DAIKIN

Air Conditioning

Technical Data

Ceiling suspended unit

EEDEN15-100

FHQ-C

TABLE OF CONTENTS

FHQ-C

1 Features

For wide rooms with no false ceilings nor free floor space

- Ideal for comfortable air flow in wide rooms thanks to Coanda effect: up to 100° discharge angle
- Even rooms with ceilings up to 3.8m can be heated up or cooled down very easily without capacity loss
- Can easily be installed in both new and refurbishment projects
- Can easily be mounted in corners and narrow spaces, as it only needs 30mm lateral service space
- Reduced energy consumption thanks to specially developed DC fan motor and drain pump
- Stylish unit blends easily with any interior. The flaps close entirely when the unit is not operating
- No optional adapter needed for DIII-connection, link your unit into the wider building management system.

Inverter


Home leave operation


Fan only

Auto cooling-heating changeover


Vertical auto swing


Fan speed steps

Dry programme


Air filter

Weekly timer


Infrared remote control


Wired remote control


Centralised control

Auto-restart


Self diagnosis


Drain pump kit


Twin/triple/ double twin application


Multi model application


VRV for residential application

2 Specifications

2-1 Technical Specifications					FHQ35C	FHQ50C	FHQ60C	FHQ71C	FHQ100C	FHQ125C	FHQ140C
Power input - 50Hz	Cooling	Nom.		kW	0.090		0.091	0.110	0.172	0.217	0.251
	Heating	Nom.		kW	0.072	0.090			0.172	0.217	0.251
Casing	Colour				Fresh White						
	Material				Resin, sheet metal						
Dimensions	Unit	Height/Width/Depth		mm	235/960/690		235/1,270/690		235/1,590/690		
	Packed unit	Height/Width/Depth		mm	340/1,116/858		349/1,426/878		349/1,746/878		
Weight	Unit			kg	24	25	31	32	38		
	Packed unit			kg	38	39	52	54	61		
Packing	Material				-	Carton / Plywood					
	Weight			kg	8.5		13.9		15.0		
Heat exchanger	Length			mm	722		1,032		1,352		
	Rows	Quantity			2	3	2	3			
	Fin pitch			mm	1.5						
	Face area			m²	0.2130		0.3030		0.3980		
	Stages	Quantity			14						
	Empty tubeplate hole	Quantity			0						
	Tube type				ø7 Hi-XSL						
	Tube material				Copper						
	Tube diameter			mm	7.0						
	Fin	Type			ML fin (Multi louver)						
		Treatment			Anti Corrosion Hydrophilic						
Air filter	Type				Resin net with mold resistance						
	Quantity			pc	2						
Fan	Type				Sirocco fan						
	Quantity				2				4		
	Air flow rate	Cooling	High	m³/min	14	15	19.5	20.5	28	31	34
				cfm	494	530	689	724	989	1,095	1,201
			Nom.	m³/min	11.5	12	15	17	24	27	29
				cfm	406	424	530	600	848	953	1,024
			Low	m³/min	10		11.5	14	20	23	24
				cfm	353		406	494	706	812	848
		Heating	High	m³/min	14	15	19.5	20.5	28	31	34
				cfm	494	530	689	724	989	1,095	1,201
			Nom.	m³/min	11.5	12	15	17	24	27	29
				cfm	406	424	530	600	848	953	1,024
			Low	m³/min	10		11.5	14	20	23	24
				cfm	353		406	494	706	812	848
Fan motor	Quantity				1						
	Model				KFD-280-87-8A		KFD-280-117-8A		EQDW01EDK		
	Index of Protection				20						
	Insulation grade				Class "E"						
	Poles				8						
	Drive				Direct drive						
	Speed	Steps			3						
		Cooling	High/Medium/Low	rpm	864/787/710	960/856/711	875/792/709	936/825/714	1,090/935/780	1,170/1,017/864	1,254/1,076/898
		Heating	High/Medium/Low	rpm	864/787/710	960/856/711	875/792/709	936/825/714	1,090/935/780	1,170/1,017/864	1,254/1,076/898
	Output	High		W	60		91		150		
	Phase x Voltage			V	DC280V				DC192V-380V		
	Full load amps (FLA)	Cooling		A	0.6			0.8	1.2	1.6	1.8
		Heating		A	0.6			0.8	1.2	1.6	1.8
Sound power level	Cooling			dBA	53	54		55	60	62	64
	Heating			dBA	53	54		55	60	62	64

2 Specifications

2-1 Technical Specifications				FHQ35C	FHQ50C	FHQ60C	FHQ71C	FHQ100C	FHQ125C	FHQ140C
Sound pressure level	Cooling	High/Nom./Low	dBA	36/34/31	37/35/32	37/35/33	38/36/34	42/38/34	44/41/37	46/42/38
	Heating	High/Nom./Low	dBA	36/34/31	37/35/32	37/35/33	38/36/34	42/38/34	44/41/37	46/42/38
Control systems	Infrared remote control			BRC7G53						
	Wired remote control			BRC1D52 / BRC1E52A/B						
Refrigerant	Type			R-410A						
Piping connections	Sound absorbing insulation			Not needed						
	Liquid	Type/OD	mm	C1220T (Flare connection)/6.35			C1220T (Flare connection)/9.52			
	Gas	Type/OD	mm	C1220T (Flare connection)/ 9.5	C1220T (Flare connection)/ 12.7		C1220T (Flare connection)/15.9			
	Drain			VP20						
	Heat insulation			Needed						
Air direction control				Up and downwards						
Safety devices	Item	01		Fuse (F, 5A, 250V)			-			

Standard Accessories : Wiring fixture;
Standard Accessories : Clamps;
Standard Accessories : Joint insulating material;
Standard Accessories : Sealing material;
Standard Accessories : Drain hose;
Standard Accessories : Operation manual;
Standard Accessories : Resin bushing;
Standard Accessories : Installation manual;
Standard Accessories : Clamp metal;
Standard Accessories : Screw for wiring fixture;
Standard Accessories : Installation pattern;
Standard Accessories : Declaration of conformity;
Standard Accessories : Washer for hanger bracket;

2-2 Electrical Specifications			FHQ35C	FHQ50C	FHQ60C	FHQ71C	FHQ100C	FHQ125C	FHQ140C
Power supply	Name		VE						
	Phase		1~						
	Frequency	Hz	50/60						
	Voltage	V	220-240/220						
Current - 50Hz	Maximum running current	A	0.6			0.8	1.3	1.5	1.8

3 Safety device settings

3 - 1 Safety Device Settings

FHQ-C

	Safety devices		35	50	60	71	100	125	140
FHQ~C	Fuse		250V 5A	250V 5A	250V 5A	---	---	---	---
	Fan motor thermal fuse	°C	---	---	---	---	---	---	---
	Fan motor thermal protector	°C	---	---	---	---	---	---	---

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4 Options

4 - 1 Options

FHQ-C

Name of option	Remark		FHQ~C						
			35	50	60	71	100	125	140
Long-life filter			KAFP501A56		KAFP501A80		KAFP501A160		
Fresh air intake kit			KDDQ50A140						
Drain pump kit			KDU50P60VE			KDU50P140VE			
L-type piping kit (for upward direction)			KHFP5MA35	KHFP5N63		KHFP5N160			
Remote control	Wired type		BRC1D528, BRC1E51A7, BRC1E52A7, BRC1E52B7						
	Infrared type	Heat pump use	BRC7GA53						
		Cooling only use	BRC7GA56						
Simplified remote control (with operation mode selector button)		*2	BRC2E52C7						
Simplified remote control (without operation mode selector button)		*2	BRC3E52C7						
Central remote control			DCS302CA51						
Unified on/off control			DCS301BA51						
Schedule timer			DST301BA51						
Wiring adapter for electrical appendices			KRP1BA54						
Wiring adapter for electrical appendices		*1	KRP4AA52						
Wiring adapter for electrical appendices		*1	-						
External adapter for outdoor unit (installation on indoor unit)			-						
Installation box for adapter PCB			KRP1D93A						
Adapter box mounting plate			KKSAP50A56		-				
Remote sensor			KRCS01-4B						
Remote on/off (connector for forced on, forced off)			EKR0R04						
Noise filter (for electromagnetic use only)			-						
Electrical box with earth terminal (3 blocks)			KJB311AA						
Electrical box with earth terminal (2 blocks)			KJB212AA						
Digital input adapter		*1, *3	BRP7A52						

NOTES

*1. Installation box for adapter PCB (KRP1D93A) is necessary.
*2. Included languages are:
Language pack 1: English, German, French, Dutch, Spanish, Italian and Portugese.
With PC cable EKPCCAB3 in combination with the updater PC software, you can additionally change the language to:
Language pack 2: English, Bulgarian, Croatian, Czech, Hungarian, Romanian and Slovenian.
Language pack 3: English, Greek, Polish, Russian, Serbian, Slovak and Turkish.
*3. Only possible in combination with simplified remote control BRC2/3E52C7.

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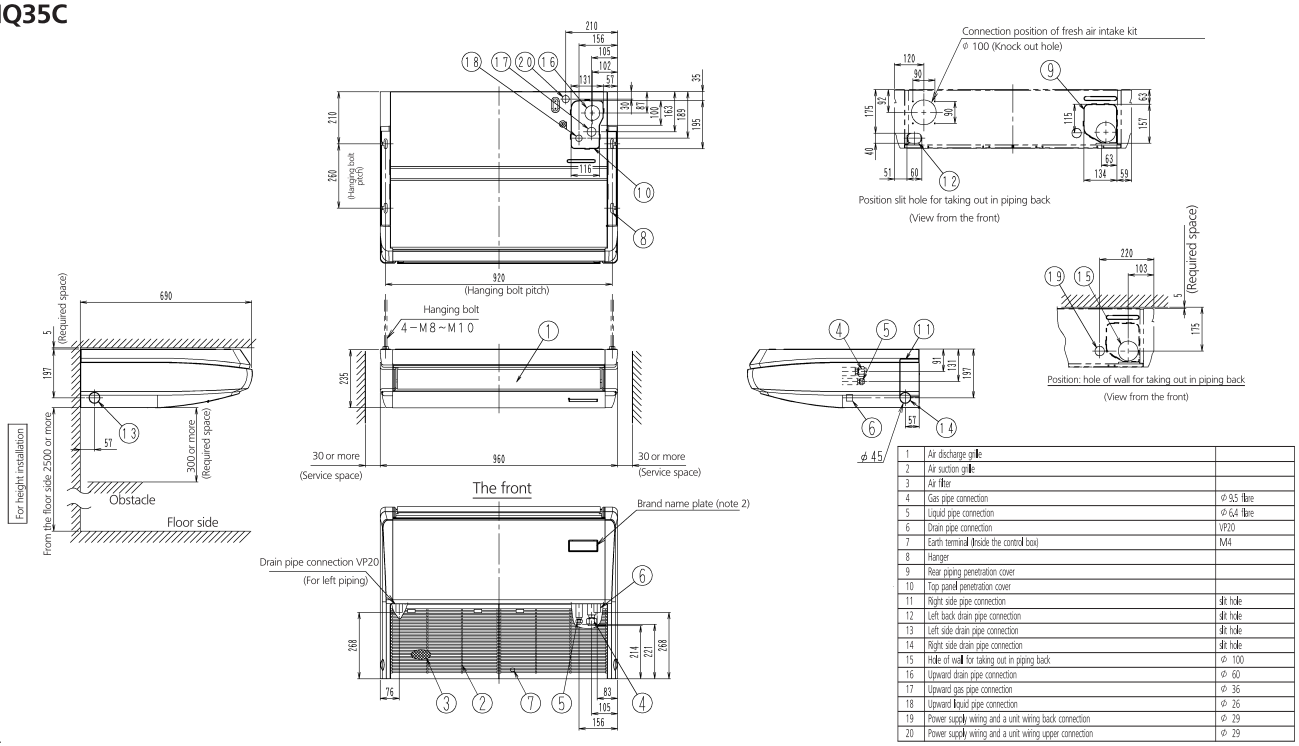
5 Dimensional drawings

5 - 1 Dimensional Drawings

FHQ35C



1	Air discharge grille	
2	Air suction grille	
3	Air filter	
4	Gas pipe connection	Φ 9.5 flare
5	Liquid pipe connection	Φ 6.4 flare
6	Drain pipe connection	VP20
7	Earth terminal (Inside the control box)	M4
8	Hanger	
9	Rear piping penetration cover	
10	Top panel penetration cover	
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	Φ 100
16	Upward drain pipe connection	Φ 60
17	Upward gas pipe connection	Φ 36
18	Upward liquid pipe connection	Φ 26
19	Power supply wiring and a unit wiring back connection	Φ 29
20	Power supply wiring and a unit wiring upper connection	Φ 29

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. Please do not place the thing been damp and troubled under an indoor unit. When the case where humidity is 80% or more, and the drain outlet are choked up and the air filter are dirty, dew may fall.

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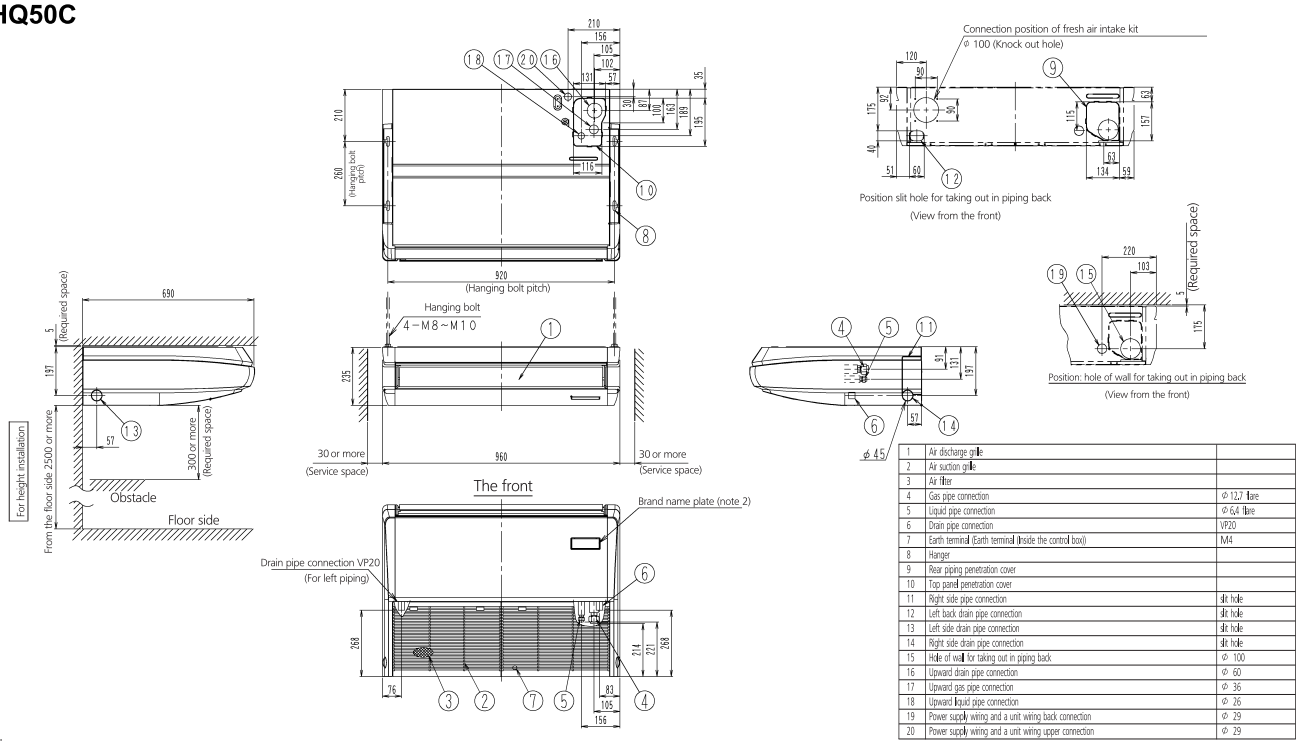
FHQ50C



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 (Earth terminal (Inside the control box))	M4
8	Hanger	
9	Rear piping penetration cover	
10	Top panel penetration cover	
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	Φ 100
16	Upward drain pipe connection	Φ 60
17	Upward gas pipe connection	Φ 36
18	Upward liquid pipe connection	Φ 26
19	Power supply wiring and a unit wiring back connection	Φ 29
20	Power supply wiring and a unit wiring upper connection	Φ 29

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. Please do not place the thing been damp and troubled under an indoor unit. When the case where humidity is 80% or more, and the drain outlet are choked up and the air filter are dirty, dew may fall

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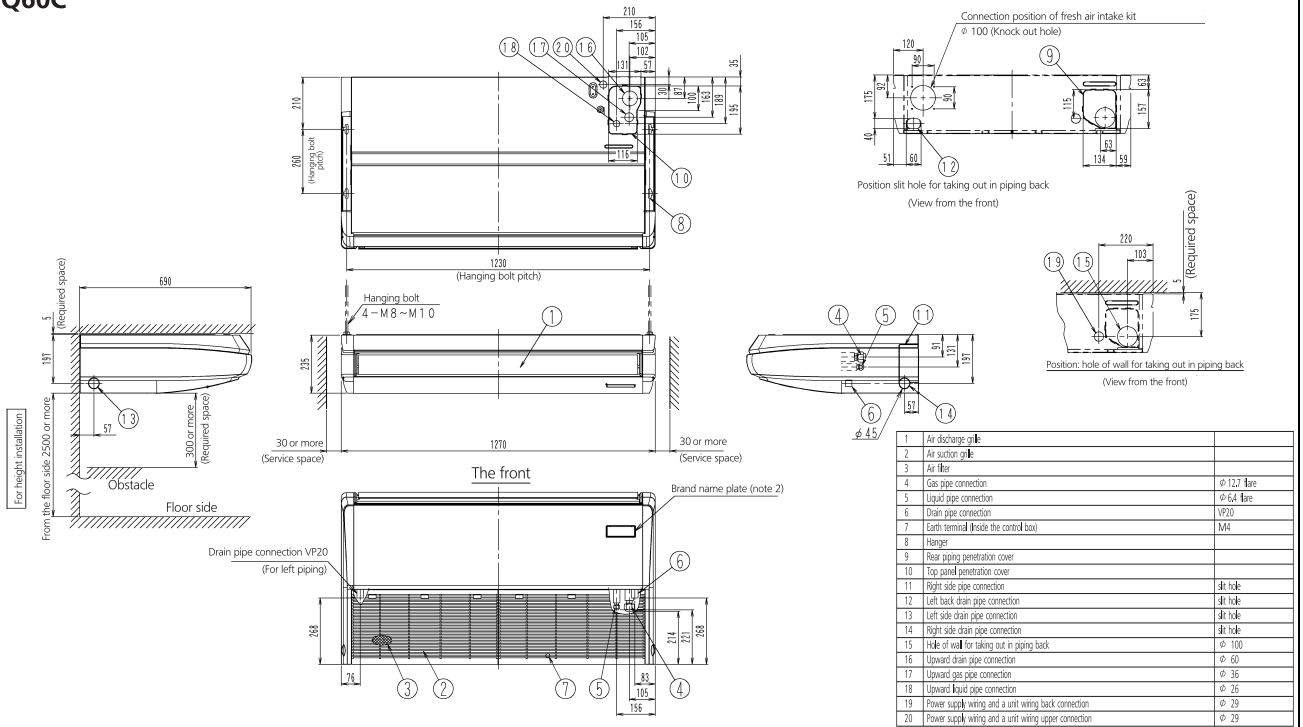
5 Dimensional drawings

5 - 1 Dimensional Drawings

FHQ60C



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 control box)	M4
8	Hanger	
9	Rear piping penetration cover	
10	Top panel penetration cover	
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	φ 100
16	Upward drain pipe connection	φ 60
17	Upward gas pipe connection	φ 36
18	Upward liquid pipe connection	φ 26
19	Power supply wiring and a unit wiring back connection	φ 29
20	Power supply wiring and a unit wiring upper connection	φ 29

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. Please do not place the thing been damp and troubled under an indoor unit. When the case where humidity is 80% or more, and the drain outlet are choked up and the air filter are dirty, dew may fall.

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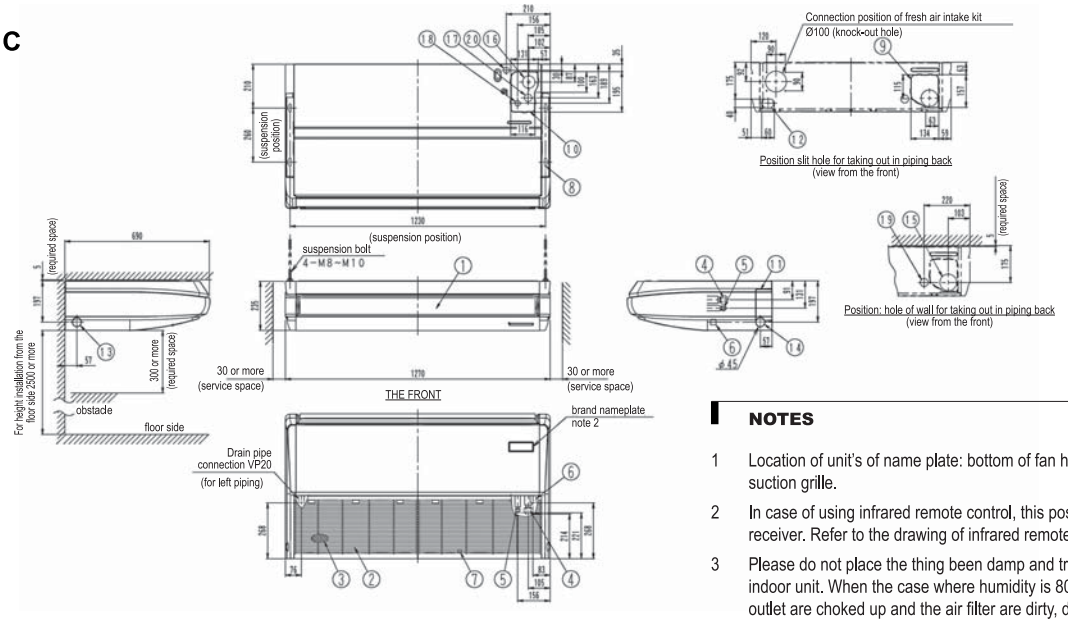
FHQ71C



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NOTES

1 Location of unit's of name plate: bottom of fan housing inside the suction grille.

2 In case of using infrared remote control, this position will be a signal receiver. Refer to the drawing of infrared remote control in detail.

3 Please do not place the thing been damp and troubled under an indoor unit. When the case where humidity is 80% or more, the drain outlet are choked up and the air filter are dirty, dew may fall.

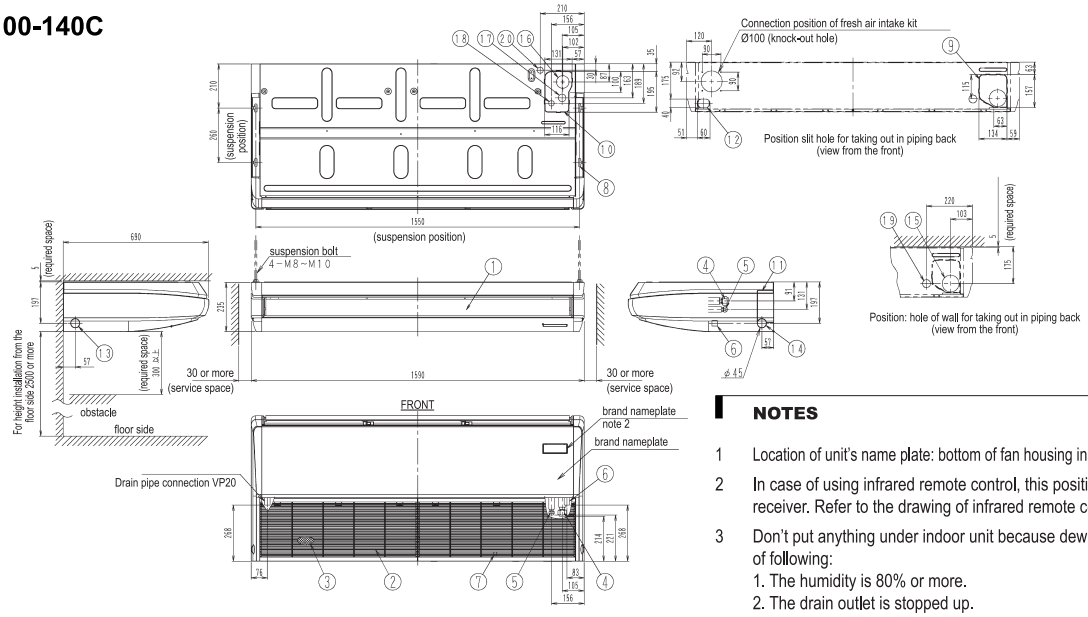
Nr	Name	Description
1	Air discharge grille	
2	Air suction grille	
3	Air filter	
4	Gas pipe connection	Ø15.9 flare
5	Liquid pipe connection	Ø9.5 flare
6	Drain pipe connection	VP20
7	Earth terminal (inside electric components box)	M4
8	Hanger bracket	
9	Backward piping and wiring connection opening lid	
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	Ø100
16	Upward drain pipe connection	Ø60
17	Upward gas pipe connection	Ø36
18	Upward liquid pipe connection	Ø26
19	Power source wiring and a unit wiring back connection	Ø29
20	Power source wiring and a unit wiring upper connection	Ø29

5 Dimensional drawings

5 - 1 Dimensional Drawings

FHQ100-140C



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NOTES

1 Location of unit's name plate: bottom of fan housing inside the suction grille.

2 In case of using infrared remote control, this position will be a signal receiver. Refer to the drawing of infrared remote control in detail.

3 Don't put anything under indoor unit because dew may fall by reason of following:
1. The humidity is 80% or more.
2. The drain outlet is stopped up.
3. The air filter is dirty.

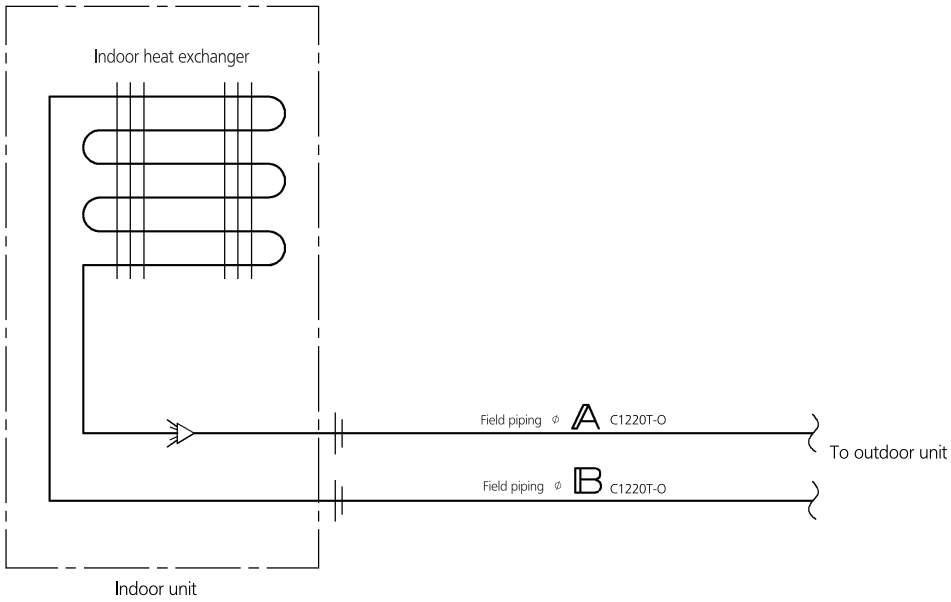
Nr	Name	Description
1	Air discharge grille	
2	Air suction grille	
3	Air filter	
4	Gas pipe connection	Ø15.9 flare
5	Liquid pipe connection	Ø9.5 flare
6	Drain pipe connection	VP20
7	Earth terminal (inside electric components box)	M4
8	Hanger bracket	
9	Backward piping and wiring connection opening lid	
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	Ø100
16	Upward drain pipe connection	Ø60
17	Upward gas pipe connection	Ø36
18	Upward liquid pipe connection	Ø26
19	Power source wiring and a unit wiring back connection	Ø29
20	Power source wiring and a unit wiring upper connection	Ø29

6 Piping diagrams

6 - 1 Piping Diagrams

FHQ-C



Model	A	B
FHQ35C	6.4	9.5
FHQ50, 60C	6.4	12.7
FHQ71, 100, 125C	9.5	15.9

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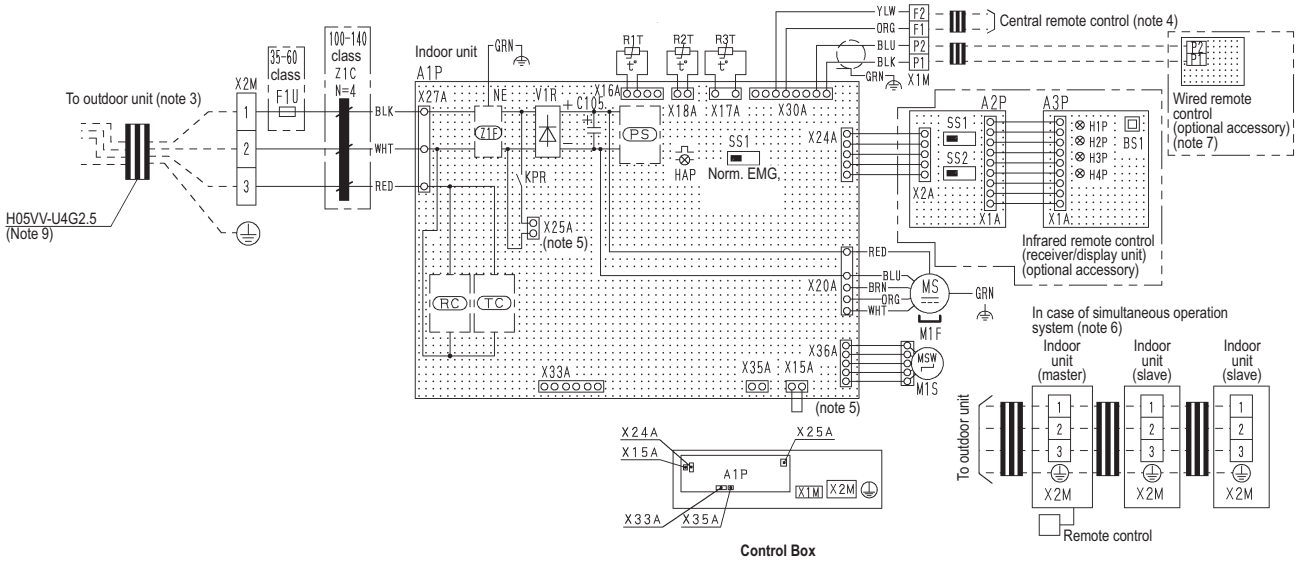
7 Wiring diagrams

7 - 1 Wiring Diagrams - Single Phase

FHQ-C



Indoor Unit		Infrared remote control (receiver/display unit)	
A1P	Printed circuit board	A2P	Printed circuit board
C105	Capacitor (M1F)	A3P	Printed circuit board
F1U	Fuse (F, 5A, 250V)	BS1	Push button (on/off)
HAP	Flashing lamp (service monitor green)	H1P	Pilot lamp (on-red)
		H2P	Pilot lamp (timer-green)
KPR	Magnetic relay (drain pump)	H3P	Pilot lamp (filter sign-red)
M1F	Motor (indoor fan)	H4P	Pilot (defrost-orange)
M1S	Motor (swing blade)	SS1	Selector switch (main/sub)
R1T	Thermistor (air)	SS2	Selector switch (wireless address set)
R2T-R3T	Thermistor (coil)	**Connector for optional parts**	
SS1	Selector switch (emergency)	X15A	Connector (float switch)
V1R	Diode bridge	X24A	Connector (infrared remote control)
X1M	Terminal block	X25A	Connector (drain pump)
X2M	Terminal block	X33A	Connector (adapter for wiring)
Z1F	Noise filter	X35A	Connector (power supply for adapter)
Z1C	Ferrite core (noise filter)		
PS	Power supply circuit		
RC	Signal receiver circuit		
TC	Signal transmission circuit		

NOTES

1. □□□□: terminal block, ⊡⊡: connector, - -▮▮▮- -:field wiring , ⊡⊡: short circuit connector
2. In case of simultaneous operation indoor unit system, see the indoor unit wiring only.
3. For the detail, see wiring diagram attached to outdoor unit.
4. In case of using central remote control, connect it to the unit in accordance with the attached installation manual.
5. X15A, X2A are connected when the drain up kit is being used.
   In accordance with the attached installation manual.
6. In case of simultaneous operation system, connection quantity of the indoor units varies according to the connection outdoor unit, confirm technical guide and catalog, etc. before connecting.
7. In case of main/sub changeover, see the installation manual attached to the remote control.
8. Symbols show as follows: BLK: black, RED: red, BLU: blue, WHT: white, YLW: yellow, GRN: green, ORG: orange, BRN: brown
9. Shows only in case of protected piping, use H07RN-F in case of no protection.

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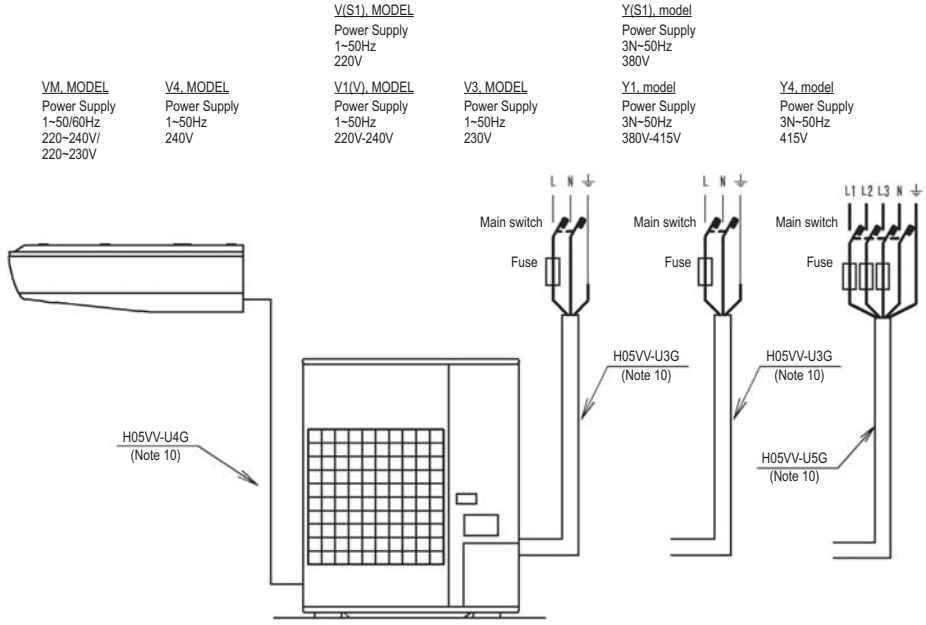
8 External connection diagrams

8 - 1 External Connection Diagrams

FHQ-C



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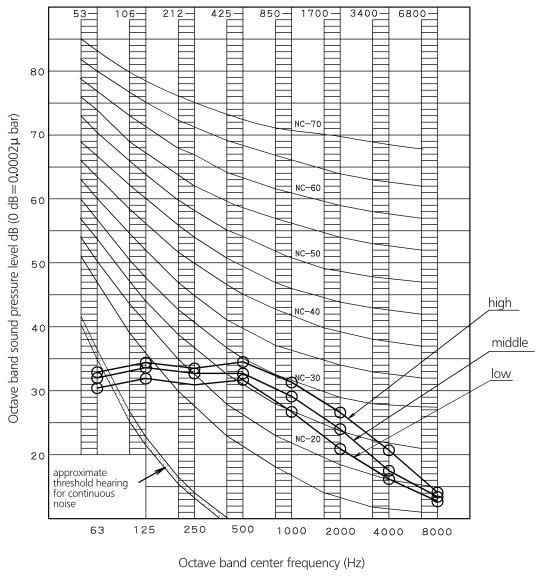
NOTES

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 conductor only.
4. As for details, see wiring diagrams.
5. Install fuse and mains witch for safety.
6. All field wiring and components must be provided by a licensed electrician.
7. 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 source with other equipment.
10. Shows only in case of protected pipes.
    Use H07RN-F in case of no protection.

9 Sound data

9 - 1 Sound Pressure Spectrum

FHQ35C



NOTES

1 Overall (dB)

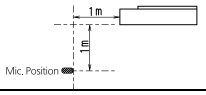
Scale	high	middle	low
A	36,0	34,0	31,0
C	42,0	40,0	37,0

(B,G,N is already rectified)

Power level (dB)

high	middle	low
53,0	51,0	48,0

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 220-240V 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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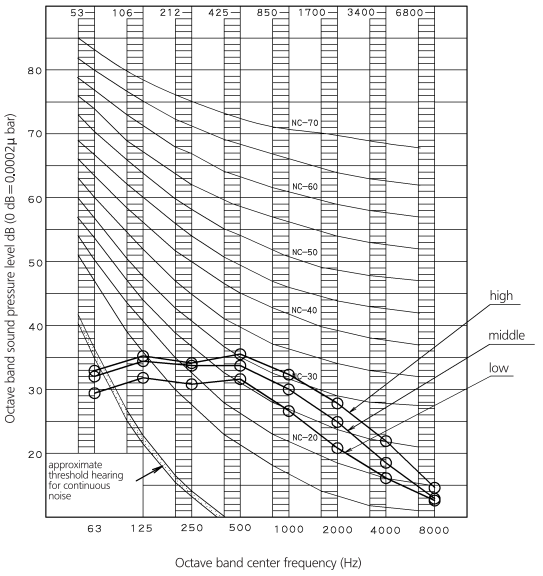
FHQ50C



NOTES

1 Overall (dB)

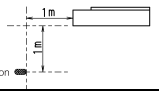
Scale	high	middle	low
A	37,0	35,0	32,0
C	43,0	41,0	38,0

(B,G,N is already rectified)

Power level (dB)

high	middle	low
54,0	52,0	49,0

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 220-240V 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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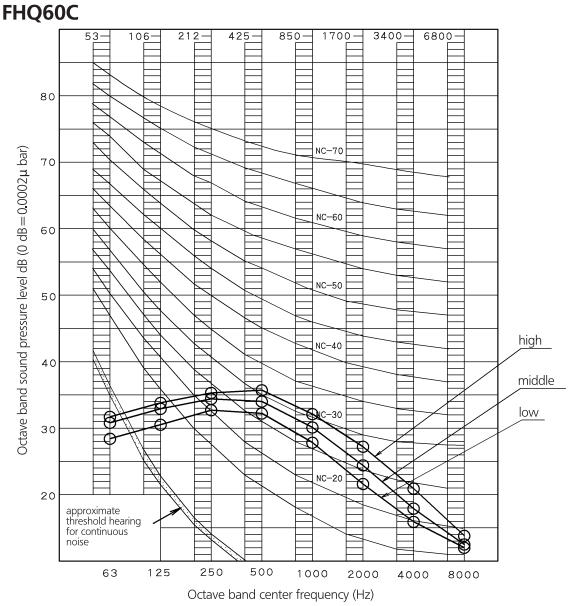
FHQ60C



NOTES

1 Overall (dB)

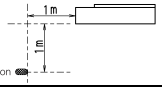
Scale	high	middle	low
A	37,0	35,0	33,0
C	43,0	41,0	39,0

(B,G,N is already rectified)

Power level (dB)

high	middle	low
54,0	52,0	50,0

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 220-240V 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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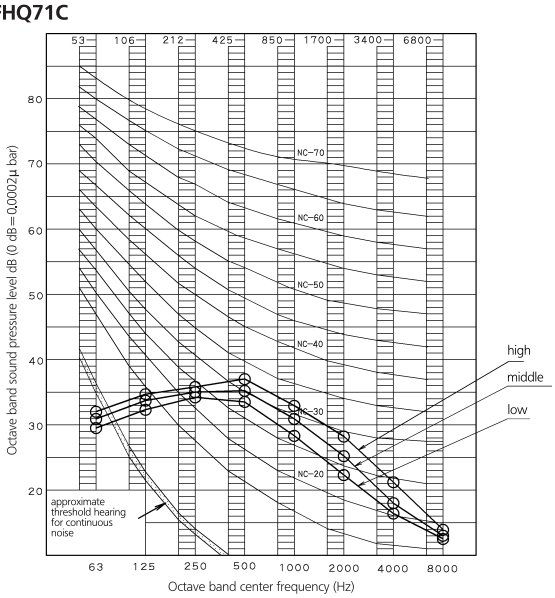


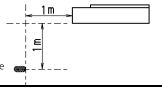
NOTES

1 Overall (dB)

Scale	high	middle	low
A	38	36	34
C	44	42	40

(B,G,N is already rectified)

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 220–240V 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

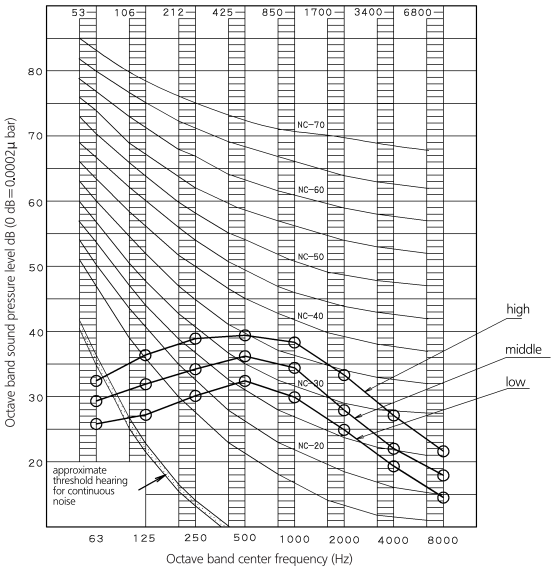


4D069649B

9 Sound data

9 - 1 Sound Pressure Spectrum

FHQ100C



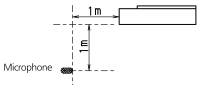
NOTES

1 Overall (dB)

Scale	high	middle	low
A	42	38	34
C	45	41	37

(B,G,N is already rectified)

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 220–240V 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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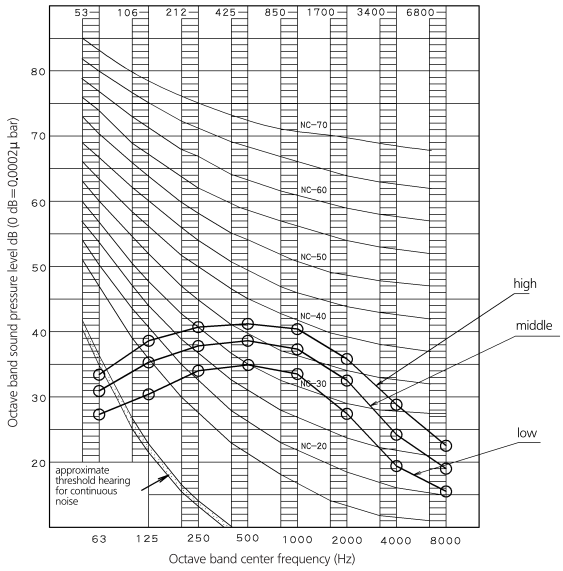


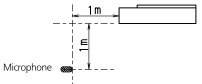
NOTES

1 Overall (dB)

Scale	high	middle	low
A	44	41	37
C	47	44	40

(B,G,N is already rectified)

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 220–240V 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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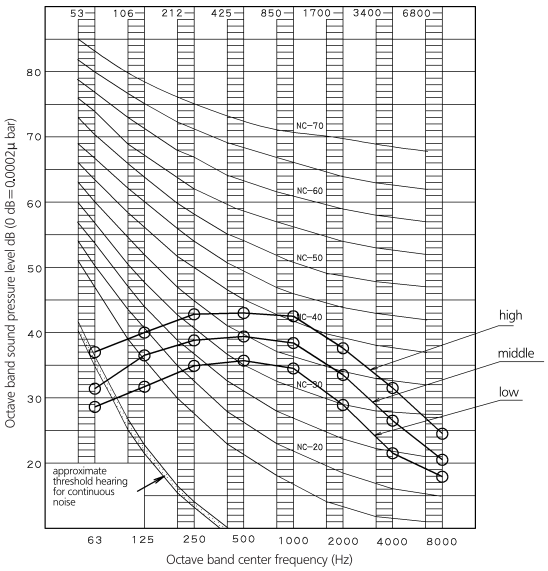


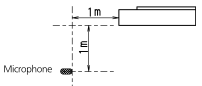
NOTES

1 Overall (dB)

Scale	high	middle	low
A	46	42	38
C	49	45	41

(B,G,N is already rectified)

2 Measuring place: Anechoic chamber
3 Operation noise differs with operation and ambient conditions.
4 Operating conditions: Power source: 220–240V 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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