

Heritage Statement Heating System

For Restaurant Conversion

25 South Street, Emsworth
Hampshire, PO10 7EG.

1.0 **Generally**

1.1 This Heritage Statement and Schedule of Repair is in pursuance of a planning application to Havant Borough Council. The works are to convert the existing Grade II listed shop and store buildings into a Restaurant. The proposals relate only to the proposed heating system

1.2 No other purpose is anticipated or accepted. Copyright of this report remains with Martin Critchley, Chartered Architect.

1.3 Reference should be made to the planning submission drawings for details of the proposals, ref:

1456	-	317	Ground floor Plan
		318	First floor plan
		421	Elevations

2.0 **Context**

2.1 Reference should made to the Heritage Statement and Schedule of Repair as approved under listed Buildings application APP/14/01201. In all other respects than the heating system, that document stands, and will not be duplicated here.

Heating System

3.0 Heating as Approved (2.1 above.)

3.1 *Provide new central heating installation. It is proposed to locate the new boiler plant on the first floor, adjacent to the stairs, where an existing cupboard backs on to the central, open well.*

3.2 *Modern flexible pipework allows ease of installation, and less intrusion in concealed areas. See 6.2 regarding floor lifting and 9.3 regarding duct routes. Exposed pipework to be copper. Iron radiator feeds to be threaded barrel to match.*

3.2 *There is no precedent for contemporary radiators. Our clients preference is for cast iron column radiators as the earliest and most appropriate manifestation of radiator design.*

4.0 Heating as Proposed.

4.1 It was felt that the disruption to the fabric of the building, and that the intrusion into the interior, would be less than as required in 3.0 above, if a system of warm air emitters were installed, piped from external compressors. This is a system also known as 'air source heat pumps' and 'reverse air conditioning'. Apart from delivering warm energy into the interior, it can also provide comfort cooling in periods of hot weather.

4.2 To provide sufficient capacity, eight small compressor units are required. It is proposed to locate six units on the west side wall of the new kitchen (facing the alley to the Bluebell P.H.) and the other two on the roof of the kitchen, adjacent to the barn roof. These locations offer two advantages :-

1. The compressors are remote from the original parts of the Listed Building.
2. The compressors can not be seen from any public areas.

4.3 Internally the number of emitter units is more flexible, and numerically less than for the originally proposed wet radiator system.

4.4 The Emitters are smaller than similar wet radiators and have flat front panels that can be decorated to minimise their visual impact on the interior. Particularly in the barn (restaurant hall) the units can be located at high level, where they and their connecting pipework are least intrusive.

5.0 **Appendices**

- I Daikin Compressor details
- II Daikin Door Screen Emitter details
- III Daikin Floor Mounted Emitter details
- IV Daikin Wall Mounted Emitter details

Martin Critchley, Chartered Architect.

The Old Brewery, 15E South Street,
Havant, Hampshire, PO9 1BU.

#1 2rd November 2015



Air Conditioning

Technical Data



EEDEN15-100

RXG-L

2 Specifications

2-1 Capacity and Power input				FTXG20LW/RXG20L	FTXG25LW/RXG25L	FTXG35LW/RXG35L	FTXG50LW/RXG50L
Cooling capacity	Min.		kW	1.3 (1)		1.4 (1)	1.7 (1)
			Btu/h	4,400 (1)		4,800 (1)	5,800 (1)
			kcal/h	1,120 (1)		1,200 (1)	1,460 (1)
	Max.		kW	2.8 (1)	3.0 (1)	3.8 (1)	5.3 (1)
			Btu/h	9,500 (1)	10,200 (1)	13,000 (1)	18,100 (1)
			kcal/h	2,410 (1)	2,580 (1)	3,270 (1)	4,560 (1)
Heating capacity	Min.		kW	1.3 (1)		1.4 (1)	1.7 (1)
			Btu/h	4,400 (1)		4,800 (1)	5,800 (1)
			kcal/h	1,120 (1)		1,200 (1)	1,460 (1)
	Max.		kW	4.3 (1)	4.5 (1)	5.0 (1)	6.5 (1)
			Btu/h	14,600 (1)	15,400 (1)	17,100 (1)	22,200 (1)
			kcal/h	3,700 (1)	3,870 (1)	4,300 (1)	5,590 (1)
Power input	Cooling	Min.	kW	0.320 (1)		0.350 (1)	0.370 (1)
		Nom.	kW	0.501 (1)	0.523 (1)	0.882 (1)	1.360 (1)
		Max.	kW	0.760 (1)	0.820 (1)	1.190 (1)	1.880 (1)
	Heating	Min.	kW	0.310 (1)		0.320 (1)	0.310 (1)
		Nom.	kW	0.500 (1)	0.769 (1)	0.985 (1)	1.589 (1)
		Max.	kW	1.120 (1)	1.320 (1)	1.490 (1)	2.490 (1)
Seasonal efficiency (according to EN14825)	Cooling	Energy label		A+++		A++	
		Pdesign	kW	2.30	2.40	3.50	4.80
		SEER		8.52	8.50	7.00	6.70
		Annual energy consumption	kWh	94	99	175	251
	Heating (Average climate)	Energy label		A++		A+	
		Pdesign	kW	2.10	2.70	3.00	4.60
		SCOP		4.60		4.24	
		Annual energy consumption	kWh	639	821	913	1,519
	Piping connections	Liquid	OD	6.35			
		Gas	OD	9.5			12.7
Current	Drain	OD	mm	18			
	Heat insulation			Both liquid and gas pipes			
	Nominal running current (RLA) - 50Hz	Cooling	A	2.8 (2) / 2.7 / 2.6	2.9 (2) / 2.8 / 2.7	5.0 (2) / 4.8 / 4.6	6.5 (2) / 6.2 / 5.9
		Heating	A	2.8 (2) / 2.7 / 2.6	4.4 (2) / 4.2 / 4.0	5.5 (2) / 5.3 / 5.1	7.4 (2) / 7.1 / 6.8
Nominal efficiency	EER			4.59 (3)		3.97 (3)	3.53 (3)
	COP			5.00 (3)	4.42 (3)	4.06 (3)	3.65 (3)
	Annual energy consumption		kWh	250.5	261.5	441	680
	Energy label	Cooling		A			
		Heating		A			

Notes

(1) Nominal efficiency: cooling at 35°/27° nominal load, heating at 7°/20° nominal load

(2) 240V

(3) EER/COP according to Eurovent 2012, for use outside EU only

SL: The silent fan level of the air flow rate setting

220V

230V

2-2 Capacity and Power input				FTXG25LS/RXG25L	FTXG20LS/RXG20L	FTXG35LS/RXG35L	FTXG50LS/RXG50L
Cooling capacity	Min.		kW	1.3 (1)		1.4 (1)	1.7 (1)
			Btu/h	4,400 (1)		4,800 (1)	5,800 (1)
			kcal/h	1,120 (1)		1,200 (1)	1,460 (1)
	Max.		kW	3.0 (1)	2.8 (1)	3.8 (1)	5.3 (1)
			Btu/h	10,200 (1)	9,500 (1)	13,000 (1)	18,100 (1)
			kcal/h	2,580 (1)	2,410 (1)	3,270 (1)	4,560 (1)

2 Specifications

2

2-2 Capacity and Power input				FTXG25LS/RXG25L	FTXG20LS/RXG20L	FTXG35LS/RXG35L	FTXG50LS/RXG50L
Heating capacity	Min.	kW		1.3 (1)		1.4 (1)	1.7 (1)
		Btu/h		4,400 (1)		4,800 (1)	5,800 (1)
		kcal/h		1,120 (1)		1,200 (1)	1,460 (1)
	Max.	kW		4.5 (1)	4.3 (1)	5.0 (1)	6.5 (1)
		Btu/h		15,400 (1)	14,600 (1)	17,100 (1)	22,200 (1)
		kcal/h		3,870 (1)	3,700 (1)	4,300 (1)	5,590 (1)
Power input	Cooling	Min.	kW	0.320 (1)		0.350 (1)	0.370 (1)
		Nom.	kW	0.523 (1)	0.501 (1)	0.882 (1)	1.360 (1)
		Max.	kW	0.820 (1)	0.760 (1)	1.190 (1)	1.880 (1)
	Heating	Min.	kW	0.310 (1)		0.320 (1)	0.310 (1)
		Nom.	kW	0.769 (1)	0.500 (1)	0.985 (1)	1.589 (1)
		Max.	kW	1.320 (1)	1.120 (1)	1.490 (1)	2.490 (1)
Seasonal efficiency (according to EN14825)	Cooling	Energy label		A+++		A++	
		Pdesign	kW	2.40	2.30	3.50	4.80
		SEER		8.50	8.52	7.00	6.70
		Annual energy consumption	kWh	99	94	175	251
	Heating (Average climate)	Energy label		A++		A+	
		Pdesign	kW	2.70	2.10	3.00	4.60
		SCOP		4.60		4.24	
		Annual energy consumption	kWh	821	639	913	1,519
Piping connections	Liquid	OD	mm	6.35			
	Gas	OD	mm	9.5			12.7
	Drain	OD	mm	18.0			
	Heat insulation			Both liquid and gas pipes			
Current	Nominal running current (RLA) - 50Hz	Cooling	A	2.9 (2) / 2.8 / 2.7	2.8 (2) / 2.7 / 2.6	5.0 (2) / 4.8 / 4.6	6.5 (2) / 6.2 / 5.9
		Heating	A	4.4 (2) / 4.2 / 4.0	2.8 (2) / 2.7 / 2.6	5.5 (2) / 5.3 / 5.1	7.4 (2) / 7.1 / 6.8
Nominal efficiency	EER			4.59 (3)		3.97 (3)	3.53 (3)
	COP			4.42 (3)	5.00 (3)	4.06 (3)	3.65 (3)
	Annual energy consumption		kWh	261.5	250.5	441	680
	Energy label	Cooling		A			
		Heating		A			

Notes

(1) Nominal efficiency: cooling at 35°/27° nominal load, heating at 7°/20° nominal load

(2) 240V

(3) EER/COP according to Eurovent 2012, for use outside EU only

SL: The silent fan level of the air flow rate setting

220V

230V

2-3 Capacity and Power input				FVXG25K/RXG25L	FVXG35K/RXG35L	FVXG50K/RXG50L
Cooling capacity	Min.	kW		1.3	1.4	1.7
		Btu/h		4,400	4,800	5,800
		Nom.	kW	2.5 (1)	3.5 (1)	5.0 (1)
	Max.	Btu/h		8,500 (1)	11,900 (1)	17,100 (1)
		kW		3.0	3.8	5.6
		Btu/h		10,200	13,000	19,100
Heating capacity	Min.	kW		1.3	1.4	1.7
		Btu/h		4,400	4,800	5,800
		Nom.	kW	3.4 (2)	4.5 (2)	5.8 (2)
	Max.	Btu/h		11,600 (2)	15,400 (2)	19,800 (2)
		kW		4.5	5.0	8.1
		Btu/h		15,400	17,100	27,600

2 Specifications

2-3 Capacity and Power input				FVXG25K/RXG25L	FVXG35K/RXG35L	FVXG50K/RXG50L
Power input	Cooling	Min.	kW	0.30	0.31	4.50
		Nom.	kW	0.54	0.94	1.51
		Max.	kW	0.79	1.15	2.00
	Heating	Min.	kW	0.29		0.50
		Nom.	kW	0.77	1.21	1.57
		Max.	kW	1.27	1.46	2.66
Seasonal efficiency (according to EN14825)	Cooling	Energy label		A++		A
		Pdesign	kW	2.50	3.50	5.00
		SEER		6.53	6.48	5.41
		Annual energy consumption	kWh	134	189	324
	Heating (Average climate)	Energy label		A++	A+	
		Pdesign	kW	2.80	3.10	4.60
		SCOP		4.65	4.00	4.18
		Annual energy consumption	kWh	842	1,087	1,543
Piping connections	Liquid	OD	mm	6.35		
	Gas	OD	mm	9.5		12.7
Nominal efficiency	EER			4.63	3.72	3.31
	COP			4.42	3.75	3.69
	Annual energy consumption		kWh	270	470	755
	Energy label	Cooling		A		
		Heating		A		

Notes

(1) Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB, 24°CWB

(2) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB

Energy label: scale from A (most efficient) to G (less efficient)

Annual energy consumption: based on average use of 500 running hours per year at full load (nominal conditions)

220V

230V

240V

When connected with multi-system outdoor unit, refer to the specifications of the multi outdoor unit to be connected.

2-4 Technical Specifications				RXG20L	RXG25L	RXG35L	RXG50L
Capacity control	Method			Inverter controlled			
Casing	Colour			Ivory white			
Dimensions	Unit	Height	mm	550 (1)			735 (1)
		Width	mm	765			825
		Depth	mm	285			300
	Packed unit	Height	mm	612			797
		Width	mm	906			992
		Depth	mm	402			437
Weight	Unit		kg	35			48
	Packed unit		kg	38			52
Packing	Weight		kg	3			4
Heat exchanger	Length		mm	805			845
	Rows	Quantity		2			
	Fin pitch		mm	1.4			1.8
	Stages	Quantity		24			32
	Tube type			ø7 Hi-XD			ø8 G2E
	Fin	Type		Waffle louvered fin			Colgate fin
Compressor	Model			1YC23APXD			2YC36GXD
	Type			Hermetically sealed swing compressor			
	Output		W	600			1,100

2 Specifications

2-4 Technical Specifications					RXG20L	RXG25L	RXG35L	RXG50L
Fan	Type				Propeller fan			
	Air flow rate	Cooling	High	m³/min	34.5		37.0	49.8
				cfm	1,218		1,306	1,758
			Super low	m³/min	31.0			42.6
				cfm	1,094			1,504
		Heating	High	m³/min	31.1			44.8
				cfm	1,098			1,581
			Super low	m³/min	26.4			38.3
				cfm	932			1,352
Fan motor	Model				D23H-28			KFD-380-50-8C
	Output			W	23			53
	Speed	Cooling	High	rpm	860		920	780
			Super low	rpm	780			670
		Heating	High	rpm	860			720
			Super low	rpm	740			670
			Sound power level	Cooling			dBA	61
Heating				dBA	62		63	
Sound pressure level	Cooling	High		dBA	46		48	
		Silent operation		dBA	43		44	
	Heating	High		dBA	47		48	
		Silent operation		dBA	44		45	44
		Operation range	Cooling	Ambien t	Min.	°CDB	-10 (2)	
Max.	°CDB				46			
Heating	Ambien t		Min.	°CWB	-15			
			Max.	°CWB	18			
Refrigerant	Type				R-410A			
	Charge			kg	1.05		1.6	
				TCO ₂ eq	2.2		3.3	
	GWP				2,087.5			
Refrigerant oil	Type				FVC50K			
	Charged volume			l	0.375		0.395	
Piping connections	Liquid	OD		mm	6.35			
	Gas	OD		mm	9.5		12.7	
	Drain	ID		mm	-			
		OD		mm	18			
	Piping length	OU - IU	Max.	m	20		30	
		System	Chargel ess	m	10			
	Additional refrigerant charge			kg/m	0.02 (for piping length exceeding 10m)			
	Level difference	IU - OU	Max.	m	15		20	

2-5 Electrical Specifications					RXG20L	RXG25L	RXG35L	RXG50L
Power supply	Name				V1			
	Phase				1~			
	Frequency			Hz	50			
	Voltage			V	220-240			
Current	Nominal running current (RLA)	Cooling	A	2.68 (3) / 2.58 (4) / 2.48 (5)	2.78 (3) / 2.68 (4) / 2.58 (5)	4.84 (3) / 4.64 (4) / 4.44 (5)	6.34 (3) / 6.04 (4) / 5.74 (5)	
		Heating	A	2.65 (3) / 2.55 (4) / 2.45 (5)	4.24 (3) / 4.04 (4) / 3.84 (5)	5.29 (3) / 5.09 (4) / 4.89 (5)	7.19 (3) / 6.89 (4) / 6.59 (5)	
	Starting current	Cooling	A	2.8	4.4	5.5	7.4	
		Heating	A	2.8	4.4	5.5	7.4	
Current - 50Hz	Maximum fuse amps (MFA)			A	16		20	
Current - 60Hz	Maximum fuse amps (MFA)			A	-			
Wiring connections	For power supply	Remark			3 for power supply, 4 for interunit wiring (including earth wiring)			

3 Electrical data

3 - 1 Electrical Data

3

RXG20-35L

Representative unit combination		Power supply				Comp.		OFM		IFM	
Indoor unit	Outdoor unit	Hz-volts	Voltage range	MCA	MFA	RHz	RLA	W	FLA	W	FLA
FTXG20LV18W FTXG20LV1BS	RXG20L2V1B	50 - 220 50 - 230 50 - 240	Max. 50Hz 264V Min. 50Hz 198V	9.75	16	40	2.4	23	0.23	40	0.15
							2.3				
							2.2				
FTXG25LV18W FTXG25LV1BS	RXG25L2V1B	50 - 220 50 - 230 50 - 240	Max. 50Hz 264V Min. 50Hz 198V	9.75	16	42	2.6	23	0.23	40	0.15
							2.4				
							2.3				
FTXG35LV18W FTXG35LV1BS	RXG35L2V1B	50 - 220 50 - 230 50 - 240	Max. 50Hz 264V Min. 50Hz 198V	9.75	16	68	4.7	23	0.23	40	0.15
							4.4				
							4.2				

3D086658

SYMBOLS

MCA : Min. Circuit Amps. (A)
MFA : Max. Fuse Amps (A)
RHz : Rated operating frequency (Hz)
RLA : Rated Load Amps. (A)
OFM : Outdoor fan motor
IFM : Indoor Fan Motor.
FLA : Full Load Amps. (A)
W : Fan Motor Rated Output (W)

NOTES

1. RLA is based on the following conditions:
Indoor temp.: 27°CDB/19°CWB
Outdoor temp.: 35°CDB
2. Maximum allowable voltage variation between phases is 2%.
3. Select wire size based on the larger value of MCA.
4. Instead of fuse, use circuit breaker.

RXG25-35L

Representative unit combination		Power supply				Comp.		OFM		IFM	
Indoor unit	Outdoor unit	Hz-volts	Voltage range	MCA	MFA	RHz	RLA	W	FLA	W	FLA
FVXG25K2V1B	RXG25L2V1B	50 - 220 50 - 230 50 - 240	Max. 50Hz 264V Min. 50Hz 198V	9.75	16	47	2.6	23	0.23	32	0.16
							2.5				
							2.4				
FVXG35K2V1B	RXG35L2V1B	50 - 220 50 - 230 50 - 240	Max. 50Hz 264V Min. 50Hz 198V	9.75	16	72	4.4	23	0.23	32	0.16
							4.2				
							4.0				

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SYMBOLS

MCA : Min. Circuit Amps (A)
MFA : Max. Fuse Amps (A)
RLA : Rated Load Amps (A)
OFM : Outdoor fan motor
IFM : Indoor Fan Motor
FLA : Full Load Amps (A)
W : Fan Motor Rated Output (W)
RHz : Rated operating frequency (Hz)

NOTES

1. RLA is based on the following conditions:
Indoor temp.: 27°CDB/19°CWB
Outdoor temp.: 35°CDB
2. Maximum allowable voltage variation between phases is 2%.
3. Select wire size based on the larger value of MCA.
4. Instead of fuse, use circuit breaker.

3 Electrical data

3 - 1 Electrical Data

RXG50L

Representative unit combination		Power supply				Comp.		OFM		IFM	
Indoor unit	Outdoor unit	Hz-volts	Voltage range	MCA	MFA	RHz	RLA	W	FLA	W	FLA
FTXG50LV1BW FTXG50LV1BS	RXG50L2V1B	50 - 220	Max. 50Hz 264V Min. 50Hz 198V	19.75	20	66	6.1	53	0.27	40	0.15
		50 - 230					5.8				
		50 - 240					5.6				

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SYMBOLS

MCA	: Min. Circuit Amps. (A)
MFA	: Max. Fuse Amps (A)
RHz	: Rated operating frequency (Hz)
RLA	: Rated Load Amps. (A)
OFM	: Outdoor fan motor
IFM	: Indoor Fan Motor.
FLA	: Full Load Amps. (A)
W	: Fan Motor Rated Output (W)

NOTES

1. RLA is based on the following conditions:
Indoor temp.: 27°CDB/19°CWB
Outdoor temp.: 35°CDB
2. Maximum allowable voltage variation between phases is 2%.
3. Select wire size based on the larger value of MCA.
4. Instead of fuse, use circuit breaker.

RXG50L

Representative unit combination		Power supply				Comp.		OFM		IFM	
Indoor unit	Outdoor unit	Hz-volts	Voltage range	MCA	MFA	RHz	RLA	W	FLA	W	FLA
FVXG50K2V1B	RXG50L2V1B	50 - 220	Max. 50Hz 264V Min. 50Hz 198V	19.75	20	70	6.7	53	0.27	32	0.16
		50 - 230					6.3				
		50 - 240					6.1				

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SYMBOLS

MCA	: Min. Circuit Amps (A)
MFA	: Max. Fuse Amps (A)
RLA	: Rated Load Amps (A)
OFM	: Outdoor fan motor
IFM	: Indoor Fan Motor
FLA	: Full Load Amps (A)
W	: Fan Motor Rated Output (W)
RHz	: Rated operating frequency (Hz)

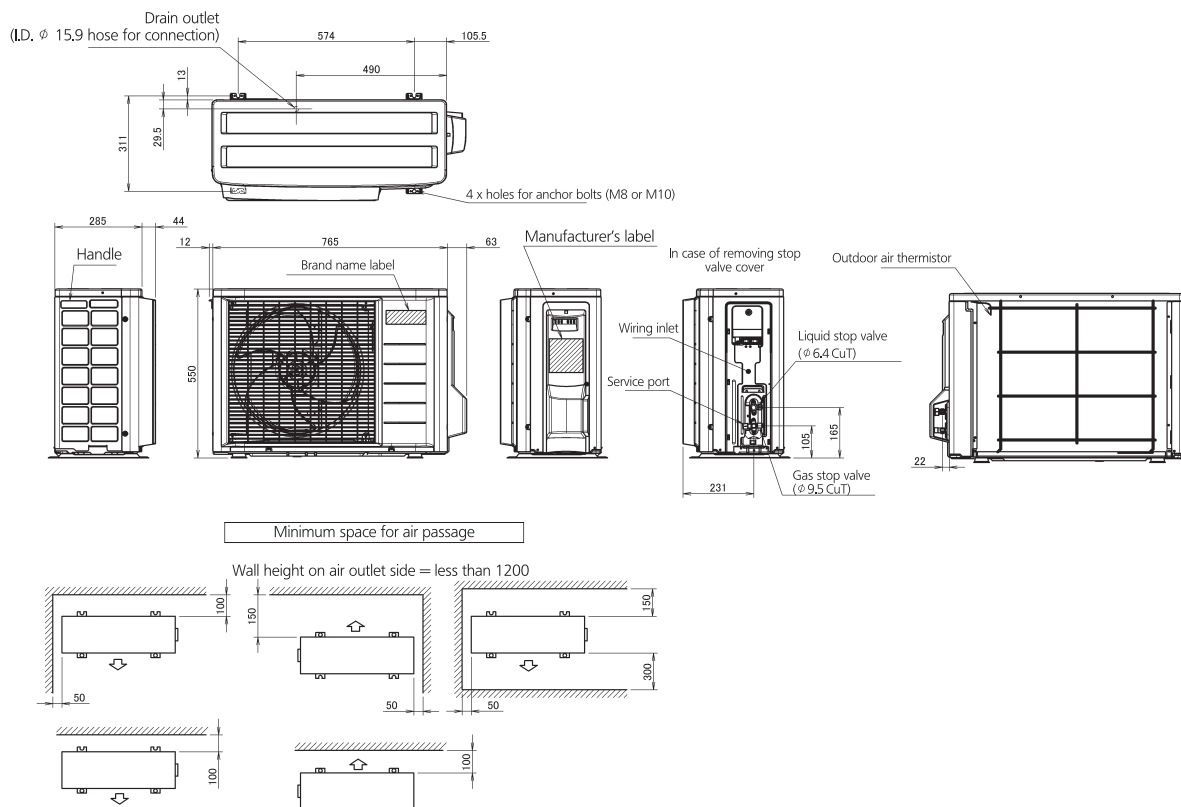
NOTES

1. RLA is based on the following conditions:
Indoor temp.: 27°CDB/19°CWB
Outdoor temp.: 35°CDB
2. Maximum allowable voltage variation between phases is 2%.
3. Select wire size based on the larger value of MCA.
4. Instead of fuse, use circuit breaker.

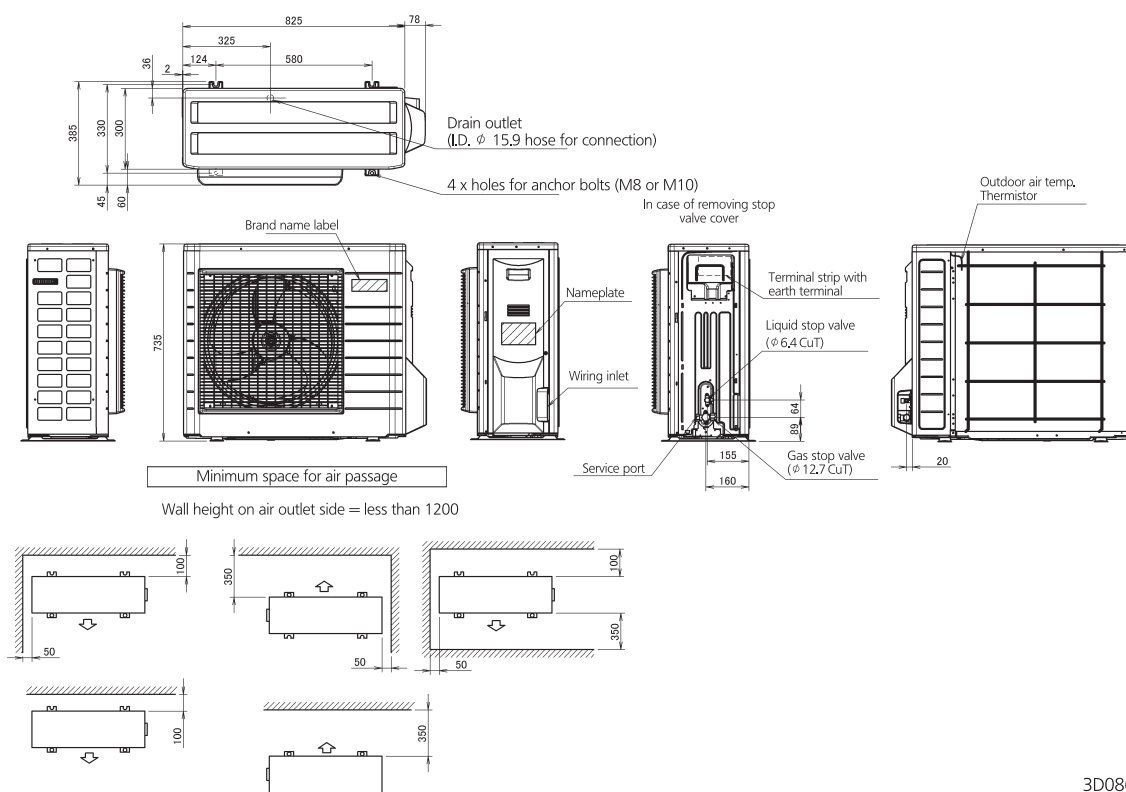
5 Dimensional drawings

5 - 1 Dimensional Drawings

RXG20-35L



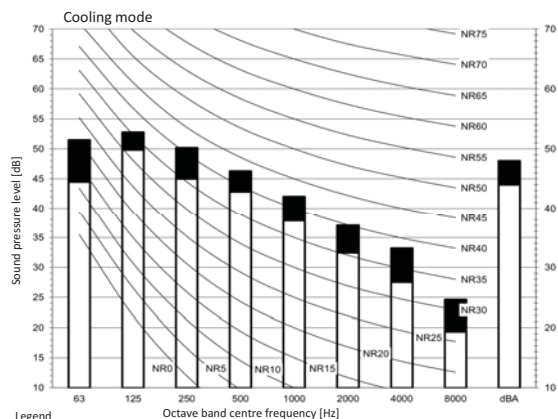
RXG50L



9 Sound data

9 - 1 Sound Pressure Spectrum

RXG35L



Legend

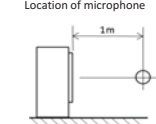
dBA = A-weighted sound pressure level (A scale according to IEC).

A Scale

B High-tap

Low-tap

Location of microphone



The operation noise measuring method is in accordance with JISC9612.

Measuring location: anechoic chamber

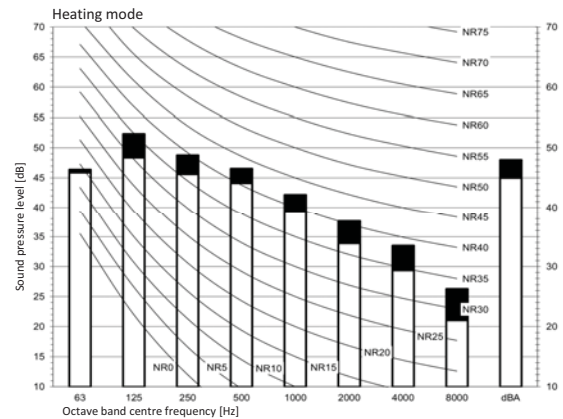
Cooling

Total dB

A	B
dBA	48

Background noise already taken into account.

Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard



Heating

Total dB

A	B
dBA	48

Background noise already taken into account.

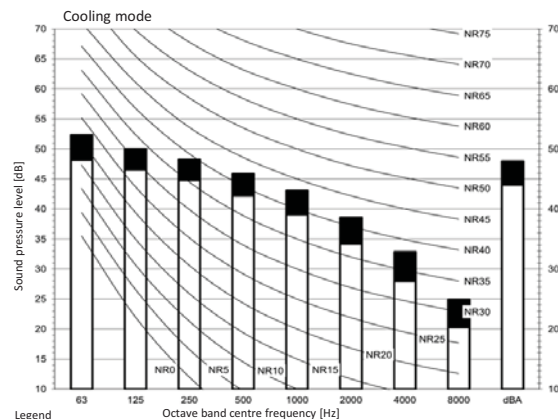
Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard

Notes

Operating noise varies depending on operation and ambient conditions.

3D086901A

RXG50L



Legend

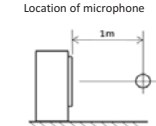
dBA = A-weighted sound pressure level (A scale according to IEC).

A Scale

B High-tap

Low-tap

Location of microphone



The operation noise measuring method is in accordance with JISC9612.

Measuring location: anechoic chamber

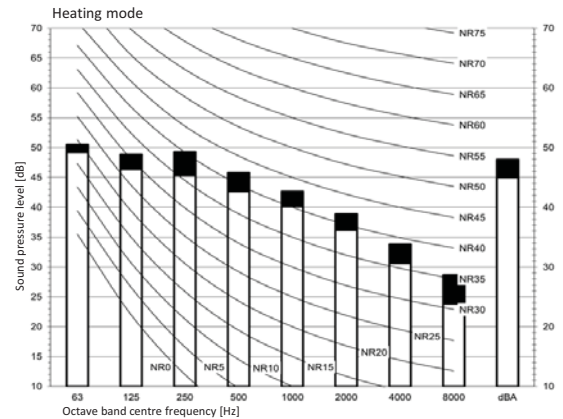
Cooling

Total dB

A	B
dBA	48

Background noise already taken into account.

Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard



Heating

Total dB

A	B
dBA	48

Background noise already taken into account.

Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard

Notes

Operating noise varies depending on operation and ambient conditions.

3D086902A



Air Conditioning

Technical Data

Wall mounted unit



EEEDEN15-100

FAQ-C

2 Specifications

2-1 Technical Specifications					FAQ71C		FAQ100C		*FAQ125C	
Power input	Cooling	Nom.	kW		0.051		0.061		-	
	Heating	Nom.	kW		0.068		0.061		-	
Casing	Colour				Fresh White				-	
	Material				Resin				-	
Dimensions	Unit	Height/Width/Depth	mm		290/1,050/238		340/1,200/240		340/1,200/240	
	Packed unit	Height/Width/Depth	mm		366/1,147/337		429/1,310/325		-/-/-	
Weight	Unit		kg		13		17		17	
	Packed unit		kg		19		24		-	
Heat exchanger	Length		mm		863		963		-	
	Rows	Quantity			2				-	
	Fin pitch		mm		1.2				-	
	Passes	Quantity			4		6		-	
	Face area		m²		0.279		0.347		-	
	Stages	Quantity			18		20		-	
	Empty tubeplate hole	Quantity			0				-	
	Fin	Type			Cross fin coil (Multi slit fins and Hi-XB tubes)				-	
Fan	Type				Cross flow fan				-	
	Quantity				1				-	
	Air flow rate	Cooling	High	m³/min	18		26		-	
			Nom.	m³/min	16		23		-	
			Low	m³/min	14		19		-	
		Heating	High	m³/min	18		26		-	
			Nom.	m³/min	16		23		-	
			Low	m³/min	14		19		-	
Fan motor	Model				QCL9663MA		QCL1096M		-	
	Speed	Steps			3				-	
	Output	High		W	48		64		-	
	Phase x Voltage			V	DC310		DC325		-	
	Full load amps (FLA)	Cooling	A		0.3		0.4		-	
		Heating	A		0.4				-	
Sound power level	Cooling		dBA		61		65		-	
	Heating		dBA		61		65		-	
Sound pressure level	Cooling	High/Nom./Low	dBA		45/42/40		49/45/41		-/-/-	
	Heating	High/Nom./Low	dBA		45/42/40		49/45/41		-/-/-	
Control systems	Infrared remote control				BRC7EB518				-	
	Wired remote control				BRC1D52 / BRC1E52A/B				-	
Refrigerant	Type				R-410A				-	
Piping connections	Liquid	Type/OD	mm		Flare connection/9.52				/-	
	Gas	Type/OD	mm		Flare connection/15.9				/-	
	Drain				VP13 (I.D. 13/O.D. 18)				-	
	Heat insulation				Foamed polystyrene / Foamed polyethylene				-	

Standard Accessories : Installation and operation manual; Quantity : 1;

Standard Accessories : Installation panel;

Standard Accessories : Insulation tape;

Standard Accessories : Screws;

Standard Accessories : Clamps;

Standard Accessories : Screw cover;

2-2 Electrical Specifications				FAQ71C	FAQ100C	*FAQ125C
Power supply	Phase			1~		1~
	Frequency		Hz	50/60		50/60
	Voltage		V	220-240/220		220-240/220

3 Safety device settings

3 - 1 Safety Device Settings

FAQ71-100C

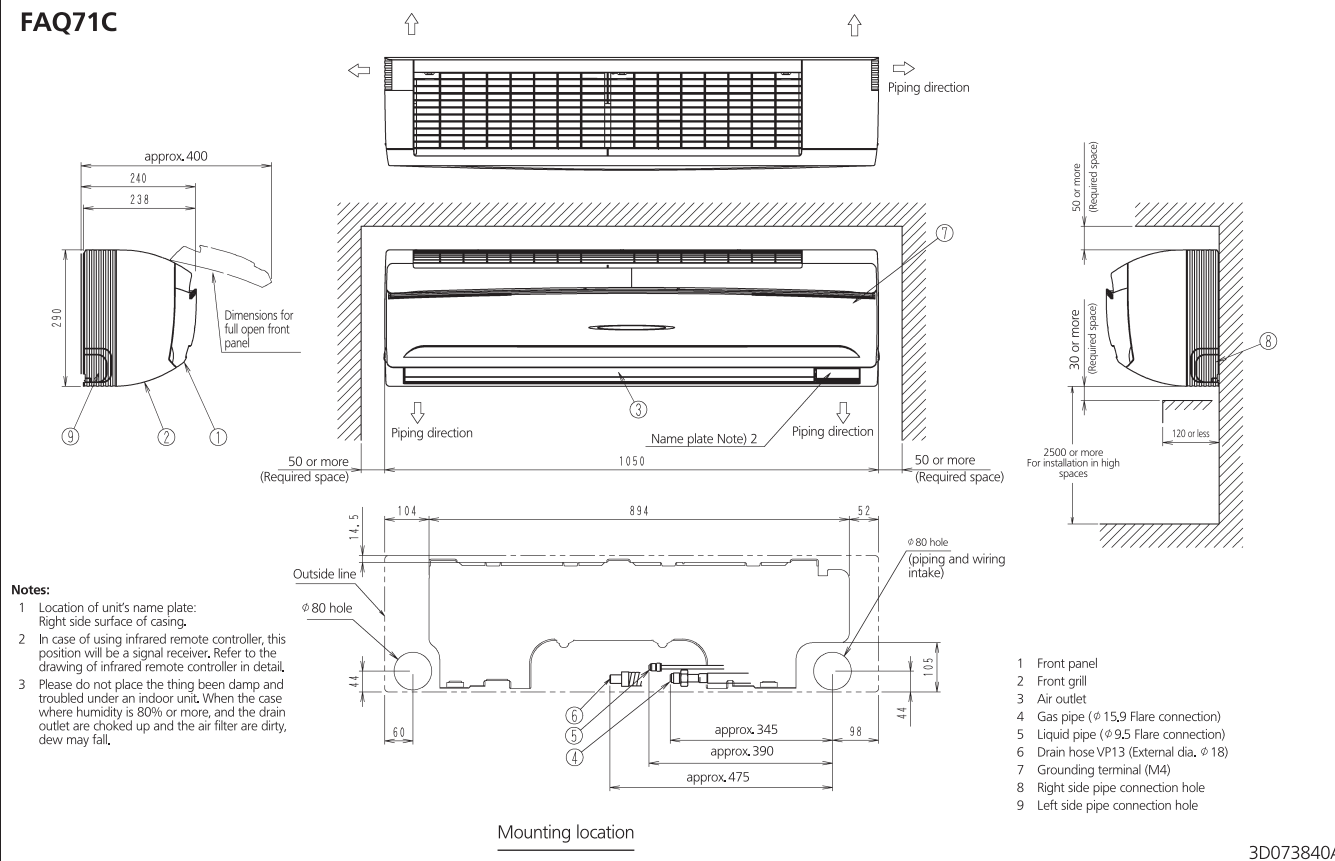
Safety devices		71	100
FAQ~CVEB	Fuse	—	—
	Fan motor thermal fuse (°C)	—	—
	Fan motor thermal protector (°C)	—	—

DU423-9101P

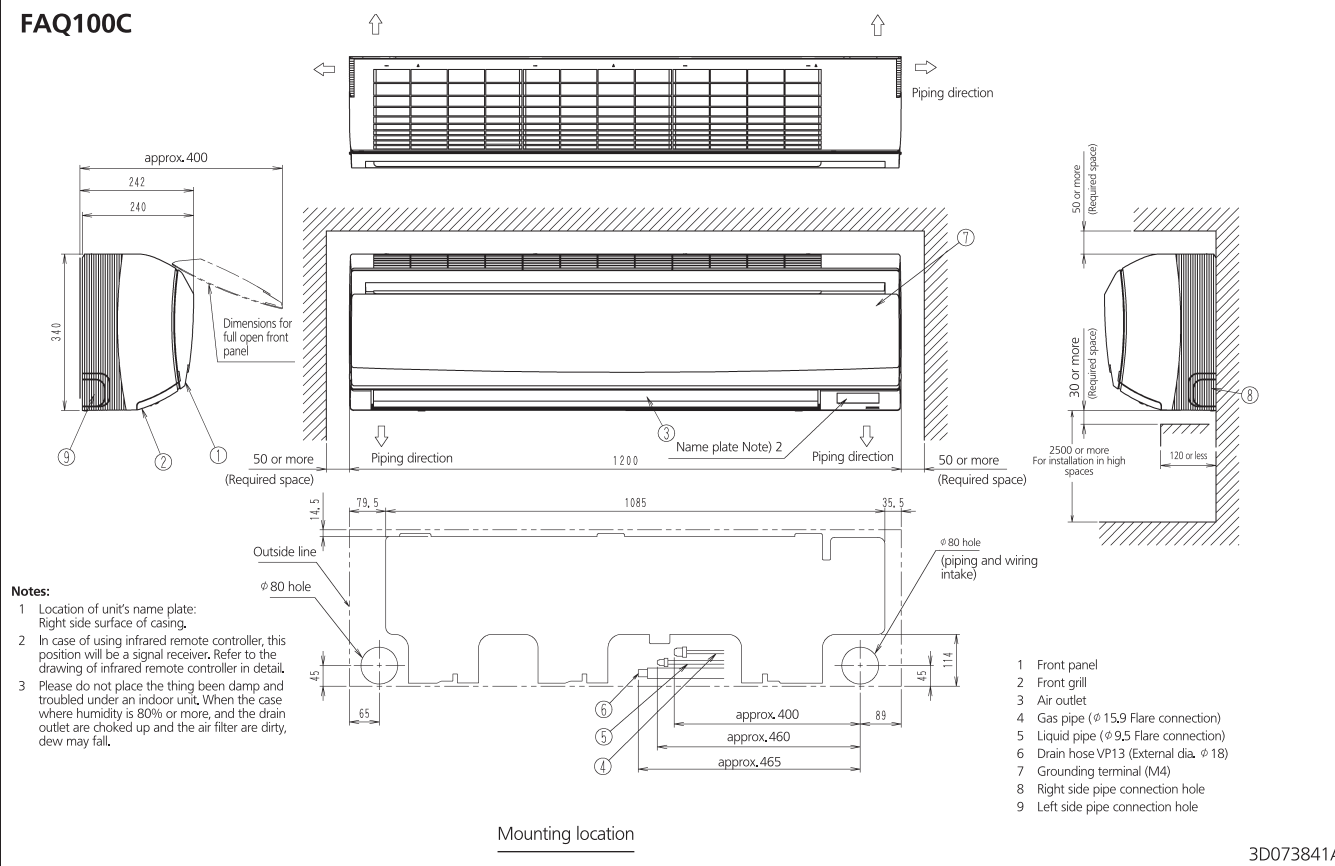
5 Dimensional drawings

5 - 1 Dimensional Drawings

FAQ71C

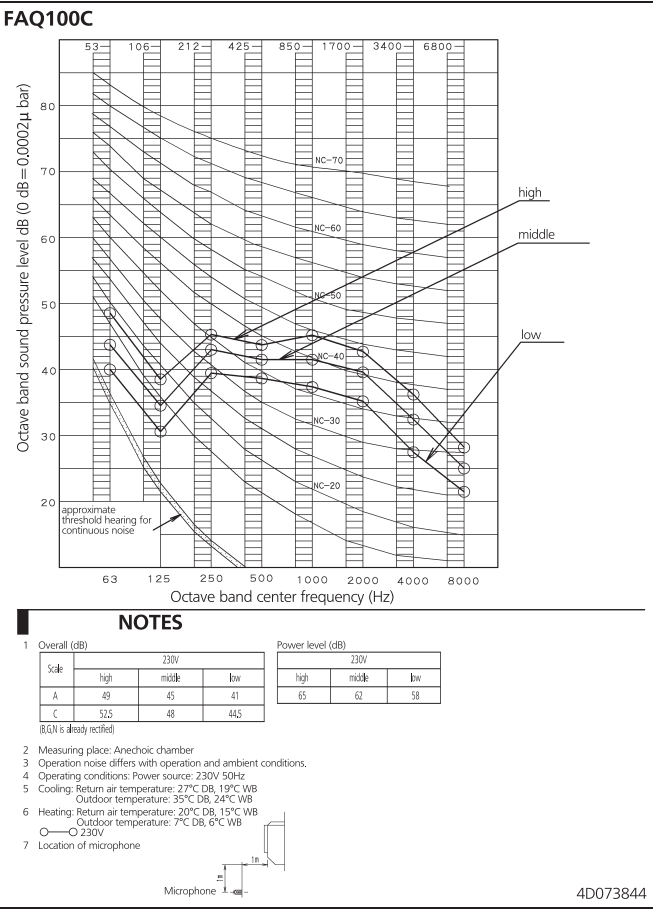
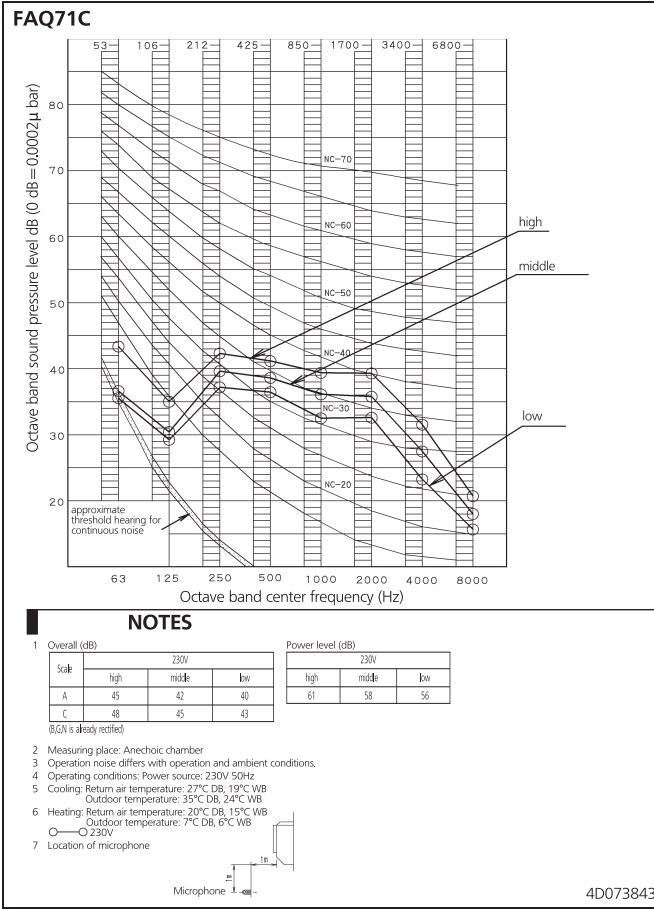


FAQ100C



9 Sound data

9 - 1 Sound Pressure Spectrum





Air Conditioning Technical Data

Floor standing unit with radiant heat panel



EEDEN15-100

FVXG-K

2 Specifications

2-1 Technical Specifications					FVXG25K		FVXG35K		FVXG50K	
Power input - 50Hz	Cooling	Nom.	kW		0.019		0.210		0.032	
	Heating	Nom.	kW		0.022		0.02		0.035	
Casing	Colour				Fresh white (6.5Y 9.5/0.5)					
Dimensions	Unit	Height/Width/Depth	mm		600/950/215					
	Packed unit	Height/Width/Depth	mm		761/1,030/314					
Weight	Unit		kg		22					
	Packed unit		kg		28					
Packing	Weight		kg		6					
Heat exchanger	Length		mm		665					
	Rows	Quantity			2					
	Fin pitch		mm		1.2					
	Stages	Quantity			18					
	Tube type		ø6.35 Hi-XU tube							
	Fin	Type			Multi slit fin					
Air filter	Type				Removable / washable / mildew proof					
Fan	Type				Cross flow fan					
	Air flow rate	Cooling	High	m³/min	8.9	9.1		10.6		
				cfm	314	321		374		
			Nom.	m³/min	8.9	9.1		10.3		
				cfm	314	321		-		
			Low	m³/min	5.3		7.3			
				cfm	187		258			
		Silent operation	m³/min	4.5		6.0				
			cfm	159		212				
		Heating	High	m³/min	9.9	10.2		12.2		
				cfm	349	360		431		
			Nom.	m³/min	7.8	8.0		10.0		
				cfm	275	282		353		
	Low		m³/min	5.7	5.8		7.8			
			cfm	201	205		275			
	Silent operation	m³/min	4.7	5.0		6.8				
		cfm	166	177		240				
Fan motor	Model				KFD-280-40-8H					
	Speed	Steps			5 + silent, + auto					
		Cooling	High/ Medium/ Low/ Silent operation	rpm	1,350/1,140/940/850		1,390/1,170/950/860		1,630/1,440/1,250/1,100	
	Heating	High/ Medium/ Low/ Silent operation	rpm	1,430/1,190/950/840		1,470/1,210/960/870		1,700/1,450/1,200/1,080		
Output	High		W	32						
Sound power level	Cooling			dBA	52				58	
	Heating			dBA	53				60	
Sound pressure level	Cooling	High/Nom./Low/ Silent operation		dBA	38/32/26/23		39/33/27/24		44/40/36/32	
	Heating	High/Nom./Low/ Silent operation/ Radiant heat		dBA	39/32/26/22/19		40/33/27/23/19		46/40/34/30/26	
Control systems	Infrared remote control				ARC466A2					
Refrigerant	Type				R-410A					

2 Specifications

2-1 Technical Specifications			FVXG25K	FVXG35K	FVXG50K
Piping connections	Liquid	OD	6.35		
	Gas	OD	9.50		12.70
	Drain		18		
Temperature control			Microcomputer control		
Air direction control			Right, left, upwards		

Standard Accessories : Installation manual; Quantity : 1;

Standard Accessories : Batteries; Quantity : 2;

Standard Accessories : Installation plate; Quantity : 1;

Standard Accessories : Wireless remote control; Quantity : 1;

Standard Accessories : Remote control holder; Quantity : 1;

Standard Accessories : Titanium apatite photocatalytic air purification filter; Quantity : 2;

Standard Accessories : Drain hose; Quantity : 1;

Standard Accessories : Insulation sheet; Quantity : 2;

Standard Accessories : Operation manual; Quantity : 1;

Standard Accessories : Thermal insulation (thermal insulation tube); Quantity : 1;

2-2 Electrical Specifications				FVXG25K	FVXG35K	FVXG50K
Power supply	Name			V1		
	Phase			1~		
	Frequency	Hz		50		
	Voltage	V		220-240		
Current	Nominal running current (RLA) - 50Hz	Cooling	A	0.10 (1) / 0.09 (2) / 0.09 (3)	0.11 (1) / 0.10 (2) / 0.10 (3)	0.17 (1) / 0.16 (2) / 0.15 (3)
		Heating	A	0.11 (1) / 0.11 (2) / 0.10 (3)	0.12 (1) / 0.12 (2) / 0.11 (3)	0.18 (1) / 0.17 (2) / 0.17 (3)
Wiring connections - 50Hz	For power supply	Remark		3 for power supply, 4 for interunit wiring (Earth wire included)		

Notes

(1) 220V

(2) 230V

(3) 240V

SL: The silent fan level of the air flow rate setting

When connected to a multi outdoor unit, the sound pressure level in silent operation and radiant heat equals above values + 1dB.

3

3 - 1 Options

FVXG-K

Indoor Units - Control systems

		FVXG-K
Wired remote control		BRC944 (3) BRC073 (3)
Cord for wired remote control	3m	BRCW901A03
	8m	BRCW901A08
Wiring adapter normal open contact / normal open pulse contact		KRP413A1S (1)
Centralised control board	Up to 5 rooms	KRC72 (2)
Anti-theft protection for remote control		KKF910A4
Interface adapter for DIII-net		KRP928A2S
Online controller		BRP069A42
Modbus gateway		RTD-RA
KNX gateway		KLK-DD
Installation key		BKS028

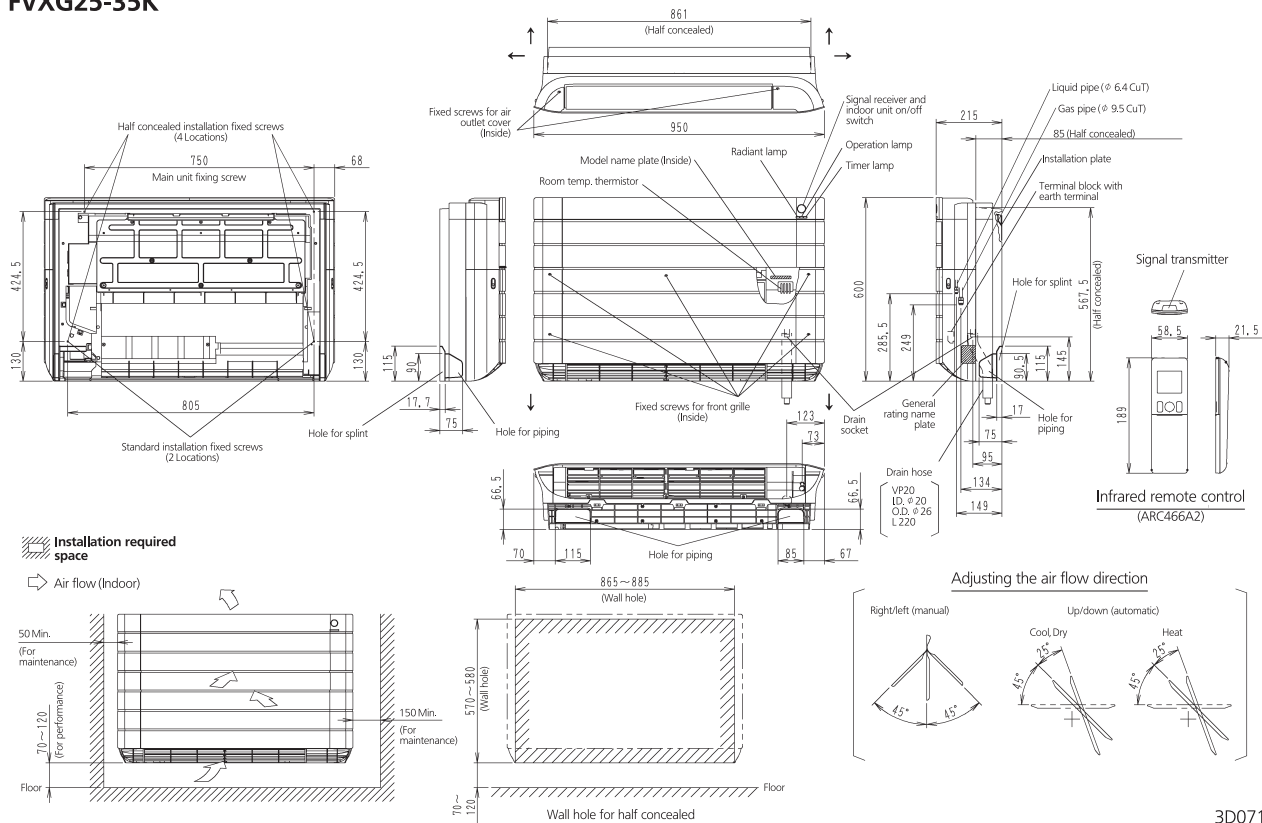
- (1) Wiring adapter supplied by Daikin. Time clock and other devices: to be purchased locally.
(2) Wiring adapter is also required for each indoor unit.
(3) Cord for wired remote control BRCW901A03 or BRCW901A08 required.

4 Dimensional drawings

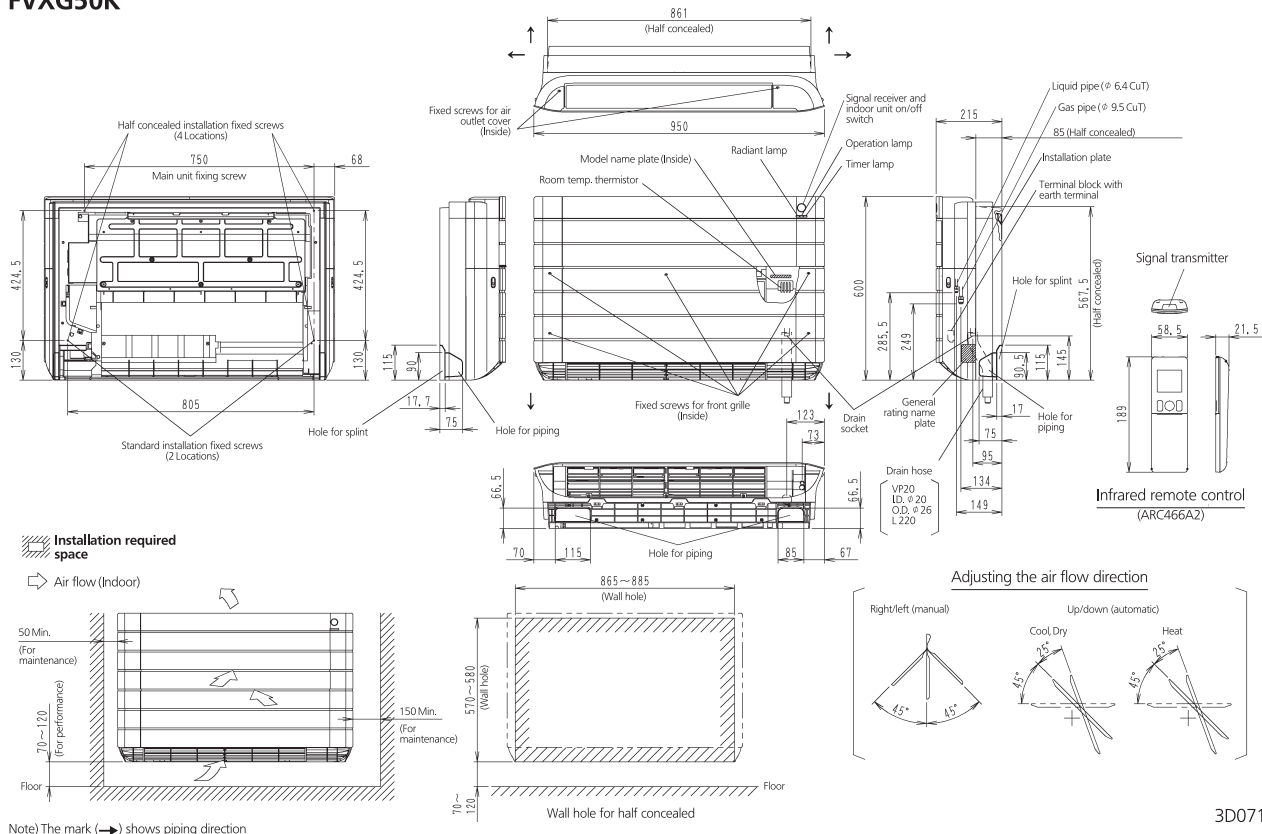
4 - 1 Dimensional Drawings

4

FVXG25-35K



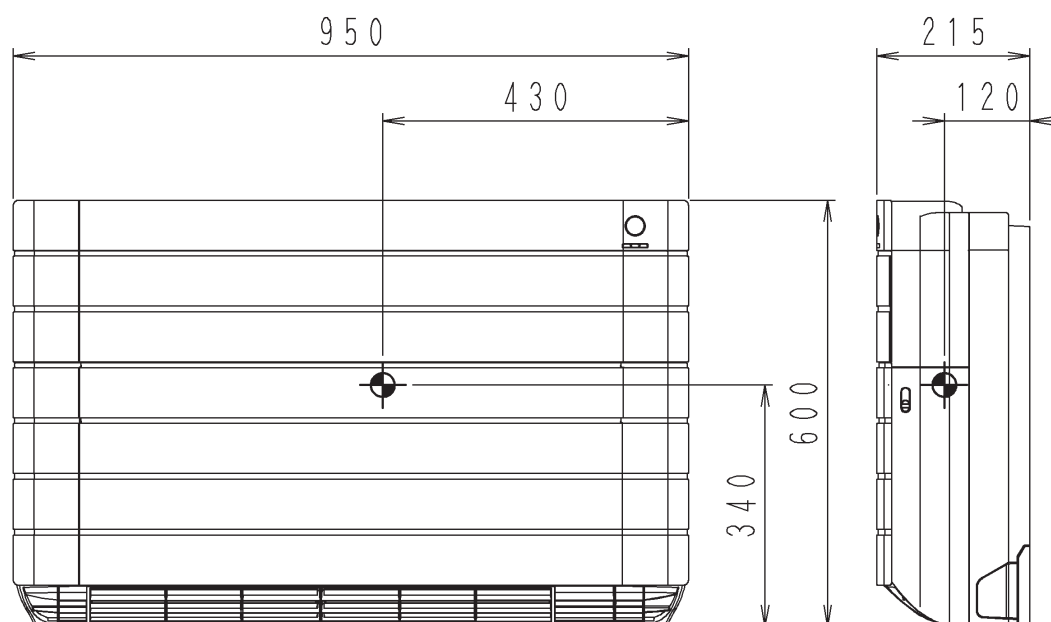
FVXG50K



5 Centre of gravity

5 - 1 Centre of Gravity

FVXG25-50K



4D071599

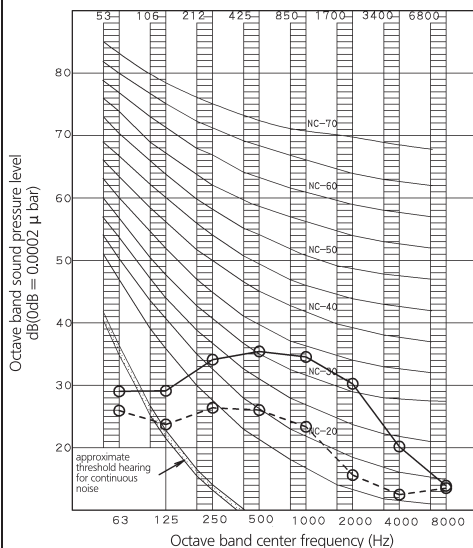
8 Sound data

8 - 1 Sound Pressure Spectrum

8

FVXG25K

Cooling



Overall (dB)

Scale	50Hz 220-240V (H)	50Hz 220-240V (L)
A	38	26

(B,G,N is already rectified)

Measuring place

Measure in anechoic room

NOTE: Operation noise differs with operation and ambient conditions.

Operating conditions

Power source 220-240V 50Hz

External static pressure

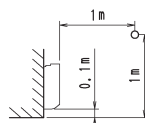
○—○ 50Hz 220-240V (H)

○---○ 50Hz 220-240V (L)

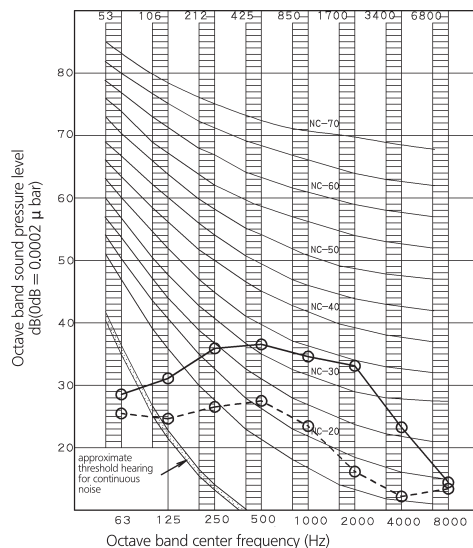
Cooling

Location of microphone

The operation noise measuring method is in accordance with JISC9612



Heating



Overall (dB)

Scale	50Hz 220-240V (H)	50Hz 220-240V (L)
A	39	26

(B,G,N is already rectified)

Measuring place

Measure in anechoic room

Operating conditions

Power source 220-240V 50Hz

External static pressure

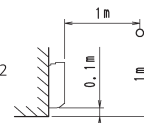
○—○ 50Hz 220-240V (H)

○---○ 50Hz 220-240V (L)

Heating

Location of microphone

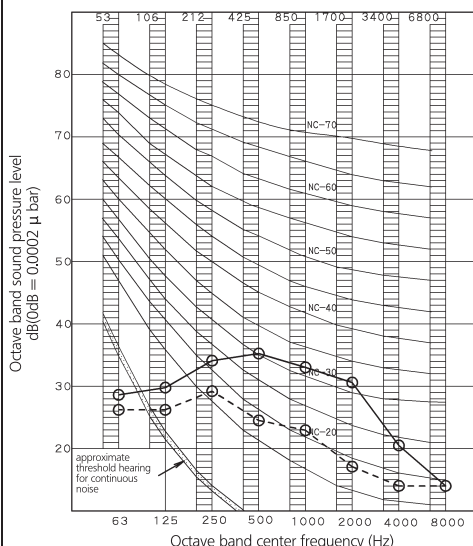
The operation noise measuring method is in accordance with JISC9612



3D071600

FVXG35K

Cooling



Overall (dB)

Scale	50Hz 220-240V (H)	50Hz 220-240V (L)
A	39	27

(B,G,N is already rectified)

Measuring place

Measure in anechoic room

NOTE: Operation noise differs with operation and ambient conditions.

Operating conditions

Power source 220-240V 50Hz

External static pressure

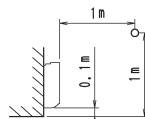
○—○ 50Hz 220-240V (H)

○---○ 50Hz 220-240V (L)

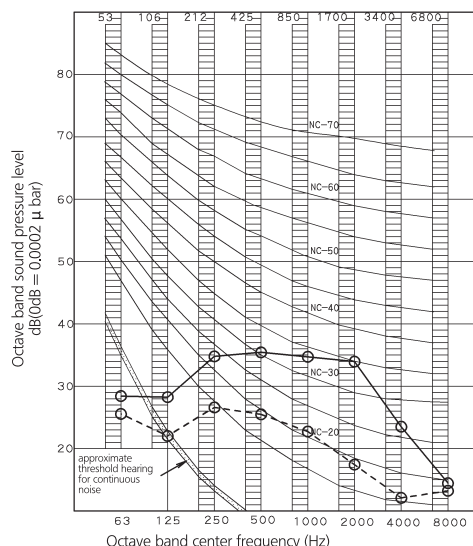
Cooling

Location of microphone

The operation noise measuring method is in accordance with JISC9612



Heating



Overall (dB)

Scale	50Hz 220-240V (H)	50Hz 220-240V (L)
A	40	27

(B,G,N is already rectified)

Measuring place

Measure in anechoic room

Operating conditions

Power source 220-240V 50Hz

External static pressure

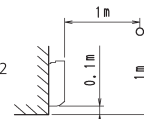
○—○ 50Hz 220-240V (H)

○---○ 50Hz 220-240V (L)

Heating

Location of microphone

The operation noise measuring method is in accordance with JISC9612



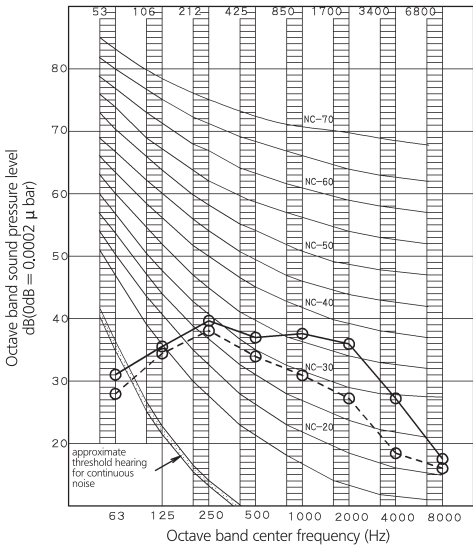
3D071601

8 Sound data

8 - 1 Sound Pressure Spectrum

FVXG50K

Cooling



Overall (dB)

Scale	50Hz 220-240V (H)	50Hz 220-240V (L)
A	44	36

(B,G,N is already rectified)

Measuring place

Measure in anechoic room

NOTE: Operation noise differs with operation and ambient conditions.

Operating conditions

Power source 220-240V 50Hz

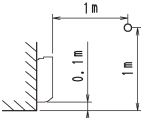
External static pressure

- 50Hz 220-240V (H)
- - -○ 50Hz 220-240V (L)

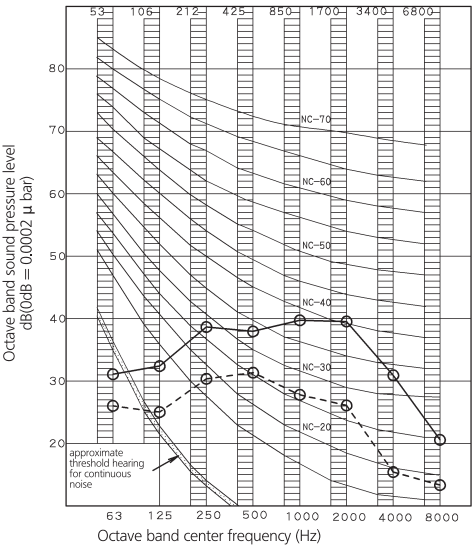
Cooling

Location of microphone

The operation noise measuring method is in accordance with JISC9612



Heating



Overall (dB)

Scale	50Hz 220-240V (H)	50Hz 220-240V (L)
A	46	34

(B,G,N is already rectified)

Measuring place

Measure in anechoic room

Operating conditions

Power source 220-240V 50Hz

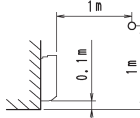
External static pressure

- 50Hz 220-240V (H)
- - -○ 50Hz 220-240V (L)

Heating

Location of microphone

The operation noise measuring method is in accordance with JISC9612



3D071602



Air Conditioning Technical Data

Wall mounted unit



EEDEN15-100

FTXG-LS, FTXG-LW

2 Specifications

2-1 Technical Specifications					FTXG20LS	FTXG25LS	FTXG35LS	FTXG50LS	FTXG20LW	FTXG25LW	FTXG35LW	FTXG50LW
Power input	Cooling	Nom.	kW		0.023 (1) / 0.023 (2) / 0.023 (3)		0.033 (1) / 0.033 (2) / 0.033 (3)		0.023 (1) / 0.023 (2) / 0.023 (3)		0.033 (1) / 0.033 (2) / 0.033 (3)	
	Heating	Nom.	kW		0.031 (1) / 0.031 (2) / 0.031 (3)	0.033 (1) / 0.033 (2) / 0.033 (3)	0.042 (1) / 0.042 (2) / 0.042 (3)	0.043 (1) / 0.043 (2) / 0.043 (3)	0.031 (1) / 0.031 (2) / 0.031 (3)	0.033 (1) / 0.033 (2) / 0.033 (3)	0.042 (1) / 0.042 (2) / 0.042 (3)	0.043 (1) / 0.043 (2) / 0.043 (3)
Casing	Colour				Silver				White			
Dimensions	Unit	Height/Width/ Depth		mm	303 (3)/998/212							
	Packed unit	Height/Width/ Depth		mm	322/1,101/389							
Weight	Unit			kg	12							
	Packed unit			kg	16							
Packing	Weight			kg	4							
Heat exchanger	Length			mm	610							
	Rows	Quantity			2							
	Fin pitch			mm	1.2							
	Stages	Quantity			18							
	Tube type			Ø6,35 Hi-XB								
	Fin	Type			Multi slit fin							
Air filter	Type				Removable / washable / mildew proof							
Fan	Type				Cross flow fan							
	Air flow rate	Cooling	High	m³/min	8.9		10.9		8.9		10.9	
				cfm	313		385		313		385	
			Nom.	m³/min	6.6		7.8	8.9	6.6		7.8	8.9
				cfm	234		276	313	234		276	313
			Low	m³/min	4.4		4.8	6.8	4.4		4.8	6.8
				cfm	155		168	239	155		168	239
		Silent operation	m³/min	2.6		2.9	3.6	2.6		2.9	3.6	
			cfm	91		102	128	91		102	128	
		Heating	High	m³/min	10.2	11.0	12.4	12.6	10.2	11.0	12.4	12.6
				cfm	361	388	438	446	361	388	438	446
			Nom.	m³/min	8.4	8.6	9.6	10.5	8.4	8.6	9.6	10.5
				cfm	298	303	340	372	298	303	340	372
	Low		m³/min	6.3		6.9	8.1	6.3		6.9	8.1	
			cfm	223		245	284	223		245	284	
	Silent operation	m³/min	3.8		4.1	5.0	3.8		4.1	5.0		
		cfm	133		144	176	133		144	176		
Fan motor	Model				KFD-280-40-8G1	KFD-280-40-8G	KFD-280-40-8G1			KFD-280-40-8G	KFD-280-40-8G1	
	Speed	Steps			5 + silent, + auto							
		Cooling	High/ Medium/ Low/ Silent operation	rpm	1,440/1,140/840/600		1,710/ 1,300/890/ 640	1,710/ 1,440/ 1,160/740	1,440/1,140/840/600		1,710/ 1,300/890/ 640	1,710/ 1,440/ 1,160/740
					Heating	High/ Medium/ Low/ Silent operation	rpm	1,620/ 1,380/ 1,100/760	1,720/ 1,400/ 1,100/760	1,910/ 1,540/ 1,180/800	1,940/ 1,660/ 1,330/920	1,620/ 1,380/ 1,100/760
Output	Rated		W	29								
Sound power level	Cooling			dBA	54		59	60	54		59	60
	Heating			dBA	56		59	60	56		59	60
Sound pressure level	Cooling	High/Nom./Low/ Silent operation		dBA	38/32/25/19		45/34/26/ 20	46/40/35/ 25	38/32/25/19		45/34/26/ 20	46/40/35/ 32
	Heating	High/Nom./Low/ Silent operation		dBA	40/34/28/ 19	41/34/28/ 19	45/37/29/ 20	47/41/35/ 25	40/34/28/ 19	41/34/28/ 19	45/37/29/ 20	47/41/35/ 32
Control systems	Infrared remote control				ARC466A1							

2 Specifications

2-1 Technical Specifications			FTXG20LS	FTXG25LS	FTXG35LS	FTXG50LS	FTXG20LW	FTXG25LW	FTXG35LW	FTXG50LW
Refrigerant	Type		R-410A							
Piping connections	Liquid	OD	6.35							
	Gas	OD	9.5			12.7	9.5			12.7
	Drain		18							
	Heat insulation		Both liquid and gas pipes							
Temperature control			Microcomputer control							
Air direction control			Right, Left, Horizontal, Downward							

Standard Accessories : Installation manual; Quantity : 1;

Standard Accessories : Operation manual; Quantity : 1;

Standard Accessories : Infrared remote control; Quantity : 1;

Standard Accessories : Batteries; Quantity : 2;

Standard Accessories : Remote control holder; Quantity : 1;

Standard Accessories : Mounting plate; Quantity : 1;

Standard Accessories : Indoor unit fixing screws; Quantity : 2;

Standard Accessories : Titanium apatite photocatalytic air purification filter; Quantity : 2;

Standard Accessories : Screw cover; Quantity : 2;

2-2 Electrical Specifications				FTXG20LS	FTXG25LS	FTXG35LS	FTXG50LS	FTXG20LW	FTXG25LW	FTXG35LW	FTXG50LW
Power supply	Name			V1							
	Phase			1~							
	Frequency		Hz	50							
	Voltage		V	220-240							
Current	Nominal running current (RLA) - 50Hz	Cooling	A	0.12 (1) / 0.12 (2) / 0.12 (3)		0.16 (1) / 0.16 (2) / 0.16 (3)		0.12 (1) / 0.12 (2) / 0.12 (3)		0.16 (1) / 0.16 (2) / 0.16 (3)	
		Heating	A	0.15 (1) / 0.15 (2) / 0.15 (3)	0.16 (1) / 0.16 (2) / 0.16 (3)	0.21 (1) / 0.21 (2) / 0.21 (3)		0.15 (1) / 0.15 (2) / 0.15 (3)	0.16 (1) / 0.16 (2) / 0.16 (3)	0.21 (1) / 0.21 (2) / 0.21 (3)	
Wiring connections - 50Hz	For power supply	Remark		3 for power supply, 4 for interunit wiring (Earth wire included)							

Notes

(1) 220V

(2) 230V

(3) 240V

SL: The silent fan level of the air flow rate setting

When connected with multi-system outdoor unit, refer to the specifications of the multi outdoor unit to be connected.

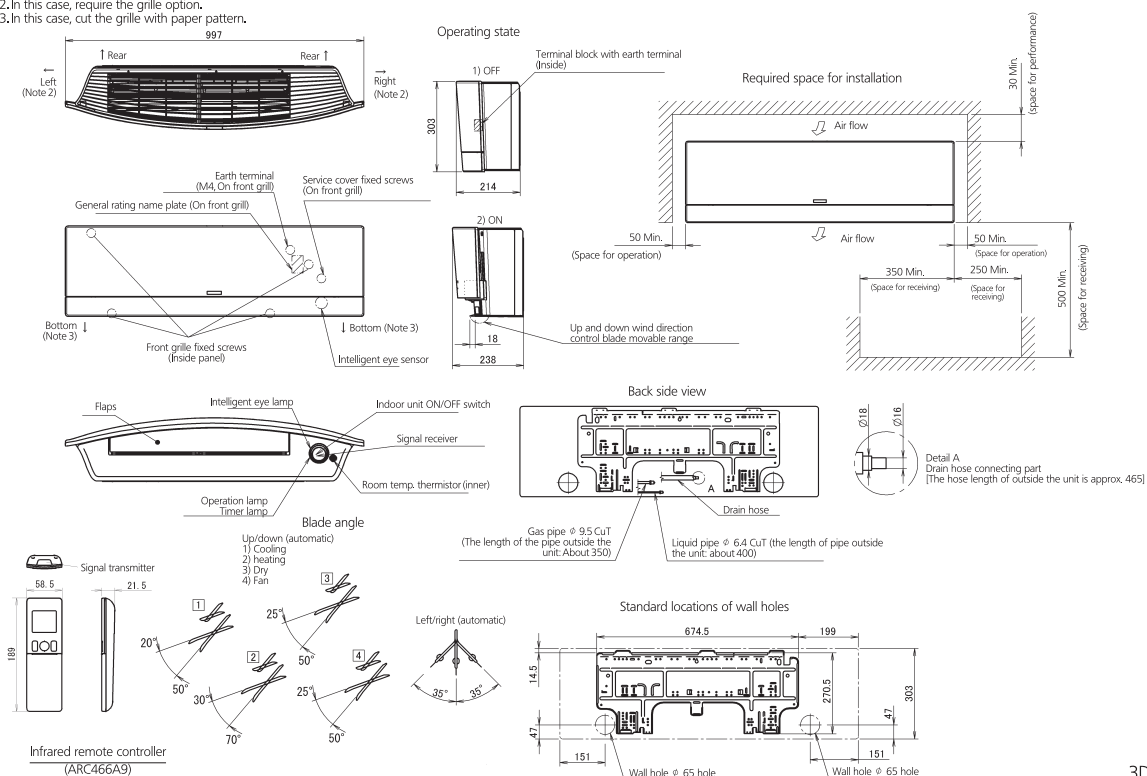
4 Dimensional drawings

4 - 1 Dimensional Drawings

FTXG20-35LW/S

Note)

1. The mark (→) shows piping direction.
2. In this case, require the grille option.
3. In this case, cut the grille with paper pattern.

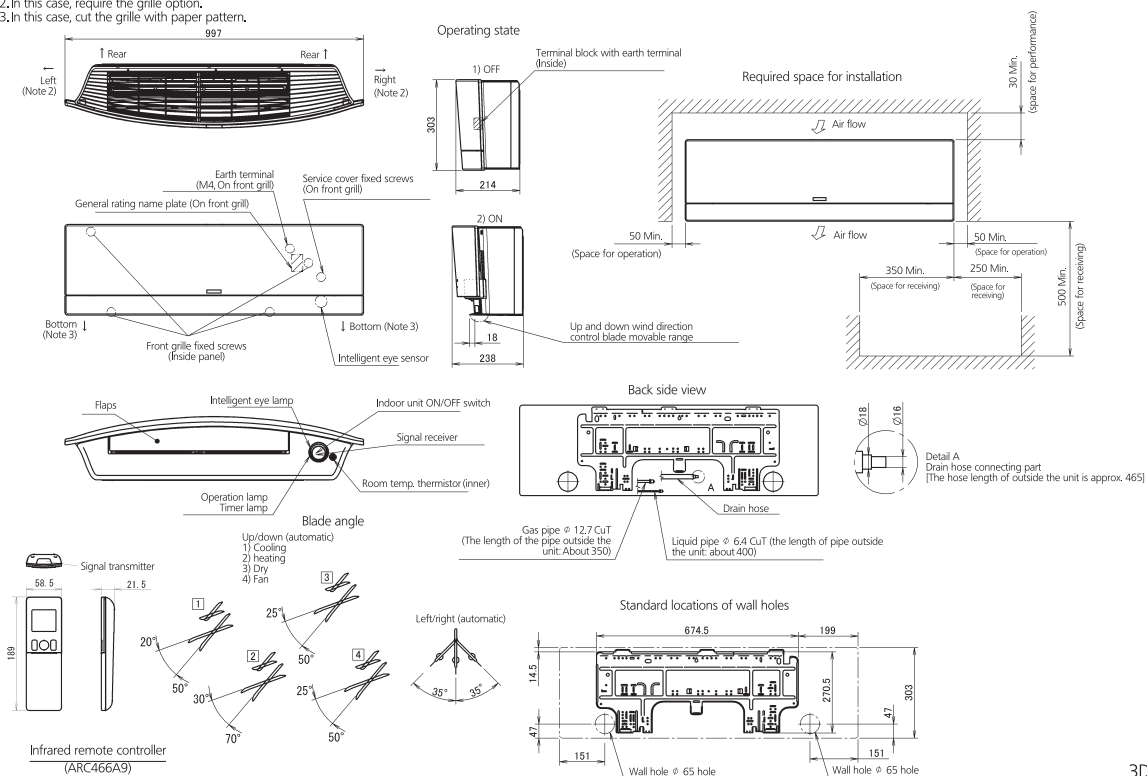


3D085835

FTXG50LW/S

Note)

1. The mark (→) shows piping direction.
2. In this case, require the grille option.
3. In this case, cut the grille with paper pattern.

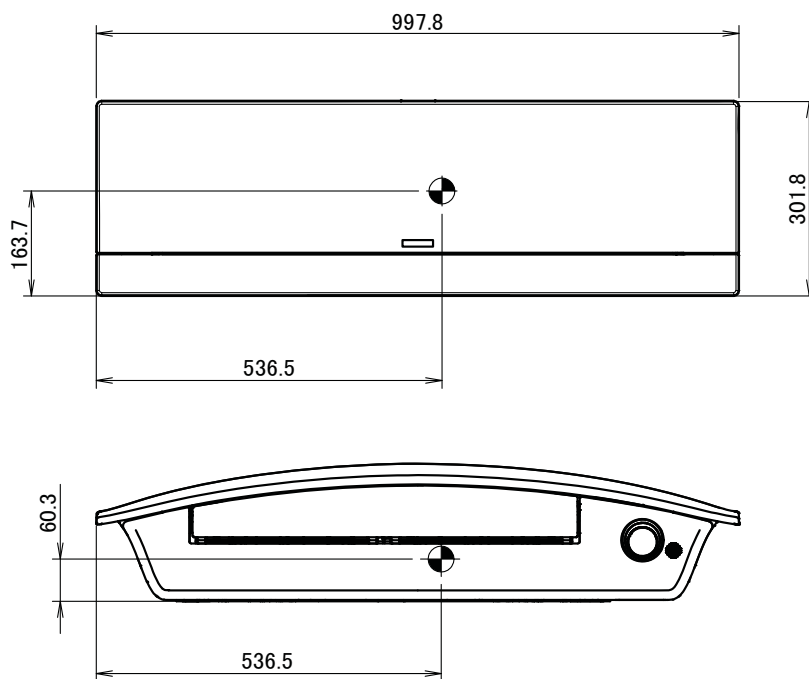


3D085836

5 Centre of gravity

5 - 1 Centre of Gravity

FTXG-LW/S



4D086660B

8 Sound data

8 - 1 Sound Pressure Spectrum

FTXG35LW/S

