



technical data

Concealed Ceiling Unit (Large)
FXMQ-MAVE

air conditioning systems

R-410A



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FXMQ-MAVE

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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	m ²	0.68	0.68	
		Nr of Stages		26	26	
Fan	Type			Sirocco fan		
	Quantity			2	2	
Cooling	High	m ³ /min		58	72	
	Low	m ³ /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			

1

2

1 Specifications

1-1 TECHNICAL SPECIFICATIONS		FXMQ200MAVE	FXMQ250MAVE
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			

1-2 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
	Maximum fuse amps (MFA)	A	15
	Full load amps (FLA)	A	6.5
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
	Maximum fuse amps (MFA)	A	15
	Full load amps (FLA)	A	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			

2 Safety device settings

2

		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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The diagram illustrates the assembly of optional components onto the main unit. The 'Main Unit' is shown as a large rectangular box. A 'Drain Pump Kit' is attached to the bottom left side. A 'Filter Chamber' is mounted on the front face, containing two 'High Efficiency Filter' units. Labels with leader lines identify each component: 'Main Unit', 'High Efficiency Filter' (top right), 'Drain Pump Kit' (bottom left), 'Filter Chamber' (bottom center), and 'High Efficiency Filter' (bottom right).

4

4 Control systems

Individual control systems

		FXMQ200MA	FXMQ250MA
WIRED REMOTE CONTROL			BRC1D52
INFRARED REMOTE CONTROL	Heat pump		BRC4C62
	Cooling only		BRC4C64
SIMPLIFIED REMOTE CONTROL			BRC2A51
REMOTE CONTROL FOR HOTEL USE			BRC3A61

Centralised control systems

		FXMQ200MA	FXMQ250MA
CENTRALISED REMOTE CONTROL			DCS302C51
UNIFIED ON/OFF CONTROL			DCS301B51
SCHEDULE TIMER			DST301B51

Others

		FXMQ200MA	FXMQ250MA
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

5

FXMQ-MA

TC: Total capacitykW – SHC: Sensible capacitykW

Unit size	Nominal capacity	Outdoor air temp. °CDB	Indoor air temperature													
			14.OWB		16.OWB		18.OWB		19.OWB		20.OWB		22.OWB		24.OWB	
			20.ODB	23.ODB	26.ODB	27.ODB	28.ODB	30.ODB	32.ODB	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

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5 Capacity tables

5 - 2 Heating capacity tables

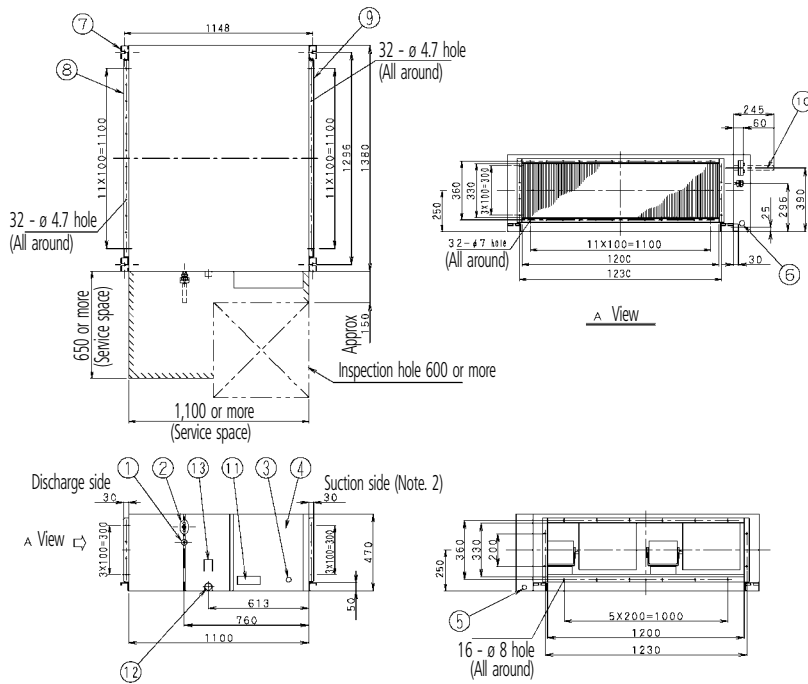
FXMQ-MA

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	

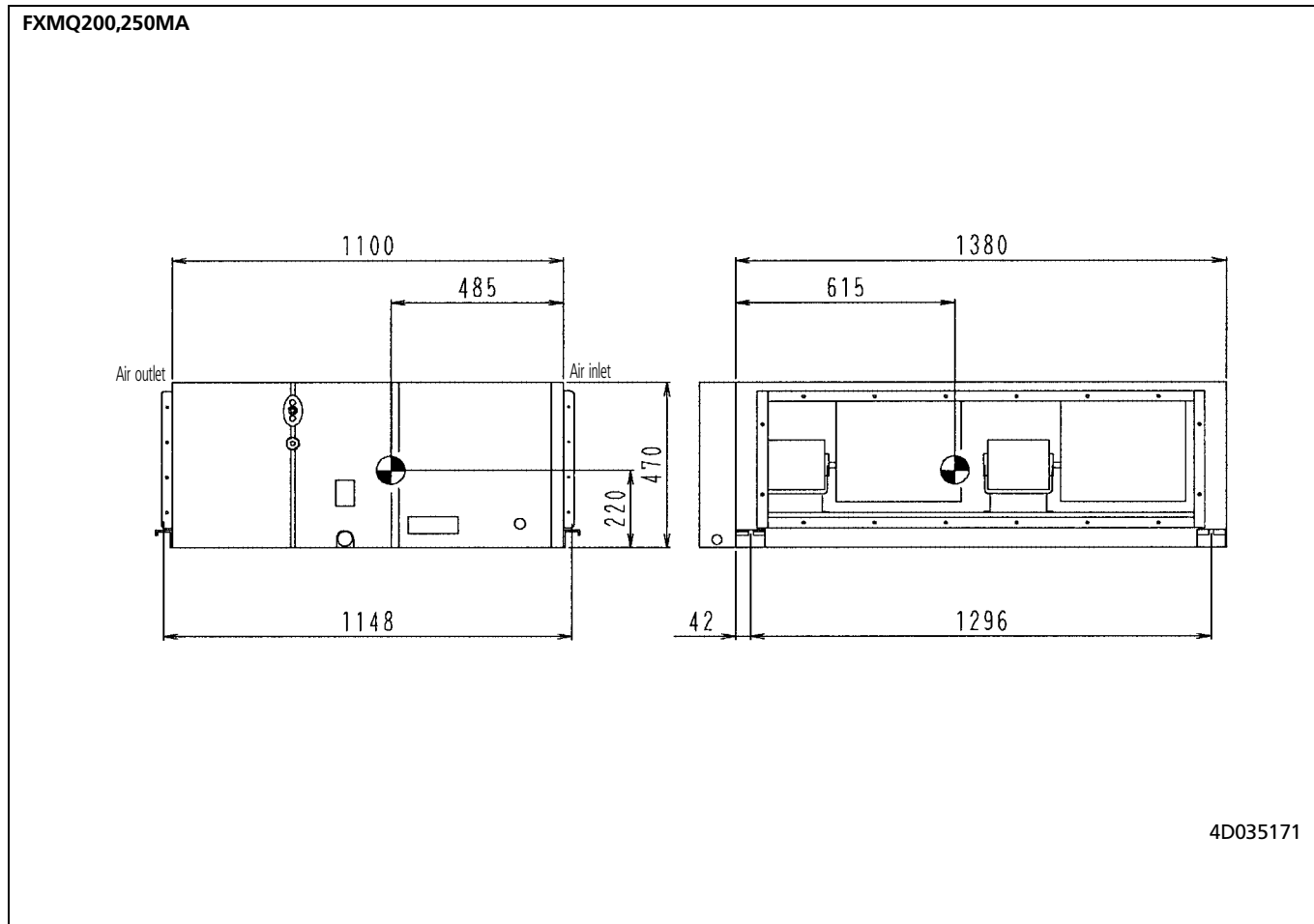
NOTES

- 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

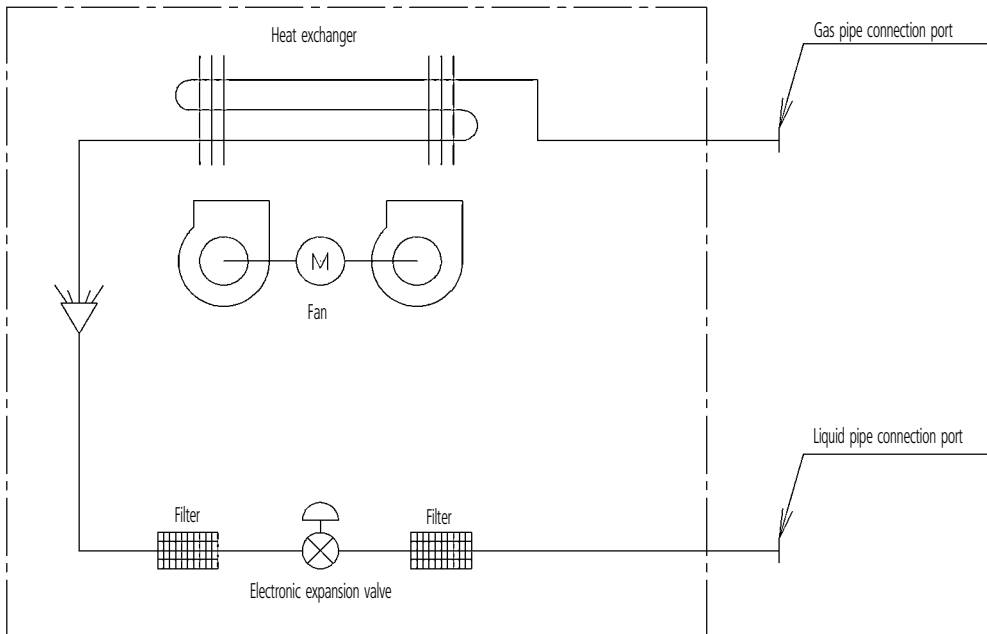
6 - 2 Centre of gravity



7 Piping diagram

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FXMQ-MA



Piping connection diameters

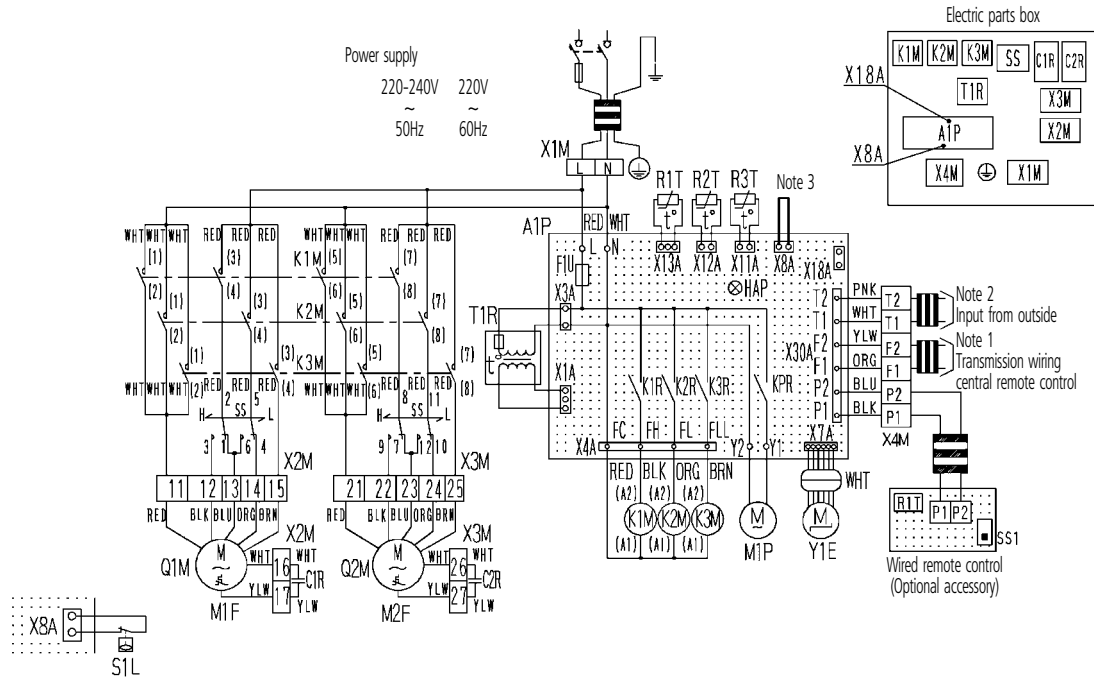
Model	Gas	Liquid
FXMQ200MA	ø19.1	ø9.5
FXMQ250MA	ø22.2	ø9.5

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

- : Terminal block
- , D- : Connector
- : Short circuit connector
- : Terminal
- |—|—| : Field wiring

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

NOTES

- In case using central remote control, connect it to the unit in accordance with the attached instruction manual.
- 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.
- In case installing the drain pump, remove the short circuit connector of X8A and execute the additional wiring for float switch and drain pump.
- Use copper conductors only.
- 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

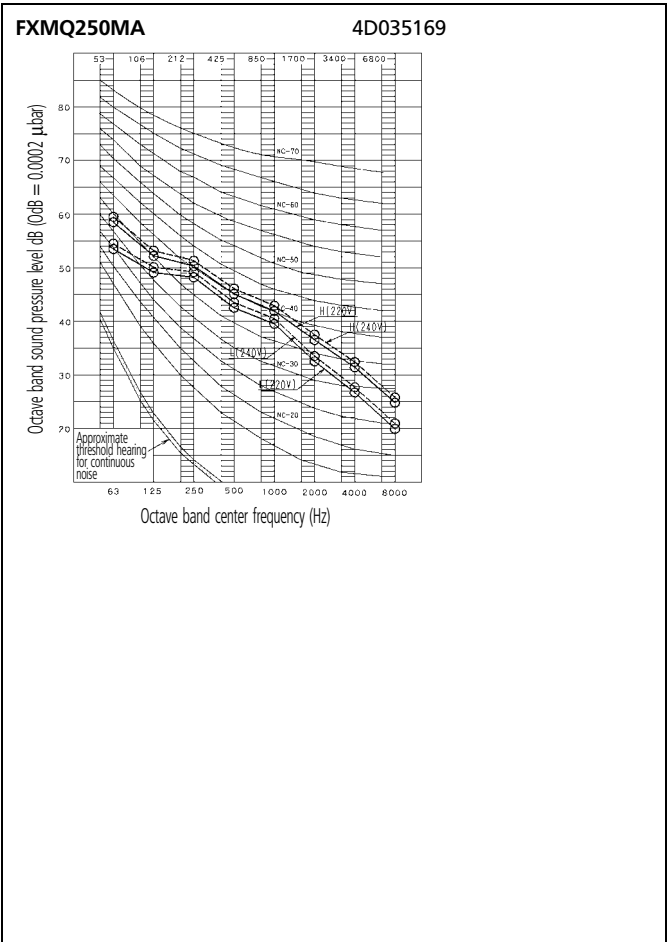
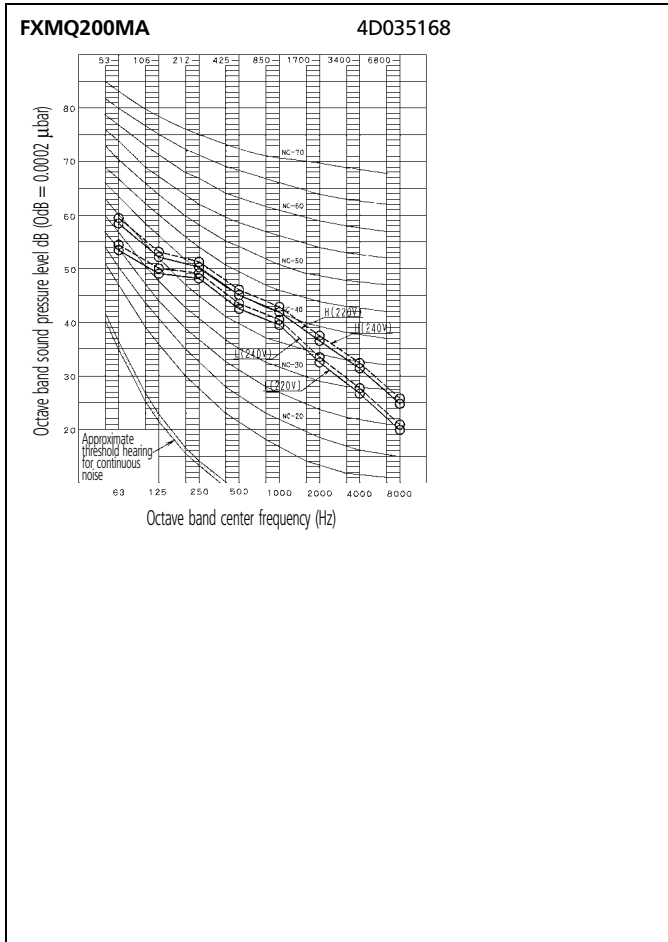
Model	Sound pressure level - 220V			Sound power level
	H	L	Measuring location	
FXMQ200MA	48	45		*
FXMQ250MA	48	45		*

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

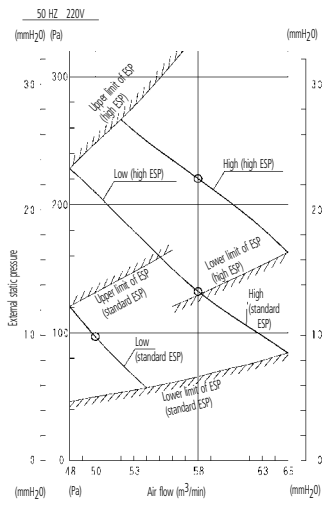


10 Fan characteristics

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FXMQ200MA

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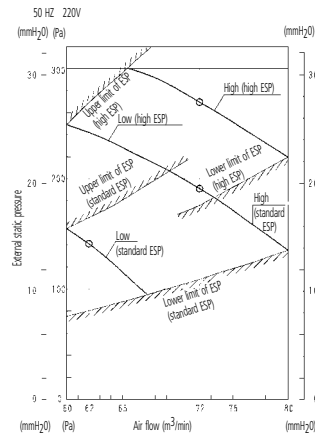


NOTES

- 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

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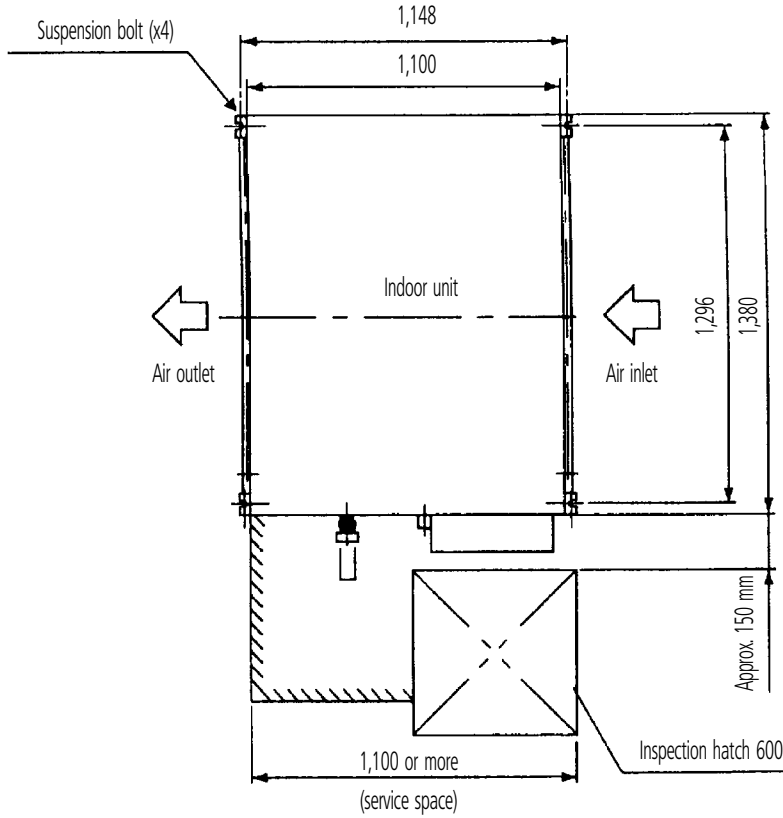
NOTES

- 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.

11 Installation

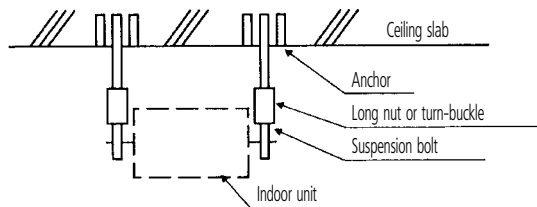
11 - 1 Suspension bolt pitch position

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.

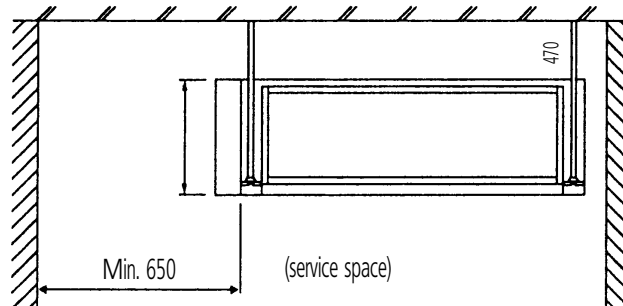
3P086156-2-5

11 Installation

11 - 2 Service space

11

FXMQ200,250MA



NOTE

- 1 Above figures mean minimum values.

3P086156-2-4

In all of us,
a green heart



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 intension 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. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.



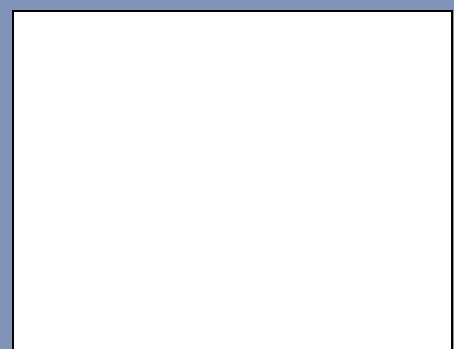
ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.



Daikin units comply with the European regulations that guarantee the safety of the product.

VRV® products are not within the scope of the Eurovent certification programme.

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