DAIKIN

Air Conditioners

Technical Data

VRV®

Concealed Ceiling Unit (Large)

EEDEN10-204

FXMQ-MAVE

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Air Conditioners

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VRV®

Concealed Ceiling Unit (Large)

EEDEN10-204

FXMQ-MAVE

TABLE OF CONTENTS

FXMQ-MAVE

1 Specifications

1-1 Technical Specifications				FXMQ200MAVE	FXMQ250MAVE
Capacity	Cooling		kW	22.4	28.0
	Heating		kW	25.0	31.5
Power Input (50Hz)	Cooling		kW	1.294	1.465
	Heating		kW	1.294	1.465
Power Input (60Hz)	Cooling		kW	1.490	1.684
	Heating		kW	1.490	1.684
Casing	Material			Galvanised steel	
Dimensions	Unit	Height	mm	470	470
		Width	mm	1,380	1,380
		Depth	mm	1,100	1,100
Weight	Unit		kg	137	137
Heat Exchanger	Dimensions	Nr of Rows		3	3
		Fin Pitch	mm	2.0	2.0
		Face Area	m²	0.68	0.68
		Nr of Stages		26	26
Fan	Type			Sirocco fan	
	Quantity			2	2
Cooling	High	m³/min		58	72
	Low	m³/min		50	62
Fan	External static pressure (Max) (50Hz)	High	Pa	221	270
		Standard	Pa	132	147
	External static pressure (Max) (60Hz)	High	Pa	270	191
		Standard	Pa	172	
	Motor	Quantity		2	2
		Model		D13/4G2DA1	D13/4G2DA1
		Output (high)	W	380	380
		Drive		Direct drive	
Refrigerant	Name			R-410A	
Cooling	Sound Pressure	High	dBA	48	48
		Low	dBA	45	45
Piping connections	Liquid (OD)	Type		Flare connection	
		Diameter	mm	9.52	9.52
	Gas	Type		Braze connection	
		Diameter	mm	19.1	22.2
	Drain	Diameter	mm	PS1B	PS1B
	Heat Insulation			Glass fiber	
Refrigerant control				Electronic expansion valve	
Temperature control				Microprocessor thermostat for cooling and heating	
Safety devices				Fuse	
				Fan motor thermal protector	
Standard Accessories				Operation manual	
				Installation manual	
				Connection pipes	
				Sealing pads	
				Clamps	
				Screws	
				Insulation for fitting	
				Clamp metal	
Notes				Nominal cooling capacities are based on : indoor temperature : 27°CDB, 19°CWB, outdoor temperature : 35°CDB, equivalent refrigerant piping : 7,5m (horizontal)	
				Nominal heating capacities are based on : indoor temperature : 20°CDB, outdoor temperature : 7°CDB, 6°CWB, equivalent refrigerant piping : 7.5m (horizontal)	
				Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.	
				The external static pressure is changeable : change the connectors inside the electrical box, this pressure means : High static pressure -standard	
				Air filter is not standard accessory, but please mount it in the duct system of the suction side. Select its colorimetric method(gravity method) 50% or more.	
				Sound pressure levels are measured at 220V	

1 Specifications

1-2 Electrical Specifications (50Hz)			FXMQ200MAVE	FXMQ250MAVE
Power Supply	Name		VE	
	Phase		1~	
	Frequency	Hz	50	
	Voltage	V	220-240	
Current	Minimum circuit amps (MCA)	A	8.1	9.0
	Maximum fuse amps (MFA)	A	15	15
	Full load amps (FLA)	A	6.5	7.2
Voltage range	Minimum	V	-10%	
	Maximum	V	+10%	
Notes			Voltage range : units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits.	
			Maximum allowable voltage range variation between phases is 2%.	
			MCA/MFA : MCA = 1.25 x FLA	
			MFA is smaller than or equal to 4 x FLA	
			Next lower standard fuse rating minimum 15A	
			Select wire size based on the MCA	
			Instead of a fuse, use a circuit breaker	

1-3 Electrical Specifications (60Hz)			FXMQ200MAVE	FXMQ250MAVE
Power Supply	Name		VE	
	Phase		1~	
	Frequency	Hz	60	
	Voltage	V	220	
Current	Minimum circuit amps (MCA)	A	9.0	10.1
	Maximum fuse amps (MFA)	A	15	15
	Full load amps (FLA)	A	7.2	8.1
Voltage range	Minimum	V	-10%	
	Maximum	V	+10%	
Notes			Voltage range : units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits.	
			Maximum allowable voltage range variation between phases is 2%.	
			MCA/MFA : MCA = 1.25 x FLA	
			MFA is smaller than or equal to 4 x FLA	
			Next lower standard fuse rating minimum 15A	
			Select wire size based on the MCA	
			Instead of a fuse, use a circuit breaker	

2 Safety device settings

		FXMQ200MA	FXMQ250MA
PC BOARD FUSE		250V 10A	
FAN MOTOR THERMAL PROTECTOR	°C	OFF: $135^{\pm 8}$, ON: $87^{\pm 15}$	

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3 Options

	FXMQ200MA	FXMQ250MA
DRAIN PUMP KIT	KDU30L250VE	
HIGH EFFICIENCY FILTER 65%	KAFJ372L280	
HIGH EFFICIENCY FILTER 90%	KAFJ373L280	
FILTER CHAMBER	KDJ3705L280	
REPLACEMENT LONG LIFE FILTER	KAFJ371L280	

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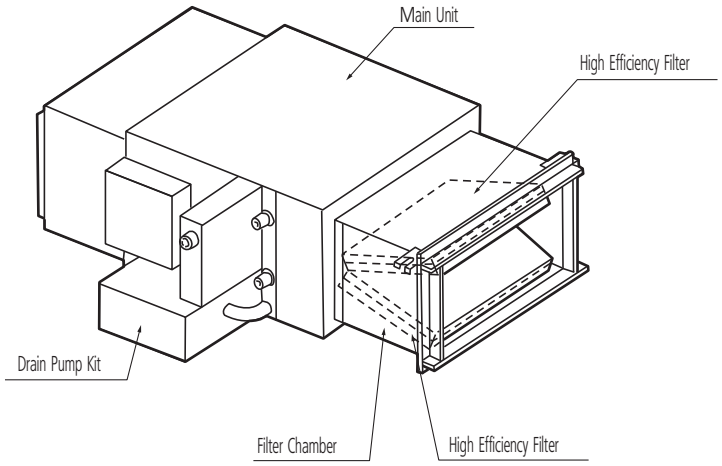

4 Control systems

Individual control systems

		FXKQ25MA	FXKQ32MA	FXKQ40MA	FXKQ63MA
WIRED REMOTE CONTROL		BRC1D52 / BRC1E51A			
INFRARED REMOTE CONTROL	Heat pump	BRC4C61			
	Cooling only	BRC4C63			

Centralised control systems

	FXKQ25MA	FXKQ32MA	FXKQ40MA	FXKQ63MA
CENTRALISED REMOTE CONTROL	DCS302C51			
UNIFIED ON/OFF CONTROL	DCS301B51			
SCHEDULE TIMER	DST301B51			

Others

	FXKQ25MA	FXKQ32MA	FXKQ40MA	FXKQ63MA
WIRING ADAPTER	KRP1B61			
WIRING ADAPTER FOR ELECTRICAL APPENDICES (1)	KRP2A61			
WIRING ADAPTER FOR ELECTRICAL APPENDICES (2)	KRP4A51			
REMOTE SENSOR	KRCS01-1			
ELECTRICAL BOX WITH EARTH TERMINAL (3 BLOCKS)	KJB311A			
ELECTRICAL BOX WITH EARTH TERMINAL (2 BLOCKS)	KJB212A			
NOISE FILTER (FOR ELECTROMAGNETIC INTERFACE USE ONLY)	KEK26-1A			
EXTERNAL CONTROL ADAPTER FOR OUTDOOR UNITS (INSTALLATION ON INDOOR UNIT)	DTA104A61			

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5 Capacity tables

5 - 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

5 Capacity tables

5 - 2 Heating capacity tables

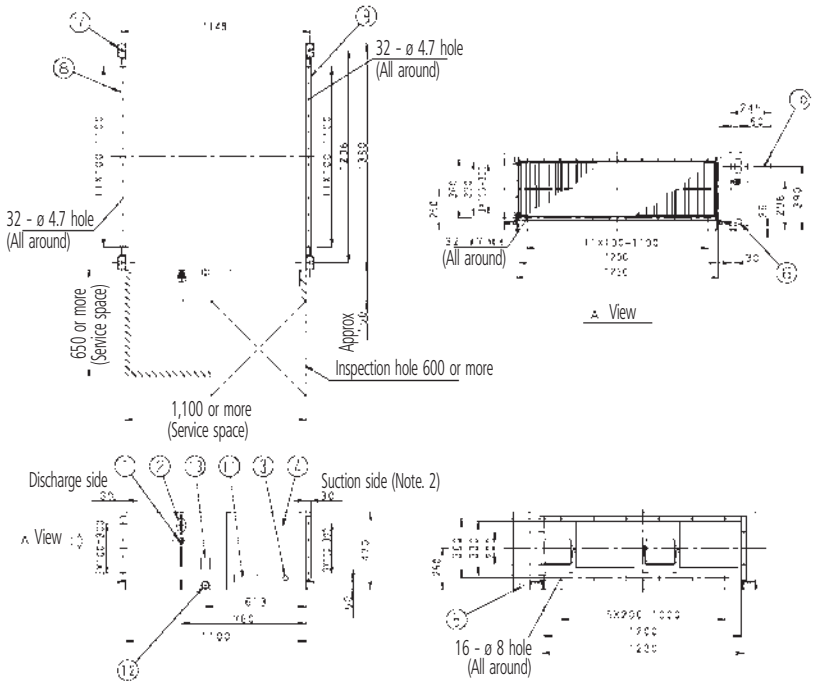
FXMQ-MA

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

6 Dimensional drawing & centre of gravity

6 - 1 Dimensional drawing

FXMQ200,250MA



Piping size (field supply)

Model	Gas	Liquid
FXMQ200MA	ø 19.1 attached piping	ø 9.5
FXMQ250MA	ø 22.2 attached piping	ø 9.5

Nr	Part 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 VP25 (O.D. ø33.349, I.D. ø30.391)
13	Water supply port	

NOTES

1 Location of unit's name plate: switch box surface.

2 Mount the air filter at the suction side. (Select its colorimethod (gravity method) 50% or more).

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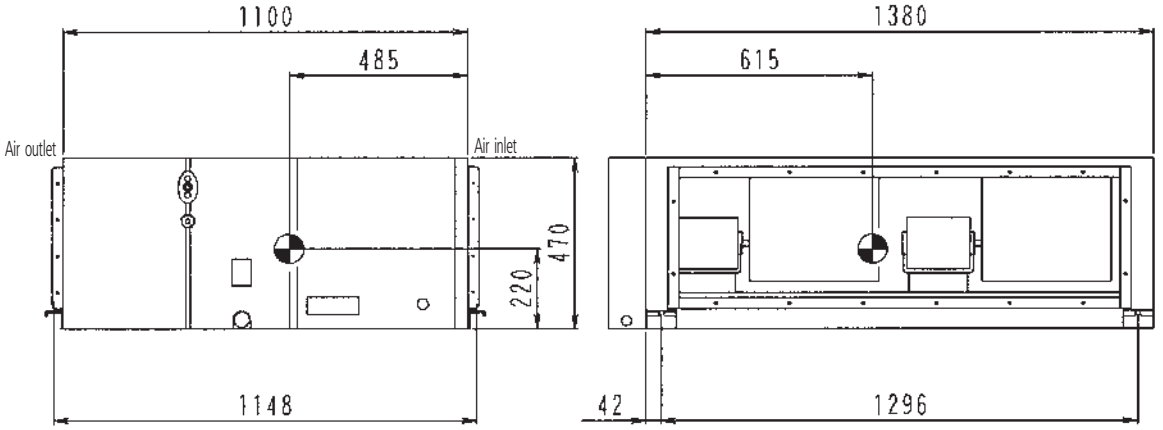
6 Dimensional drawing & centre of gravity

6 - 2 Centre of gravity

FXMQ200,250MA



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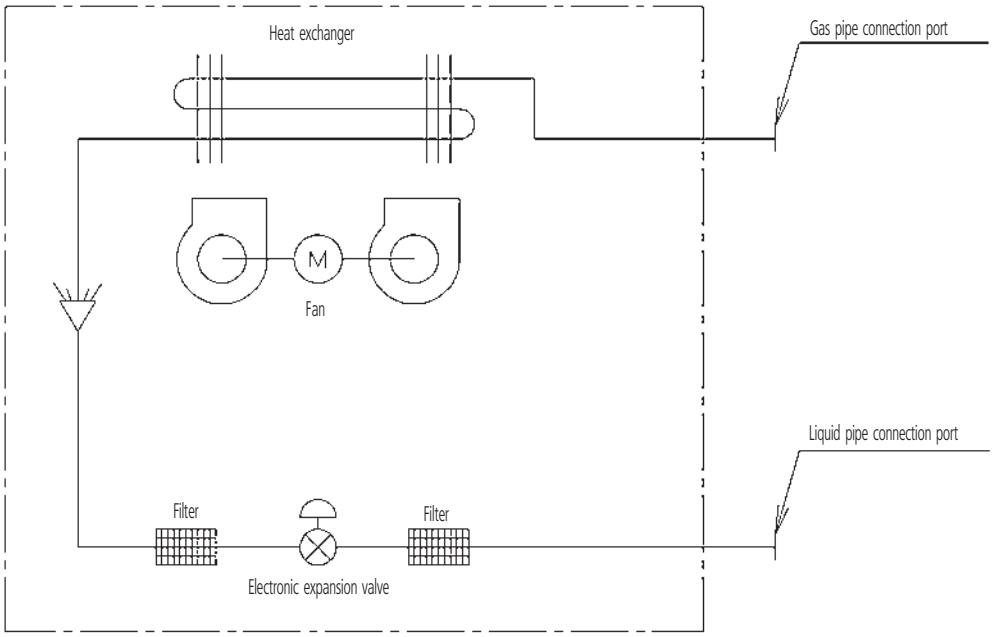
7 Piping diagram

FXMQ-MA



Piping connection diameters

Model	Gas	Liquid
FXMQ200MA	ø19.1	ø9.5
FXMQ250MA	ø22.2	ø9.5

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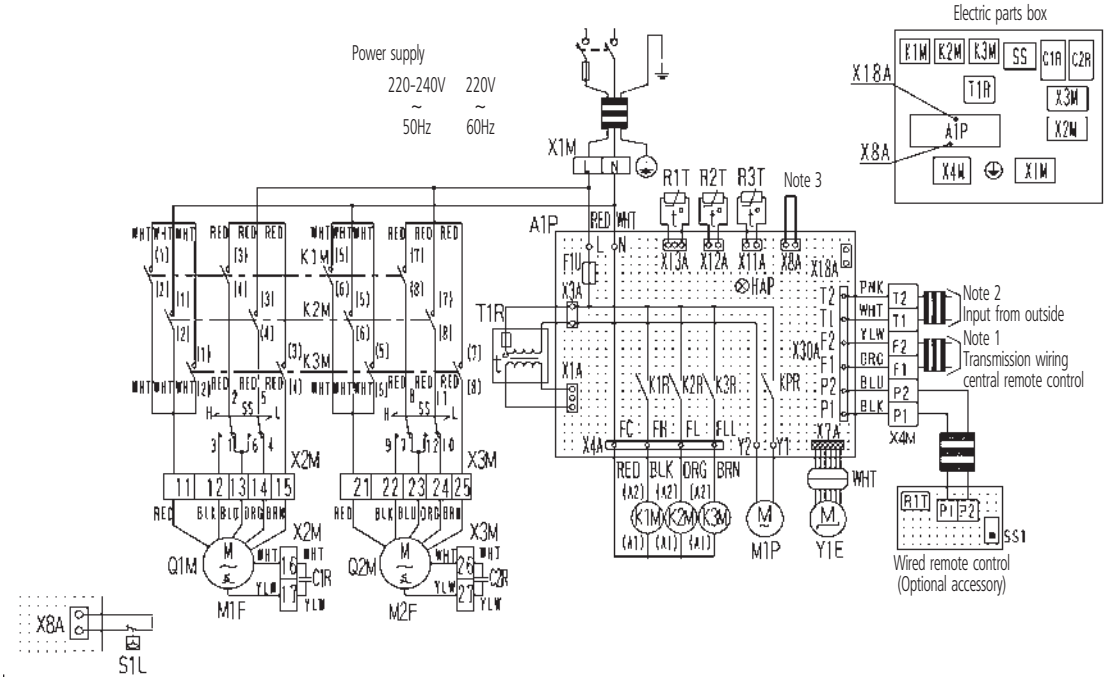
8 Wiring diagram

8 - 1 Wiring diagram

FXMQ200,250MA



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

: Terminal block
: Connector
: Short circuit connector
: Terminal
: Field wiring

COLORS : BLK : Black PNK : Pink
BLU : Blue RED : Red
BRN : Brown WHT : White
ORG : Orange YLW : Yellow

NOTES

1 In case using central remote control, connect it to the unit in accordance with the attached instruction manual.
2 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 the unit.
3 In case installing the drain pump, remove the short circuit connector of X8A and execute the additional wiring for float switch and drain pump.
4 Use copper conductors only.
5 In case high E.S.P. operation, change the switch(ss) for "H".

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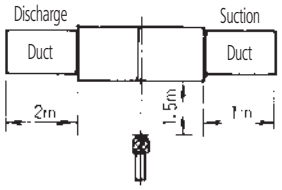
9 Sound data

9 - 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.

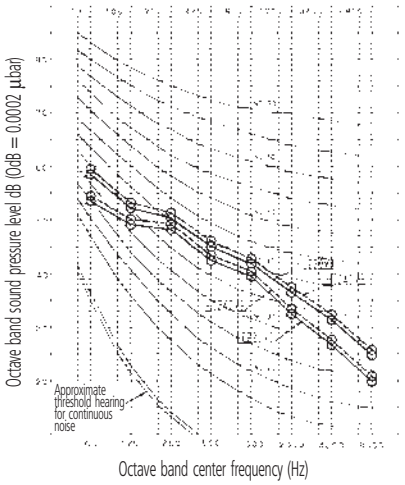
2 Measuring place: anechoic chamber

3 Operation noise differs with operation and ambient conditions.
*Data were not available at the time of publication

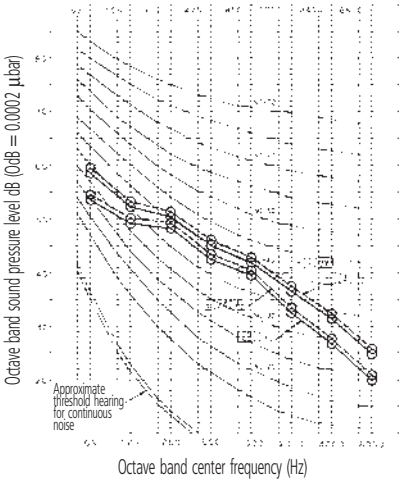
9 Sound data

9 - 2 Sound pressure spectrum

FXMQ200MA 4D035168

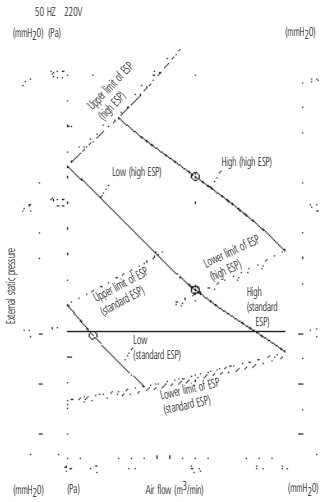


FXMQ250MA 4D035169



10 Fan characteristics

FXMQ200MA 3D035172

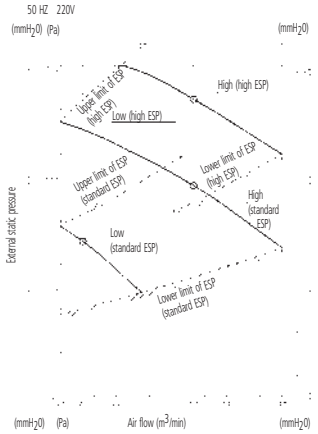


NOTES

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 terminals in the indoor unit electrical box.

FXMQ250MA 3D035173



NOTES

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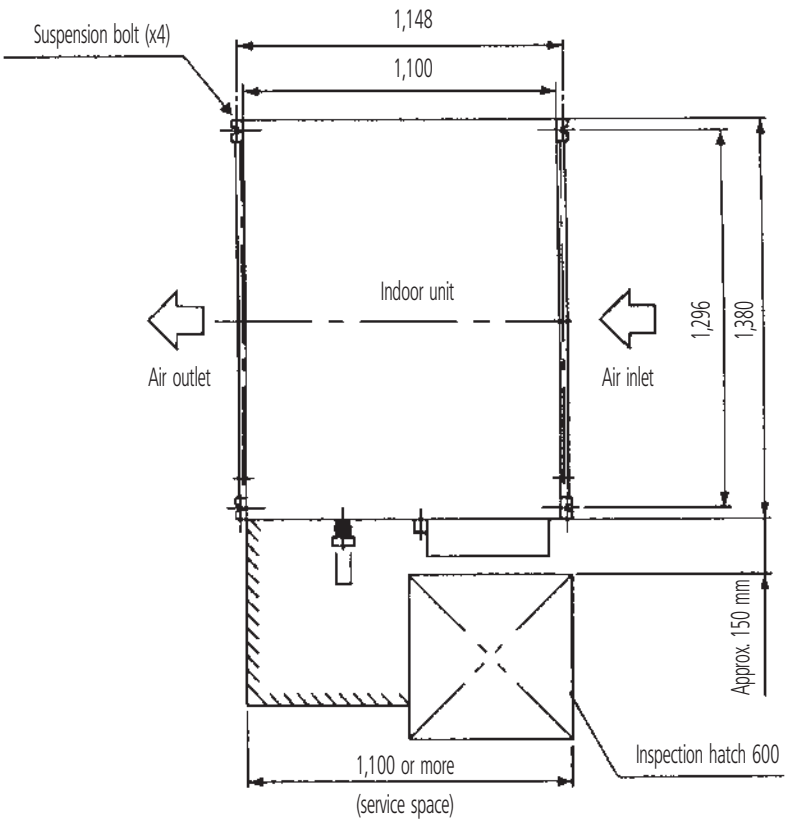
11 Installation

11 - 1 Suspension bolt pitch position

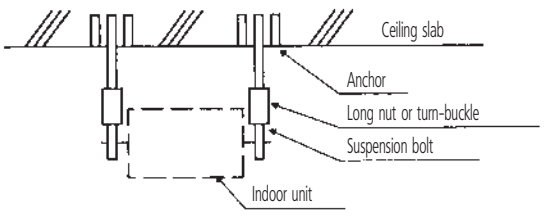
FXMQ200,250MA



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

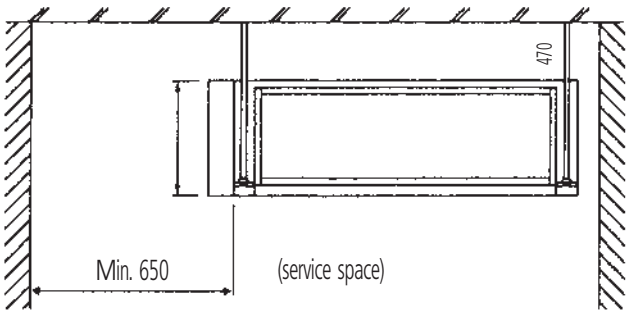
1 All the above parts are to be procured in the field.

3P086156-2-5

11 Installation

11 - 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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