

Air Conditioning  
Technical Data

**FHQ-CB**



> FHQ35CBVEB  
> FHQ50CBVEB  
> FHQ60CBVEB  
> FHQ71CBVEB  
> FHQ100CBVEB  
> FHQ125CBVEB

> FHQ140CBVEB



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# 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 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 and there are no air intake grilles visible
- No optional adapter needed for DIII-connection, link your unit into the wider building management system.
- Drain pump kit available as accessory
- Fresh air intake integrated in the same system thus reducing installation cost as no additional ventilation device is required



Infrastructure cooling



Inverter



Home leave operation



Fan only



Radiant heat



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				FHQ35CB		FHQ50CB		FHQ60CB		FHQ71CB		FHQ100CB		FHQ125CB		FHQ140CB				
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				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	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									
			Low	m³/min	10		11.5	14	20	23	24									
				cfm	353		406	494	706	812	848									
			Nom.	cfm	406	424	530	600	848	953	1,024									
				m³/min	11.5	12	15	17	24	27	29									
		Heating	High	m³/min	14	15	19.5	20.5	28	31	34									
				cfm	494	530	689	724	989	1,095	1,201									
			Low	m³/min	10		11.5	14	20	23	24									
				cfm	353		406	494	706	812	848									
			Nom.	cfm	406	424	530	600	848	953	1,024									
				m³/min	11.5	12	15	17	24	27	29									
Fan motor	Quantity				1															
	Model				KFD-280-87-8A			KFD-280-117-8A			EQDW01EDK									
	Speed		Steps		3															
	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			
Sound pressure level	Cooling		High/Low		dBA		36/31		37/32		37/33		38/34		42/34		44/37		46/38	
	Heating		High/Low		dBA		36/31		37/32		37/33		38/34		42/34		44/37		46/38	
Control systems	Infrared remote control				BRC7G53															
	Wired remote control				BRC1D52 / BRC1E52A/B / BRC1E53A / BRC1E53B / BRC1E53C / BRC1E51A															
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)						-									

2-2 Electrical Specifications				FHQ35CB	FHQ50CB	FHQ60CB	FHQ71CB	FHQ100CB	FHQ125CB	FHQ140CB
Power supply	Phase	1~								
	Frequency		Hz	50						
	Voltage		V	220-240						
Current - 50Hz	Maximum running current		A	0.6			0.8	1.3	1.5	1.8

# 3 Options

## 3 - 1 Options

### FHQ-CB

			FHQ*CBVEB						
			35	50	60	71	100	125	140
Long-life replacement filter			KAFP501A56		KAFP501A80		KAFP501A160		
Fresh air intake kit						KDDQ50A140			
Drain pump kit			KDU50P60VE			KDU50P140VE			
L-type piping kit (upward direction)			KHFP5MA35	KHFP5N63		KHFP5N160			
Remote control			BRC1E53A7 <sup>(1)(3)</sup> , BRC1E53B7 <sup>(1)(3)</sup> , BRC1E53C7 <sup>(1)(3)</sup> , BRC1E52B7, BRC1E52A7, BRC1E51A7, BRC1D528						
			Wired remote control		BRC7GA53				
			Wireless remote control		BRC7GA56				
			Heat pump		BRC2E52C7 <sup>(1)</sup>				
			Cooling only		BRC3E52C7 <sup>(1)</sup>				
Simplified remote control (with operation mode selector button)			DCS302CA51						
Simplified remote control (without operation mode selector button)			DCS301BA51						
Central remote control			DST301BA51						
Unified ON/OFF controller			KRP1BA54						
Schedule timer			KRP4AA52 <sup>(6)</sup>						
Wiring adaptor for electrical appendices			KRP1D93A						
Wiring adaptor for electrical appendices									
Installation box for adaptor PCB									
Mounting plate for adaptor PCB installation box			KKSAP50A56						
Remote sensor			KRC501-4B						
Remote "ON/OFF" and "forced OFF" kit			EKRR04						
Electrical box with earth terminal (3 blocks)			KJB311AA						
Electrical box with earth terminal (2 blocks)			KJB212AA						
Digital input adaptor			BRP7A52 <sup>(6)(7)</sup>						

(1) Included languages are: English, German, French, Italian, Spanish, Portuguese, and Dutch.

(2) Included languages are: English, Czech, Croatian, Hungarian, Slovenian, Romanian, and Bulgarian.

(3) Included languages are: English, Russian, Greek, Turkish, Polish, Albanian, and Slovak.

(4) Includes duty rotation functionality

(5) Included languages are:

Language pack 1: English, German, French, Dutch, Spanish, Italian, and Portuguese.

With PC cable EKPCAB3 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.

(6) Requires installation box for adaptor PCB (KRP1D93A).

(7) Only possible in combination with simplified remote control BRC2/3E52C7.

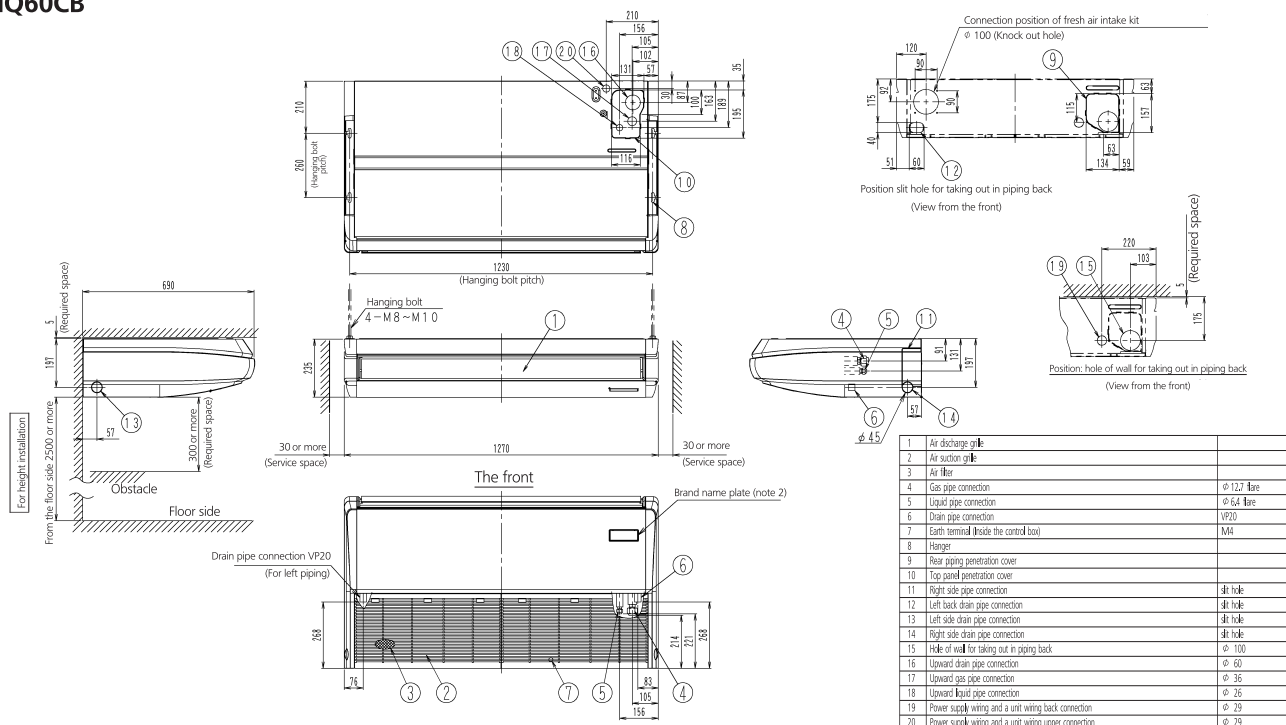
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## 4 Dimensional drawings

### 4 - 1 Dimensional Drawings

#### FHQ60CB

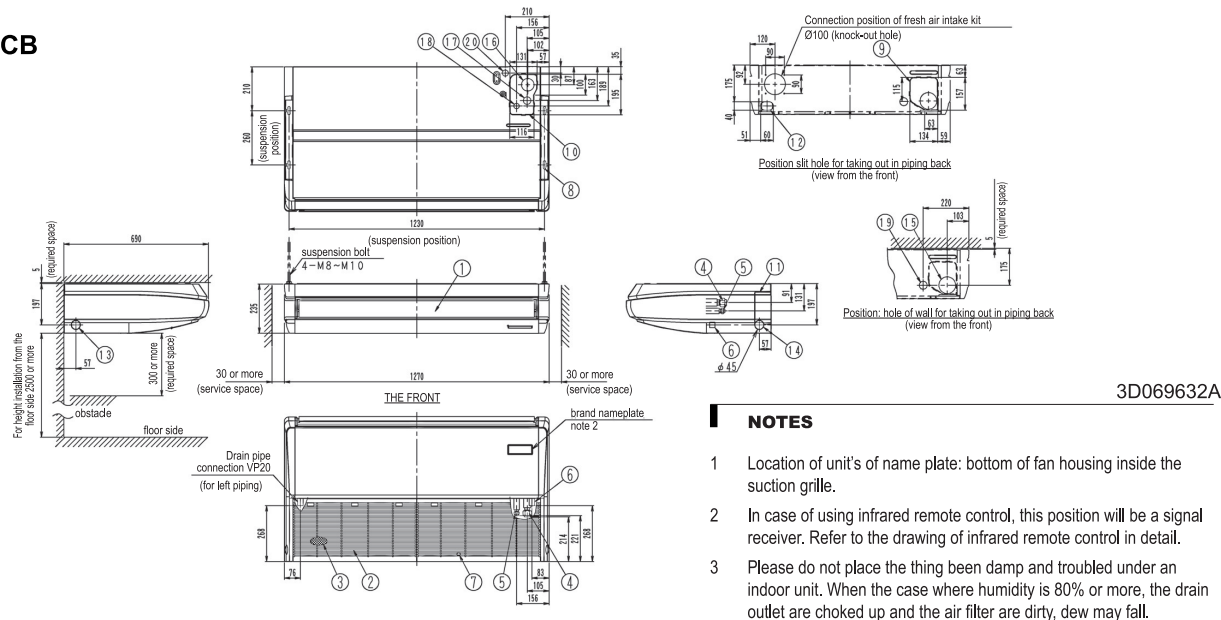


Note:

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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#### FHQ71CB



3D069632A

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

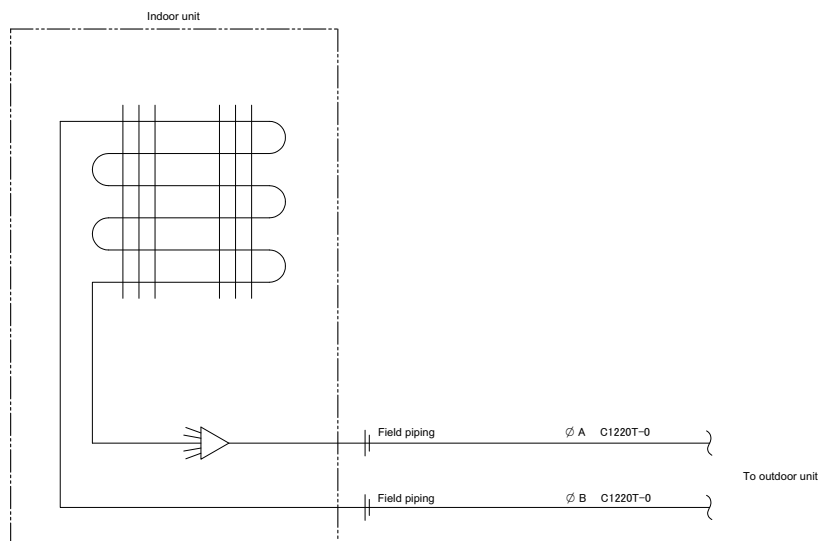




## 5 Piping diagrams

### 5 - 1 Piping Diagrams

FHQ-CB

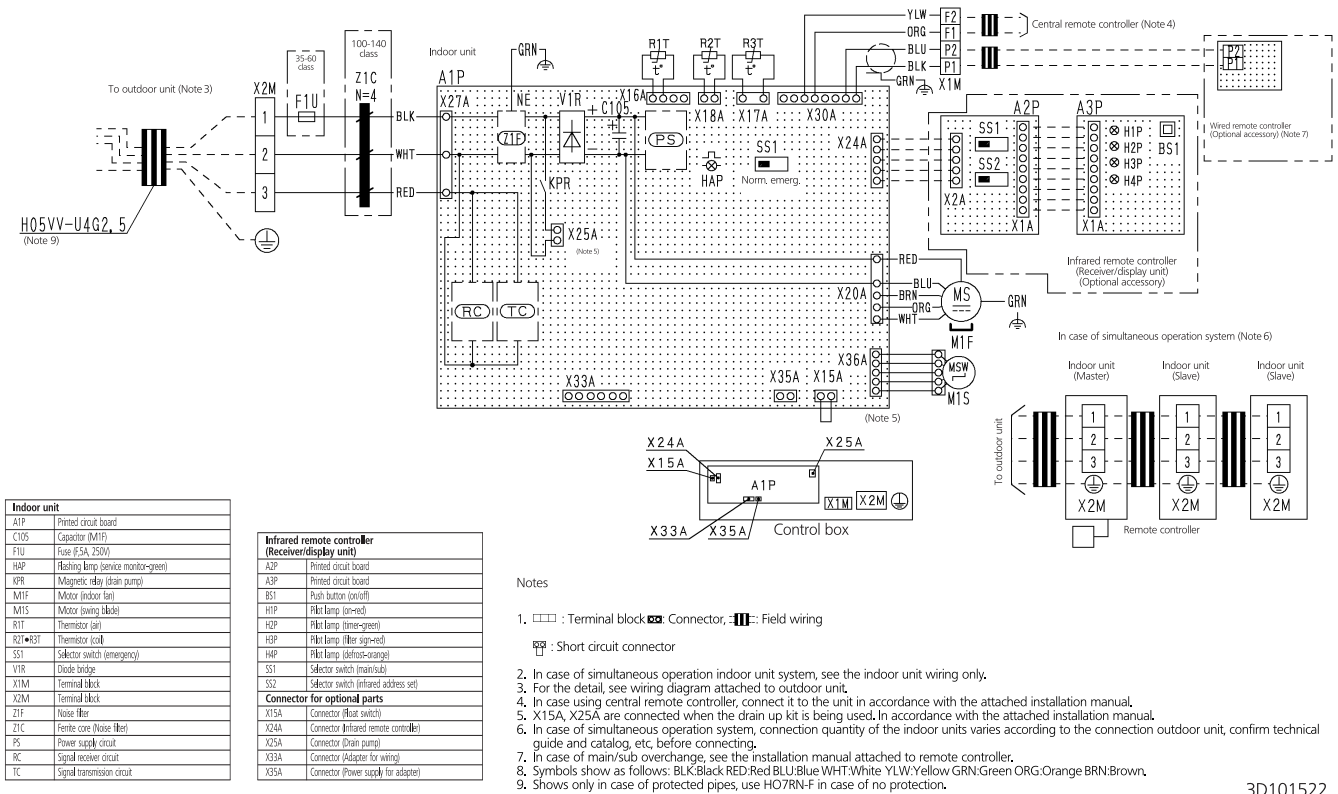


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# 6 Wiring diagrams

## 6 - 1 Wiring Diagrams - Single Phase

### FHQ-CB

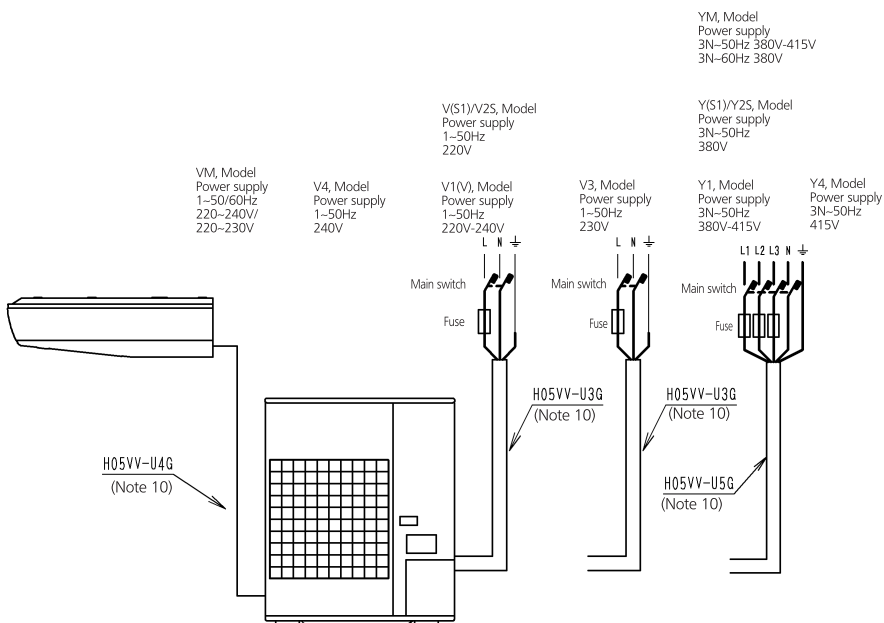


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## 7 External connection diagrams

### 7 - 1 External Connection Diagrams

#### FHQ-CB



#### NOTES

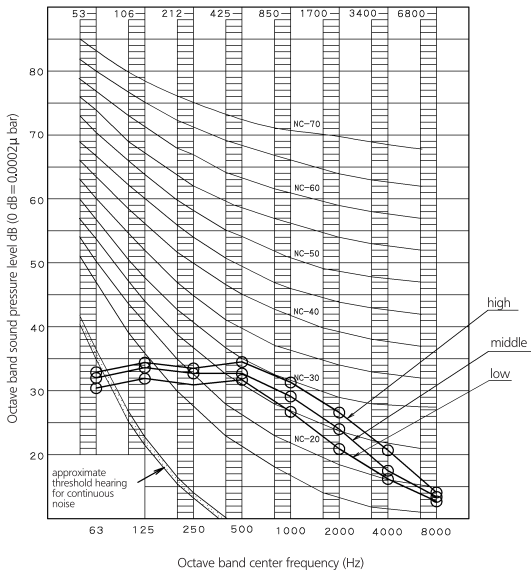
- 1 — Line voltage wiring  
— Control circuit wiring
- 2 All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
- 3 Use copper conductors only.
- 4 As for details, see wiring diagram.
- 5 Install fuse and mainswitch for safety.
- 6 All 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 source with other equipment.
- 10 Show only in case of protected pipes. Use HO7RN-F in case of no protection.

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# 8 Sound data

## 8 - 1 Sound Pressure Spectrum

FHQ35CB



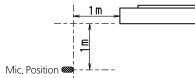
NOTES

- Overall (dB)

Scale	high	middle	low
A	36.0	34.0	31.0
C	42.0	40.0	37.0

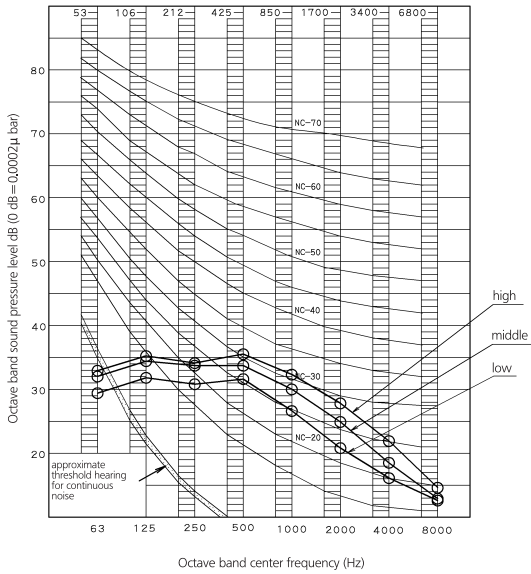
(dBA is already rectified)

Power level (dB)	high	middle	low
	53.0	51.0	48.0
- Measuring place: Anechoic chamber
- Operation noise differs with operation and ambient conditions.
- Operating conditions: Power source: 220-240V 50Hz
- Cooling: Return air temperature: 27°CDB, 19°CWB  
Outdoor temperature: 35°CDB, 24°CWB
- Heating: Return air temperature: 20°CDB, 15°CWB  
Outdoor temperature: 7°CDB, 6°CWB
- Location of microphone



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FHQ50CB



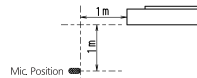
NOTES

- Overall (dB)

Scale	high	middle	low
A	37.0	35.0	32.0
C	43.0	41.0	38.0

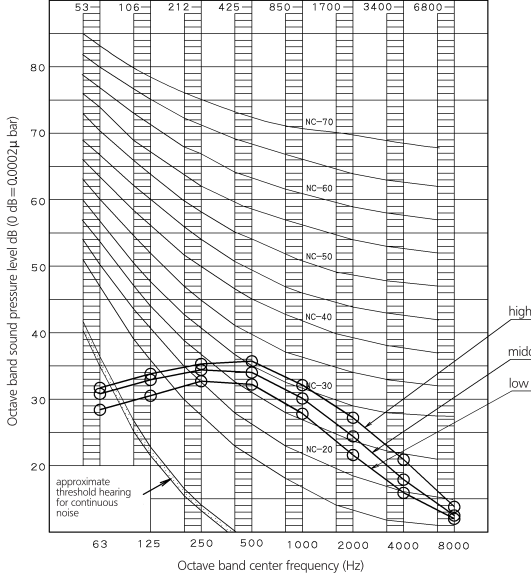
(dBA is already rectified)

Power level (dB)	high	middle	low
	54.0	52.0	49.0
- Measuring place: Anechoic chamber
- Operation noise differs with operation and ambient conditions.
- Operating conditions: Power source: 220-240V 50Hz
- Cooling: Return air temperature: 27°CDB, 19°CWB  
Outdoor temperature: 35°CDB, 24°CWB
- Heating: Return air temperature: 20°CDB, 15°CWB  
Outdoor temperature: 7°CDB, 6°CWB
- Location of microphone



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FHQ60CB



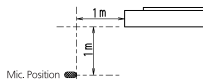
NOTES

- Overall (dB)

Scale	high	middle	low
A	37.0	35.0	33.0
C	43.0	41.0	38.0

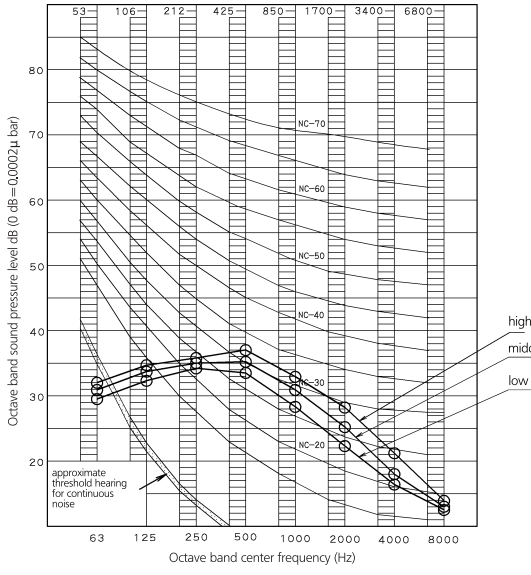
(dBA is already rectified)

Power level (dB)	high	middle	low
	54.0	52.0	50.0
- Measuring place: Anechoic chamber
- Operation noise differs with operation and ambient conditions.
- Operating conditions: Power source: 220-240V 50Hz
- Cooling: Return air temperature: 27°CDB, 19°CWB  
Outdoor temperature: 35°CDB, 24°CWB
- Heating: Return air temperature: 20°CDB, 15°CWB  
Outdoor temperature: 7°CDB, 6°CWB
- Location of microphone



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FHQ71CB

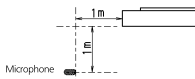


NOTES

- Overall (dB)

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

(dBA is already rectified)
- Measuring place: Anechoic chamber
- Operation noise differs with operation and ambient conditions.
- Operating conditions: Power source: 220-240V 50Hz/220V 60Hz
- Cooling: Return air temperature: 27°CDB, 19°CWB  
Outdoor temperature: 35°CDB, 24°CWB
- Heating: Return air temperature: 20°CDB, 15°CWB  
Outdoor temperature: 7°CDB, 6°CWB
- Location of microphone



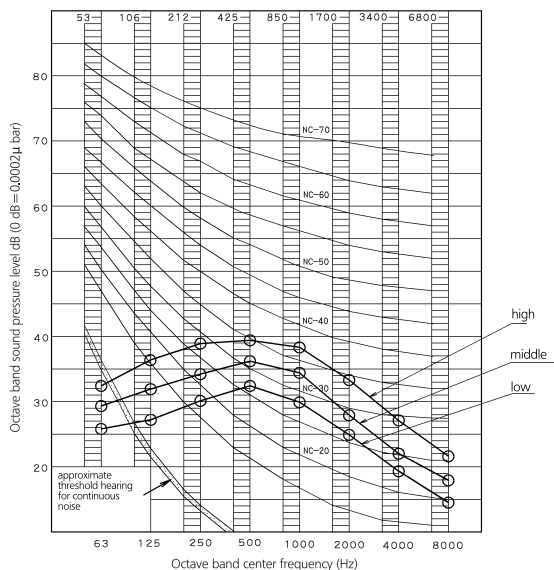
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# 8 Sound data

## 8 - 1 Sound Pressure Spectrum

8

FHQ100CB

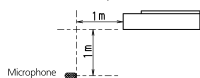


### NOTES

- Overall (dB)
 

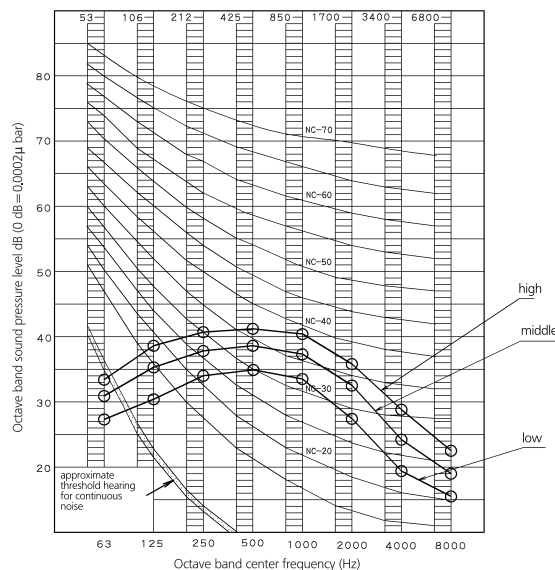
Scale	high	middle	low
A	42	38	34
C	45	41	37

 (B/C is already rectified)
- Measuring place: Anechoic chamber
- Operation noise differs with operation and ambient conditions.
- Operating conditions: Power source: 220-240V 50Hz/220V 60Hz
- Cooling: Return air temperature: 27°CDB, 19°CWB  
Outdoor temperature: 35°CDB, 24°CWB
- Heating: Return air temperature: 20°CDB, 15°CWB  
Outdoor temperature: 7°CDB, 6°CWB
- Location of microphone



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FHQ125CB

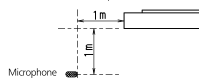


### NOTES

- Overall (dB)
 

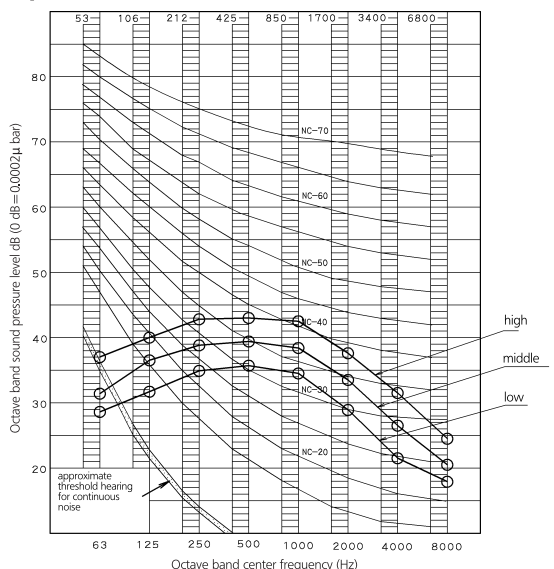
Scale	high	middle	low
A	44	41	37
C	47	44	40

 (B/C is already rectified)
- Measuring place: Anechoic chamber
- Operation noise differs with operation and ambient conditions.
- Operating conditions: Power source: 220-240V 50Hz/220V 60Hz
- Cooling: Return air temperature: 27°CDB, 19°CWB  
Outdoor temperature: 35°CDB, 24°CWB
- Heating: Return air temperature: 20°CDB, 15°CWB  
Outdoor temperature: 7°CDB, 6°CWB
- Location of microphone



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FHQ140CB

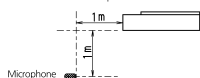


### NOTES

- Overall (dB)
 

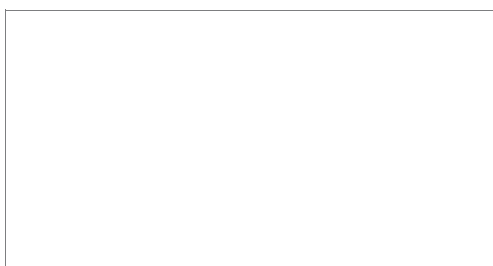
Scale	high	middle	low
A	46	42	38
C	49	45	41

 (B/C is already rectified)
- Measuring place: Anechoic chamber
- Operation noise differs with operation and ambient conditions.
- Operating conditions: Power source: 220-240V 50Hz/220V 60Hz
- Cooling: Return air temperature: 27°CDB, 19°CWB  
Outdoor temperature: 35°CDB, 24°CWB
- Heating: Return air temperature: 20°CDB, 15°CWB  
Outdoor temperature: 7°CDB, 6°CWB
- Location of microphone



4D069651F

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