DAIKIN

technical data

air conditioning systems

Outdoor Air Processing Unit

FXMQ-MFV1

VRV III

TABLE OF CONTENTS

FXMQ-MFV1

1 Specifications

1-1 TECHNICAL SPECIFICATIONS				FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1
Nominal Capacity	Cooling		kW	14.0	22.4	28.00
	Heating		kW	8.9	13.9	17.40
Power input (Nominal)	Cooling		kW	0.359	0.548	0.638
	Heating		kW	0.359	0.548	0.638
Casing	Material			Galvanised steel		
Dimensions	Unit	Height	mm	470	470	470
		Width	mm	744	1380	1380
		Depth	mm	1100	1100	1100
Weight	Unit		kg	86	123	123
Heat Exchanger	Dimensions	Nr of Rows		3	3	3
		Fin Pitch	mm	2.00	2.00	2.00
		Face Area	m²	0.28	0.65	0.65
		Nr of Stages		26	26	26
	Fin	Fin type		Cross fin coil		
Fan	Type			Sirocco fan		
Air Flow Rate	Cooling	Medium	m³/min	18.0	28.0	35.0
	Heating	Medium	m³/min	18.0	28.0	35.0
Fan	External static pressure	Standard	Pa	185	225	205
	Motor	Model		D13/4G2DA1		
		Output (high)	W	380	380	380
		Drive		Direct drive		
Piping connections	Liquid (OD)	Type		Flare connection		
		Diameter	mm	9.5	9.5	9.5
	Gas	Type		Flare connection	Brazing/Brazing connection	Brazing/Brazing connection
		Diameter	mm	15.9	19.1	22.2
	Drain	Diameter	mm	PS1B		
	Heat Insulation			Glass fiber		
Air Filter				As option		
Refrigerant control				Electronic expansion valve		
Temperature control				Microprocessor thermostat for cooling and heating		
Safety devices				Fuse		
				Fan motor thermal protector		
Standard Accessories	Standard Accessories			Installation and operation manual		
				Sealing Pads		
				Screws		
				Clamps		
					Connection pipes	Connection pipes
Notes				Nominal cooling capacities are based on : outdoor temperature : 33°CDB, 28°CWB (68%RH), discharge set temperature : 18°CDB, equivalent piping length 7.5m (horizontal)		
				Nominal heating capacities are based on : outdoor temperature : 0°CDB, -2.9°CWB (50%RH), discharge set temperature : 25°CDB, equivalent piping length 7.5m (horizontal)		
				Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.		
				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.		

1 Specifications

1-2 ELECTRICAL SPECIFICATIONS			FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1
Power Supply	Frequency	Hz	50	50	50
	Voltage	V	220-240		
Current	Minimum circuit amps (MCA)	A	1.90	3.30	3.80
	Maximum fuse amps (MFA)	A	15	15	15
	Full load amps (FLA)	A	1.50	2.60	3.00
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 <= 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

FXMQ-MFV1		125	200	250
PC BOARD FUSE		250V 10A		
FAN MOTOR THERMAL PROTECTOR	°C	OFF: $135^{\pm 8}$ (ON: $87^{\pm 15}$)		

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3 Options

FXMQ-MFV1		125	200	250
DRAIN PUMP KIT		KDU30L250VE		
HIGH EFFICIENCY FILTER	65%	KAFJ372L140	KAFJ372L280	
	90%	KAFJ373L140	KAFJ373L280	
FILTER CHAMBER		KDJ3705L140	KDJ3705L280	
LONG LIFE REPLACEMENT FILTER		KAFJ371L140	KAFJ371L280	

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4 Control systems

No.	Item \ Type		FXMQ-MFV1
1	Remote control	Wired	BRC1A62
4	Adapter for wiring		KRP1B61
5-1	Wiring adapter for electrical appendices (1)		KRP2A61
5-1	Wiring adapter for electrical appendices (2)		KRP4A51
8	Central remote control		DCS302C61
8-1	Electrical box with earth terminal (3 blocks)		KJB311A
9	Unified on/off controller		DCS301B61
9-1	Electrical box with earth terminal (2 blocks)		KJB212A
9-2	Noise filter (for electromagnetic interface use only)		KEK26-1
10	Schedule timer		DST301B61
11	External control adapter for outdoor unit (Must be installed on indoor units)		DTA104A61

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5 Capacity tables

5 - 1 Cooling/Heating capacity tables

<FXMQ125MFV1>

Cooling

Outdoor temperature	°CWB							
°CDB	15.0	17.0	20.0	23.0	26.0	28.0	30.0	32.0
	Capacity							
	kW	kW	kW	kW	kW	kW	kW	kW
20.0	3.6	3.8	-	-	-	-	-	-
22.0	3.6	3.8	5.1	-	-	-	-	-
25.0	3.6	3.8	5.1	6.8	-	-	-	-
27.0	-	3.8	5.1	6.7	-	-	-	-
29.0	-	-	5.1	6.7	11.0	-	-	-
31.0	-	-	5.0	6.6	10.9	14.1	-	-
33.0	-	-	5.0	6.5	10.8	14.0	16.4	-
35.0	-	-	-	6.4	10.7	13.9	16.3	17.4

Heating

Outdoor temperature	°CWB								
°CDB	-7.0	-5.2	-2.9	0.0	2.0	4.0	6.0	10.0	14.0
	Capacity								
	kW	kW	kW	kW	kW	kW	kW	kW	kW
-5.0	9.7	9.7	-	-	-	-	-	-	-
0.0	-	-	8.9	-	-	-	-	-	-
3.0	-	-	7.9	7.9	7.9	-	-	-	-
7.0	-	-	-	-	6.4	6.4	6.4	-	-
11.0	-	-	-	-	-	5.0	5.0	5.0	-
15.0	-	-	-	-	-	-	3.6	3.6	3.6

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NOTES

1 The above capacities are based on the following conditions:
- Air discharge temperature setting:18°C for cooling operation, 25°C for heating (Factory setting)
- Equivalent piping length: 7.5 m
- Level difference: 0m

2 The above capacity values are general average values which can be generated by each compressor operation level.

3 A value enclosed in a box means rated capacity.

5 Capacity tables

5 - 1 Cooling/Heating capacity tables

<FXMQ200MFV1>

Cooling

Outdoor temperature	°CWB							
°CDB	15.0	17.0	20.0	23.0	26.0	28.0	30.0	32.0
	Capacity							
	kW	kW	kW	kW	kW	kW	kW	kW
20.0	5.7	6.1	-	-	-	-	-	-
22.0	5.7	6.1	8.2	-	-	-	-	-
25.0	5.7	6.1	8.2	10.8	-	-	-	-
27.0	-	6.1	8.1	10.7	-	-	-	-
29.0	-	-	8.1	10.6	17.6	-	-	-
31.0	-	-	8.0	10.5	17.4	22.6	-	-
33.0	-	-	8.0	10.3	17.3	22.4	26.2	-
35.0	-	-	-	10.2	17.1	22.2	26.1	27.8

Heating

Outdoor temperature	°CWB								
°CDB	-7.0	-5.2	-2.9	0.0	2.0	4.0	6.0	10.0	14.0
	Capacity								
	kW	kW	kW	kW	kW	kW	kW	kW	kW
-5.0	15.0	15.0	-	-	-	-	-	-	-
0.0	-	-	13.9	-	-	-	-	-	-
3.0	-	-	12.2	12.2	12.2	-	-	-	-
7.0	-	-	-	-	10.0	10.0	10.0	-	
11.0	-	-	-	-	-	7.8	7.8	7.8	-
15.0	-	-	-	-	-	-	5.6	5.6	5.6

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NOTES

1 The above capacities are based on the following conditions:
- Air discharge temperature setting:18°C for cooling operation, 25°C for heating (Factory setting)
- Equivalent piping length: 7.5 m
- Level difference: 0m

2 The above capacity values are general average values which can be generated by each compressor operation level.

3 A value enclosed in a box means rated capacity.

5 Capacity tables

5 - 1 Cooling/Heating capacity tables

<FXMQ250MFV1>

Cooling

Outdoor temperature	°CWB							
°CDB	15.0	17.0	20.0	23.0	26.0	28.0	30.0	32.0
	Capacity							
	kW	kW	kW	kW	kW	kW	kW	kW
20.0	7.1	7.6	-	-	-	-	-	-
22.0	7.1	7.6	10.2	-	-	-	-	-
25.0	7.1	7.6	10.2	13.5	-	-	-	-
27.0	-	7.6	10.1	13.4	-	-	-	-
29.0	-	-	10.1	13.3	22.0	-	-	-
31.0	-	-	10.0	13.1	21.8	28.2	-	-
33.0	-	-	10.0	12.9	21.6	28.0	32.8	-
35.0	-	-	-	12.8	21.4	27.8	32.6	34.8

Heating

Outdoor temperature	°CWB								
°CDB	-7.0	-5.2	-2.9	0.0	2.0	4.0	6.0	10.0	14.0
	Capacity								
	kW	kW	kW	kW	kW	kW	kW	kW	kW
-5.0	18.8	18.8	-	-	-	-	-	-	-
0.0	-	-	17.4	-	-	-	-	-	-
3.0	-	-	15.3	15.3	15.3	-	-	-	-
7.0	-	-	-	-	12.5	12.5	12.5	-	
11.0	-	-	-	-	-	9.8	9.8	9.8	-
15.0	-	-	-	-	-	-	7.0	7.0	7.0

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NOTES

1 The above capacities are based on the following conditions:
- Air discharge temperature setting:18°C for cooling operation, 25°C for heating (Factory setting)
- Equivalent piping length: 7.5 m
- Level difference: 0m

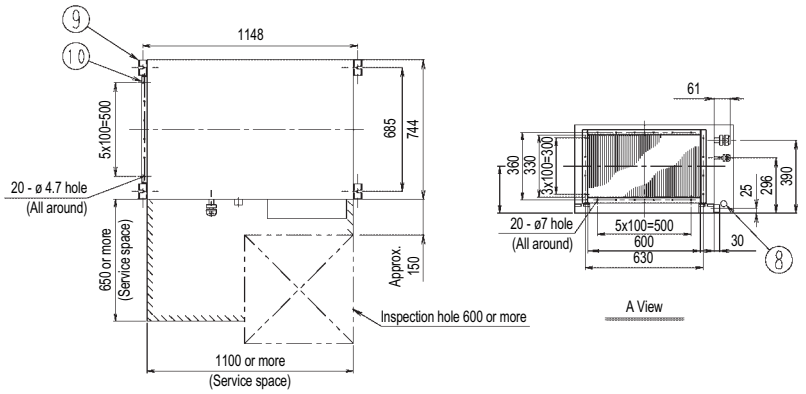
2 The above capacity values are general average values which can be generated by each compressor operation level.

3 A value enclosed in a box means rated capacity.

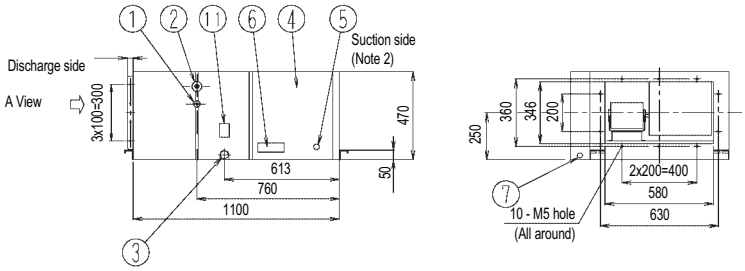
6 Dimensional drawing & centre of gravity

6 - 1 Dimensional drawing

FXMQ125MFV1



Nr	Name	Description
1	Liquid pipe connection	ø 9.5 flare connection
2	Gas pipe connection	ø 15.9 flare connection
3	Drain pipe connection	PS1B Internal thread Major dia. ø 33.349, Minor dia. ø 30.391
4	Control box	
5	Ground terminal	M5 (Inside control box)
6	Name plate	Note 1
7	Power supply wiring connection	
8	Transmission wiring connection	
9	Hanger bracket	M10
10	Discharge companion flange	
11	Water supply port	



NOTES

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

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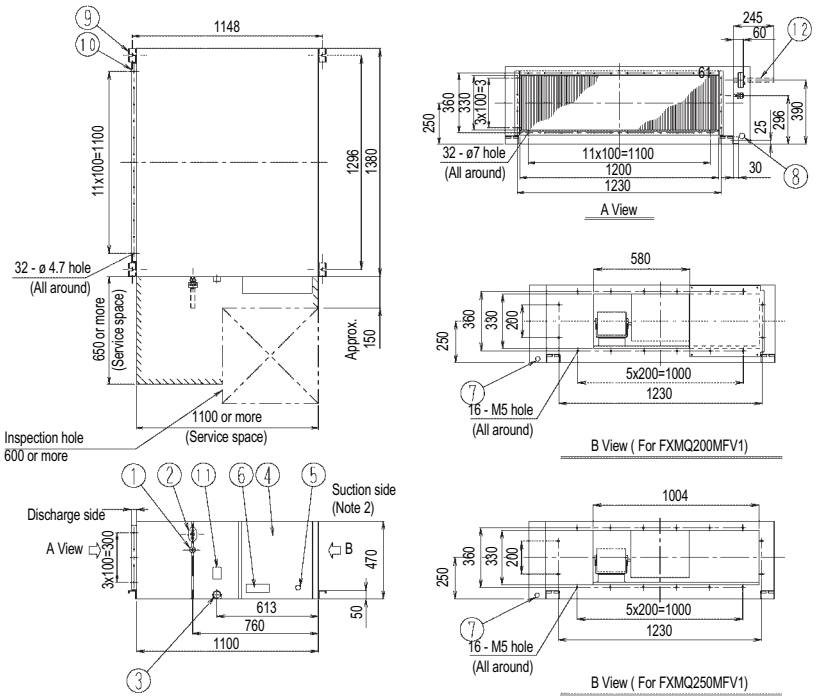
FXMQ200,250MFV1

Piping size (field supply)

Indoor unit	Gas side	Liquid side
FXMQ200MFV1	ø 19.1 attached piping	ø 9.5
FXMQ250MFV1	ø 22.2 attached piping	ø 9.5

Nr	Name	Description
1	Liquid pipe connection	Flare connection
2	Gas pipe connection	Attendant piping connection
3	Drain pipe connection	PS1B Internal thread Major dia. ø 33.349, Minor dia. ø 30.391
4	Control box	
5	Ground terminal	M5 (Inside control box)
6	Name plate	Note 1
7	Power supply wiring connection	
8	Transmission wiring connection	
9	Hanger bracket	M10
10	Discharge companion flange	
11	Water supply port	
12	Attached piping	Brazing



NOTES

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

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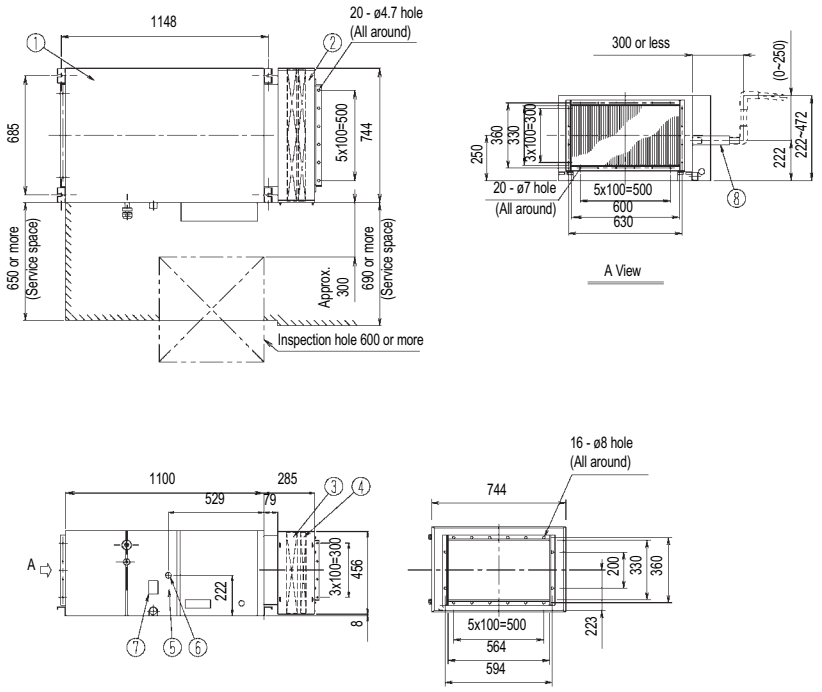
6 Dimensional drawing & centre of gravity

6 - 1 Dimensional drawing

FXMQ125MFV1



Nr	Name	Description
1	VRV D.P. Unit C. duct type	
2	Filter chamber	
3	High-efficiency filter	
4	Long-life replacement filter	
5	Drain pump kit	Built-in
6	Drain pipe connection (drain pump kit)	VP25 (O.D. ø 32, I.D. ø 25)
7	Water supply port	
8	Drain hose	Attached to drain pump kit

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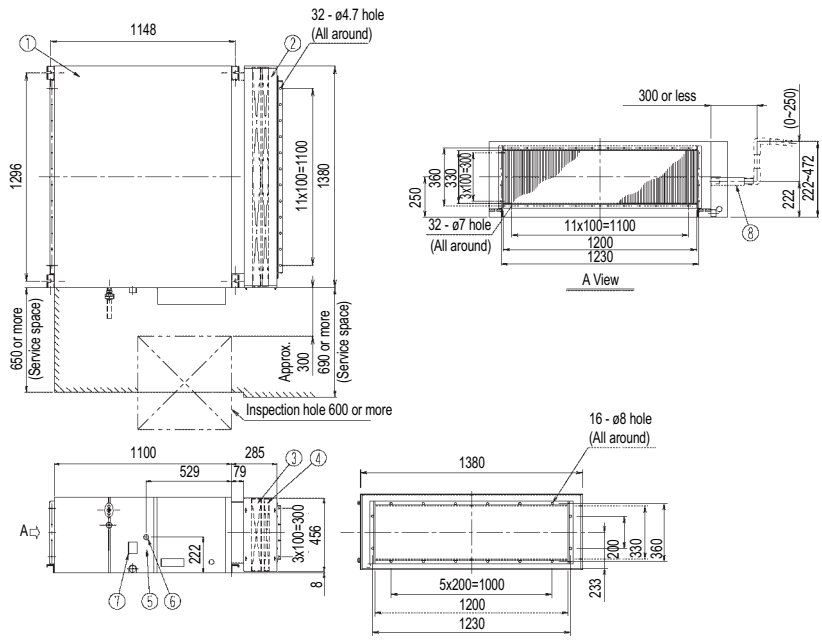
FXMQ200,250MFV1



Nr	Name	Description
1	VRV D.P. Unit C. duct type	
2	Filter chamber	
3	High-efficiency filter	
4	Long-life replacement filter	
5	Drain pump kit	Built-in
6	Drain pipe connection (drain pump kit)	VP25 (O.D. ø 32, I.D. ø 25)
7	Water supply port	
8	Drain hose	Attached to drain pump kit

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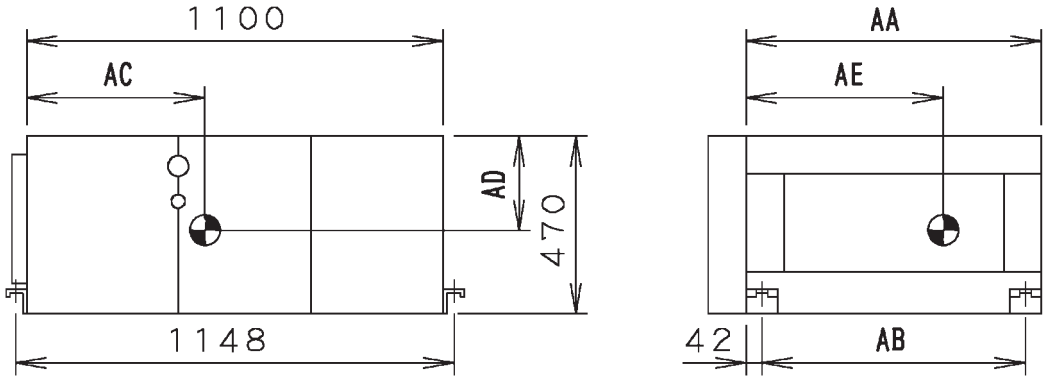
6 Dimensional drawing & centre of gravity

6 - 2 Centre of gravity

FXMQ-MFV1



Model	Product mass	AA	AB	AC	AD	AE
FXMQ125MFV1	86 kg	780	696	600	250	300
FXMQ200MFV1	123 kg	1380	1296	570	250	600
FXMQ250MFV1	123 kg	1380	1296	570	250	600

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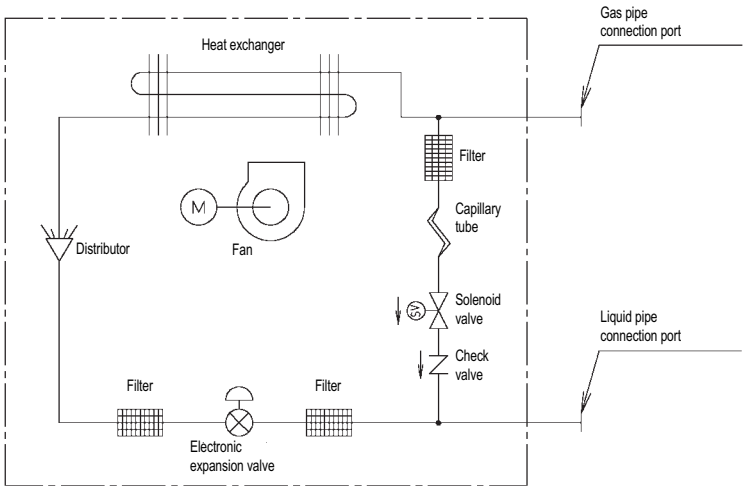
7 Piping diagram

FXMQ-MFV1



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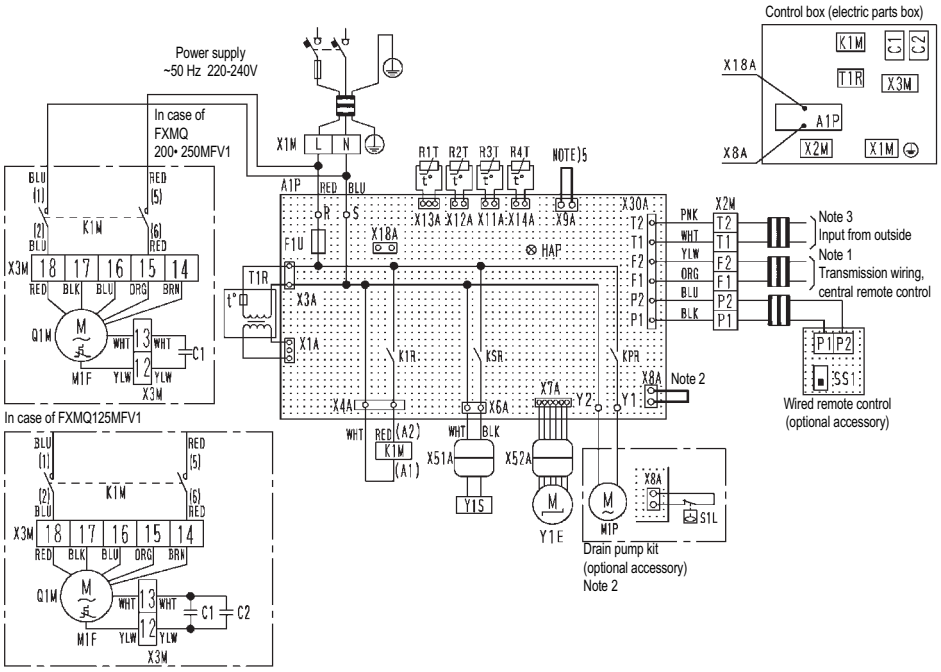
8 Wiring diagram

8 - 1 Wiring diagram

FXMQ-MFV1



Indoor unit		R1T	Thermistor (suction air)	Optional parts	
A1P	Printed circuit board	R2T	Thermistor (coil, liquid)	M1P	Motor (Drain pump)
C1, C2	Capacitor (M1F)	R3T	Thermistor (coil, gas)	S1L	Float switch (drain pump)
F1U	Fuse (Ⓑ, 5A, 250V) (A1P)	R4T	Thermistor (discharge air)		
HAP	Light emitting diode (service monitor-green)	T1R	Transformer (220-240/22V)	Wired remote control	
		X1M	Terminal block (power)		
K1M	Magnetic relay (M1F)	X2M	Terminal block (control)	SS1	Select switch (Main/sub)
K1R	Magnetic relay (M1F)	X3M	Terminal block		
KPR	Magnetic relay (M1P)	X51A, X52A	Connector	Connector for optional parts	
KSR	Magnetic relay (Y1S)	Y1E	Electronic expansion valve	X18A	Connector (wiring adapter for electrical appendices)
M1F	Motor (fan)	Y1S	Solenoid valve (hot gas)		
Q1M	Thermal protector (M1F embedded 135°C)				

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

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

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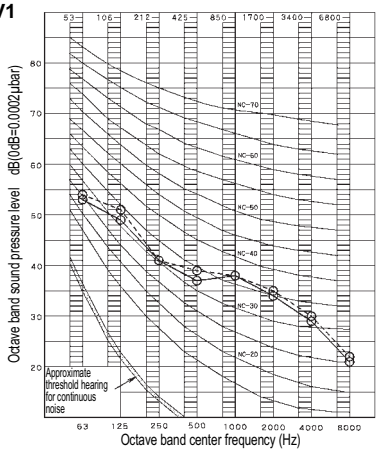
NOTES

1 In case of using central remote control, connect it to the unit in accordance with the attached instruction manual.
2 In case of installing the drain pump kit, remove the short circuit connector of X8A and execute the additional wiring for float switch and drain pump.
3 In case of connecting the input wires from outside, forced off or on/off control operation can be selected by remot control.
4 Do not remove short circuit connector of X9A.

9 Sound data

9 - 1 Sound pressure spectrum

FXMQ125MFV1



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NOTES

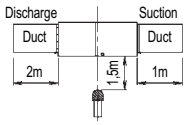
1 Over All (dB):
(B, G, N is already rectified)

Scale	220V	240V
A	42	43

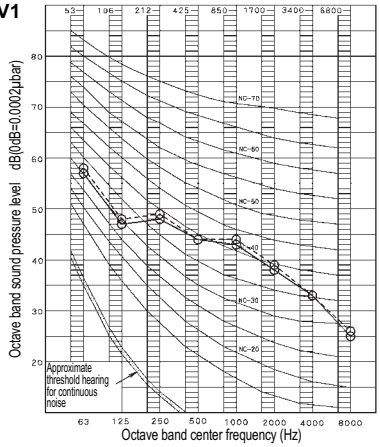
2 Operating conditons:
- Power source: 220-240V 50Hz
- Standard condition
- External static Pressure: 185Pa (220V), 225Pa (240V)
  ○———○ : 220 Hz
  ○ - - - ○ : 240 Hz

3 Measuring place: Anechoic chamber

4 Location of microphone



FXMQ200MFV1



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NOTES

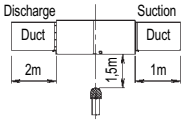
1 Over All (dB):
(B, G, N is already rectified)

Scale	220V	240V
A	47	48

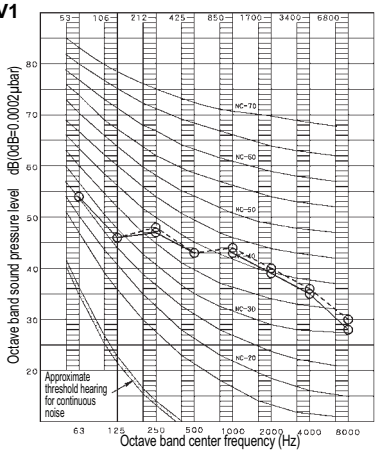
2 Operating conditons:
- Power source: 220-240V 50Hz
- Standard condition
- External static Pressure: 225Pa (220V), 275Pa (240V)
  ○———○ : 220 Hz
  ○ - - - ○ : 240 Hz

3 Measuring place: Anechoic chamber

4 Location of microphone



FXMQ250MFV1



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NOTES

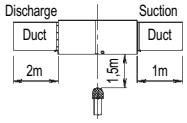
1 Over All (dB):
(B, G, N is already rectified)

Scale	220V	240V
A	47	48

2 Operating conditons:
- Power source: 220-240V 50Hz
- Standard condition
- External static Pressure: 205Pa (220V), 255Pa (240V)
  ○———○ : 220 Hz
  ○ - - - ○ : 240 Hz

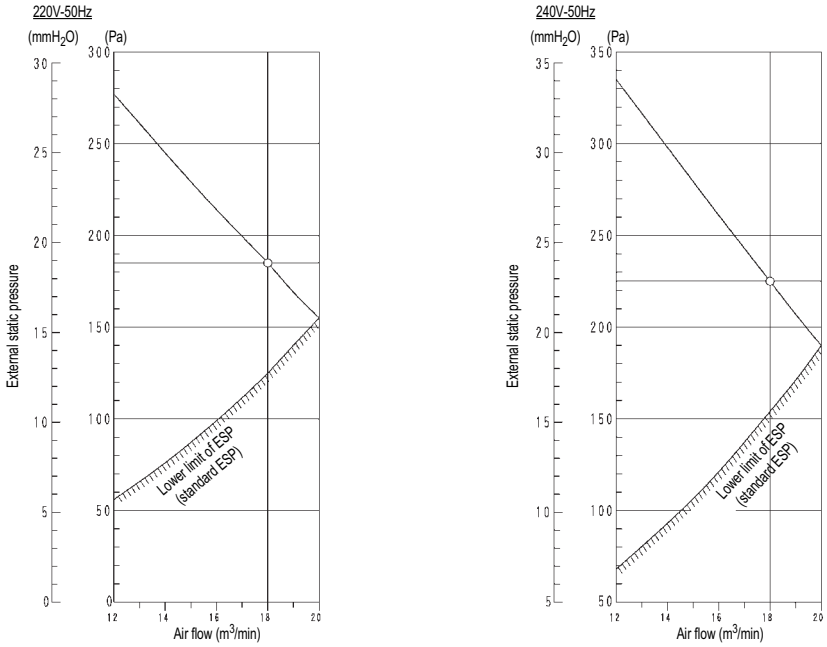
3 Measuring place: Anechoic chamber

4 Location of microphone



10 Fan characteristics

FXMQ125MFV1



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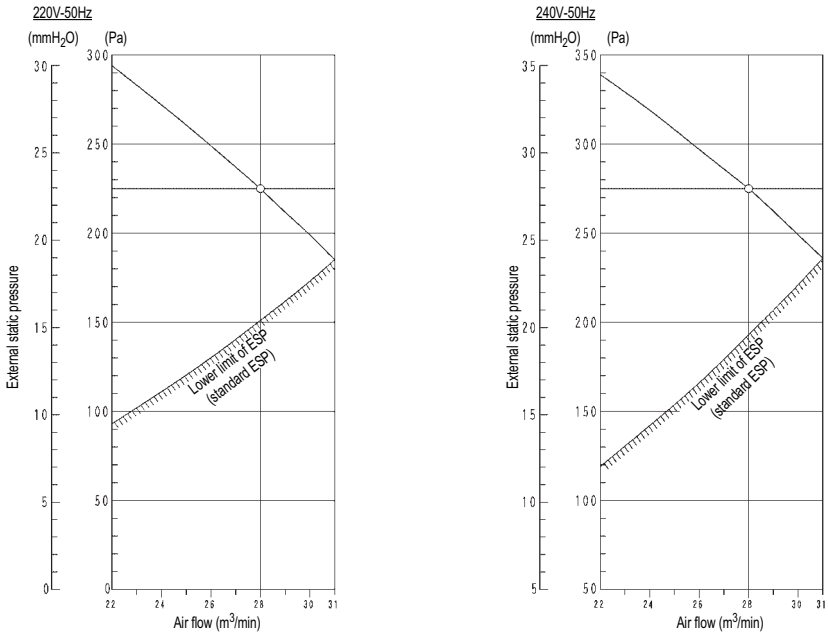
FXMQ200MFV1



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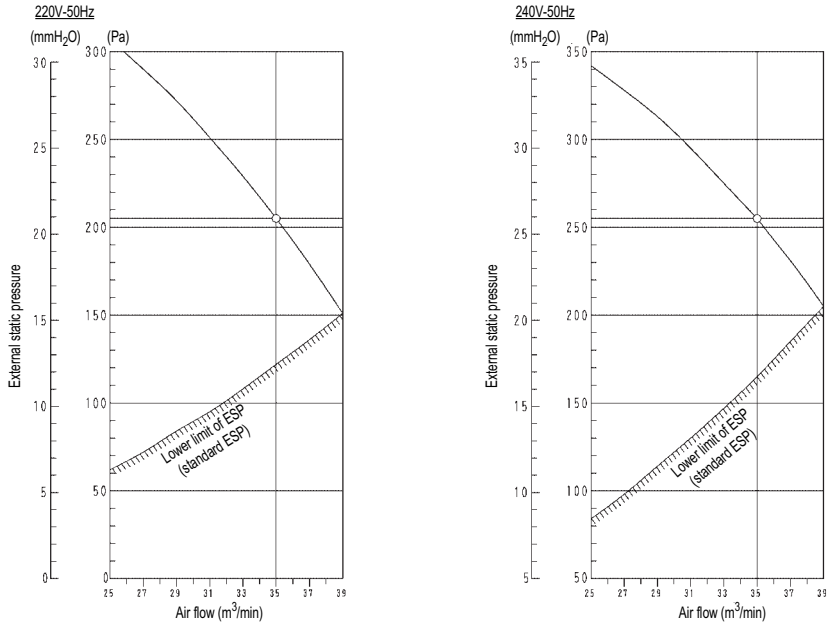
10 Fan characteristics

FXMQ250MFV1



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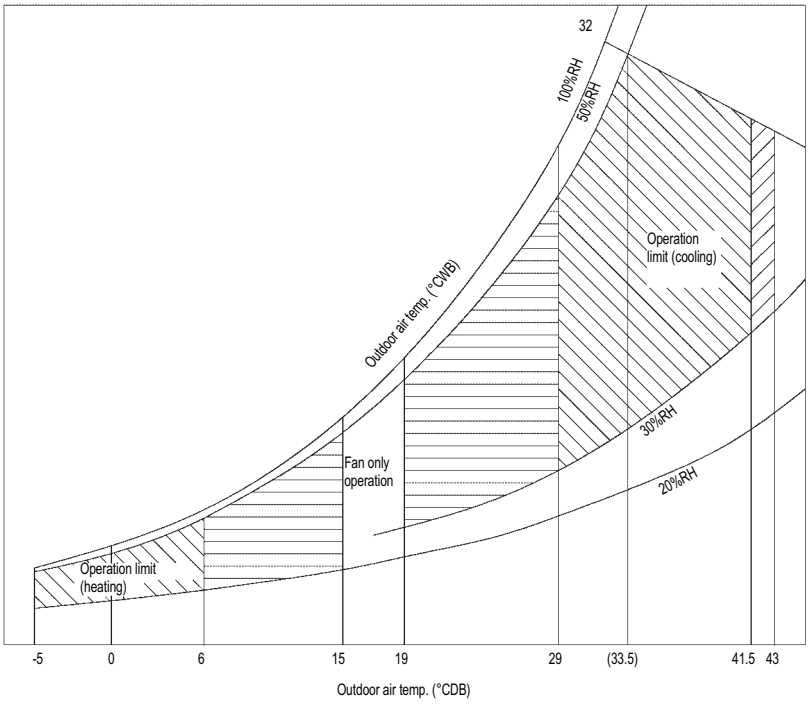
11 Operation range

FXMQ125MFV1



NOTES

1 These figures assume the following operating conditions. (Indoor and outdoor units)
- Equivalent piping length: 7.5m
- Level difference: 0m

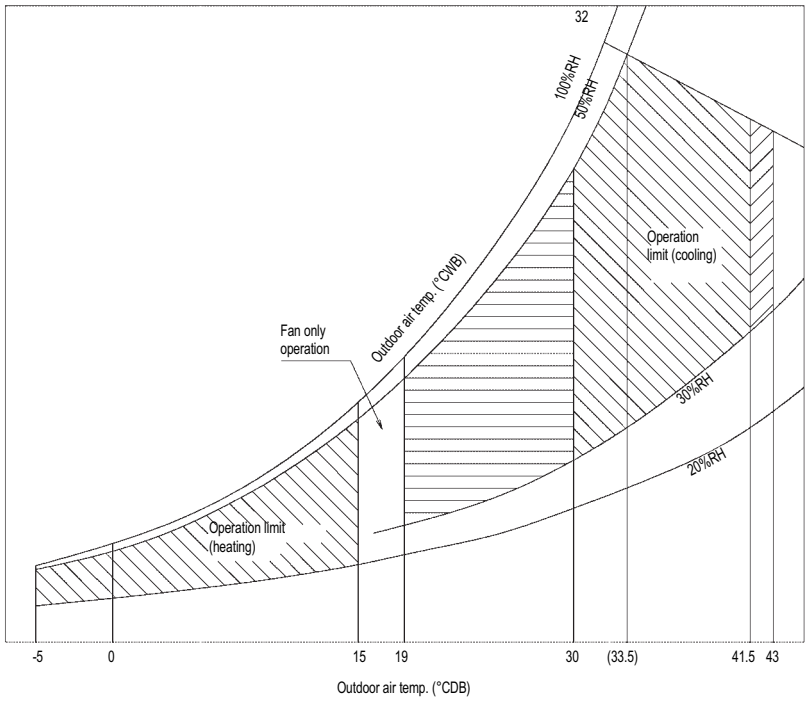
2 : The discharge air temperature may nog match the temperature setting for too large outdoor-air processing capacity. Thermostat OFF may be carried out.

3 : The discharge air temperature may nog match the temperature setting for too small outdoor-air processing capacity.

4 The system will not operate in fan mode when the outdoor-air temperature is 5°C below.

3D046312

FXMQ200MFV1



NOTES

1 These figures assume the following operating conditions. (Indoor and outdoor units)
- Equivalent piping length: 7.5m
- Level difference: 0m

2 : The discharge air temperature may nog match the temperature setting for too large outdoor-air processing capacity. Thermostat OFF may be carried out.

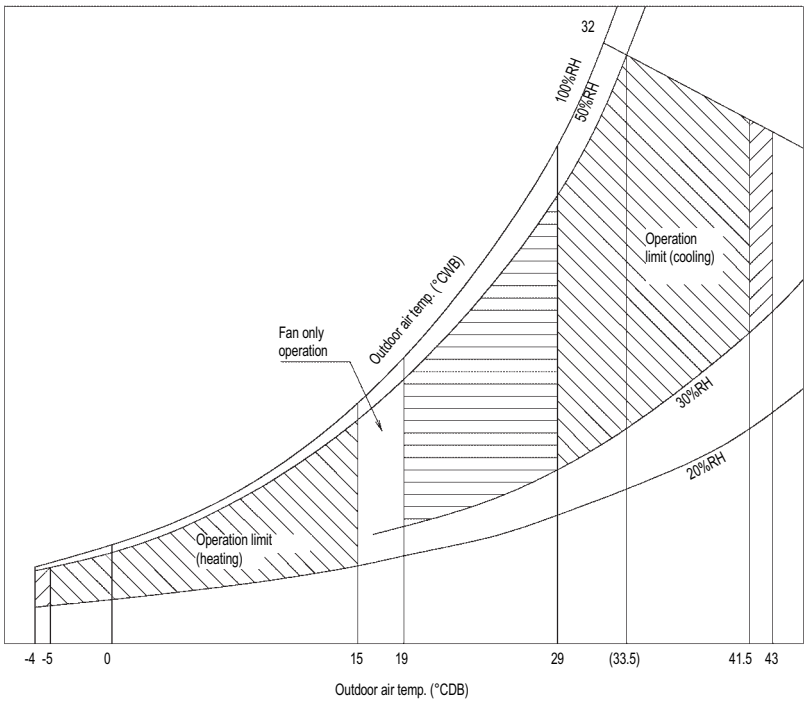
3 : The discharge air temperature may nog match the temperature setting for too small outdoor-air processing capacity.

4 The system will not operate in fan mode when the outdoor-air temperature is 5°C below.

3D047750

11 Operation range

FXMQ250MFV1



NOTES

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4 The system will not operate in fan mode when the outdoor-air temperature is 5°C below.

3D046313

2

VRV III

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.

CE 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.

DAIKIN EUROPE N.V.

Naamloze Vennootschap
Zandvoordestraat 300
B-8400 Oostende, Belgium
www.daikin.eu
BTW: BE 0412 120 336
RPR Oostende

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