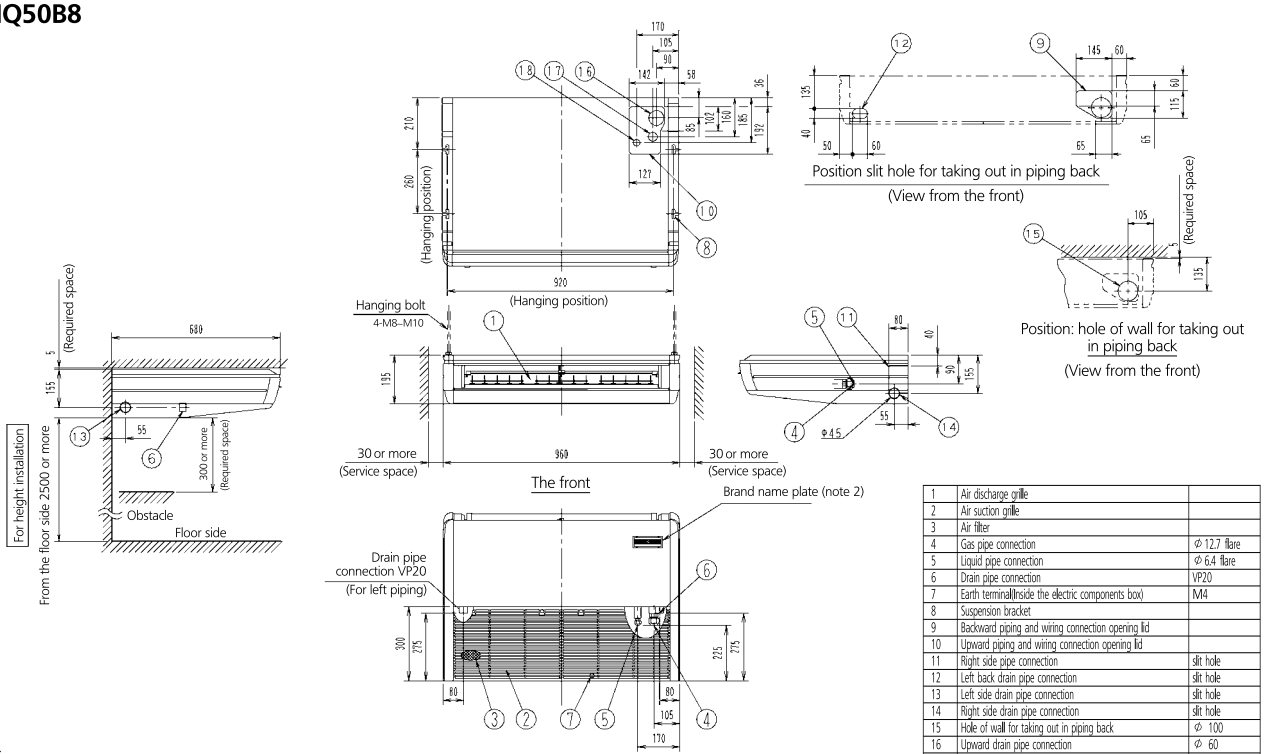
FHQ50B8



1	Air discharge grille	
2	Air suction grille	
3	Air filter	
4	Gas pipe connection	∅ 12.7 flare
5	Liquid pipe connection	∅ 6.4 flare
6	Drain pipe connection	VP20
7	Earth terminal(Inside the electric components box)	M4
8	Suspension bracket	
9	Backward piping and wiring connection opening lid	
10	Upward piping and wiring connection opening lid	
11	Right side pipe connection	slit hole
12	Left back drain pipe connection	slit hole
13	Left side drain pipe connection	slit hole
14	Right side drain pipe connection	slit hole
15	Hole of wall for taking out in piping back	∅ 100
16	Upward drain pipe connection	∅ 60
17	Upward gas pipe connection	∅ 36
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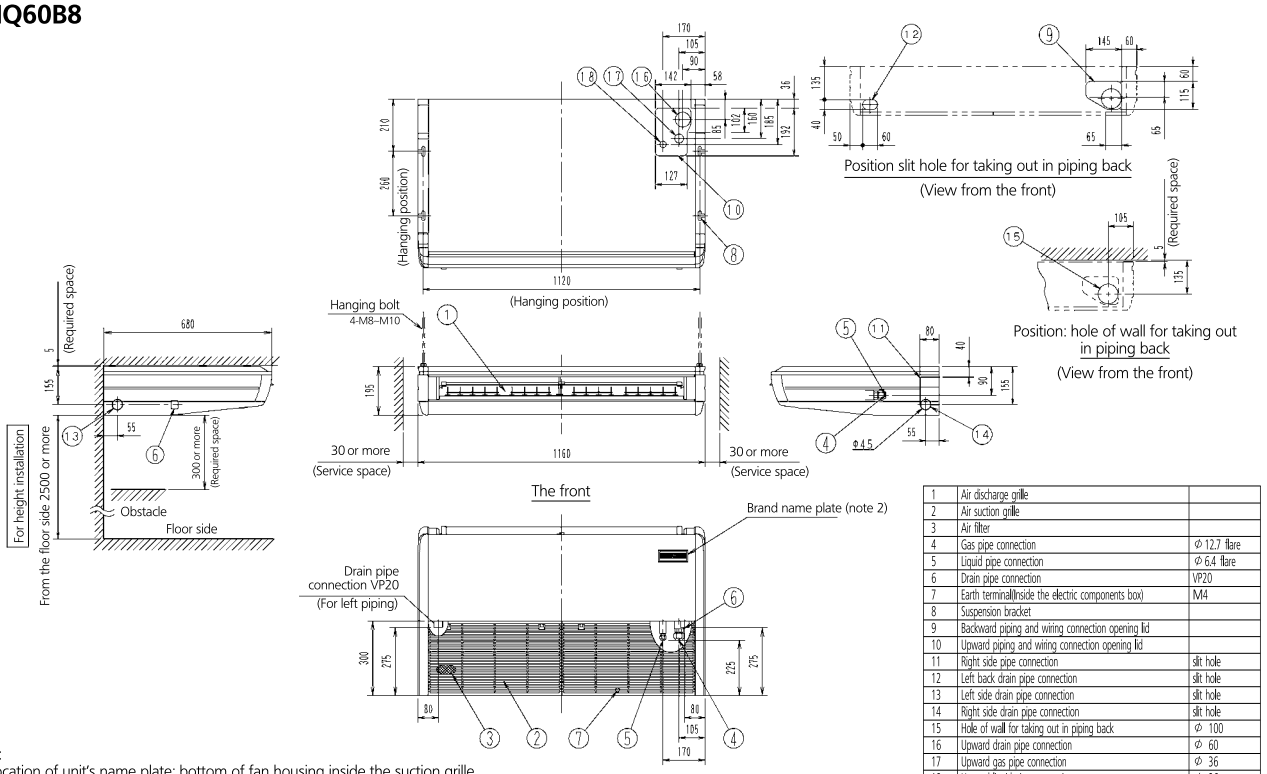
5 Dimensional drawings

5 - 1 Dimensional Drawings

FHQ60B8



1	Air discharge grille	
2	Air suction grille	
3	Air filter	
4	Gas pipe connection	Φ 12.7 flare
5	Liquid pipe connection	Φ 6.4 flare
6	Drain pipe connection	VP20
7	Earth terminal(Inside the electric components box)	M4
8	Suspension bracket	
9	Backward piping and wiring connection opening lid	
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3. The remote control code is the standard (about 3m outside the machine) attached.
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   (It is not attached to VRV.)

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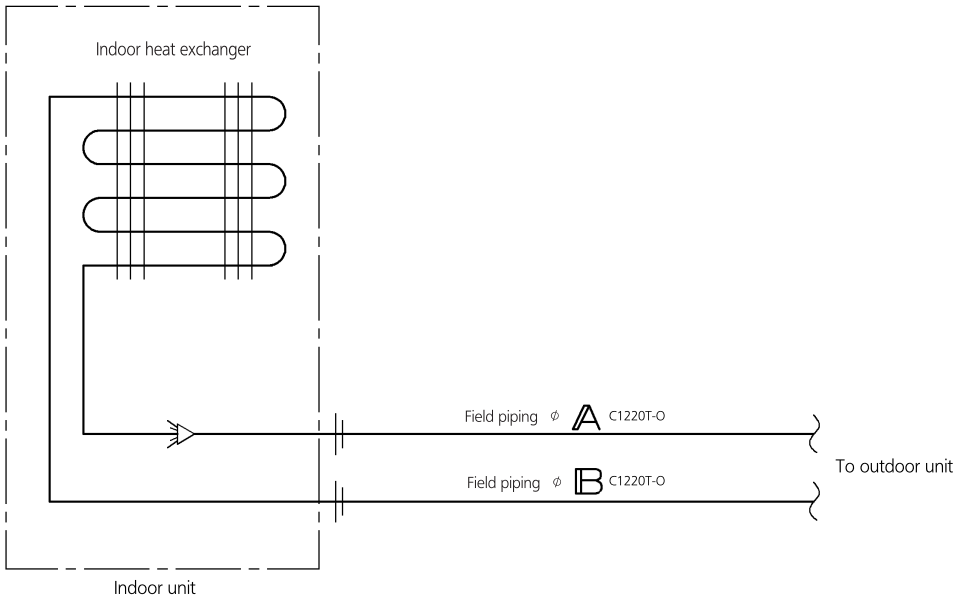
6 Piping diagrams

6 - 1 Piping Diagrams

FHQ-B8



Model	A	B
FHQ35BWV1B	6.4	9.5
FHQ50, 60BWV1B	6.4	12.7

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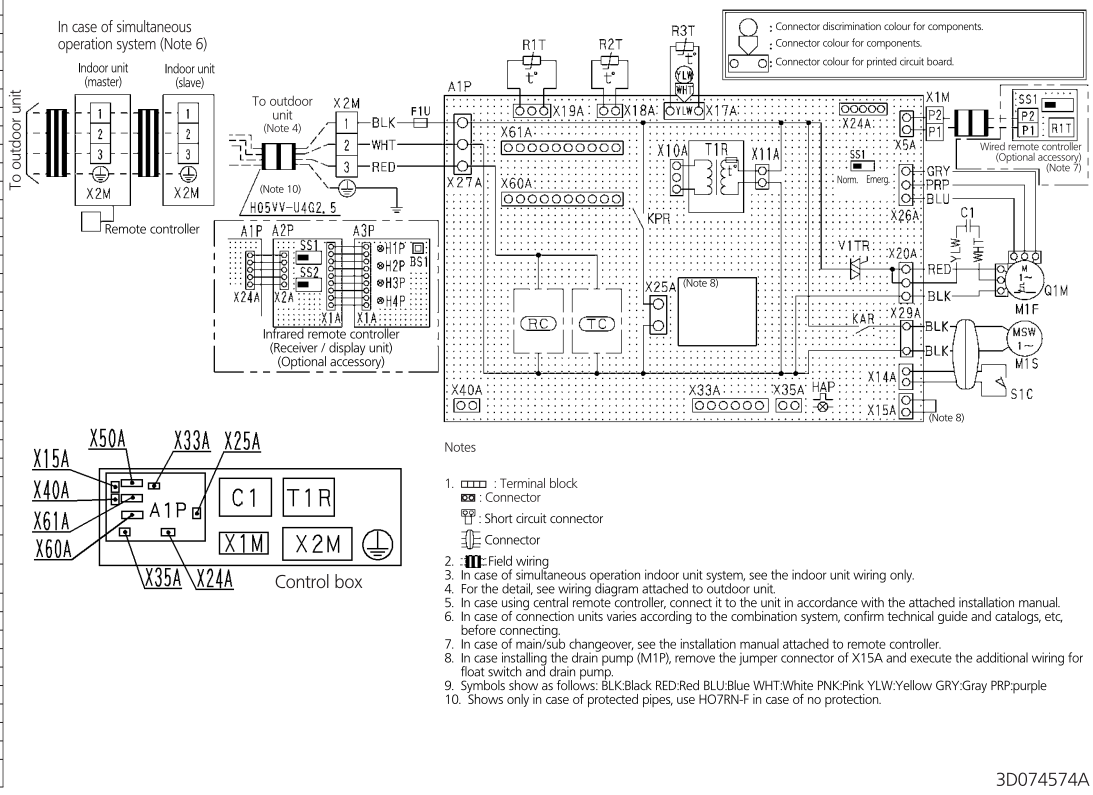
7 Wiring diagrams

7 - 1 Wiring Diagrams - Single Phase

FHQ-B8

A1P	Printed circuit board
C1	Capacitor (M1F)
F1U	Fuse(T5A 250V)
HAP	Flashing lamp (service monitor-green)
KAR	Magnetic relay (M1S)
KPR	Magnetic relay (M1P)
M1F	Motor (indoor fan)
M1S	Motor (swing flap)
Q1M	Thermal protector (M1F embedded)
R1T	Thermistor (air)
R2T	Thermistor (Coil-1)
R3T	Thermistor (Coil-2)
S1C	Limit switch (swing flap)
SS1	Selector switch (emergency)
T1R	Transformer (220-240V/22V)
V1TR	Triac (Phase control circuit)
X1M	Terminal block
X2M	Terminal block
(RC)	Signal receiver circuit
(TC)	Signal transmission circuit
Wired remote controller	
R1T	Thermistor (air)
SS1	Selector switch (main/sub)
Infrared remote controller (Receiver / display unit)	
A2P	Printed circuit board
A3P	Printed circuit board
BS1	Push button switch (ON/OFF)
H1P	Pilot lamp (on-red)
H2P	Pilot lamp (timer-green)
H3P	Pilot lamp (filter sign-red)
H4P	Pilot lamp (defrost-orange)
SS1	Selector switch (main/sub)
SS2	Selector switch (wireless address set)
Connector for optional parts	
X15A	Connector (float switch)
X24A	Connector (wireless remote controller)
X25A	Connector (drain pump)
X33A	Connector (adapter for wiring)
X35A	Connector (group control adapter)
X40A	Connector (on/off input from outside)
X60A X61A	Connector (interface adapter for sky air series)



Notes

1. : Terminal block
   : Connector
   : Short circuit connector
   Connector
2. : Field wiring
3. In case of simultaneous operation indoor unit system, see the indoor unit wiring only.
4. For the detail, see wiring diagram attached to outdoor unit.
5. In case using central remote controller, connect it to the unit in accordance with the attached installation manual.
6. In case of connection units varies according to the combination system, confirm technical guide and catalogs, etc, before connecting.
7. In case of main/sub changeover, see the installation manual attached to remote controller.
8. In case installing the drain pump (M1P), remove the jumper connector of X15A and execute the additional wiring for float switch and drain pump.
9. Symbols show as follows: BLK:Black RED:Red BLU:Blue WHT:White PNK:Pink YLW:Yellow GRY:Gray PRP:purple
10. Shows only in case of protected pipes, use HO7RN-F in case of no protection.

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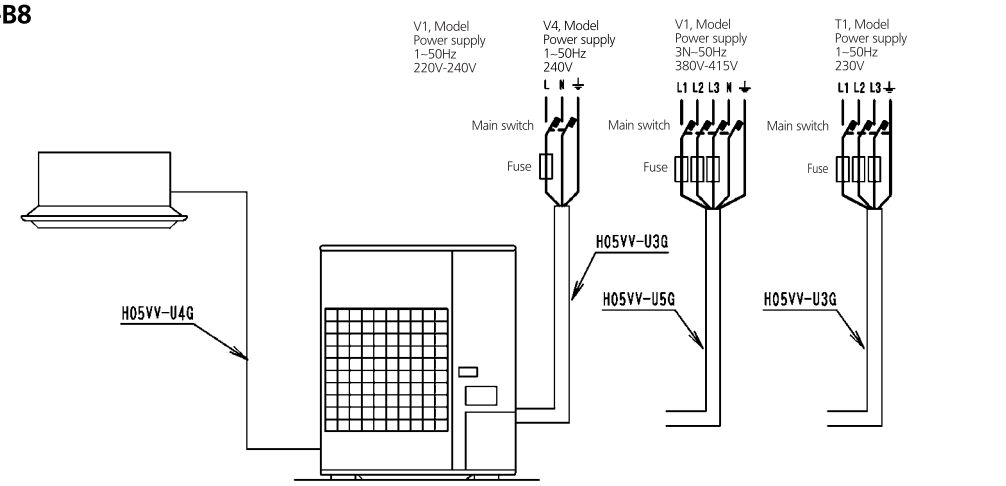
8 External connection diagrams

8 - 1 External Connection Diagrams

FHQ-B8



NOTES

1 Line voltage wiring
Control circuit wiring

2 All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.

3 Use copper conductors only.

4 As for details, see wiring diagram.

5 Install fuse and mainswitch for safety.

6 All field wiring and components must be provided by a licensed electrician.

7 The unit shall be grounded in compliance with the applicable local and national codes.

8 Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.

9 Never share a common power supply with other equipment.

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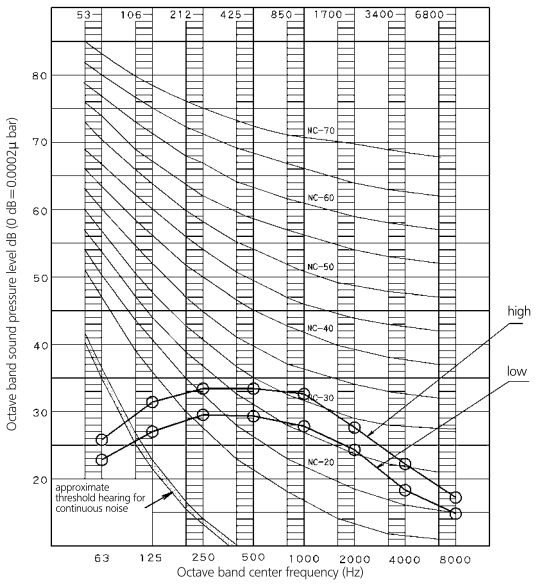
9 Sound data

9 - 1 Sound Pressure Spectrum

FHQ35B8



NOTES

1 Overall (dB)

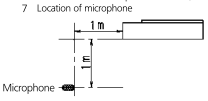
Scale	high	low
A	37	32
C	40	35

(B,G,N is already rectified)

Power level (dB)

high	low
53	48

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 230V 50Hz/220V 60Hz
5 Cooling: Return air temperature: 27°CDB, 19°CWB
Outdoor temperature: 35°CDB, 24°CWB
6 Heating: Return air temperature: 20°CDB, 15°CWB
Outdoor temperature: 7°CDB, 6°CWB
7 Location of microphone



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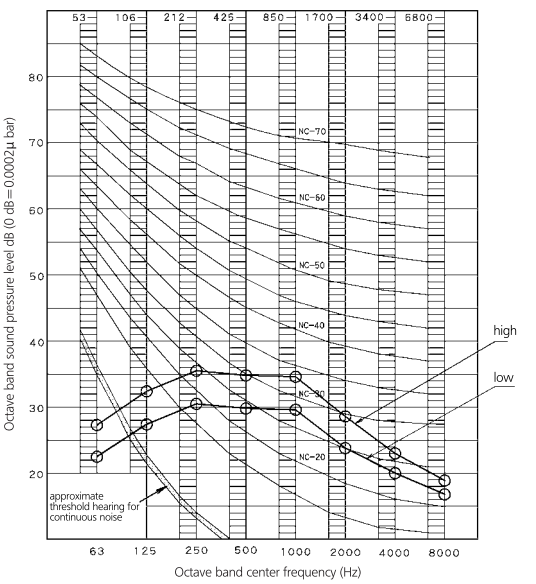


NOTES

1 Overall (dB)

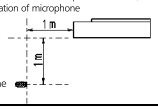
Scale	high	low
A	38	33
C	41	36

(B,G,N is already rectified)

Power level (dB)

high	low
54	49

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 230V 50Hz/220V 60Hz
5 Cooling: Return air temperature: 27°CDB, 19°CWB
Outdoor temperature: 35°CDB, 24°CWB
6 Heating: Return air temperature: 20°CDB, 15°CWB
Outdoor temperature: 7°CDB, 6°CWB
7 Location of microphone



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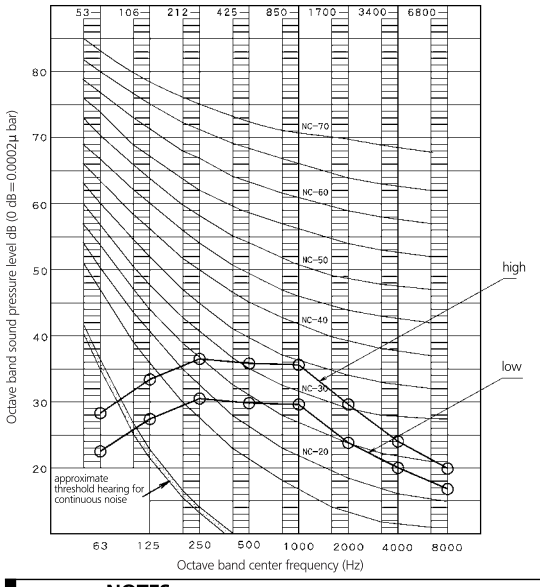


NOTES

1 Overall (dB)

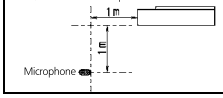
Scale	high	low
A	39	33
C	42	36

(B,G,N is already rectified)

Power level (dB)

high	low
55	49

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 230V 50Hz
5 Cooling: Return air temperature: 27°CDB, 19°CWB
Outdoor temperature: 35°CDB, 24°CWB
6 Heating: Return air temperature: 20°CDB, 15°CWB
Outdoor temperature: 7°CDB, 6°CWB
7 Location of microphone



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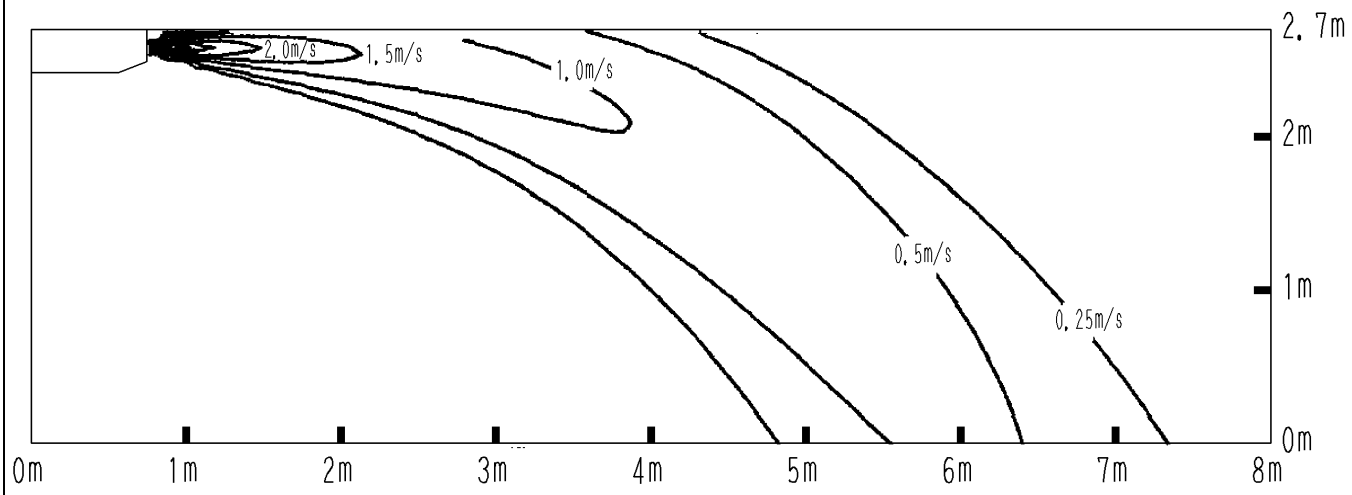
10 Air flow patterns

10 - 1 Air Flow Pattern - Cooling

FHQ35~50B8

Cooling - Air velocity distribution

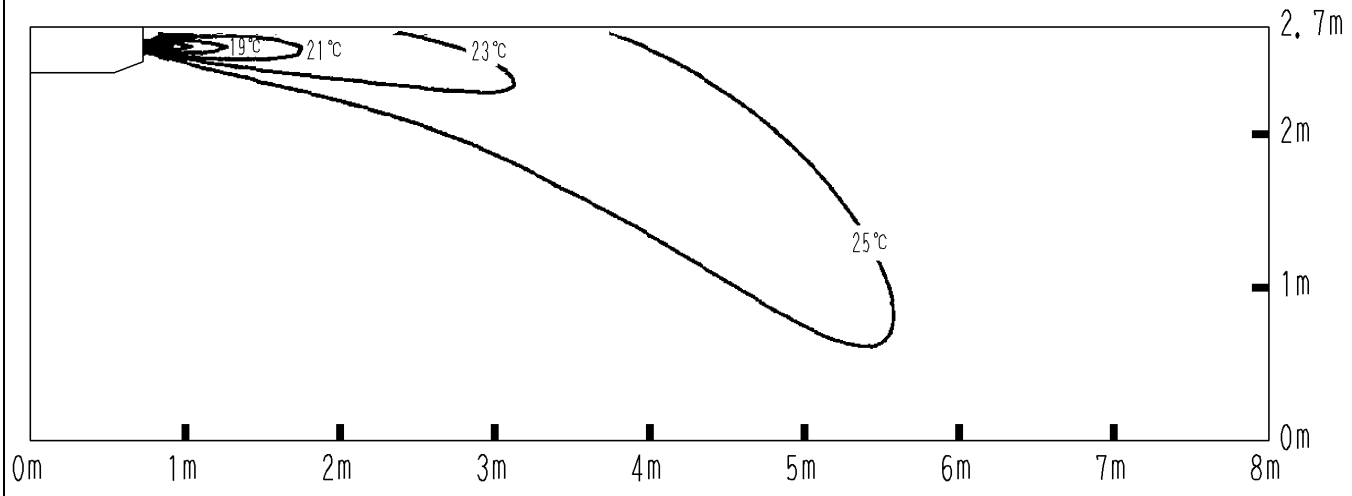
Air flow direction: horizontal



FHQ35~50B8

Cooling - Air temperature distribution

Air flow direction: horizontal



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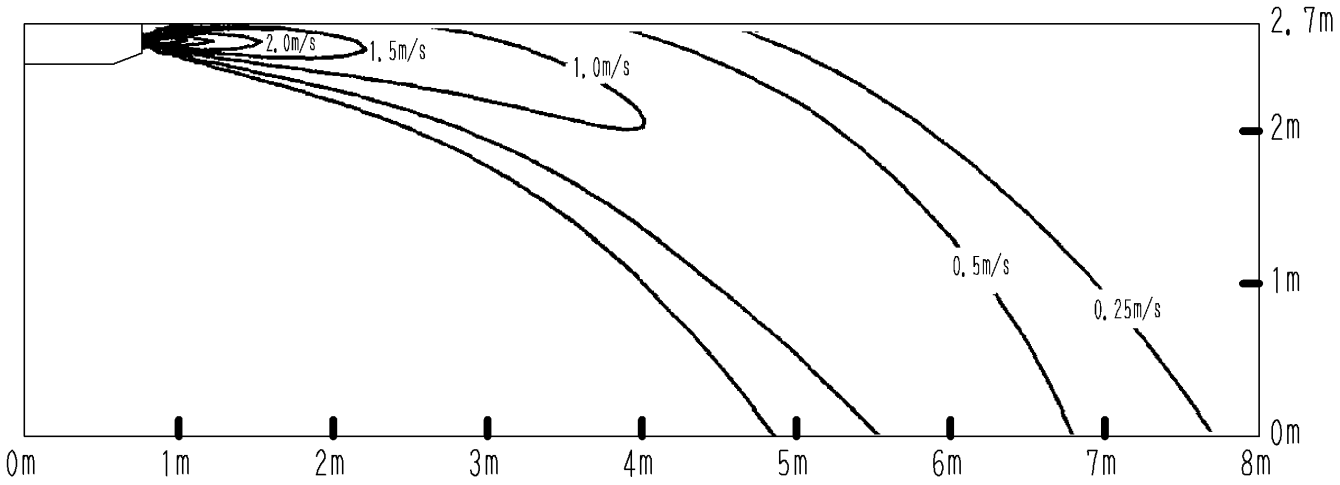
10 Air flow patterns

10 - 1 Air Flow Pattern - Cooling

FHQ60B8

Cooling - Air velocity distribution

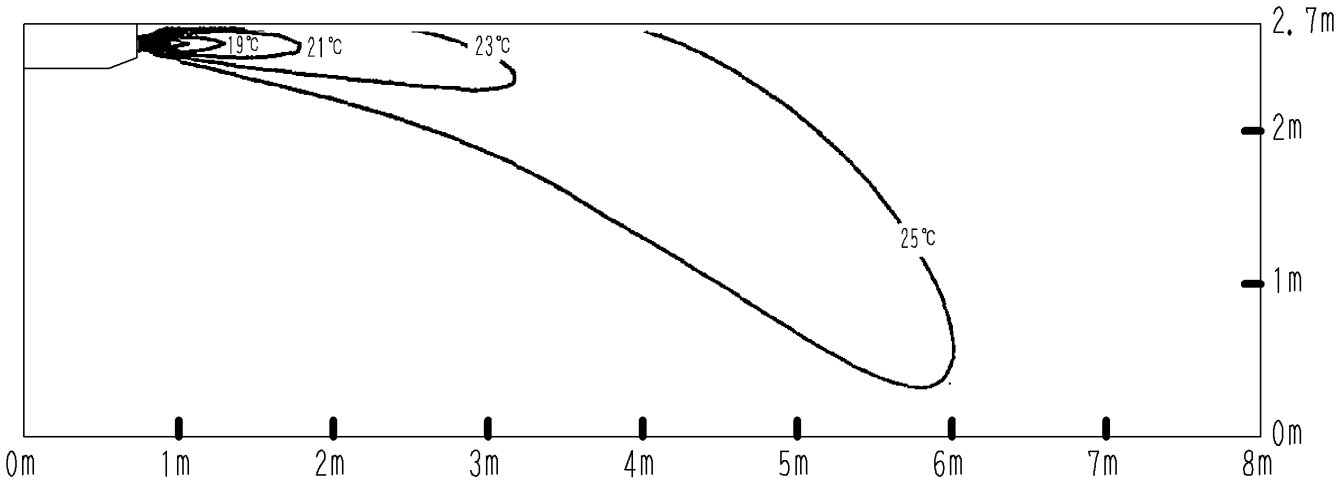
Air flow direction: horizontal



FHQ60B8

Cooling - Air temperature distribution

Air flow direction: horizontal



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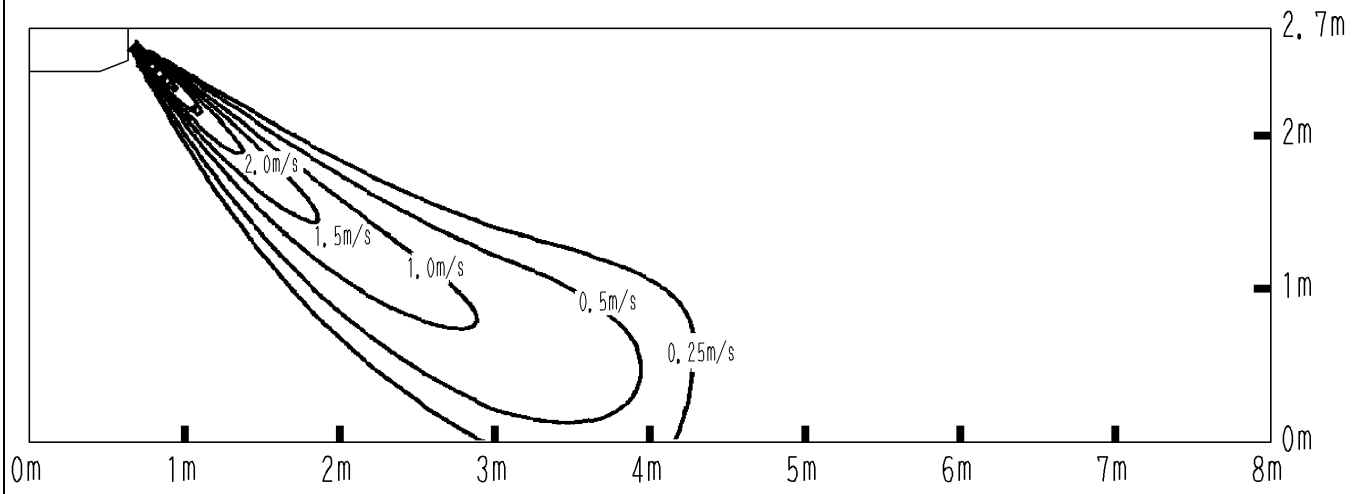
10 Air flow patterns

10 - 2 Air Flow Pattern - Heating

FHQ35~50B8

Heating - Air velocity distribution

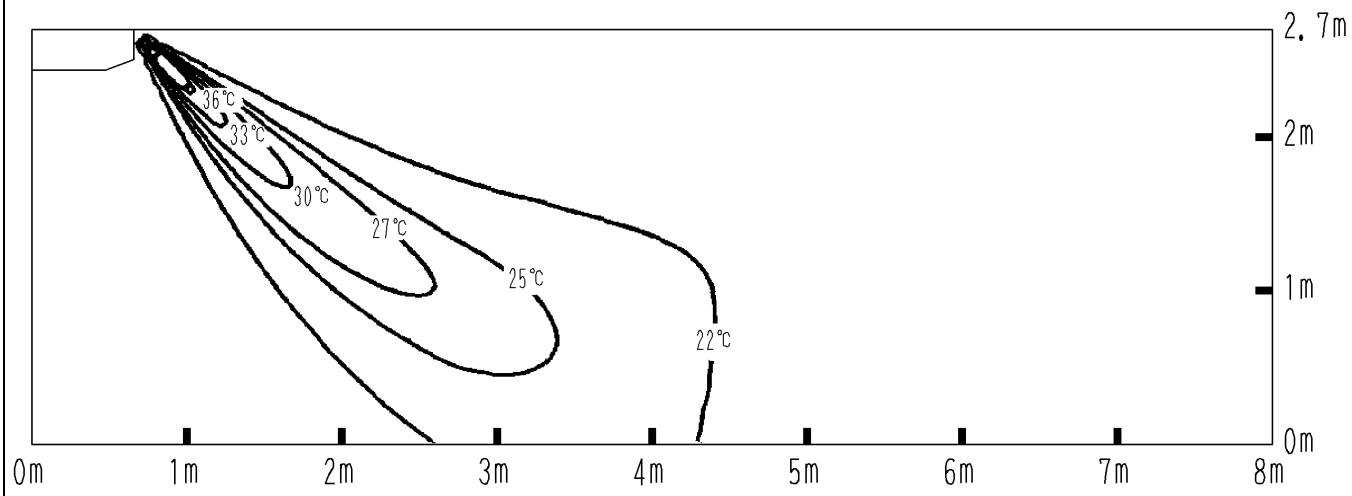
Air flow direction: 45° (downward)



FHQ35~50B8

Heating - Air temperature distribution

Air flow direction: 45° (downward)



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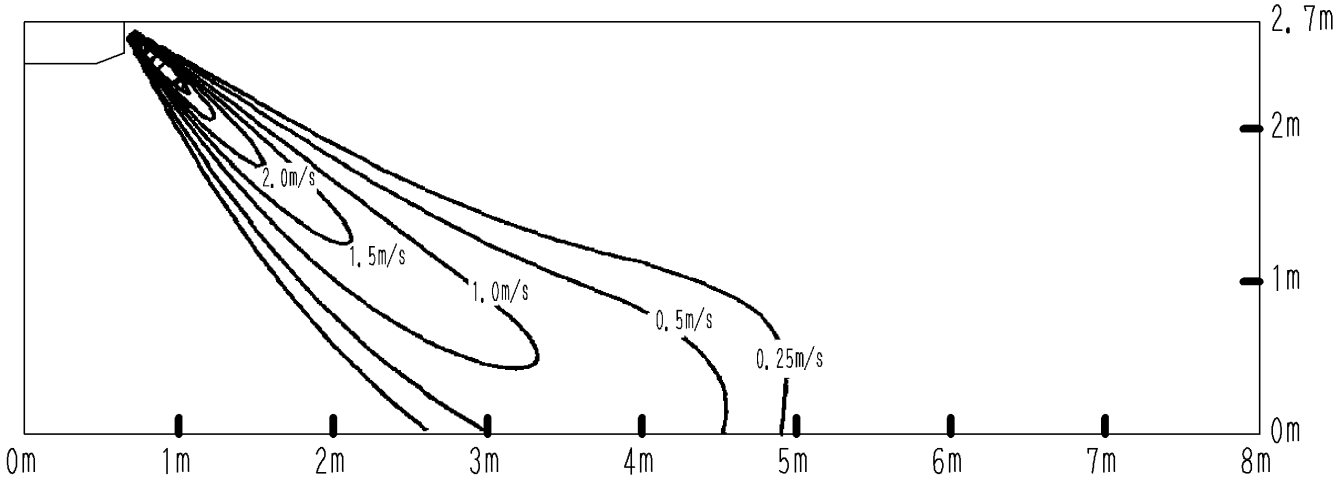
10 Air flow patterns

10 - 2 Air Flow Pattern - Heating

FHQ60B8

Heating - Air velocity distribution

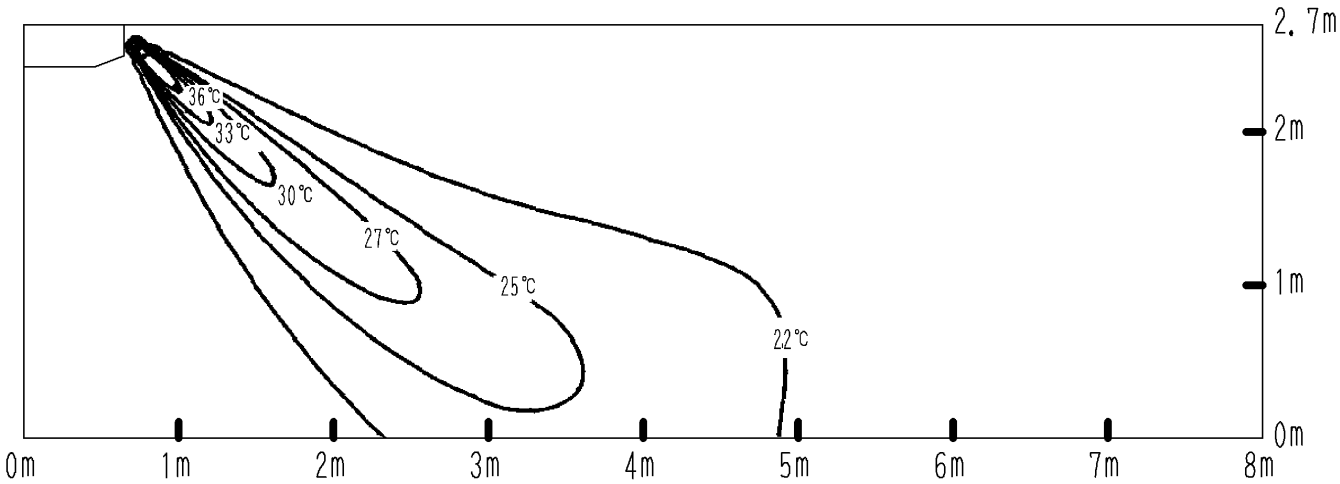
Air flow direction: 45° (downward)



FHQ60B8

Heating - Air temperature distribution

Air flow direction: 45° (downward)



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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.

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"

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