DAIKIN

Air Conditioning

Technical Data

Large concealed ceiling unit

EEDEN12-204

FXMQ-MA

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FXMQ-MA

1 Features

- User friendly remote control with contemporary design
- Up to 270Pa external static pressure allows extensive ductwork runs and flexible application: ideal for use in large areas
- Easy to use: all main functions directly accessible
- Blends unobtrusively with any interior décor: only the suction and discharge grilles are visible
- Easy setup: clear graphical user interface for advanced menu settings

heat pump 2 steps optional

2 Specifications

2-1 Technical Specifications					FXMQ200MA	FXMQ250MA
Cooling capacity	Nom.			kW	22.4 (1)	28.0 (1)
Heating capacity	Nom.			kW	25.0 (2)	31.5 (2)
Power input - 50Hz	Cooling	Nom.		kW	1.294	1.465
	Heating	Nom.		kW	1.294	1.465
Power input - 60Hz	Cooling	Nom.		kW	1.490	1.684
	Heating	Nom.		kW	1.490	1.684
Casing	Material				Galvanised steel plate	
Dimensions	Unit	Height		mm	470	
		Width		mm	1,380	
		Depth		mm	1,100	
Weight	Unit			kg	137	
Heat exchanger	Rows	Quantity			3	
	Fin pitch			mm	2.0	
	Face area			m^2	0.68	
	Stages	Quantity			26	
Fan	Type				Sirocco fan	
	Quantity				2	
	Air flow rate - 50Hz	Cooling	High	m^3/min	58	72
			Low	m^3/min	50	62
	Air flow rate - 60Hz	Cooling	High	m^3/min	58	72
			Low	m^3/min	50	62
	External static pressure - 50Hz	High		Pa	221	270
		Nom.		Pa	132	191
	External static pressure - 60Hz	High		Pa	270	
		Nom.		Pa	132	147
Fan motor	Quantity				2	
	Model				D13/4G2DA1	
	Output	High		W	380	
	Drive				Direct drive	
Sound pressure level	Cooling	High		dBA	48	
		Low		dBA	45	
Refrigerant	Type				R-410A	
	Control				Electronic expansion valve	
Piping connections	Liquid	Type			Flare connection	
		OD		mm	9.52	
	Gas	Type			Braze connection	
		OD		mm	19.1	22.2
	Drain				PS1B	
	Heat insulation				Glass fiber	
	Sound absorbing insulation				Glass fiber	
Temperature control					Microprocessor thermostat for cooling and heating	
Safety devices	Item	01			Fuse	
		02			Fan motor thermal protection	

Standard Accessories : Screws;
Standard Accessories : Clamps;
Standard Accessories : Sealing pads;
Standard Accessories : Connection pipes;
Standard Accessories : Installation and operation manual;

2-2 Electrical Specifications			FXMQ200MA	FXMQ250MA
Power supply	Name		VE	
	Phase		1~	
	Frequency	Hz	50/60	
	Voltage	V	220-240/220	
Voltage range	Min.	%	-10	
	Max.	%	10	

2 Specifications

2-2 Electrical Specifications				FXMQ200MA	FXMQ250MA
Current - 50Hz	Minimum circuit amps (MCA)		A	8.1	9.0
	Maximum fuse amps (MFA)		A	15	
	Full load amps (FLA)	Total	A	6.5	7.2
Current - 60Hz	Minimum circuit amps (MCA)		A	9.0	10.1
	Maximum fuse amps (MFA)		A	15	
	Full load amps (FLA)	Total	A	7.2	8.1

Notes

(1) Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m (horizontal)

(2) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m (horizontal)

(3) Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

(4) The external static pressure is changeable: change the connectors inside the electrical box, this pressure means: High static pressure - Standard

(5) The air filter is not a standard accessory, but please mount it in the duct system of the suction side. Select its colorimetric method (gravity method) 50% or more.

(6) Sound pressure levels are measured at 220V.

(7) Reference acoustic pressure 0 dB = 20 Pa.

(8) Sound values are measured in an anechoic room.

(9) Operation sound differs with operation and ambient conditions

(10) Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.

(11) Maximum allowable voltage range variation between phases is 2%.

(12) MCA/MFA: MCA = 1.25 x FLA

(13) MFA ≤ 4 x FLA

(14) Next lower standard fuse rating minimum 15A

(15) Select wire size based on the value of MCA

(16) Instead of a fuse, use a circuit breaker

3 Safety device settings

3 - 1 Safety Device Settings

FXMQ-MA

Safety devices		200	250
PC board fuse		250V 10A	250V 10A
Fan motor thermal fuse	°C	-	-
Fan motor thermal protector	°C	OFF: 135 $^{\pm 8}$ (ON: 87 $^{\pm 15}$)	OFF: 135 $^{\pm 8}$ (ON: 87 $^{\pm 15}$)

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4 Options

4 - 1 Options

FXMQ-MA

Item		Model	Duct Type	
			FXMQ200MA	FXMQ250MA
Drain pump kit		Type	KDU30L250VE	
		Z No.	Z980500	
High efficiency filter	65%	Type	KAFJ372L280	
		AS No.	AS3600873	
	90%	Type	KAFJ373L280	
		AS No.	AS36000873	
Filter chamber		Type	KDJ3705L280	
		AS No.	AS3600874	
Long life replacement filter		Type	KAFJ371L280	
		AS No.	AS3600872	

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NOTE

1. See the latest for the modification marks.

5 Control systems

5 - 1 Control Systems

FXMQ-MA

No.	Item / Type			FXMQ-MA
1	Remote control	Infrared	H/P	BRC4C62
			C/O	BRC4C64
		Wired		BRC1D52 / BRC1E51A (*7) / BRC1E52A (*8)/ BRC1E52B (*9) / BRC1D61 (*10)
2	Simplified remote control			BRC2A51
3	Remote control for hotel use			BRC3A61
4	Adapter for wiring			KRP1B61
5-1	Wiring adapter for electrical appendices (1)			KRP2A61
5-1	Wiring adapter for electrical appendices (2)			KRP4A51
6	Remote sensor			KRCS01-1
7	Installation box for adapter PCB			-
8	Central remote control			DCS302C51 / DCS302C61 (*10)
8-1	Electrical box with earth terminal (3 blocks)			KJB311A
9	Unified on/off controller			DCS301B51 / DCS301B61 (*10)
9-1	Electrical box with earth terminal (2 blocks)			KJB212A
9-2	Noise filter (for electromagnetic interface use only)			KEK26-1
10	Schedule timer			DST301B51 / DST301B61 (*10)
11	External control adapter for outoor unit (Must be installed on indoor units)			DTA104A61
12	Residential wired remote control			DCS303A51 (*10) (*11)

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NOTES

1. Installation box (No. 7) is necessary for each adapter marked *.
2. Up to 2 adapters can be fixed for each installation box.
3. Only one installation box can be installed for each indoor unit.
4. Up to 2 installation boxes can be installed for each indoor unit.
5. Installation box (No. 7) is necessary for second adapter.
6. Installation box (No. 7) is necessary for each adapter.
7. Included languages are: English, German, French, Dutch, Spanish, Italian, Greek, Portuguese, Russian and Turkish.
8. Included languages are: English, German, French, Dutch, Spanish, Italian, Greek, Portuguese, Russian, Turkish and Polish.
9. Included languages are: English, German, Albanian, Bulgarian, Croatian, Czech, Hungarian, Serbian, Slovak and Slovenian.
10. For DAME only
11. For residential use. Cannot be used with other centralised control equipment.

6 Capacity tables

6 - 1 Cooling Capacity Tables

FXMQ-MA

TC: Total capacity;kW – SHC: Sensible capacity;kW

Unit size	Nominal capacity	Outdoor air temp.	Indoor air temperature													
			14.0WB		16.0WB		18.0WB		19.0WB		20.0WB		22.0WB		24.0WB	
			20.0DB		23.0DB		26.0DB		27.0DB		28.0DB		30.0DB		32.0DB	
		°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
200	22.4	10.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.8	17.6	29.4	17.8
		12.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.8	17.6	29.0	17.6
		14.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.8	17.6	28.7	17.4
		16.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.8	17.6	28.3	17.2
		18.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.8	17.6	27.9	16.9
		20.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.8	17.6	27.5	16.7
		21.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.8	17.6	27.4	16.6
		23.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.4	17.3	27.0	16.4
		25.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	26.1	17.1	26.6	16.2
		27.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	25.7	16.8	26.2	16.1
		29.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	25.3	16.6	25.8	15.9
		31.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	24.9	16.4	25.4	15.7
		33.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.8	17.0	24.5	16.3	25.0	15.6
		35.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.6	17.0	24.2	16.1	24.6	15.4
		37.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	23.2	16.8	23.8	16.0	24.3	15.3
		39.0	15.1	13.4	18.0	14.9	21.0	16.3	22.4	16.8	22.8	16.6	23.4	15.8	23.9	15.1
250	28.0	10.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	33.5	22.1	36.8	22.1
		12.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	33.5	22.1	36.3	21.8
		14.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	33.5	22.1	35.9	21.6
		16.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	33.5	22.1	35.4	21.3
		18.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	33.5	22.1	34.9	21.0
		20.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	33.5	22.1	34.4	20.7
		21.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	33.5	22.1	34.2	20.6
		23.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	33.0	21.7	33.7	20.3
		25.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	32.6	21.5	33.2	20.2
		27.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	32.1	21.2	32.8	20.0
		29.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	31.6	20.9	32.3	19.9
		31.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	31.1	20.6	31.8	19.7
		33.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.8	21.2	30.6	20.4	31.3	19.5
		35.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.5	21.1	30.2	20.2	30.8	19.4
		37.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	20.9	29.0	20.9	29.7	20.0	30.4	19.2
		39.0	18.9	16.9	22.5	18.5	26.2	20.4	28.0	21.0	28.5	20.6	29.2	19.8	29.9	19.0

6 Capacity tables

6 - 2 Heating Capacity Tables

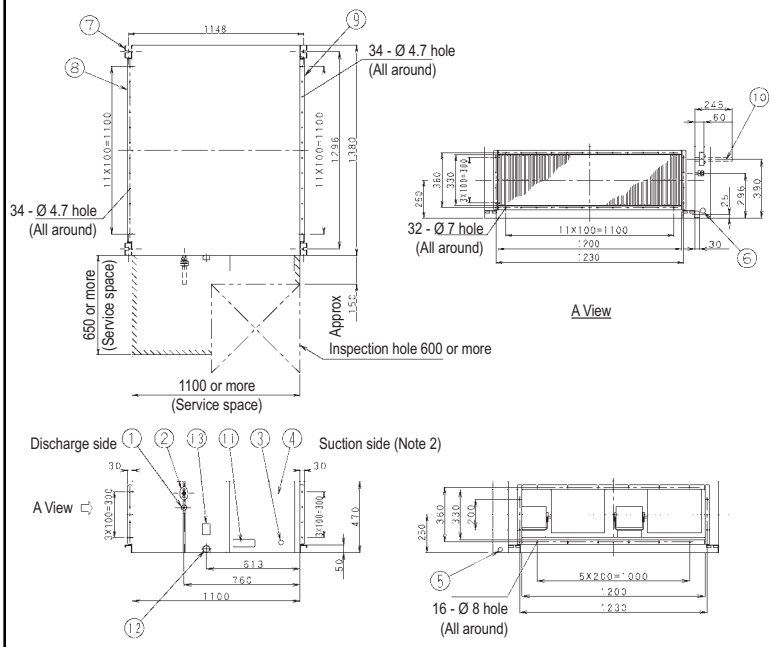
FXMQ-MA

Unit Size	Nominal capacity	Outdoor air temperature		Indoor air temperature °CDB					
				16.0	18.0	20.0	21.0	22.0	24.0
		°CDB	°CWB	kW	kW	kW	kW	kW	kW
200	25.0	-19.8	-20.0	14.8	14.7	14.7	14.7	14.6	14.6
		-18.8	-19.0	15.2	15.2	15.1	15.1	15.1	15.0
		-16.7	-17.0	16.1	16.0	16.0	16.0	16.0	15.9
		-14.7	-15.0	17.0	16.9	16.9	16.9	16.8	16.8
		-12.6	-13.0	17.9	17.8	17.8	17.7	17.7	17.7
		-10.5	-11.0	18.7	18.7	18.6	18.6	18.6	18.6
		-9.5	-10.0	19.2	19.1	19.1	19.1	19.0	19.0
		-8.5	-9.1	19.6	19.5	19.5	19.5	19.4	19.4
		-7.0	-7.6	20.2	20.2	20.2	20.1	20.1	20.1
		-5.0	-5.6	21.1	21.1	21.0	21.0	21.0	20.9
		-3.0	-3.7	22.0	21.9	21.9	21.9	21.8	21.8
		0.0	-0.7	23.3	23.2	23.2	23.2	23.2	21.8
		3.0	2.2	24.6	24.5	24.5	24.2	23.4	21.8
		5.0	4.1	25.4	25.4	25.0	24.2	23.4	21.8
		7.0	6.0	26.2	26.2	25.0	24.2	23.4	21.8
		9.0	7.9	27.1	26.6	25.0	24.2	23.4	21.8
		11.0	9.8	27.9	26.6	25.0	24.2	23.4	21.8
		13.0	11.8	28.2	26.6	25.0	24.2	23.4	21.8
		15.0	13.7	28.2	26.6	25.0	24.2	23.4	21.8
250	31.5	-19.8	-20.0	18.6	18.5	18.5	18.5	18.4	18.4
		-18.8	-19.0	19.2	19.1	19.0	19.0	19.0	18.9
		-16.7	-17.0	20.3	20.2	20.2	20.1	20.1	20.0
		-14.7	-15.0	21.4	21.3	21.3	21.2	21.2	21.2
		-12.6	-13.0	22.5	22.4	22.4	22.4	22.3	22.3
		-10.5	-11.0	23.6	23.6	23.5	23.5	23.4	23.4
		-9.5	-10.0	24.2	24.1	24.1	24.0	24.0	23.9
		-8.5	-9.1	24.7	24.6	24.6	24.5	24.5	24.4
		-7.0	-7.6	25.5	25.4	25.4	25.4	25.3	25.3
		-5.0	-5.6	26.6	26.6	26.5	26.5	26.4	26.4
		-3.0	-3.7	27.7	27.6	27.6	27.5	27.5	27.5
		0.0	-0.7	29.3	29.3	29.2	29.2	29.2	27.5
		3.0	2.2	31.0	30.9	30.8	30.5	29.5	27.5
		5.0	4.1	32.0	32.0	31.5	30.5	29.5	27.5
		7.0	6.0	33.1	33.0	31.5	30.5	29.5	27.5
		9.0	7.9	34.1	33.5	31.5	30.5	29.5	27.5
		11.0	9.8	35.2	33.5	31.5	30.5	29.5	27.5
		13.0	11.8	35.5	33.5	31.5	30.5	29.5	27.5
		15.0	13.7	35.5	33.5	31.5	30.5	29.5	27.5

7 Dimensional drawings

7 - 1 Dimensional Drawings

FXMQ-MA



Piping size (field supply)

Indoor unit	Gas side	Liquid side
FXMQ200MA	Ø 19.1 attached piping	Ø 9.5
FXMQ250MA	Ø 22.2 attached piping	Ø 9.5

No.	Name	Description
1	Liquid pipe connection	Flare connection
2	Gas pipe connection	Attendant piping connection
3	Ground terminal	M5 (Inside switch box)
4	Switch box	
5	Power supply wiring connection	
6	Transmission wiring connection	
7	Hook	M10
8	Discharge companion flange	
9	Suction flange	
10	Attached piping	Brazing
11	Name plate	
12	Drain piping connection	PS1B Internal thread Major dia. Ø 33.349 Minor dia. Ø 30.391
13	Water supply port	

NOTES

1. Location of unit's Name Plates: Switch box surface.
2. Mount the air filter at the suction side. Select its colorimethod (gravity method) 50% or more.

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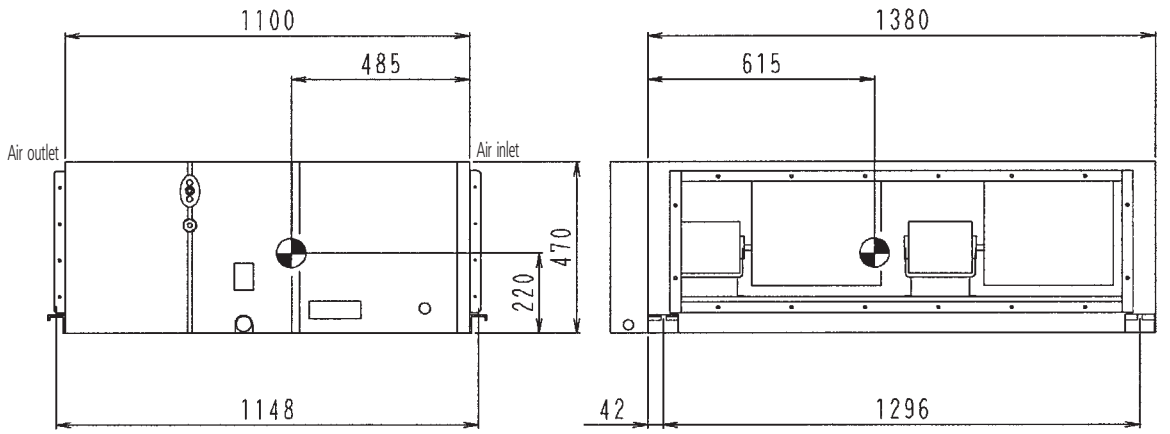
8 Centre of gravity

8 - 1 Centre of Gravity

FXMQ200,250MA



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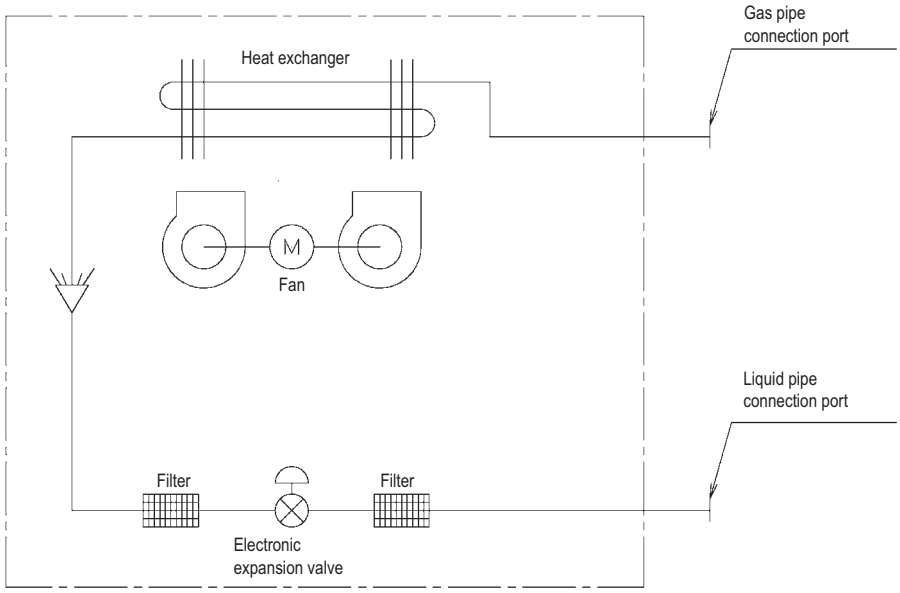
9 Piping diagrams

9 - 1 Piping Diagrams

FXMQ-MA



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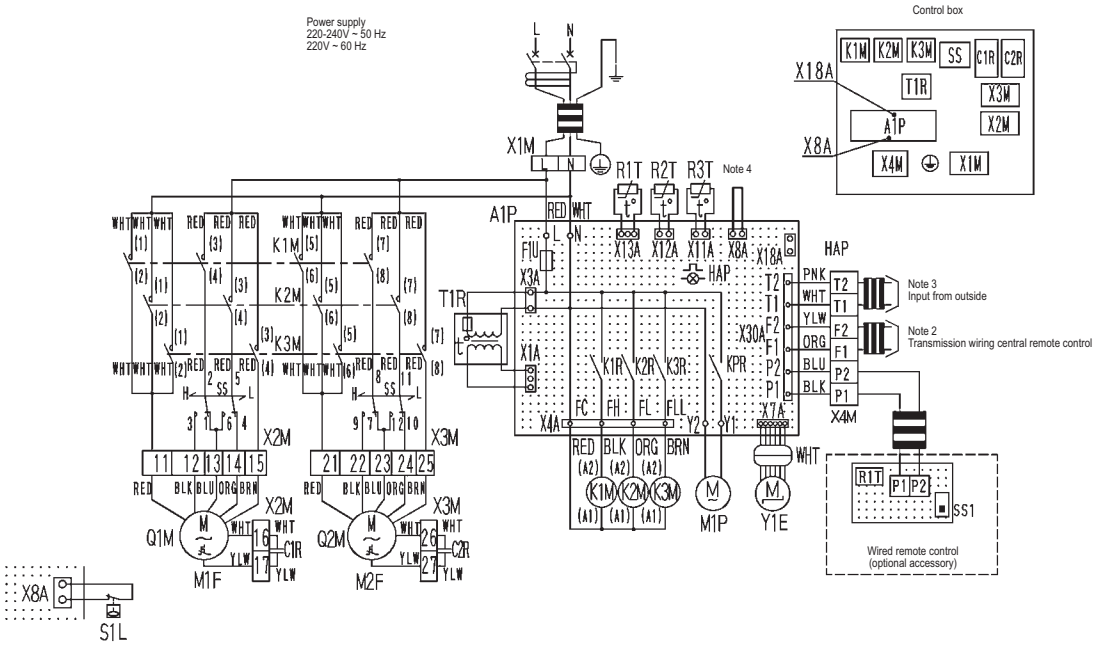
10 Wiring diagrams

10 - 1 Wiring Diagrams - Single Phase

FXMQ200,250MA



Indoor unit		R2T, R3T	Thermistor (coil)	Wired remote control	
A1P	Printed circuit board	SS	Selector switch (static pressure)	R1T	Thermistor (air)
C1R, C2R	Capacitor (M1F, 2F)	T1R	Transformer (220-240V/22V)	SS1	Select switch (main/sub)
F1U	Fuse (Ⓑ , 5A, 250V)	X1M	Terminal block (power)		
HAP	Light emitting diode (service monitor-green)	X2M, X3M	Terminal block	Connector for optional parts	
K1M	Magnetic contactor (M1F, 2F)	X4M	Terminal block (control)	X8A	Connector (float switch)
K2M	Magnetic contactor (M1F, 2F)	Y1E	Electronic expansion valve	X18A	Connector (wiring adapter for electrical appendices)
K3M	Magnetic contactor (M1F, 2F)				
K1R - K3R	Magnetic relay (M1F, 2F)	Optional parts			
KPR	Magnetic relay (M1P)	M1P	Motor (drain pump)		
M1F, M2F	Motor (indoor fan)				
Q1M, Q2M	Thermo switch (M1F, 2F embedded)				
R1T	Thermistor (air)				

PNK: pink	WHT: white
YLW: yellow	ORG: orange
BLU: blue	BLK: black
RED: red	BRN: brown

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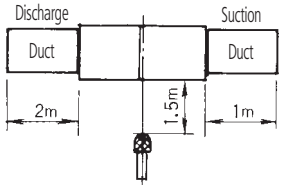
NOTES

1. ☐☐☐☐ : terminal block, ⊙⊙, D─ : connector, ─○─ : terminal, ⊡ : short circuit connector, ═▮▮▮═ : field wiring
2. In case using central remote control, connect it to the unit in accordance with the attached instruction manual.
3. When connecting the input wires from outside, forced off or on/off control operation can be selected by remote control. In details, refer to the installation manual attached to the unit.
4. In case installing the drain pump, remove the short circuit connector of X8A and execute the additional wiring for float switch and drain pump.
5. Use copper conductors only.
6. In case high E.S.P. operation, change the switch (SS) for 'H'.

11 Sound data

11 - 1 Sound Level Data

FXMQ-MA

Model	Sound pressure level - 220V			Sound power level
	H	L	Measuring location	
FXMQ200MA	48	45		*
FXMQ250MA	48	45		*

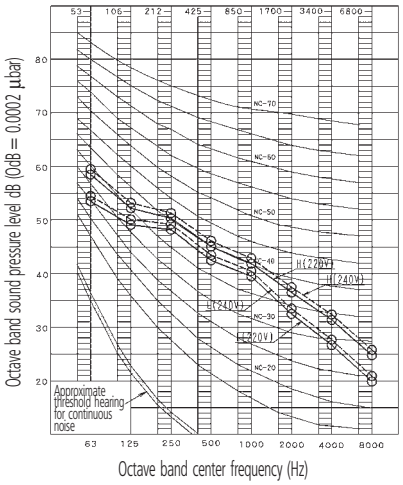
NOTES

1 Reference acoustic pressure 0 dB = 20 Pa.
2 Measuring place: anechoic chamber
3 Operation noise differs with operation and ambient conditions.
*Data were not available at the time of publication

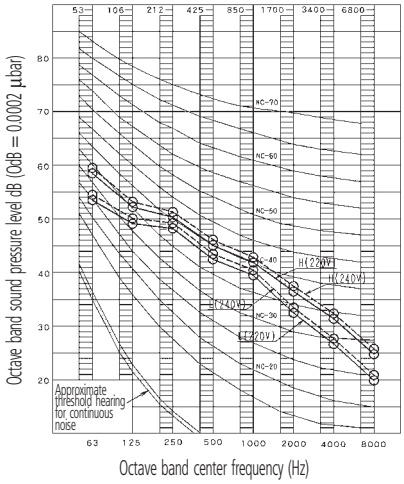
11 Sound data

11 - 2 Sound Pressure Spectrum

FXMQ200MA 4D035168



FXMQ250MA 4D035169

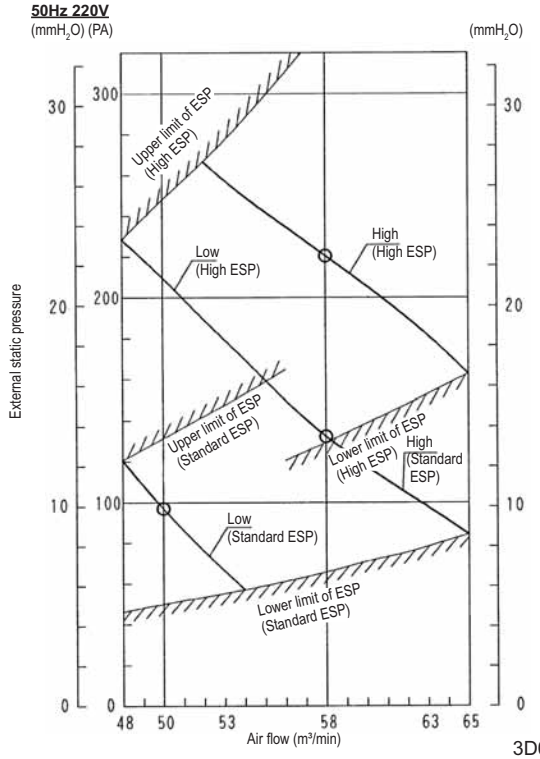


12 Fan characteristics

12 - 1 Fan Characteristics

FXMQ200MA

50Hz 220V



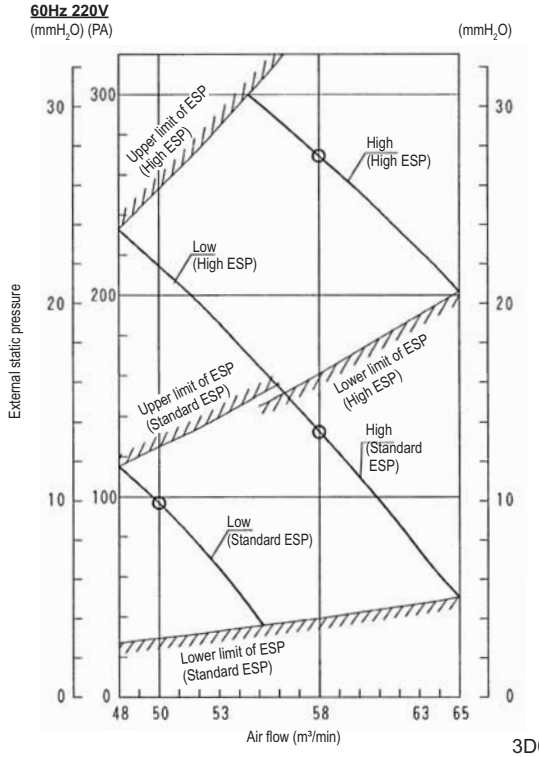
3D035172

NOTES

1. The remote control can be used to switch between “high” and “low”.
2. The air flow is set to “standard” before leaving the factory. It is possible to switch between “standard ESP” and “high ESP” by changing the switch in the indoor unit electrical box.

FXMQ200MA

60Hz 220V



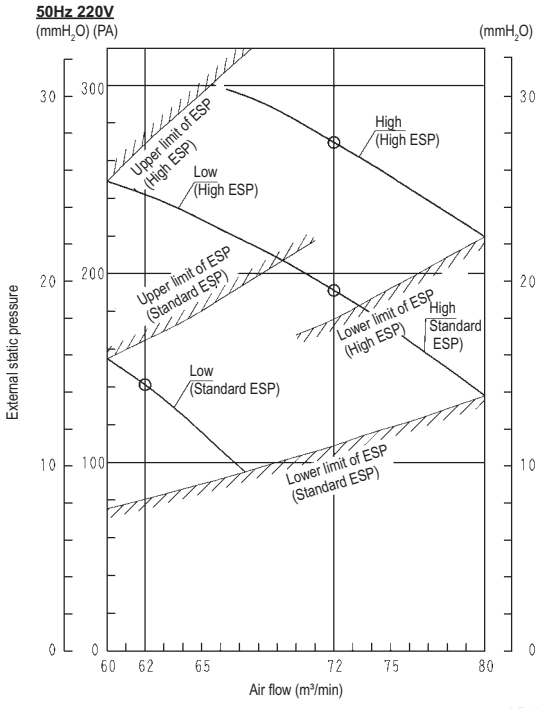
3D035172

NOTES

1. The remote control can be used to switch between “high” and “low”.
2. The air flow is set to “standard” before leaving the factory. It is possible to switch between “standard ESP” and “high ESP” by changing the switch in the indoor unit electrical box.

FXMQ250MA

50Hz 220V



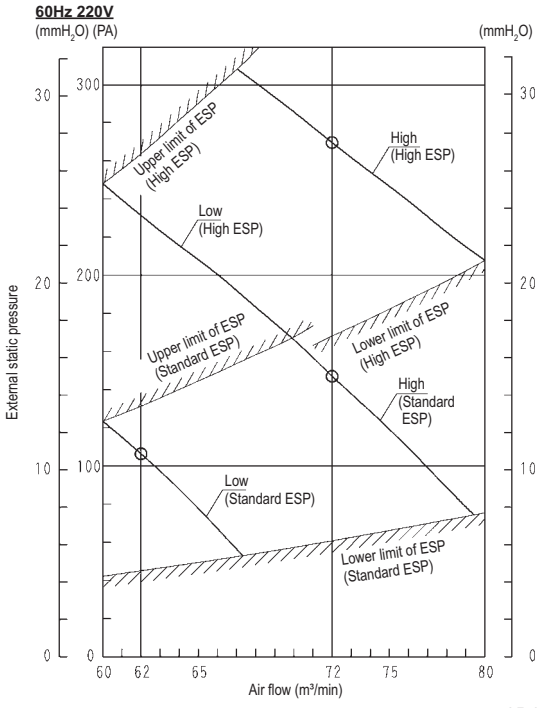
3D035173A

NOTES

1. The remote control can be used to switch between “high” and “low”.
2. The air flow is set to “standard” before leaving the factory. It is possible to switch between “standard ESP” and “high ESP” by changing the switch in the indoor unit electrical box.

FXMQ250MA

60Hz 220V



3D035173A

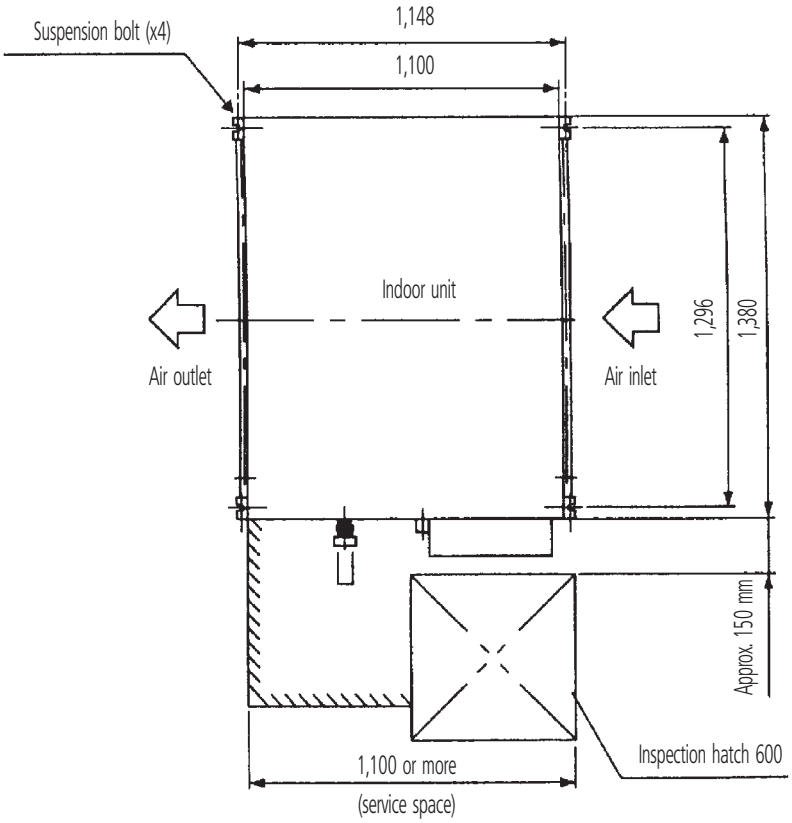
NOTES

1. The remote control can be used to switch between “high” and “low”.
2. The air flow is set to “standard” before leaving the factory. It is possible to switch between “standard ESP” and “high ESP” by changing the switch in the indoor unit electrical box.

13 Installation

13 - 1 Suspension Bolt Pitch Position

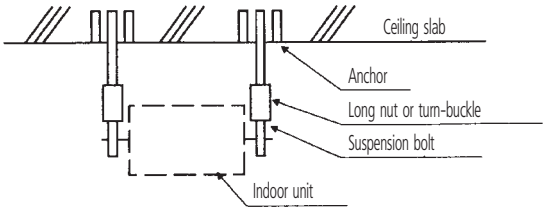
FXMQ200,250MA



NOTES

1 Install a canvas duct to the air discharge outlet and air inlet so that vibration from the machine body is not transmitted to the duct or ceiling. You should also apply acoustic (insulation material) to the inside of the duct, and vibration insulation rubber to the suspension bolts.

2 Install suspension bolts.
Use bolts of 10 mm diameter.
Install the equipment where supporting structures are strong enough to bear the equipment's weight. Use embedded inserts or anchor bolts with new buildings and hole-in-anchors with old buildings.



NOTE

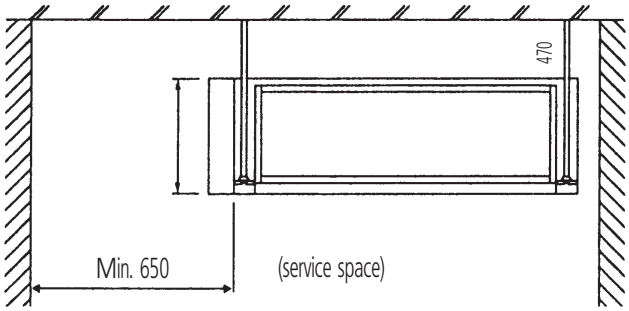
1 All the above parts are to be procured in the field.

3P086156-2-5

13 Installation

13 - 2 Service Space

FXMQ200,250MA



NOTE

1 Above figures mean minimum values.

3P086156-2-4

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.

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