



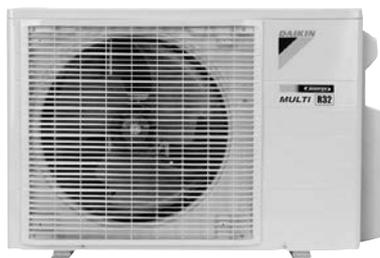
EDTAU122301

R-32

Engineering Data

Multi-Split Type Air Conditioners
- Heat Pump -

2MXF-T Series



INVERTER

Multi-Split Type Air Conditioners 2MXF-T Series

CTXF20TVMA	2MXF70T2VMA
CTXF25TVMA	
CTXF35TVMA	
CTXF50TVMA	

1. Power Supply	3
2. Functions.....	4
2.1 Indoor Unit.....	4
2.2 Outdoor Unit.....	5
3. Specifications	6
3.1 Indoor Unit.....	6
3.2 Outdoor Unit.....	7
3.3 Combination Capacity	8
4. Dimensions	10
4.1 Indoor Unit.....	10
4.2 Outdoor Unit.....	11
5. Wiring Diagrams.....	12
5.1 Indoor Unit.....	12
5.2 Outdoor Unit.....	13
6. Piping Diagrams.....	14
6.1 Indoor Unit.....	14
6.2 Outdoor Unit.....	14
7. Capacity Tables	15
7.1 2MXF70T2VMA.....	15
7.2 Capacity Correction Factor by the Length of Refrigerant Piping (Reference)	23
8. Operation Limit.....	24
9. Sound Level	25
9.1 Measuring Location	25
9.2 Indoor Unit.....	26
9.3 Outdoor Unit.....	28
10. Electric Characteristics.....	29
11. Installation Manual	30
11.1 Indoor Unit.....	30
11.2 Outdoor Unit.....	38
12. Operation Manual.....	49
12.1 20/25/35 Class	49
12.2 50 Class	74
13. Optional Accessories	99
13.1 Indoor Unit.....	99

13.2 Outdoor Unit.....99

Cautions

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided and choose an outdoor unit with anti-corrosion treatment.

1. Power Supply

Indoor Unit	Outdoor Unit	Power Supply
CTXF20TVMA CTXF25TVMA CTXF35TVMA CTXF50TVMA	2MXF70T2VMA	1 phase, 220 - 230 - 240 V, 50 Hz 1 phase, 220 - 230 V, 60 Hz

Note: Power Supply Intake ; Outdoor Unit

2. Functions

2.1 Indoor Unit

Category	Functions			Category	Functions		
		CTXF20/25/35TVMA	CTXF50TVMA			CTXF20/25/35TVMA	CTXF50TVMA
Basic Functions	Inverter (with inverter power control)	●	●	Health & Cleanliness	Titanium apatite deodorizing filter (option)	●	●
	Operation limit for cooling	—	—		Dust collection filter (PM2.5) (option)	●	●
	Operation limit for heating	—	—		Mould proof air filter	●	●
	PAM control	—	—		Wipe-clean flat panel	●	●
	Wide-range waveform control	—	—		Washable panel	—	—
	Standby electricity saving	●	●		Separated drain pan	●	●
	Demand control	—	—		Mould proof operation	—	—
Compressor	Oval scroll compressor	—	—	Odour removing	—	—	
	Swing compressor	—	—	Good-sleep cooling operation	—	—	
	Rotary compressor	—	—	Timer	24-hour ON/OFF timer	—	—
	Reluctance DC motor	—	—		Count up-down ON/OFF timer	●	●
Comfortable Airflow	Power-airflow flap	●	—		Night set mode	●	●
	Power-airflow dual flaps	—	●		Worry Free (Reliability & Durability)	Auto-restart (after power failure)	●
	Power-airflow diffuser	—	—	Self-diagnosis (R/C) display		●	●
	Wide-angle louvres	●	●	Wiring error check		—	—
	Vertical auto-swing	●	●	Anti-corrosion treatment of outdoor heat exchanger fins		—	—
	Horizontal auto-swing	—	—	Protection net of outdoor unit		—	—
	3D airflow	—	—	Stabiliser free		—	—
Comfort airflow mode	●	●	Low/high voltage shield	—		—	
Comfort Control	Comfortable auto fan speed	●	●	Flexibility	Multi-split/split compatible indoor unit	—	—
	Auto fan speed	—	—		High ceiling application	—	—
	Switchable fan speed	●	●		Chargeless	—	—
	Indoor unit quiet operation	●	●		Either side drain (right/left)	●	●
	Night quiet mode (automatic)	—	—		Power selection	—	—
	Outdoor unit quiet operation	—	—		Remote Control	Remote control adaptor (normal open pulse contact) (option)	●
	Intelligent eye operation (auto energy saving)	—	—	Remote control adaptor (normal open contact) (option)		●	●
	0.5°C step room temperature setting	●	●	DIII-NET compatible (adaptor) (option)		●	●
	Hot-start function	●	●	Wireless LAN connection (option) ★		●	●
	Operation	Automatic defrosting	—	—	Remote Controller	Wireless	●
Auto-cooling/heating changeover		●	●	Wired (option)		●	●
Programme dry function		●	●				
Lifestyle Convenience	Fan only	●	●				
	Lifestyle Convenience	Powerful operation (non-inverter)	—	—			
		Inverter powerful operation	—	—			
		Super powerful operation	●	●			
		Priority-room setting	—	—			
		Cooling/heating mode lock	—	—			
		Home leave operation	—	—			
		ECONO mode	●	●			
		Indoor unit ON/OFF switch	●	●			
		Signal reception indicator	●	●			
R/C with backlight LCD		●	●				
Temperature display	—	—					

Note: ● : Available
— : Not available

★ : Can be installed inside indoor unit

2.2 Outdoor Unit

Category	Functions	2MXF70T2VMA	Category	Functions	2MXF70T2VMA	
Basic Functions	Inverter (with inverter power control)	●	Health & Cleanliness	Titanium apatite deodorizing filter (option)	—	
	Operation limit for cooling	Refer to P. 24		Dust collection filter (PM2.5) (option)	—	
	Operation limit for heating			Mould proof air filter	—	
	PAM control	●		Wipe-clean flat panel	—	
	Wide-range waveform control	●		Washable panel	—	
	Standby electricity saving	●		Separated drain pan	—	
	Demand control	●		Mould proof operation	—	
Compressor	Oval scroll compressor	—		Odour removing	—	
	Swing compressor	●		Good-sleep cooling operation	—	
	Rotary compressor	—		Timer	24-hour ON/OFF timer	—
	Reluctance DC motor	●			Count up-down ON/OFF timer	—
Comfortable Airflow	Power-airflow flap	—	Night set mode		—	
	Power-airflow dual flaps	—	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	—	
	Power-airflow diffuser	—		Self-diagnosis (R/C) display	●	
	Wide-angle louvres	—		Wiring error check	—	
	Vertical auto-swing	—		Anti-corrosion treatment of outdoor heat exchanger fins	●	
	Horizontal auto-swing	—		Protection net of outdoor unit	●	
	3D airflow	—		Stabiliser free	—	
	Comfort airflow mode	—		Low/high voltage shield	—	
Comfort Control	Comfortable auto fan speed	—		Flexibility	Multi-split/split compatible indoor unit	—
	Auto fan speed	—	High ceiling application		—	
	Switchable fan speed	—	Chargeless		20 m	
	Indoor unit quiet operation	—	Either side drain (right/left)		—	
	Night quiet mode (automatic)	—	Power selection		—	
	Outdoor unit quiet operation	●	Remote Control	Remote control adaptor (normal open pulse contact)	—	
	Intelligent eye operation (auto energy saving)	—		Remote control adaptor (normal open contact)	—	
	0.5°C step room temperature setting	—		DIII-NET compatible (adaptor) (option)	—	
	Hot-start function	—		Wireless LAN connection (option)	—	
	Automatic defrosting	●		Remote Controller	Wireless	—
Operation	Auto-cooling/heating changeover	—	Wired		—	
	Programme dry function	—				
	Fan only	—				
Lifestyle Convenience	Powerful operation (non-inverter)	—				
	Inverter powerful operation	—				
	Super powerful operation	—				
	Priority-room setting	—				
	Cooling/heating mode lock	—				
	Home leave operation	—				
	ECONO mode	●				
	Indoor unit ON/OFF switch	—				
	Signal reception indicator	—				
	R/C with backlight LCD	—				
Temperature display	—					

Note: ● : Available
— : Not available

3. Specifications

3.1 Indoor Unit

50 Hz, 220 - 230 - 240 V / 60 Hz, 220 - 230 V

Model			CTXF20TVMA		CTXF25TVMA	
			Cooling	Heating	Cooling	Heating
Capacity ★			2.0 kW Class		2.5 kW Class	
Front Panel Colour			Pure White		Pure White	
Airflow Rate	H	m³/min (cfm)	10.0 (353)	11.6 (410)	10.0 (353)	11.6 (410)
	M		7.7 (272)	8.7 (307)	7.7 (272)	8.7 (307)
	L		5.8 (205)	6.5 (230)	5.8 (205)	6.5 (230)
	SL		3.7 (131)	5.1 (180)	3.7 (131)	5.1 (180)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	27		27	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downwards		Right, Left, Horizontal, Downwards	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.30 - 0.29 - 0.28 / 0.30 - 0.29	0.35 - 0.33 - 0.32 / 0.35 - 0.33	0.30 - 0.29 - 0.28 / 0.30 - 0.29	0.35 - 0.33 - 0.32 / 0.35 - 0.33
Power Consumption (Rated)		W	21	23	21	23
Power Factor (Rated)		%	31.2 - 30.8 - 30.6 / 31.2 - 30.8	30.5 - 30.9 - 30.5 / 30.5 - 30.9	31.2 - 30.8 - 30.6 / 31.2 - 30.8	30.5 - 30.9 - 30.5 / 30.5 - 30.9
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H x W x D)		mm	285 x 770 x 223		285 x 770 x 223	
Packaged Dimensions (H x W x D)		mm	320 x 830 x 360		320 x 830 x 360	
Weight (Mass)		kg	9		9	
Gross Weight (Gross Mass)		kg	11		11	
Sound Pressure Level	H / M / L / SL	dB(A)	40 / 33 / 27 / 19	40 / 34 / 28 / 20	40 / 33 / 27 / 19	40 / 34 / 28 / 20
Sound Power Level		dB	54	54	54	54
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	mm	φ 6.4		φ 6.4	
	Gas	mm	φ 9.5		φ 9.5	
	Drain	mm	φ 16.0		φ 16.0	
Drawing No.			3D121580		3D121581	

Model			CTXF35TVMA		CTXF50TVMA	
			Cooling	Heating	Cooling	Heating
Capacity ★			3.5 kW Class		5.0 kW Class	
Front Panel Colour			Pure White		Pure White	
Airflow Rate	H	m³/min (cfm)	10.6 (374)	12.0 (424)	18.7 (660)	19.6 (692)
	M		8.3 (293)	9.4 (332)	15.4 (544)	14.9 (526)
	L		6.0 (212)	6.8 (240)	12.0 (424)	11.3 (399)
	SL		3.7 (131)	5.1 (180)	8.2 (290)	9.6 (339)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	27		58	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downwards		Right, Left, Horizontal, Downwards	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.33 - 0.32 - 0.31 / 0.33 - 0.32	0.37 - 0.35 - 0.34 / 0.37 - 0.35	0.43 - 0.41 - 0.39 / 0.43 - 0.41	0.47 - 0.45 - 0.43 / 0.47 - 0.45
Power Consumption (Rated)		W	23	25	44	49
Power Factor (Rated)		%	31.7 - 31.3 - 30.9 / 31.7 - 31.3	30.4 - 30.8 - 30.4 / 30.4 - 30.8	46.5 - 46.7 - 47.0 / 46.5 - 46.7	47.4 - 47.3 - 47.5 / 47.4 - 47.3
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H x W x D)		mm	285 x 770 x 223		295 x 990 x 263	
Packaged Dimensions (H x W x D)		mm	320 x 830 x 360		386 x 1,102 x 389	
Weight (Mass)		kg	9		12	
Gross Weight (Gross Mass)		kg	11		17	
Sound Pressure Level	H / M / L / SL	dB(A)	42 / 35 / 28 / 19	42 / 36 / 29 / 20	45 / 40 / 35 / 28	45 / 39 / 33 / 28
Sound Power Level		dB	56	56	59	59
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	mm	φ 6.4		φ 6.4	
	Gas	mm	φ 9.5		φ 12.7	
	Drain	mm	φ 16.0		φ 16.0	
Drawing No.			3D121582		3D121583A	

- Notes:**
- ★ See Page 8 ~ 9 "Combination Capacity".
 - SL: The Quiet fan level of the airflow rate setting.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

3.2 Outdoor Unit

50 Hz, 220 - 230 - 240 V / 60 Hz, 220 - 230 V

Model			2MXF70T2VMA	
			Cooling	Heating
Capacity ★	kW	—		
Power Consumption ★	W	—		
Running Current ★	A	—		
Casing Colour		Ivory White		
Heat Exchanger		Waffle Fin ϕ 7.0 Hi-XD Tube		
Compressor	Type	Hermetically Sealed Swing Type		
	Model	2YC40GXD		
	Motor Output	W	1,300	
Refrigerant Oil	Model	FW68DA		
	Charge	L	0.65	
Refrigerant	Type	R-32		
	Charge	kg	1.24	
Airflow Rate	H	m ³ /min	46.5	47.5
	L	m ³ /min	33.0	30.9
	H	cfm	1,642	1,679
	L	cfm	1,165	1,092
Fan	Type	Propeller		
	Motor Output	W	—	
	Running Current	A	H: 0.43 / L: 0.24	H: 0.44 / L: 0.21
	Power Consumption	W	H: 65.8 / L: 33.9	H: 68.3 / L: 29
Starting Current	A	—		
Dimensions (H x W x D)	mm	595 x 845 x 300		
Packaged Dimensions (H x W x D)	mm	660 x 995 x 410		
Weight (Mass)	kg	47		
Gross Weight (Gross Mass)	kg	52		
Sound Pressure Level	H / L	dB(A)	51 / 46	53 / 46
		dB	63	65
Piping Connections	Liquid	mm	ϕ 6.4 x 2	
	Gas	mm	ϕ 9.5 x 1, ϕ 12.7 x 1	
	Drain	mm	ϕ 16	
Heat Insulation		Both Liquid and Gas Pipes		
No. of Wiring Connections		3 for Power Supply, 4 for Interunit Wiring (Including Earth Wiring)		
Max. Interunit Piping Length	m	30 (for Total)		
	m	25 (for Each Room)		
Amount of Additional Charge	g/m	20 (20m or more)		
Max. Installation Height Difference	m	15 (between Indoor Unit and Outdoor Unit)		
	m	7.5 (between Indoor Units)		
Drawing No.		3D144162		

- Notes:**
- ★ See page 8 - 9 "Combination Capacity".
 - The data are based on the conditions shown in the table below.

Cooling	Heating	Piping Length
Indoor ; 27°CDB / 19°CWB Outdoor ; 35°CDB	Indoor ; 20°CDB Outdoor ; 7°CDB / 6°CWB	5 m

Conversion Formulae
kcal/h = kW x 860 Btu/h = kW x 3412 cfm = m ³ /min x 35.3

3.3 Combination Capacity

Cooling [50 Hz, 230 V]

Combination of indoor unit	Capacity of each indoor unit								
	Each capacity (kW)		Total capacity (kW)		Total input (kW)		Total current (A)		Power factor (%)
	A room	B room	Rating	(min ~ max)	Rating	(min ~ max)	Rating	(min ~ max)	Rating
2.0	2.00	---	2.00	1.40 ~ 3.48	0.46	0.30 ~ 0.87	2.2	1.5 ~ 4.2	92
2.5	2.50	---	2.50	1.40 ~ 3.48	0.59	0.30 ~ 0.87	2.8	1.5 ~ 4.2	92
3.5	3.50	---	3.50	1.50 ~ 4.59	0.91	0.30 ~ 1.23	4.3	1.5 ~ 5.9	92
5.0	5.00	---	5.00	1.50 ~ 5.91	1.30	0.29 ~ 1.74	6.1	1.4 ~ 8.3	92
2.0+2.0	2.00	2.00	4.00	1.60 ~ 5.30	0.89	0.30 ~ 1.38	4.2	1.5 ~ 6.6	92
2.0+2.5	2.00	2.50	4.50	1.60 ~ 6.00	1.07	0.30 ~ 1.74	5.1	1.5 ~ 8.3	92
2.0+3.5	2.00	3.50	5.50	1.60 ~ 6.47	1.48	0.27 ~ 1.86	7.0	1.3 ~ 8.8	92
2.0+5.0	2.00	5.00	7.00	1.60 ~ 7.50	1.88	0.25 ~ 2.07	8.9	1.2 ~ 9.8	92
2.5+2.5	2.50	2.50	5.00	1.60 ~ 6.00	1.26	0.29 ~ 1.74	6.0	1.4 ~ 8.3	92
2.5+3.5	2.50	3.50	6.00	1.60 ~ 6.91	1.70	0.27 ~ 2.05	8.0	1.3 ~ 9.7	92
2.5+5.0	2.33	4.67	7.00	1.60 ~ 7.50	1.88	0.25 ~ 2.07	8.9	1.2 ~ 9.8	92
3.5+3.5	3.50	3.50	7.00	1.60 ~ 7.27	2.00	0.27 ~ 2.06	9.5	1.3 ~ 9.8	92

Cooling [50 Hz, 240 V]

Combination of indoor unit	Capacity of each indoor unit								
	Each capacity (kW)		Total capacity (kW)		Total input (kW)		Total current (A)		Power factor (%)
	A room	B room	Rating	(min ~ max)	Rating	(min ~ max)	Rating	(min ~ max)	Rating
2.0	2.00	---	2.00	1.40 ~ 3.48	0.46	0.30 ~ 0.87	2.1	1.4 ~ 4.0	92
2.5	2.50	---	2.50	1.40 ~ 3.48	0.59	0.30 ~ 0.87	2.7	1.4 ~ 4.0	92
3.5	3.50	---	3.50	1.50 ~ 4.59	0.91	0.30 ~ 1.23	4.1	1.4 ~ 5.6	92
5.0	5.00	---	5.00	1.50 ~ 5.91	1.30	0.29 ~ 1.74	5.9	1.4 ~ 7.9	92
2.0+2.0	2.00	2.00	4.00	1.60 ~ 5.30	0.89	0.30 ~ 1.38	4.0	1.4 ~ 6.3	92
2.0+2.5	2.00	2.50	4.50	1.60 ~ 6.00	1.07	0.30 ~ 1.74	4.8	1.4 ~ 7.9	92
2.0+3.5	2.00	3.50	5.50	1.60 ~ 6.47	1.48	0.27 ~ 1.86	6.7	1.3 ~ 8.5	92
2.0+5.0	2.00	5.00	7.00	1.60 ~ 7.50	1.88	0.25 ~ 2.07	8.5	1.2 ~ 9.4	92
2.5+2.5	2.50	2.50	5.00	1.60 ~ 6.00	1.26	0.29 ~ 1.74	5.7	1.4 ~ 7.9	92
2.5+3.5	2.50	3.50	6.00	1.60 ~ 6.91	1.70	0.27 ~ 2.05	7.7	1.3 ~ 9.3	92
2.5+5.0	2.33	4.67	7.00	1.60 ~ 7.50	1.88	0.25 ~ 2.07	8.5	1.2 ~ 9.4	92
3.5+3.5	3.50	3.50	7.00	1.60 ~ 7.27	2.00	0.27 ~ 2.06	9.1	1.3 ~ 9.4	92

- Notes:**
1. Cooling capacity is based on 27°CDB / 19°CWB (Indoor temperature), 35°CDB / 24°CWB (Outdoor temperature).
 2. The total capacity of connected indoor units is up to 7.5 kW.
 3. It is impossible to connect only one indoor unit.
 4. Capacities are based on the following conditions.
Corresponding refrigerant piping length: 5 m
Level difference: 0 m

C: 3D121545

Heating [50 Hz, 230 V]

Combination of indoor unit	Capacity of each indoor unit								
	Each capacity (kW)		Total capacity (kW)		Total input (kW)		Total current (A)		Power factor (%)
	A room	B room	Rating	(min ~ max)	Rating	(min ~ max)	Rating	(min ~ max)	Rating
2.0	2.40	---	2.40	1.30 ~ 3.59	0.61	0.30 ~ 0.91	2.9	1.5 ~ 4.4	92
2.5	3.00	---	3.00	1.30 ~ 3.59	0.76	0.30 ~ 0.91	3.6	1.5 ~ 4.4	92
3.5	3.70	---	3.70	1.30 ~ 4.45	0.88	0.28 ~ 1.07	4.2	1.4 ~ 5.1	92
5.0	5.20	---	5.20	1.30 ~ 6.06	1.19	0.26 ~ 1.47	5.6	1.3 ~ 7.0	92
2.0+2.0	2.10	2.10	4.20	1.50 ~ 5.25	0.91	0.28 ~ 1.19	4.3	1.4 ~ 5.7	92
2.0+2.5	2.09	2.61	4.70	1.50 ~ 6.18	1.04	0.28 ~ 1.47	4.9	1.4 ~ 7.0	92
2.0+3.5	2.05	3.60	5.65	1.50 ~ 6.71	1.23	0.26 ~ 1.54	5.8	1.3 ~ 7.3	92
2.0+5.0	2.00	5.00	7.00	1.50 ~ 8.00	1.50	0.22 ~ 1.88	7.1	1.1 ~ 8.9	92
2.5+2.5	2.60	2.60	5.20	1.50 ~ 6.18	1.19	0.29 ~ 1.47	5.6	1.4 ~ 7.0	92
2.5+3.5	2.54	3.56	6.10	1.50 ~ 7.16	1.37	0.26 ~ 1.70	6.5	1.3 ~ 8.1	92
2.5+5.0	2.33	4.67	7.00	1.50 ~ 8.00	1.50	0.22 ~ 1.88	7.1	1.1 ~ 8.9	92
3.5+3.5	3.50	3.50	7.00	1.50 ~ 8.00	1.56	0.22 ~ 1.87	7.4	1.1 ~ 8.9	92

Heating [50 Hz, 240 V]

Combination of indoor unit	Capacity of each indoor unit								
	Each capacity (kW)		Total capacity (kW)		Total input (kW)		Total current (A)		Power factor (%)
	A room	B room	Rating	(min ~ max)	Rating	(min ~ max)	Rating	(min ~ max)	Rating
2.0	2.40	---	2.40	1.30 ~ 3.59	0.61	0.30 ~ 0.91	2.8	1.4 ~ 4.2	92
2.5	3.00	---	3.00	1.30 ~ 3.59	0.76	0.30 ~ 0.91	3.4	1.4 ~ 4.2	92
3.5	3.70	---	3.70	1.30 ~ 4.45	0.88	0.28 ~ 1.07	4.0	1.3 ~ 4.9	92
5.0	5.20	---	5.20	1.30 ~ 6.06	1.19	0.26 ~ 1.47	5.4	1.2 ~ 6.7	92
2.0+2.0	2.10	2.10	4.20	1.50 ~ 5.25	0.91	0.28 ~ 1.19	4.1	1.3 ~ 5.4	92
2.0+2.5	2.09	2.61	4.70	1.50 ~ 6.18	1.04	0.28 ~ 1.47	4.7	1.3 ~ 6.7	92
2.0+3.5	2.05	3.60	5.65	1.50 ~ 6.71	1.23	0.26 ~ 1.54	5.6	1.2 ~ 7.0	92
2.0+5.0	2.00	5.00	7.00	1.50 ~ 8.00	1.50	0.22 ~ 1.88	6.8	1.0 ~ 8.6	92
2.5+2.5	2.60	2.60	5.20	1.50 ~ 6.18	1.19	0.29 ~ 1.47	5.4	1.4 ~ 6.7	92
2.5+3.5	2.54	3.56	6.10	1.50 ~ 7.16	1.37	0.26 ~ 1.70	6.2	1.2 ~ 7.7	92
2.5+5.0	2.33	4.67	7.00	1.50 ~ 8.00	1.50	0.22 ~ 1.88	6.8	1.0 ~ 8.6	92
3.5+3.5	3.50	3.50	7.00	1.50 ~ 8.00	1.56	0.22 ~ 1.87	7.1	1.0 ~ 8.5	92

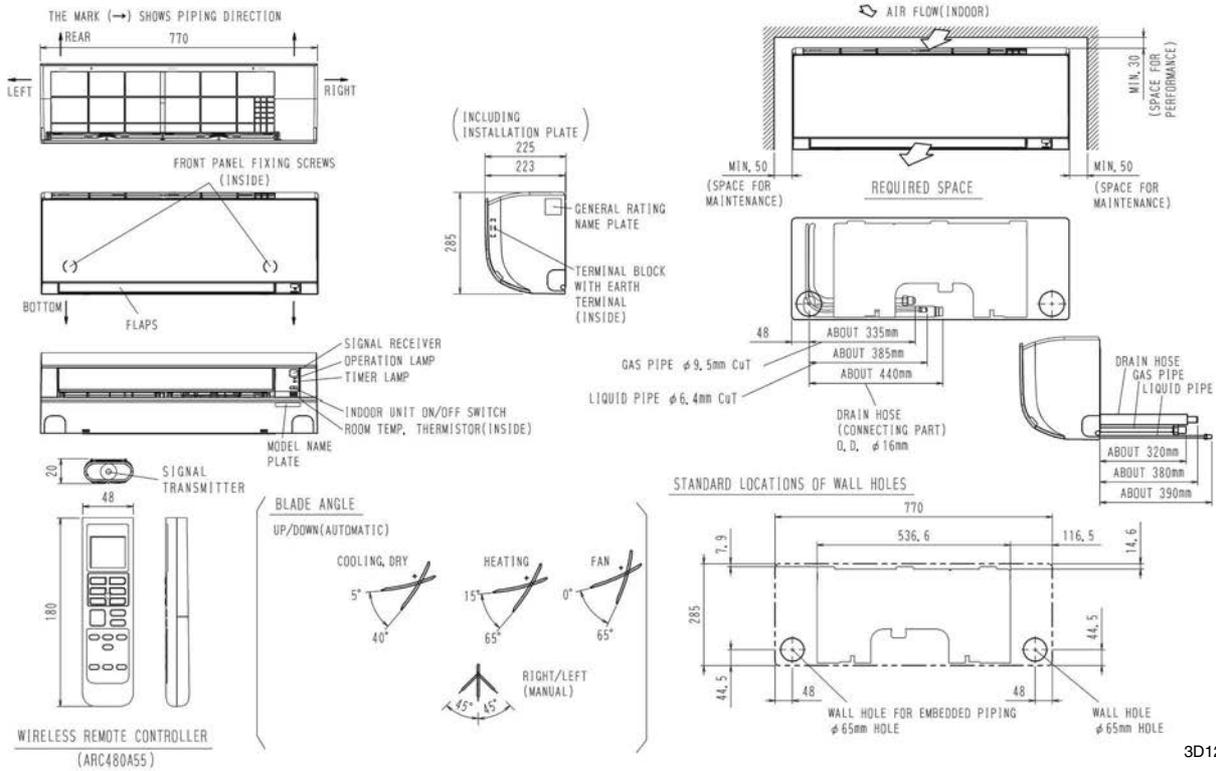
- Notes:**
1. Heating capacity is based on 20°CDB / 15°CWB (Indoor temperature), 7°CDB / 6°CWB (Outdoor temperature).
 2. The total capacity of connected indoor units is up to 7.5 kW.
 3. It is impossible to connect only one indoor unit.
 4. Capacities are based on the following conditions.
Corresponding refrigerant piping length: 5 m
Level difference: 0 m

C: 3D121554

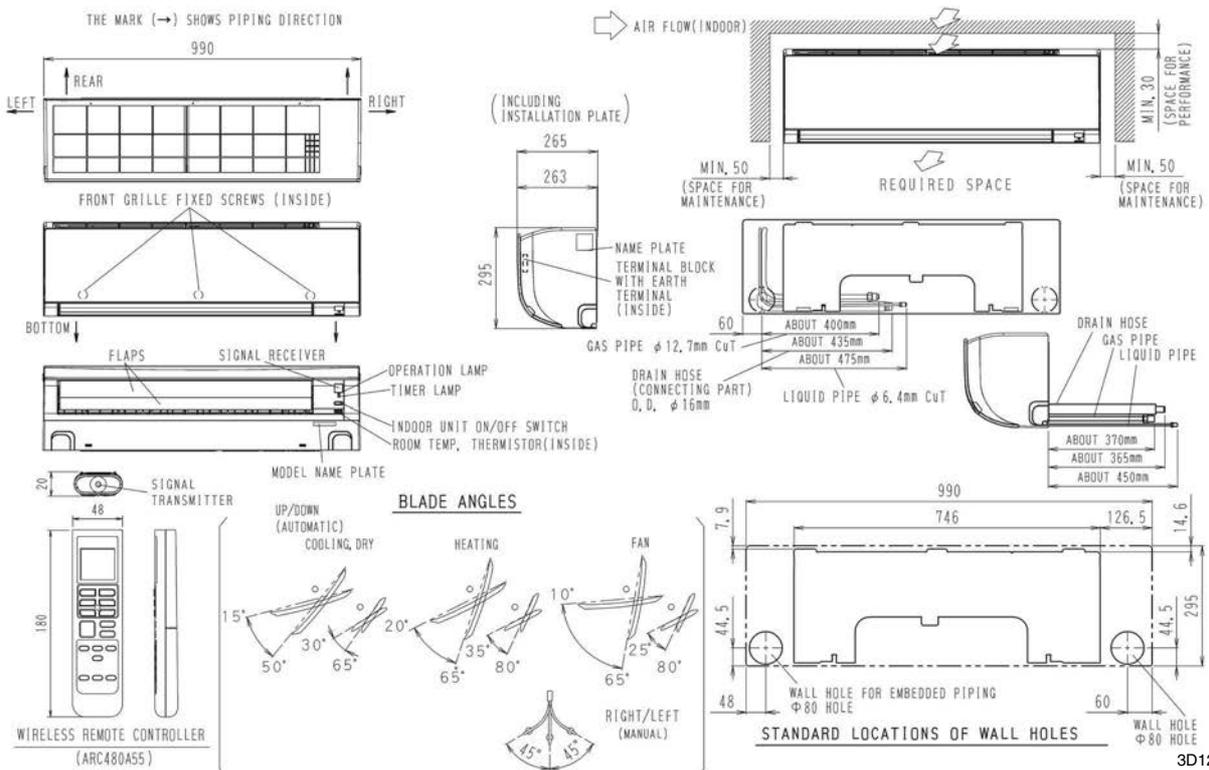
4. Dimensions

4.1 Indoor Unit

CTXF20/25/35TVMA

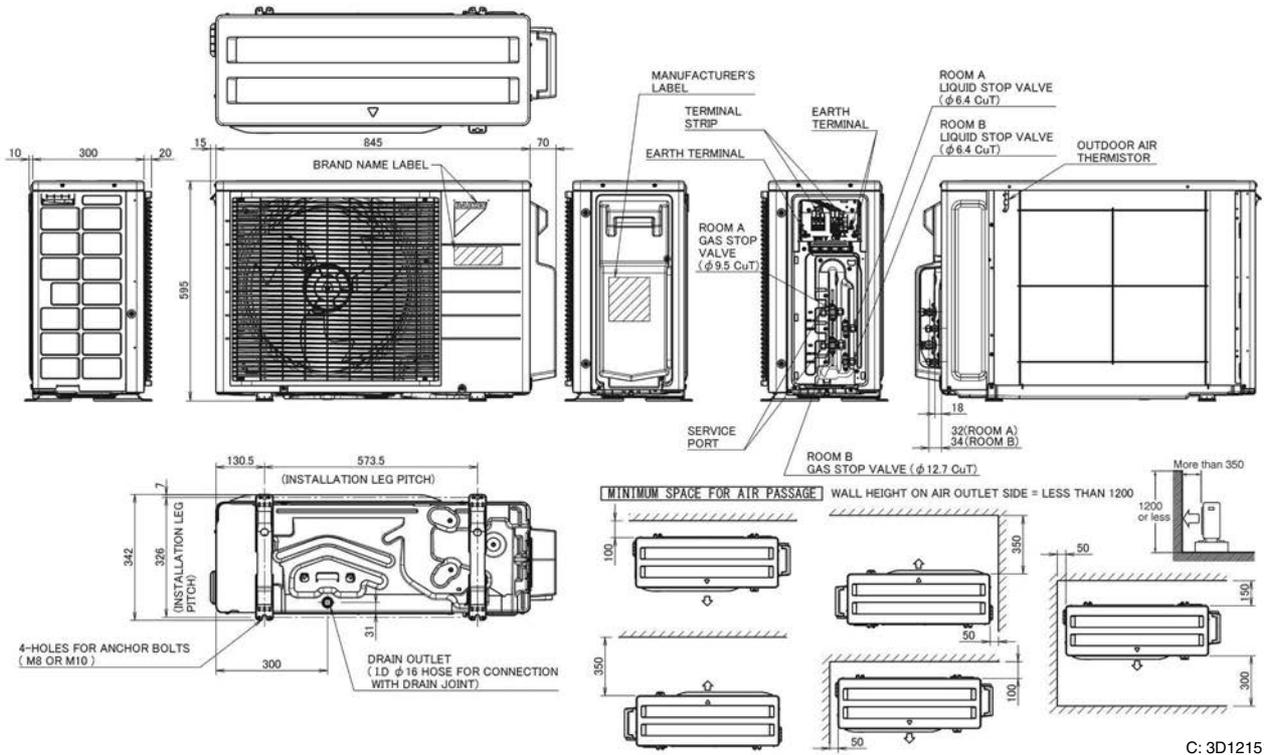


CTXF50TVMA



4.2 Outdoor Unit

2MXF70T2VMA

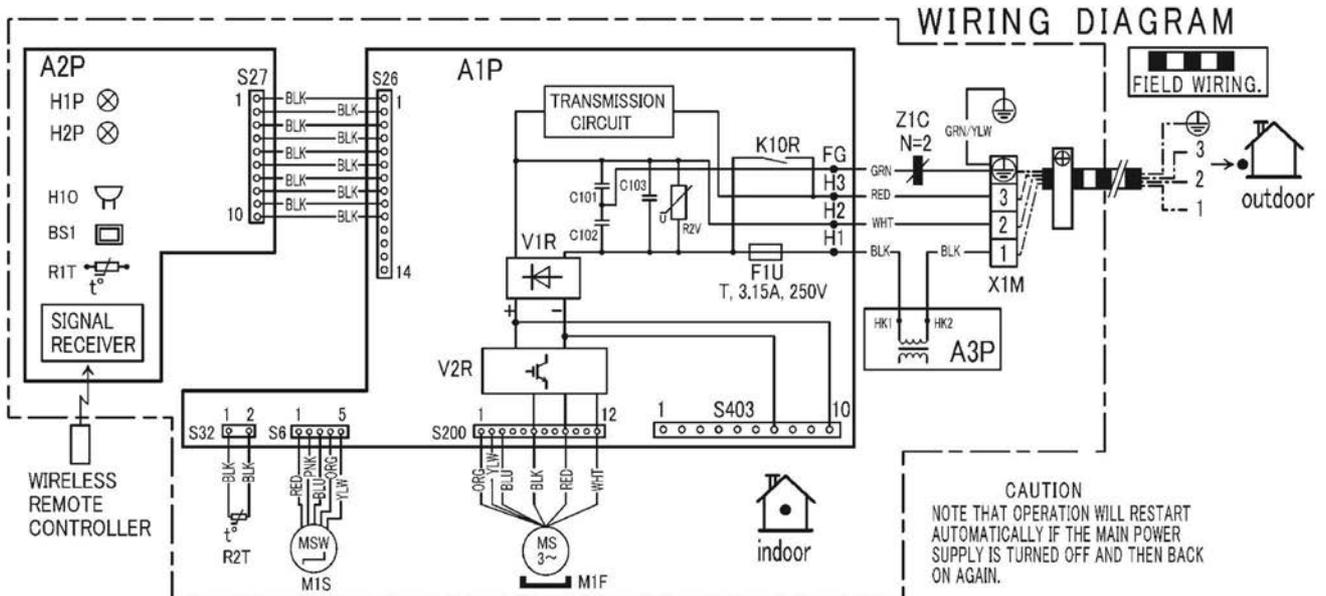


C: 3D121513

5. Wiring Diagrams

5.1 Indoor Unit

CTXF20/25/35TVMA



- | | | | |
|-------------------|---------------------------------|-------------------------|-----------------------|
| FG : FRAME GROUND | MIS : SWING MOTOR | X1M : TERMINAL STRIP | H10 : BUZZER |
| F1U : FUSE | A1P~A3P : PRINTED CIRCUIT BOARD | R2V : VARISTOR | Z1C : FERRITE CORE |
| H1~H3 : HARNESS | R1T, R2T : THERMISTOR | K10R : RELAY | C101~C103 : CAPACITOR |
| HK1, HK2 | S6~S403 : CONNECTOR | V1R : DIODE BRIDGE | H1P, H2P : PILOT LAMP |
| M1F : FAN MOTOR | BS1 : PUSH BUTTON SWITCH | V2R : IGBT POWER MODULE | ⊕ : PROTECTIVE EARTH |

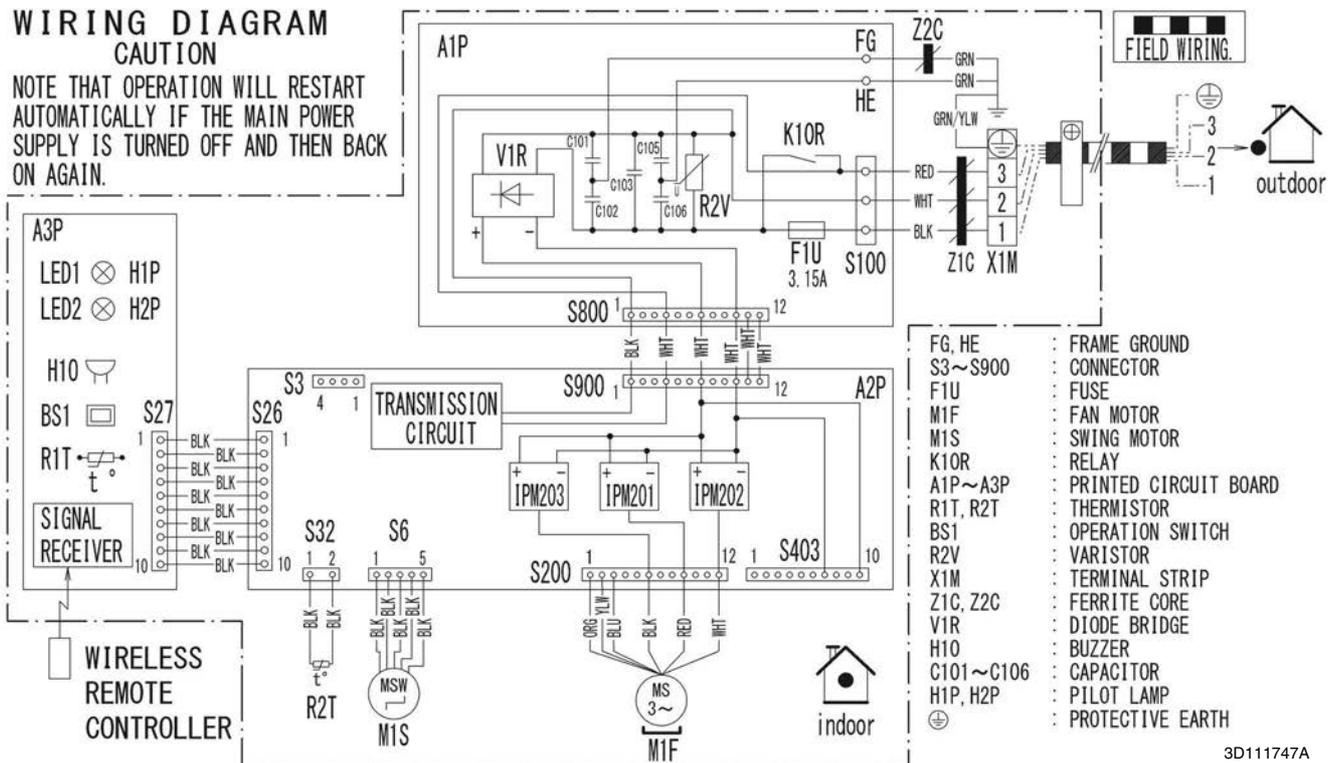
3D118480

CTXF50TVMA

WIRING DIAGRAM

CAUTION

NOTE THAT OPERATION WILL RESTART AUTOMATICALLY IF THE MAIN POWER SUPPLY IS TURNED OFF AND THEN BACK ON AGAIN.

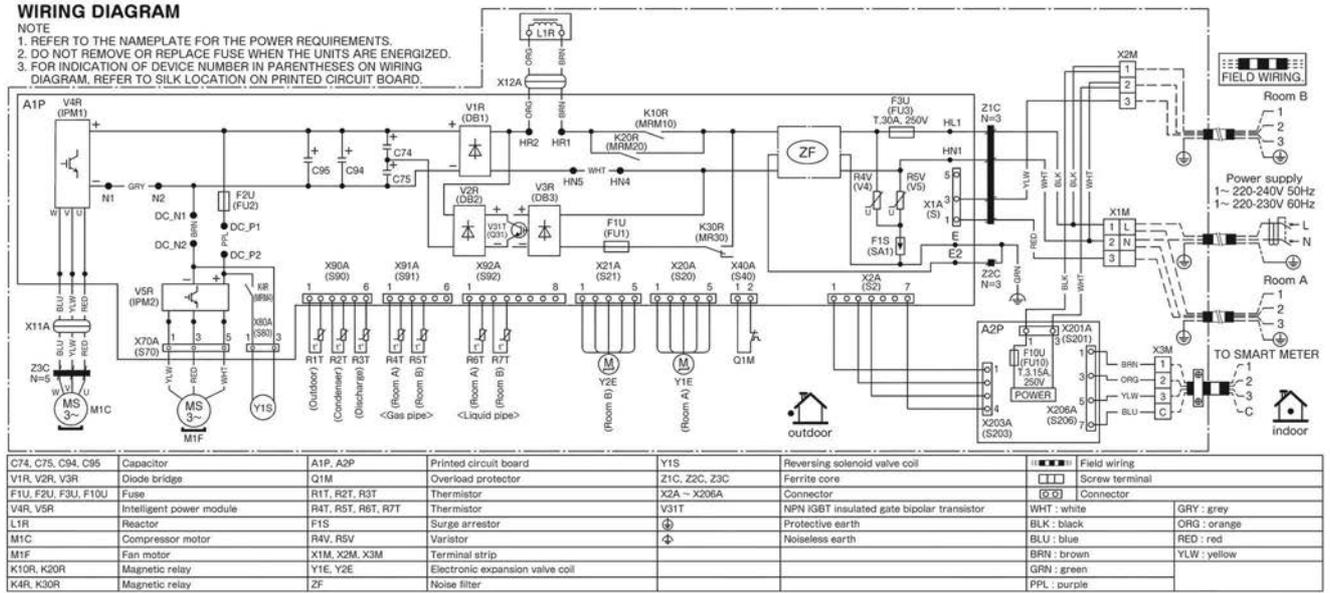


- | | |
|-----------|-------------------------|
| FG, HE | : FRAME GROUND |
| S3~S900 | : CONNECTOR |
| F1U | : FUSE |
| M1F | : FAN MOTOR |
| M1S | : SWING MOTOR |
| K10R | : RELAY |
| A1P~A3P | : PRINTED CIRCUIT BOARD |
| R1T, R2T | : THERMISTOR |
| BS1 | : OPERATION SWITCH |
| R2V | : VARISTOR |
| X1M | : TERMINAL STRIP |
| Z1C, Z2C | : FERRITE CORE |
| V1R | : DIODE BRIDGE |
| H10 | : BUZZER |
| C101~C106 | : CAPACITOR |
| H1P, H2P | : PILOT LAMP |
| ⊕ | : PROTECTIVE EARTH |

3D111747A

5.2 Outdoor Unit

2MXF70T2VMA



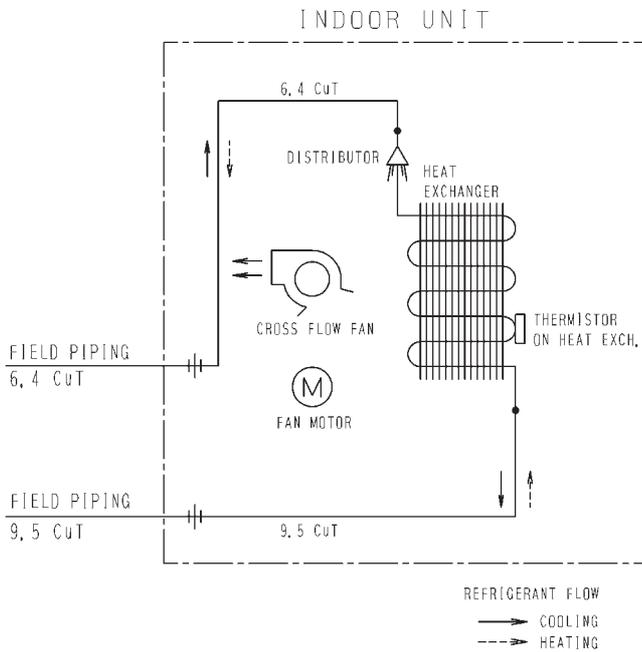
3D138191

6. Piping Diagrams

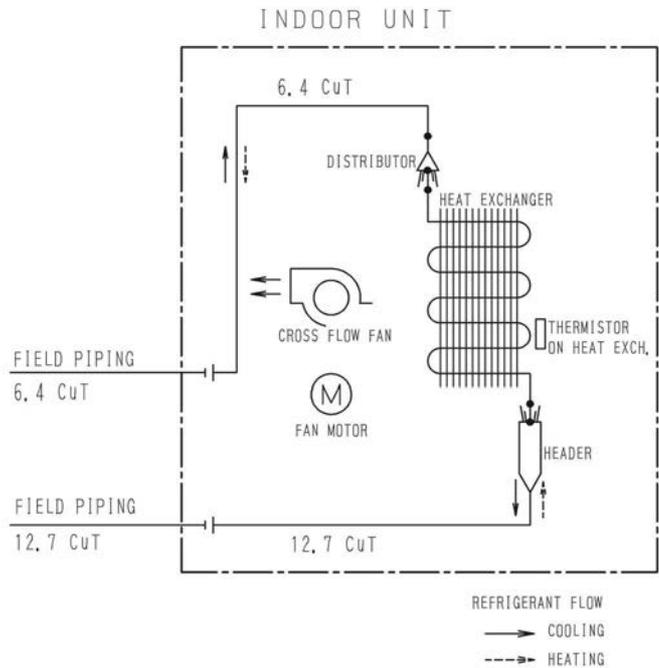
6.1 Indoor Unit

CTXF20/25/35TVMA

CTXF50TVMA



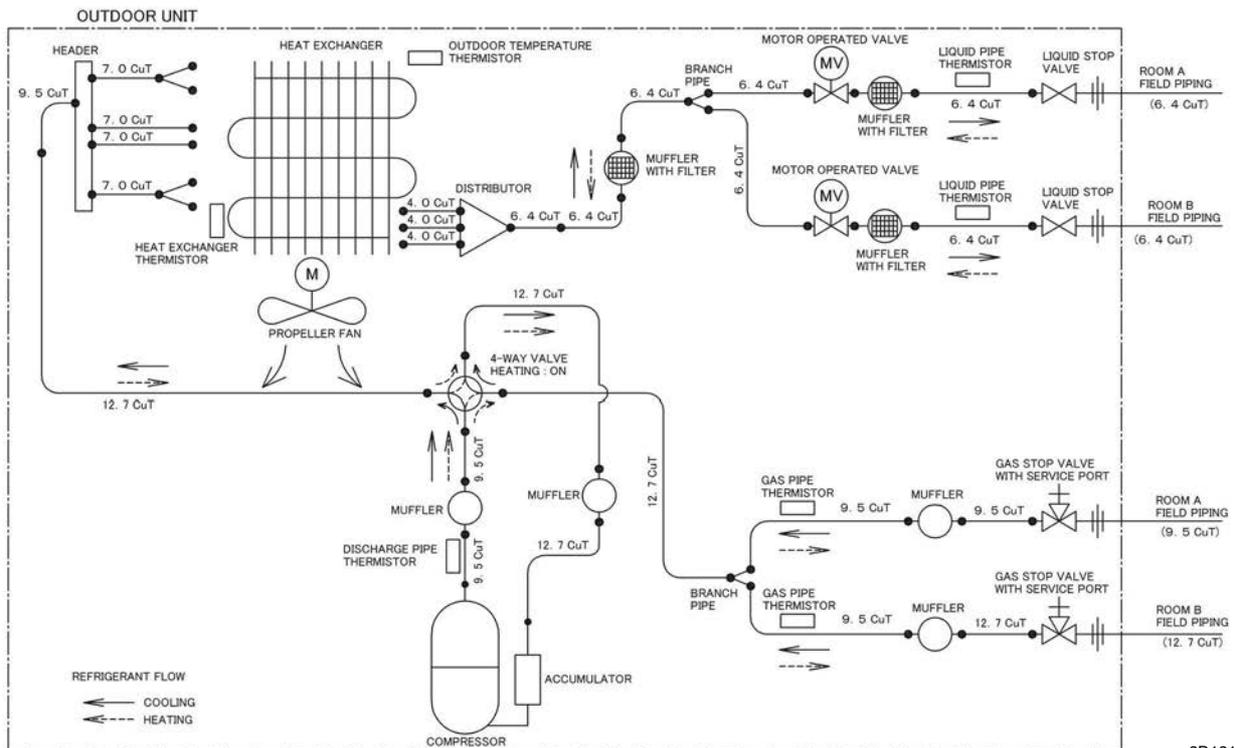
4D116432



4D099370E

6.2 Outdoor Unit

2MXF70T2VMA



3D121511

7. Capacity Tables

7.1 2MXF70T2VMA

Cooling [50 Hz, 230 V]

Combination (Capacity)	Outdoor air temp. °CDB	Indoor air temp.: °CWB											
		14°C		16°C		18°C		19°C		22°C		24°C	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
20	22.0	3.50	0.71	3.66	0.73	3.82	0.74	3.90	0.75	4.14	0.77	4.30	0.78
	25.0	3.40	0.74	3.56	0.75	3.72	0.77	3.80	0.78	4.04	0.80	4.20	0.81
	32.0	3.18	0.81	3.34	0.82	3.50	0.83	3.58	0.84	3.82	0.86	3.98	0.88
	35.0	3.08	0.84	3.24	0.85	3.40	0.86	3.48	0.87	3.72	0.89	3.88	0.91
	40.0	2.92	0.89	3.08	0.90	3.24	0.92	3.32	0.92	3.56	0.95	3.72	0.96
	43.0	2.82	0.92	2.98	0.94	3.14	0.95	3.22	0.96	3.46	0.98	3.62	0.99
	46.0	2.72	0.96	2.88	0.97	3.04	0.99	3.12	0.99	3.36	1.01	3.52	1.03
25	22.0	3.50	0.71	3.66	0.73	3.82	0.74	3.90	0.75	4.14	0.77	4.30	0.78
	25.0	3.40	0.74	3.56	0.75	3.72	0.77	3.80	0.78	4.04	0.80	4.20	0.81
	32.0	3.18	0.81	3.34	0.82	3.50	0.83	3.58	0.84	3.82	0.86	3.98	0.88
	35.0	3.08	0.84	3.24	0.85	3.40	0.86	3.48	0.87	3.72	0.89	3.88	0.91
	40.0	2.92	0.89	3.08	0.90	3.24	0.92	3.32	0.92	3.56	0.95	3.72	0.96
	43.0	2.82	0.92	2.98	0.94	3.14	0.95	3.22	0.96	3.46	0.98	3.62	0.99
	46.0	2.72	0.96	2.88	0.97	3.04	0.99	3.12	0.99	3.36	1.01	3.52	1.03
35	22.0	4.62	1.01	4.83	1.03	5.04	1.05	5.15	1.06	5.46	1.09	5.67	1.11
	25.0	4.49	1.05	4.70	1.07	4.91	1.09	5.02	1.10	5.33	1.13	5.55	1.15
	32.0	4.19	1.14	4.40	1.16	4.61	1.18	4.72	1.19	5.04	1.22	5.25	1.24
	35.0	4.06	1.18	4.27	1.20	4.48	1.22	4.59	1.23	4.91	1.26	5.12	1.28
	40.0	3.85	1.26	4.06	1.28	4.27	1.30	4.38	1.31	4.69	1.34	4.90	1.36
	43.0	3.72	1.31	3.93	1.33	4.14	1.34	4.25	1.35	4.57	1.38	4.78	1.40
	46.0	3.59	1.36	3.80	1.38	4.01	1.39	4.12	1.40	4.44	1.43	4.65	1.45
50	22.0	5.94	1.43	6.22	1.46	6.49	1.49	6.63	1.50	7.03	1.54	7.31	1.57
	25.0	5.78	1.48	6.05	1.51	6.32	1.54	6.46	1.55	6.87	1.59	7.14	1.62
	32.0	5.39	1.61	5.67	1.64	5.94	1.67	6.08	1.68	6.48	1.72	6.76	1.75
	35.0	5.23	1.67	5.50	1.70	5.77	1.73	5.91	1.74	6.32	1.78	6.59	1.81
	40.0	4.95	1.78	5.23	1.81	5.50	1.83	5.63	1.85	6.04	1.89	6.32	1.92
	43.0	4.79	1.85	5.06	1.87	5.33	1.90	5.47	1.92	5.88	1.96	6.15	1.99
	46.0	4.62	1.92	4.90	1.95	5.17	1.97	5.30	1.99	5.71	2.03	5.99	2.06
20+20	22.0	5.33	1.13	5.58	1.16	5.82	1.18	5.94	1.19	6.31	1.22	6.55	1.24
	25.0	5.18	1.17	5.43	1.20	5.67	1.22	5.79	1.23	6.16	1.26	6.40	1.29
	32.0	4.84	1.28	5.08	1.30	5.33	1.32	5.45	1.33	5.81	1.37	6.06	1.39
	35.0	4.69	1.33	4.93	1.35	5.18	1.37	5.30	1.38	5.67	1.41	5.91	1.44
	40.0	4.44	1.41	4.69	1.43	4.93	1.46	5.05	1.47	5.42	1.50	5.66	1.52
	43.0	4.29	1.46	4.54	1.49	4.78	1.51	4.91	1.52	5.27	1.55	5.52	1.58
	46.0	4.15	1.52	4.39	1.54	4.63	1.56	4.76	1.58	5.12	1.61	5.37	1.63
20+25	22.0	6.04	1.43	6.31	1.46	6.59	1.49	6.73	1.50	7.14	1.54	7.42	1.57
	25.0	5.87	1.48	6.14	1.51	6.42	1.54	6.56	1.55	6.97	1.59	7.25	1.62
	32.0	5.48	1.61	5.75	1.64	6.03	1.67	6.17	1.68	6.58	1.72	6.86	1.75
	35.0	5.31	1.67	5.59	1.70	5.86	1.73	6.00	1.74	6.41	1.78	6.69	1.81
	40.0	5.03	1.78	5.31	1.81	5.58	1.83	5.72	1.85	6.14	1.89	6.41	1.92
	43.0	4.86	1.85	5.14	1.87	5.41	1.90	5.55	1.92	5.97	1.96	6.24	1.99
	46.0	4.69	1.92	4.97	1.95	5.25	1.97	5.39	1.99	5.80	2.03	6.08	2.06
20+35	22.0	6.51	1.53	6.81	1.56	7.10	1.59	7.25	1.60	7.70	1.65	8.00	1.68
	25.0	6.33	1.58	6.63	1.61	6.92	1.64	7.07	1.66	7.52	1.70	7.82	1.73
	32.0	5.91	1.72	6.20	1.75	6.50	1.78	6.65	1.80	7.10	1.84	7.40	1.87
	35.0	5.72	1.79	6.02	1.82	6.32	1.85	6.47	1.86	6.92	1.91	7.22	1.94
	40.0	5.42	1.90	5.72	1.93	6.02	1.96	6.17	1.98	6.62	2.02	6.91	2.05
	43.0	5.24	1.97	5.54	2.00	5.84	2.03	5.99	2.05	6.44	2.09	6.73	2.12
	46.0	5.06	2.05	5.36	2.08	5.66	2.11	5.81	2.12	6.25	2.17	6.55	2.20
20+50	22.0	7.54	1.70	7.89	1.73	8.24	1.77	8.41	1.78	8.93	1.83	9.27	1.87
	25.0	7.33	1.76	7.68	1.80	8.03	1.83	8.20	1.85	8.72	1.89	9.06	1.93
	32.0	6.85	1.92	7.19	1.95	7.54	1.98	7.71	2.00	8.23	2.05	8.57	2.08
	35.0	6.64	1.99	6.98	2.02	7.33	2.06	7.50	2.07	8.02	2.12	8.36	2.15
	40.0	6.29	2.12	6.63	2.15	6.98	2.18	7.15	2.20	7.67	2.25	8.01	2.28
	43.0	6.08	2.20	6.42	2.23	6.77	2.26	6.94	2.28	7.46	2.33	7.81	2.36
	46.0	5.87	2.28	6.21	2.31	6.56	2.35	6.73	2.36	7.25	2.41	7.60	2.45
25+25	22.0	6.04	1.43	6.31	1.46	6.59	1.49	6.73	1.50	7.14	1.54	7.42	1.57
	25.0	5.87	1.48	6.14	1.51	6.42	1.54	6.56	1.55	6.97	1.59	7.25	1.62
	32.0	5.48	1.61	5.75	1.64	6.03	1.67	6.17	1.68	6.58	1.72	6.86	1.75
	35.0	5.31	1.67	5.59	1.70	5.86	1.73	6.00	1.74	6.41	1.78	6.69	1.81
	40.0	5.03	1.78	5.31	1.81	5.58	1.83	5.72	1.85	6.14	1.89	6.41	1.92
	43.0	4.86	1.85	5.14	1.87	5.41	1.90	5.55	1.92	5.97	1.96	6.24	1.99
	46.0	4.69	1.92	4.97	1.95	5.25	1.97	5.39	1.99	5.80	2.03	6.08	2.06

Combination (Capacity)	Outdoor air temp. °CDB	Indoor air temp.: °CWB											
		14°C		16°C		18°C		19°C		22°C		24°C	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
25+35	22.0	6.95	1.68	7.27	1.72	7.59	1.75	7.75	1.77	8.22	1.82	8.54	1.85
	25.0	6.76	1.75	7.08	1.78	7.39	1.81	7.55	1.83	8.03	1.88	8.35	1.91
	32.0	6.31	1.90	6.63	1.93	6.94	1.96	7.10	1.98	7.58	2.03	7.90	2.06
	35.0	6.11	1.97	6.43	2.00	6.75	2.04	6.91	2.05	7.39	2.10	7.71	2.13
	40.0	5.79	2.10	6.11	2.13	6.43	2.16	6.59	2.18	7.07	2.23	7.38	2.26
	43.0	5.60	2.18	5.92	2.21	6.24	2.24	6.40	2.26	6.87	2.31	7.19	2.34
	46.0	5.41	2.26	5.72	2.29	6.04	2.32	6.20	2.34	6.68	2.39	7.00	2.42
25+50	22.0	7.54	1.70	7.89	1.73	8.24	1.77	8.41	1.78	8.93	1.83	9.27	1.87
	25.0	7.33	1.76	7.68	1.80	8.03	1.83	8.20	1.85	8.72	1.89	9.06	1.93
	32.0	6.85	1.92	7.19	1.95	7.54	1.98	7.71	2.00	8.23	2.05	8.57	2.08
	35.0	6.64	1.99	6.98	2.02	7.33	2.06	7.50	2.07	8.02	2.12	8.36	2.15
	40.0	6.29	2.12	6.63	2.15	6.98	2.18	7.15	2.20	7.67	2.25	8.01	2.28
	43.0	6.08	2.20	6.42	2.23	6.77	2.26	6.94	2.28	7.46	2.33	7.81	2.36
	46.0	5.87	2.28	6.21	2.31	6.56	2.35	6.73	2.36	7.25	2.41	7.60	2.45
35+35	22.0	7.31	1.69	7.65	1.73	7.98	1.76	8.15	1.78	8.65	1.82	8.99	1.86
	25.0	7.11	1.75	7.44	1.79	7.78	1.82	7.95	1.84	8.45	1.89	8.78	1.92
	32.0	6.64	1.91	6.97	1.94	7.31	1.97	7.47	1.99	7.98	2.04	8.31	2.07
	35.0	6.43	1.98	6.77	2.01	7.10	2.05	7.27	2.06	7.77	2.11	8.11	2.14
	40.0	6.09	2.11	6.43	2.14	6.76	2.17	6.93	2.19	7.43	2.24	7.77	2.27
	43.0	5.89	2.19	6.23	2.22	6.56	2.25	6.73	2.27	7.23	2.32	7.57	2.35
	46.0	5.69	2.27	6.02	2.30	6.36	2.34	6.53	2.35	7.03	2.40	7.36	2.43

Symbols:

TC : Total capacity (kW)
 PI : Power input (kW)

Notes:

- Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 5 m
 Level difference : 0 m
- indicates the value at the standard condition.
- The table value is based on 230V.

C: 3D121562

Cooling [50 Hz, 240 V]

Combination (Capacity)	Outdoor air temp. °CDB	Indoor air temp.: °CWB											
		14°C		16°C		18°C		19°C		22°C		24°C	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
20	22.0	3.50	0.71	3.66	0.73	3.82	0.74	3.90	0.75	4.14	0.77	4.30	0.78
	25.0	3.40	0.74	3.56	0.75	3.72	0.77	3.80	0.78	4.04	0.80	4.20	0.81
	32.0	3.18	0.81	3.34	0.82	3.50	0.83	3.58	0.84	3.82	0.86	3.98	0.88
	35.0	3.08	0.84	3.24	0.85	3.40	0.86	3.48	0.87	3.72	0.89	3.88	0.91
	40.0	2.92	0.89	3.08	0.90	3.24	0.92	3.32	0.92	3.56	0.95	3.72	0.96
	43.0	2.82	0.92	2.98	0.94	3.14	0.95	3.22	0.96	3.46	0.98	3.62	0.99
	46.0	2.72	0.96	2.88	0.97	3.04	0.99	3.12	0.99	3.36	1.01	3.52	1.03
25	22.0	3.50	0.71	3.66	0.73	3.82	0.74	3.90	0.75	4.14	0.77	4.30	0.78
	25.0	3.40	0.74	3.56	0.75	3.72	0.77	3.80	0.78	4.04	0.80	4.20	0.81
	32.0	3.18	0.81	3.34	0.82	3.50	0.83	3.58	0.84	3.82	0.86	3.98	0.88
	35.0	3.08	0.84	3.24	0.85	3.40	0.86	3.48	0.87	3.72	0.89	3.88	0.91
	40.0	2.92	0.89	3.08	0.90	3.24	0.92	3.32	0.92	3.56	0.95	3.72	0.96
	43.0	2.82	0.92	2.98	0.94	3.14	0.95	3.22	0.96	3.46	0.98	3.62	0.99
	46.0	2.72	0.96	2.88	0.97	3.04	0.99	3.12	0.99	3.36	1.01	3.52	1.03
35	22.0	4.62	1.01	4.83	1.03	5.04	1.05	5.15	1.06	5.46	1.09	5.67	1.11
	25.0	4.49	1.05	4.70	1.07	4.91	1.09	5.02	1.10	5.33	1.13	5.55	1.15
	32.0	4.19	1.14	4.40	1.16	4.61	1.18	4.72	1.19	5.04	1.22	5.25	1.24
	35.0	4.06	1.18	4.27	1.20	4.48	1.22	4.59	1.23	4.91	1.26	5.12	1.28
	40.0	3.85	1.26	4.06	1.28	4.27	1.30	4.38	1.31	4.69	1.34	4.90	1.36
	43.0	3.72	1.31	3.93	1.33	4.14	1.34	4.25	1.35	4.57	1.38	4.78	1.40
	46.0	3.59	1.36	3.80	1.38	4.01	1.39	4.12	1.40	4.44	1.43	4.65	1.45
50	22.0	5.94	1.43	6.22	1.46	6.49	1.49	6.63	1.50	7.03	1.54	7.31	1.57
	25.0	5.78	1.48	6.05	1.51	6.32	1.54	6.46	1.55	6.87	1.59	7.14	1.62
	32.0	5.39	1.61	5.67	1.64	5.94	1.67	6.08	1.68	6.48	1.72	6.76	1.75
	35.0	5.23	1.67	5.50	1.70	5.77	1.73	5.91	1.74	6.32	1.78	6.59	1.81
	40.0	4.95	1.78	5.23	1.81	5.50	1.83	5.63	1.85	6.04	1.89	6.32	1.92
	43.0	4.79	1.85	5.06	1.87	5.33	1.90	5.47	1.92	5.88	1.96	6.15	1.99
	46.0	4.62	1.92	4.90	1.95	5.17	1.97	5.30	1.99	5.71	2.03	5.99	2.06
20+20	22.0	5.33	1.13	5.58	1.16	5.82	1.18	5.94	1.19	6.31	1.22	6.55	1.24
	25.0	5.18	1.17	5.43	1.20	5.67	1.22	5.79	1.23	6.16	1.26	6.40	1.29
	32.0	4.84	1.28	5.08	1.30	5.33	1.32	5.45	1.33	5.81	1.37	6.06	1.39
	35.0	4.69	1.33	4.93	1.35	5.18	1.37	5.30	1.38	5.67	1.41	5.91	1.44
	40.0	4.44	1.41	4.69	1.43	4.93	1.46	5.05	1.47	5.42	1.50	5.66	1.52
	43.0	4.29	1.46	4.54	1.49	4.78	1.51	4.91	1.52	5.27	1.55	5.52	1.58
	46.0	4.15	1.52	4.39	1.54	4.63	1.56	4.76	1.58	5.12	1.61	5.37	1.63
20+25	22.0	6.04	1.43	6.31	1.46	6.59	1.49	6.73	1.50	7.14	1.54	7.42	1.57
	25.0	5.87	1.48	6.14	1.51	6.42	1.54	6.56	1.55	6.97	1.59	7.25	1.62
	32.0	5.48	1.61	5.75	1.64	6.03	1.67	6.17	1.68	6.58	1.72	6.86	1.75
	35.0	5.31	1.67	5.59	1.70	5.86	1.73	6.00	1.74	6.41	1.78	6.69	1.81
	40.0	5.03	1.78	5.31	1.81	5.58	1.83	5.72	1.85	6.14	1.89	6.41	1.92
	43.0	4.86	1.85	5.14	1.87	5.41	1.90	5.55	1.92	5.97	1.96	6.24	1.99
	46.0	4.69	1.92	4.97	1.95	5.25	1.97	5.39	1.99	5.80	2.03	6.08	2.06
20+35	22.0	6.51	1.53	6.81	1.56	7.10	1.59	7.25	1.60	7.70	1.65	8.00	1.68
	25.0	6.33	1.58	6.63	1.61	6.92	1.64	7.07	1.66	7.52	1.70	7.82	1.73
	32.0	5.91	1.72	6.20	1.75	6.50	1.78	6.65	1.80	7.10	1.84	7.40	1.87
	35.0	5.72	1.79	6.02	1.82	6.32	1.85	6.47	1.86	6.92	1.91	7.22	1.94
	40.0	5.42	1.90	5.72	1.93	6.02	1.96	6.17	1.98	6.62	2.02	6.91	2.05
	43.0	5.24	1.97	5.54	2.00	5.84	2.03	5.99	2.05	6.44	2.09	6.73	2.12
	46.0	5.06	2.05	5.36	2.08	5.66	2.11	5.81	2.12	6.25	2.17	6.55	2.20
20+50	22.0	7.54	1.70	7.89	1.73	8.24	1.77	8.41	1.78	8.93	1.83	9.27	1.87
	25.0	7.33	1.76	7.68	1.80	8.03	1.83	8.20	1.85	8.72	1.89	9.06	1.93
	32.0	6.85	1.92	7.19	1.95	7.54	1.98	7.71	2.00	8.23	2.05	8.57	2.08
	35.0	6.64	1.99	6.98	2.02	7.33	2.06	7.50	2.07	8.02	2.12	8.36	2.15
	40.0	6.29	2.12	6.63	2.15	6.98	2.18	7.15	2.20	7.67	2.25	8.01	2.28
	43.0	6.08	2.20	6.42	2.23	6.77	2.26	6.94	2.28	7.46	2.33	7.81	2.36
	46.0	5.87	2.28	6.21	2.31	6.56	2.35	6.73	2.36	7.25	2.41	7.60	2.45
25+25	22.0	6.04	1.43	6.31	1.46	6.59	1.49	6.73	1.50	7.14	1.54	7.42	1.57
	25.0	5.87	1.48	6.14	1.51	6.42	1.54	6.56	1.55	6.97	1.59	7.25	1.62
	32.0	5.48	1.61	5.75	1.64	6.03	1.67	6.17	1.68	6.58	1.72	6.86	1.75
	35.0	5.31	1.67	5.59	1.70	5.86	1.73	6.00	1.74	6.41	1.78	6.69	1.81
	40.0	5.03	1.78	5.31	1.81	5.58	1.83	5.72	1.85	6.14	1.89	6.41	1.92
	43.0	4.86	1.85	5.14	1.87	5.41	1.90	5.55	1.92	5.97	1.96	6.24	1.99
	46.0	4.69	1.92	4.97	1.95	5.25	1.97	5.39	1.99	5.80	2.03	6.08	2.06

Combination (Capacity)	Outdoor air temp. °CDB	Indoor air temp.: °CWB											
		14°C		16°C		18°C		19°C		22°C		24°C	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
25+35	22.0	6.95	1.68	7.27	1.72	7.59	1.75	7.75	1.77	8.22	1.82	8.54	1.85
	25.0	6.76	1.75	7.08	1.78	7.39	1.81	7.55	1.83	8.03	1.88	8.35	1.91
	32.0	6.31	1.90	6.63	1.93	6.94	1.96	7.10	1.98	7.58	2.03	7.90	2.06
	35.0	6.11	1.97	6.43	2.00	6.75	2.04	6.91	2.05	7.39	2.10	7.71	2.13
	40.0	5.79	2.10	6.11	2.13	6.43	2.16	6.59	2.18	7.07	2.23	7.38	2.26
	43.0	5.60	2.18	5.92	2.21	6.24	2.24	6.40	2.26	6.87	2.31	7.19	2.34
	46.0	5.41	2.26	5.72	2.29	6.04	2.32	6.20	2.34	6.68	2.39	7.00	2.42
25+50	22.0	7.54	1.70	7.89	1.73	8.24	1.77	8.41	1.78	8.93	1.83	9.27	1.87
	25.0	7.33	1.76	7.68	1.80	8.03	1.83	8.20	1.85	8.72	1.89	9.06	1.93
	32.0	6.85	1.92	7.19	1.95	7.54	1.98	7.71	2.00	8.23	2.05	8.57	2.08
	35.0	6.64	1.99	6.98	2.02	7.33	2.06	7.50	2.07	8.02	2.12	8.36	2.15
	40.0	6.29	2.12	6.63	2.15	6.98	2.18	7.15	2.20	7.67	2.25	8.01	2.28
	43.0	6.08	2.20	6.42	2.23	6.77	2.26	6.94	2.28	7.46	2.33	7.81	2.36
	46.0	5.87	2.28	6.21	2.31	6.56	2.35	6.73	2.36	7.25	2.41	7.60	2.45
35+35	22.0	7.31	1.69	7.65	1.73	7.98	1.76	8.15	1.78	8.65	1.82	8.99	1.86
	25.0	7.11	1.75	7.44	1.79	7.78	1.82	7.95	1.84	8.45	1.89	8.78	1.92
	32.0	6.64	1.91	6.97	1.94	7.31	1.97	7.47	1.99	7.98	2.04	8.31	2.07
	35.0	6.43	1.98	6.77	2.01	7.10	2.05	7.27	2.06	7.77	2.11	8.11	2.14
	40.0	6.09	2.11	6.43	2.14	6.76	2.17	6.93	2.19	7.43	2.24	7.77	2.27
	43.0	5.89	2.19	6.23	2.22	6.56	2.25	6.73	2.27	7.23	2.32	7.57	2.35
	46.0	5.69	2.27	6.02	2.30	6.36	2.34	6.53	2.35	7.03	2.40	7.36	2.43

Symbols:

TC : Total capacity (kW)
 PI : Power input (kW)

Notes:

- Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 5 m
 Level difference : 0 m
- indicates the value at the standard condition.
- The table value is based on 240V.

C: 3D121563

Heating [50 Hz, 230 V]

Combination (Capacity)	Indoor air temp. °CDB	Outdoor air temp.: °CWB													
		-15°C		-10°C		-5°C		0°C		6°C		10°C		15°C	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
20	16.0	1.91	0.73	2.17	0.76	2.40	0.79	2.59	0.81	3.69	0.89	4.01	0.92	4.42	0.96
	18.0	1.87	0.74	2.12	0.77	2.36	0.79	2.55	0.82	3.64	0.90	3.96	0.93	4.37	0.97
	20.0	1.82	0.75	2.08	0.77	2.31	0.80	2.51	0.83	3.59	0.91	3.91	0.94	4.32	0.98
	21.0	1.72	0.75	1.99	0.78	2.23	0.80	2.43	0.83	3.49	0.91	3.82	0.94	4.22	0.98
	22.0	1.77	0.76	2.03	0.78	2.27	0.81	2.47	0.83	3.54	0.92	3.86	0.95	4.27	0.99
	24.0	1.72	0.76	1.99	0.79	2.23	0.82	2.43	0.84	3.49	0.93	3.82	0.96	4.22	0.99
25	16.0	1.91	0.73	2.17	0.76	2.40	0.79	2.59	0.81	3.69	0.89	4.01	0.92	4.42	0.96
	18.0	1.87	0.74	2.12	0.77	2.36	0.79	2.55	0.82	3.64	0.90	3.96	0.93	4.37	0.97
	20.0	1.82	0.75	2.08	0.77	2.31	0.80	2.51	0.83	3.59	0.91	3.91	0.94	4.32	0.98
	21.0	1.72	0.75	1.99	0.78	2.23	0.80	2.43	0.83	3.49	0.91	3.82	0.94	4.22	0.98
	22.0	1.77	0.76	2.03	0.78	2.27	0.81	2.47	0.83	3.54	0.92	3.86	0.95	4.27	0.99
	24.0	1.72	0.76	1.99	0.79	2.23	0.82	2.43	0.84	3.49	0.93	3.82	0.96	4.22	0.99
35	16.0	2.37	0.86	2.69	0.89	2.97	0.92	3.22	0.95	4.57	1.05	4.97	1.09	5.48	1.13
	18.0	2.31	0.87	2.63	0.90	2.92	0.93	3.17	0.96	4.51	1.06	4.91	1.10	5.42	1.14
	20.0	2.25	0.88	2.57	0.91	2.87	0.94	3.12	0.97	4.45	1.07	4.85	1.11	5.35	1.15
	21.0	2.14	0.88	2.46	0.91	2.76	0.95	3.02	0.98	4.33	1.07	4.73	1.11	5.23	1.15
	22.0	2.19	0.89	2.52	0.92	2.82	0.95	3.07	0.98	4.39	1.08	4.79	1.11	5.29	1.16
	24.0	2.14	0.90	2.46	0.93	2.76	0.96	3.02	0.99	4.33	1.09	4.73	1.12	5.23	1.17
50	16.0	3.23	1.18	3.66	1.22	4.05	1.27	4.38	1.31	6.23	1.44	6.77	1.49	7.46	1.55
	18.0	3.15	1.19	3.58	1.24	3.98	1.28	4.31	1.32	6.14	1.46	6.69	1.51	7.38	1.57
	20.0	3.07	1.21	3.51	1.25	3.91	1.29	4.24	1.34	6.06	1.47	6.61	1.52	7.29	1.58
	21.0	2.91	1.21	3.35	1.26	3.76	1.30	4.11	1.34	5.89	1.48	6.44	1.53	7.12	1.59
	22.0	2.99	1.22	3.43	1.26	3.84	1.31	4.18	1.35	5.98	1.48	6.52	1.53	7.21	1.59
	24.0	2.91	1.23	3.35	1.28	3.76	1.32	4.11	1.36	5.89	1.50	6.44	1.54	7.12	1.61
20+20	16.0	2.80	0.96	3.17	0.99	3.51	1.03	3.79	1.06	5.39	1.17	5.87	1.21	6.46	1.26
	18.0	2.73	0.97	3.10	1.00	3.45	1.04	3.73	1.07	5.32	1.18	5.80	1.22	6.39	1.27
	20.0	2.66	0.98	3.04	1.01	3.39	1.05	3.68	1.08	5.25	1.19	5.72	1.23	6.32	1.28
	21.0	2.52	0.98	2.91	1.02	3.26	1.05	3.56	1.09	5.11	1.20	5.58	1.23	6.17	1.28
	22.0	2.59	0.99	2.97	1.02	3.32	1.06	3.62	1.09	5.18	1.20	5.65	1.24	6.24	1.29
	24.0	2.52	1.00	2.91	1.03	3.26	1.07	3.56	1.10	5.11	1.21	5.58	1.25	6.17	1.30
20+25	16.0	3.29	1.18	3.73	1.22	4.13	1.27	4.47	1.31	6.35	1.44	6.91	1.49	7.61	1.55
	18.0	3.21	1.19	3.65	1.24	4.06	1.28	4.40	1.32	6.27	1.46	6.82	1.51	7.52	1.57
	20.0	3.13	1.21	3.58	1.25	3.98	1.29	4.33	1.34	6.18	1.47	6.74	1.52	7.44	1.58
	21.0	2.97	1.21	3.42	1.26	3.84	1.30	4.19	1.34	6.01	1.48	6.57	1.53	7.27	1.59
	22.0	3.05	1.22	3.50	1.26	3.91	1.31	4.26	1.35	6.09	1.48	6.65	1.53	7.35	1.59
	24.0	2.97	1.23	3.42	1.28	3.84	1.32	4.19	1.36	6.01	1.50	6.57	1.54	7.27	1.61
20+35	16.0	3.58	1.24	4.05	1.28	4.49	1.33	4.85	1.37	6.90	1.51	7.50	1.56	8.26	1.63
	18.0	3.49	1.25	3.97	1.30	4.41	1.34	4.77	1.39	6.80	1.53	7.41	1.58	8.17	1.64
	20.0	3.40	1.27	3.88	1.31	4.33	1.36	4.70	1.40	6.71	1.54	7.32	1.59	8.07	1.65
	21.0	3.22	1.27	3.71	1.32	4.17	1.36	4.55	1.41	6.52	1.55	7.13	1.60	7.89	1.66
	22.0	3.31	1.28	3.80	1.32	4.25	1.37	4.62	1.41	6.62	1.55	7.22	1.60	7.98	1.67
	24.0	3.22	1.29	3.71	1.34	4.17	1.38	4.55	1.43	6.52	1.57	7.13	1.62	7.89	1.68
20+50	16.0	4.26	1.51	4.83	1.57	5.35	1.62	5.78	1.68	8.22	1.85	8.94	1.91	9.85	1.99
	18.0	4.16	1.53	4.73	1.58	5.25	1.64	5.69	1.69	8.11	1.86	8.83	1.92	9.74	2.00
	20.0	4.05	1.55	4.63	1.60	5.16	1.65	5.60	1.71	8.00	1.88	8.72	1.94	9.63	2.02
	21.0	3.84	1.55	4.43	1.61	4.97	1.66	5.42	1.72	7.78	1.89	8.50	1.95	9.41	2.03
	22.0	3.95	1.56	4.53	1.62	5.06	1.67	5.51	1.72	7.89	1.90	8.61	1.96	9.52	2.04
	24.0	3.84	1.58	4.43	1.63	4.97	1.69	5.42	1.74	7.78	1.91	8.50	1.98	9.41	2.05
25+25	16.0	3.29	1.18	3.73	1.22	4.13	1.27	4.47	1.31	6.35	1.44	6.91	1.49	7.61	1.55
	18.0	3.21	1.19	3.65	1.24	4.06	1.28	4.40	1.32	6.27	1.46	6.82	1.51	7.52	1.57
	20.0	3.13	1.21	3.58	1.25	3.98	1.29	4.33	1.34	6.18	1.47	6.74	1.52	7.44	1.58
	21.0	2.97	1.21	3.42	1.26	3.84	1.30	4.19	1.34	6.01	1.48	6.57	1.53	7.27	1.59
	22.0	3.05	1.22	3.50	1.26	3.91	1.31	4.26	1.35	6.09	1.48	6.65	1.53	7.35	1.59
	24.0	2.97	1.23	3.42	1.28	3.84	1.32	4.19	1.36	6.01	1.50	6.57	1.54	7.27	1.61
25+35	16.0	3.82	1.37	4.32	1.42	4.79	1.47	5.17	1.52	7.36	1.67	8.00	1.73	8.81	1.80
	18.0	3.72	1.38	4.23	1.43	4.70	1.48	5.09	1.53	7.26	1.68	7.91	1.74	8.71	1.81
	20.0	3.63	1.40	4.14	1.45	4.62	1.50	5.01	1.54	7.16	1.70	7.81	1.76	8.62	1.83
	21.0	3.44	1.40	3.96	1.45	4.45	1.50	4.85	1.55	6.96	1.71	7.61	1.76	8.42	1.83
	22.0	3.53	1.41	4.05	1.46	4.53	1.51	4.93	1.56	7.06	1.72	7.71	1.77	8.52	1.84
	24.0	3.44	1.43	3.96	1.48	4.45	1.53	4.85	1.57	6.96	1.73	7.61	1.79	8.42	1.86
25+50	16.0	4.26	1.51	4.83	1.57	5.35	1.62	5.78	1.68	8.22	1.85	8.94	1.91	9.85	1.99
	18.0	4.16	1.53	4.73	1.58	5.25	1.64	5.69	1.69	8.11	1.86	8.83	1.92	9.74	2.00
	20.0	4.05	1.55	4.63	1.60	5.16	1.65	5.60	1.71	8.00	1.88	8.72	1.94	9.63	2.02
	21.0	3.84	1.55	4.43	1.61	4.97	1.66	5.42	1.72	7.78	1.89	8.50	1.95	9.41	2.03
	22.0	3.95	1.56	4.53	1.62	5.06	1.67	5.51	1.72	7.89	1.90	8.61	1.96	9.52	2.04
	24.0	3.84	1.58	4.43	1.63	4.97	1.69	5.42	1.74	7.78	1.91	8.50	1.98	9.41	2.05

Combination (Capacity)	Indoor air temp. °CDB	Outdoor air temp.: °CWB													
		-15°C		-10°C		-5°C		0°C		6°C		10°C		15°C	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
35+35	16.0	4.26	1.50	4.83	1.56	5.35	1.61	5.78	1.67	8.22	1.84	8.94	1.90	9.85	1.97
	18.0	4.16	1.52	4.73	1.57	5.25	1.63	5.69	1.68	8.11	1.85	8.83	1.91	9.74	1.99
	20.0	4.05	1.54	4.63	1.59	5.16	1.65	5.60	1.70	8.00	1.87	8.72	1.93	9.63	2.01
	21.0	3.84	1.55	4.43	1.60	4.97	1.65	5.42	1.71	7.78	1.88	8.50	1.94	9.41	2.02
	22.0	3.95	1.55	4.53	1.61	5.06	1.66	5.51	1.72	7.89	1.89	8.61	1.95	9.52	2.03
	24.0	3.84	1.57	4.43	1.62	4.97	1.68	5.42	1.73	7.78	1.90	8.50	1.97	9.41	2.04

Symbols:

TC : Total capacity (kW)
 PI : Power input (kW)

Notes:

- Capacities are based on the following conditions.
 Corresponding refrigerant piping length: 5 m
 Level difference: 0 m
- indicates the standard condition
- The table value is based on 230V.

C: 3D121564

Heating [50 Hz, 240 V]

Combination (Capacity)	Indoor air temp. °CDB	Outdoor air temp.: °CWB													
		-15°C		-10°C		-5°C		0°C		6°C		10°C		15°C	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
20	16.0	1.91	0.73	2.17	0.76	2.40	0.79	2.59	0.81	3.69	0.89	4.01	0.92	4.42	0.96
	18.0	1.87	0.74	2.12	0.77	2.36	0.79	2.55	0.82	3.64	0.90	3.96	0.93	4.37	0.97
	20.0	1.82	0.75	2.08	0.77	2.31	0.80	2.51	0.83	3.59	0.91	3.91	0.94	4.32	0.98
	21.0	1.72	0.75	1.99	0.78	2.23	0.80	2.43	0.83	3.49	0.91	3.82	0.94	4.22	0.98
	22.0	1.77	0.76	2.03	0.78	2.27	0.81	2.47	0.83	3.54	0.92	3.86	0.95	4.27	0.99
	24.0	1.72	0.76	1.99	0.79	2.23	0.82	2.43	0.84	3.49	0.93	3.82	0.96	4.22	0.99
25	16.0	1.91	0.73	2.17	0.76	2.40	0.79	2.59	0.81	3.69	0.89	4.01	0.92	4.42	0.96
	18.0	1.87	0.74	2.12	0.77	2.36	0.79	2.55	0.82	3.64	0.90	3.96	0.93	4.37	0.97
	20.0	1.82	0.75	2.08	0.77	2.31	0.80	2.51	0.83	3.59	0.91	3.91	0.94	4.32	0.98
	21.0	1.72	0.75	1.99	0.78	2.23	0.80	2.43	0.83	3.49	0.91	3.82	0.94	4.22	0.98
	22.0	1.77	0.76	2.03	0.78	2.27	0.81	2.47	0.83	3.54	0.92	3.86	0.95	4.27	0.99
	24.0	1.72	0.76	1.99	0.79	2.23	0.82	2.43	0.84	3.49	0.93	3.82	0.96	4.22	0.99
35	16.0	2.37	0.86	2.69	0.89	2.97	0.92	3.22	0.95	4.57	1.05	4.97	1.09	5.48	1.13
	18.0	2.31	0.87	2.63	0.90	2.92	0.93	3.17	0.96	4.51	1.06	4.91	1.10	5.42	1.14
	20.0	2.25	0.88	2.57	0.91	2.87	0.94	3.12	0.97	4.45	1.07	4.85	1.11	5.35	1.15
	21.0	2.14	0.88	2.46	0.91	2.76	0.95	3.02	0.98	4.33	1.07	4.73	1.11	5.23	1.15
	22.0	2.19	0.89	2.52	0.92	2.82	0.95	3.07	0.98	4.39	1.08	4.79	1.11	5.29	1.16
	24.0	2.14	0.90	2.46	0.93	2.76	0.96	3.02	0.99	4.33	1.09	4.73	1.12	5.23	1.17
50	16.0	3.23	1.18	3.66	1.22	4.05	1.27	4.38	1.31	6.23	1.44	6.77	1.49	7.46	1.55
	18.0	3.15	1.19	3.58	1.24	3.98	1.28	4.31	1.32	6.14	1.46	6.69	1.51	7.38	1.57
	20.0	3.07	1.21	3.51	1.25	3.91	1.29	4.24	1.34	6.06	1.47	6.61	1.52	7.29	1.58
	21.0	2.91	1.21	3.35	1.26	3.76	1.30	4.11	1.34	5.89	1.48	6.44	1.53	7.12	1.59
	22.0	2.99	1.22	3.43	1.26	3.84	1.31	4.18	1.35	5.98	1.48	6.52	1.53	7.21	1.59
	24.0	2.91	1.23	3.35	1.28	3.76	1.32	4.11	1.36	5.89	1.50	6.44	1.54	7.12	1.61
20+20	16.0	2.80	0.96	3.17	0.99	3.51	1.03	3.79	1.06	5.39	1.17	5.87	1.21	6.46	1.26
	18.0	2.73	0.97	3.10	1.00	3.45	1.04	3.73	1.07	5.32	1.18	5.80	1.22	6.39	1.27
	20.0	2.66	0.98	3.04	1.01	3.39	1.05	3.68	1.08	5.25	1.19	5.72	1.23	6.32	1.28
	21.0	2.52	0.98	2.91	1.02	3.26	1.05	3.56	1.09	5.11	1.20	5.58	1.23	6.17	1.28
	22.0	2.59	0.99	2.97	1.02	3.32	1.06	3.62	1.09	5.18	1.20	5.65	1.24	6.24	1.29
	24.0	2.52	1.00	2.91	1.03	3.26	1.07	3.56	1.10	5.11	1.21	5.58	1.25	6.17	1.30
20+25	16.0	3.29	1.18	3.73	1.22	4.13	1.27	4.47	1.31	6.35	1.44	6.91	1.49	7.61	1.55
	18.0	3.21	1.19	3.65	1.24	4.06	1.28	4.40	1.32	6.27	1.46	6.82	1.51	7.52	1.57
	20.0	3.13	1.21	3.58	1.25	3.98	1.29	4.33	1.34	6.18	1.47	6.74	1.52	7.44	1.58
	21.0	2.97	1.21	3.42	1.26	3.84	1.30	4.19	1.34	6.01	1.48	6.57	1.53	7.27	1.59
	22.0	3.05	1.22	3.50	1.26	3.91	1.31	4.26	1.35	6.09	1.48	6.65	1.53	7.35	1.59
	24.0	2.97	1.23	3.42	1.28	3.84	1.32	4.19	1.36	6.01	1.50	6.57	1.54	7.27	1.61
20+35	16.0	3.58	1.24	4.05	1.28	4.49	1.33	4.85	1.37	6.90	1.51	7.50	1.56	8.26	1.63
	18.0	3.49	1.25	3.97	1.30	4.41	1.34	4.77	1.39	6.80	1.53	7.41	1.58	8.17	1.64
	20.0	3.40	1.27	3.88	1.31	4.33	1.36	4.70	1.40	6.71	1.54	7.32	1.59	8.07	1.65
	21.0	3.22	1.27	3.71	1.32	4.17	1.36	4.55	1.41	6.52	1.55	7.13	1.60	7.89	1.66
	22.0	3.31	1.28	3.80	1.32	4.25	1.37	4.62	1.41	6.62	1.55	7.22	1.60	7.98	1.67
	24.0	3.22	1.29	3.71	1.34	4.17	1.38	4.55	1.43	6.52	1.57	7.13	1.62	7.89	1.68
20+50	16.0	4.26	1.51	4.83	1.57	5.35	1.62	5.78	1.68	8.22	1.85	8.94	1.91	9.85	1.99
	18.0	4.16	1.53	4.73	1.58	5.25	1.64	5.69	1.69	8.11	1.86	8.83	1.92	9.74	2.00
	20.0	4.05	1.55	4.63	1.60	5.16	1.65	5.60	1.71	8.00	1.88	8.72	1.94	9.63	2.02
	21.0	3.84	1.55	4.43	1.61	4.97	1.66	5.42	1.72	7.78	1.89	8.50	1.95	9.41	2.03
	22.0	3.95	1.56	4.53	1.62	5.06	1.67	5.51	1.72	7.89	1.90	8.61	1.96	9.52	2.04
	24.0	3.84	1.58	4.43	1.63	4.97	1.69	5.42	1.74	7.78	1.91	8.50	1.98	9.41	2.05
25+25	16.0	3.29	1.18	3.73	1.22	4.13	1.27	4.47	1.31	6.35	1.44	6.91	1.49	7.61	1.55
	18.0	3.21	1.19	3.65	1.24	4.06	1.28	4.40	1.32	6.27	1.46	6.82	1.51	7.52	1.57
	20.0	3.13	1.21	3.58	1.25	3.98	1.29	4.33	1.34	6.18	1.47	6.74	1.52	7.44	1.58
	21.0	2.97	1.21	3.42	1.26	3.84	1.30	4.19	1.34	6.01	1.48	6.57	1.53	7.27	1.59
	22.0	3.05	1.22	3.50	1.26	3.91	1.31	4.26	1.35	6.09	1.48	6.65	1.53	7.35	1.59
	24.0	2.97	1.23	3.42	1.28	3.84	1.32	4.19	1.36	6.01	1.50	6.57	1.54	7.27	1.61
25+35	16.0	3.82	1.37	4.32	1.42	4.79	1.47	5.17	1.52	7.36	1.67	8.00	1.73	8.81	1.80
	18.0	3.72	1.38	4.23	1.43	4.70	1.48	5.09	1.53	7.26	1.68	7.91	1.74	8.71	1.81
	20.0	3.63	1.40	4.14	1.45	4.62	1.50	5.01	1.54	7.16	1.70	7.81	1.76	8.62	1.83
	21.0	3.44	1.40	3.96	1.45	4.45	1.50	4.85	1.55	6.96	1.71	7.61	1.76	8.42	1.83
	22.0	3.53	1.41	4.05	1.46	4.53	1.51	4.93	1.56	7.06	1.72	7.71	1.77	8.52	1.84
	24.0	3.44	1.43	3.96	1.48	4.45	1.53	4.85	1.57	6.96	1.73	7.61	1.79	8.42	1.86
25+50	16.0	4.26	1.51	4.83	1.57	5.35	1.62	5.78	1.68	8.22	1.85	8.94	1.91	9.85	1.99
	18.0	4.16	1.53	4.73	1.58	5.25	1.64	5.69	1.69	8.11	1.86	8.83	1.92	9.74	2.00
	20.0	4.05	1.55	4.63	1.60	5.16	1.65	5.60	1.71	8.00	1.88	8.72	1.94	9.63	2.02
	21.0	3.84	1.55	4.43	1.61	4.97	1.66	5.42	1.72	7.78	1.89	8.50	1.95	9.41	2.03
	22.0	3.95	1.56	4.53	1.62	5.06	1.67	5.51	1.72	7.89	1.90	8.61	1.96	9.52	2.04
	24.0	3.84	1.58	4.43	1.63	4.97	1.69	5.42	1.74	7.78	1.91	8.50	1.98	9.41	2.05

Combination (Capacity)	Indoor air temp. °CDB	Outdoor air temp.: °CWB													
		-15°C		-10°C		-5°C		0°C		6°C		10°C		15°C	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
35+35	16.0	4.26	1.50	4.83	1.56	5.35	1.61	5.78	1.67	8.22	1.84	8.94	1.90	9.85	1.97
	18.0	4.16	1.52	4.73	1.57	5.25	1.63	5.69	1.68	8.11	1.85	8.83	1.91	9.74	1.99
	20.0	4.05	1.54	4.63	1.59	5.16	1.65	5.60	1.70	8.00	1.87	8.72	1.93	9.63	2.01
	21.0	3.84	1.55	4.43	1.60	4.97	1.65	5.42	1.71	7.78	1.88	8.50	1.94	9.41	2.02
	22.0	3.95	1.55	4.53	1.61	5.06	1.66	5.51	1.72	7.89	1.89	8.61	1.95	9.52	2.03
	24.0	3.84	1.57	4.43	1.62	4.97	1.68	5.42	1.73	7.78	1.90	8.50	1.97	9.41	2.04

Symbols:

TC : Total capacity (kW)
 PI : Power input (kW)

Notes:

- Capacities are based on the following conditions.
 Corresponding refrigerant piping length: 5 m
 Level difference: 0 m
- indicates the standard condition
- The table value is based on 240V.

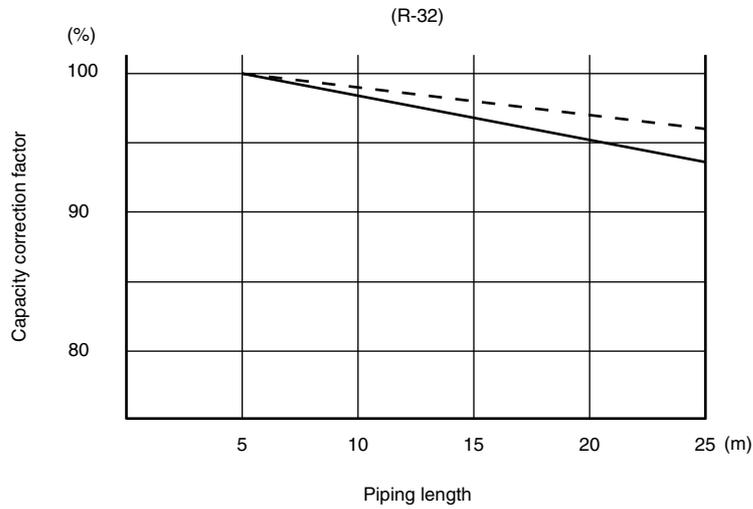
C: 3D121565

7.2 Capacity Correction Factor by the Length of Refrigerant Piping (Reference)

The cooling capacity and the heating capacity of the unit have to be corrected in accordance with the length of refrigerant piping — the distance between the indoor unit and the outdoor unit.

<— line: Cooling capacity>

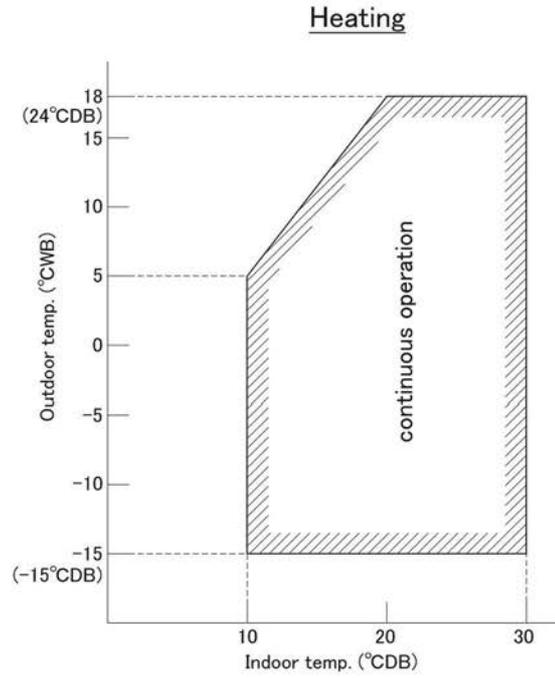
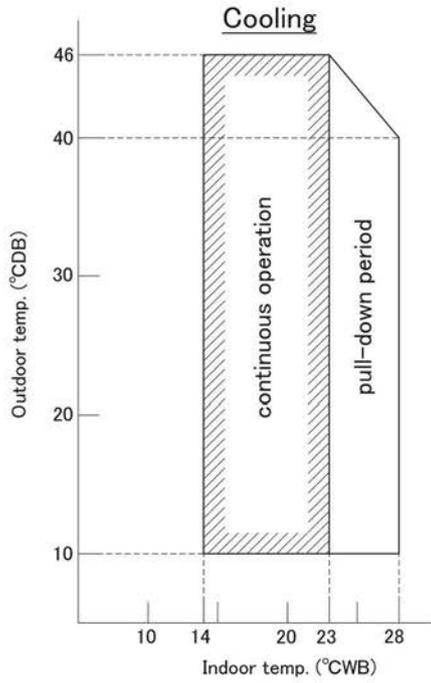
<--- line: Heating capacity>



Note: If it is for the multi-type room air-conditioner, the variation of the capacity will be smaller when only one indoor unit is in operation.

8. Operation Limit

2MXF70T2VMA



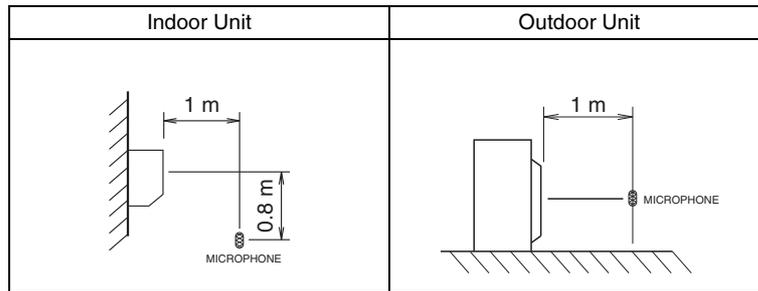
Notes: The graphs are based on the following conditions.

- Equivalent piping length 5m
- Level difference 0m
- Air flow rate High

3D122082

9. Sound Level

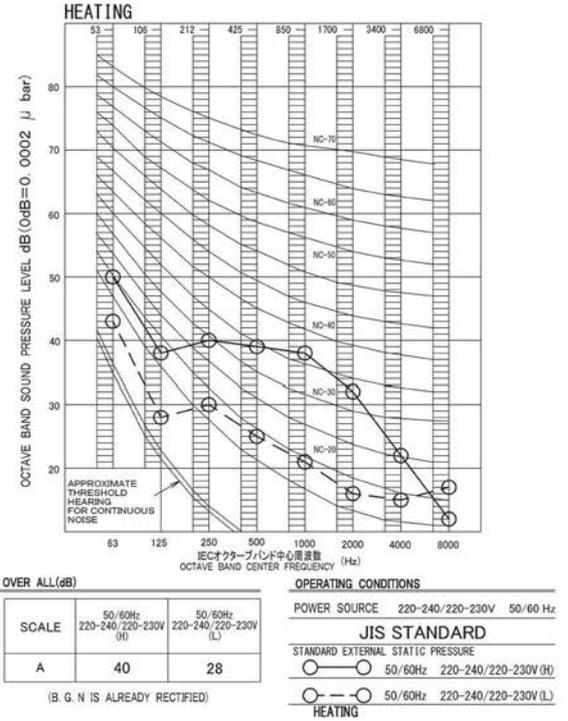
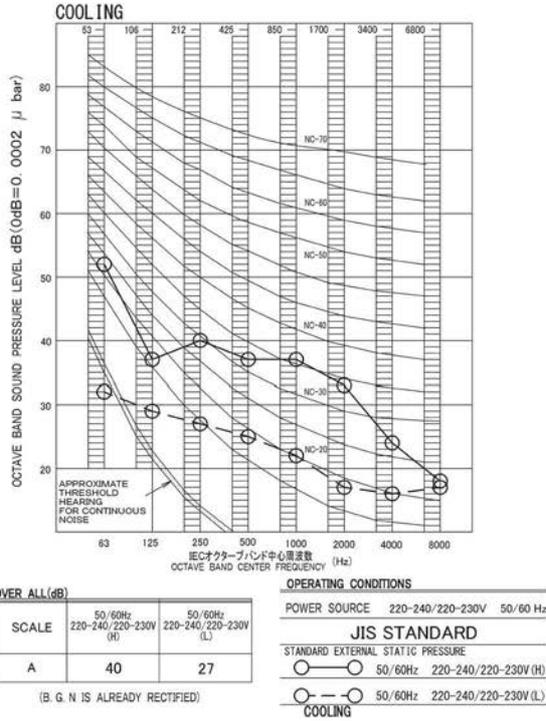
9.1 Measuring Location



- Notes:**
1. Operation sound is measured in an anechoic chamber.
 2. The operation sound measuring method is based on JIS standard.

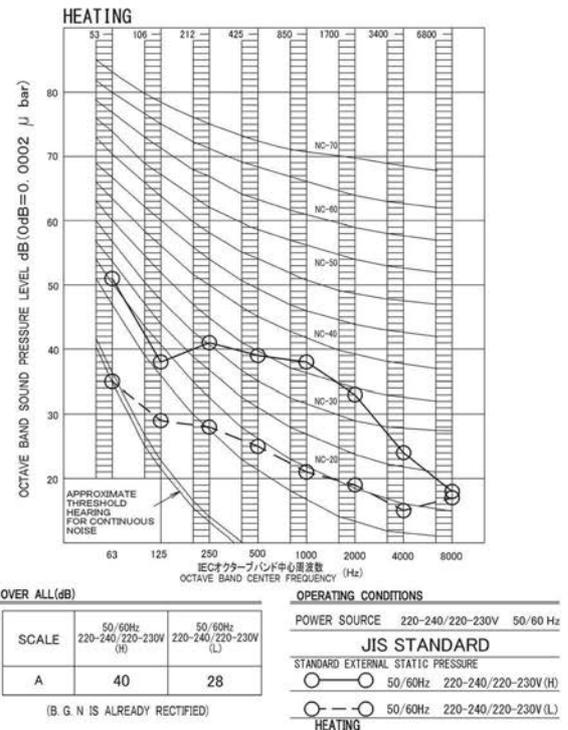
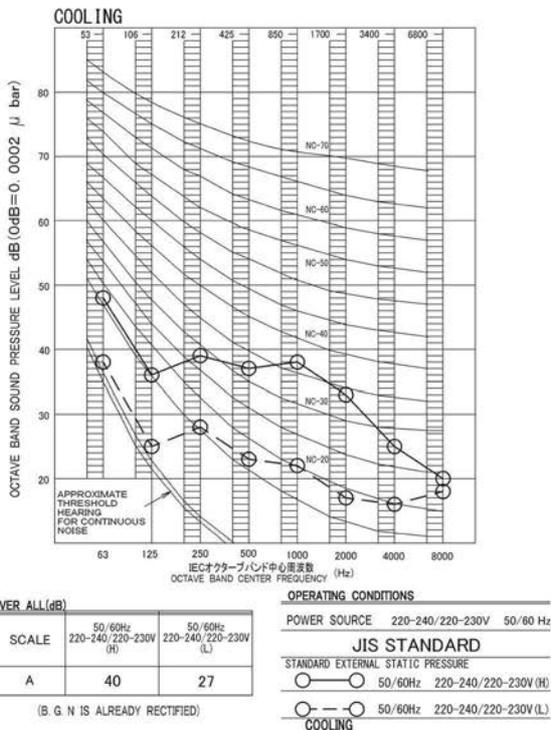
9.2 Indoor Unit

CTXF20TVMA



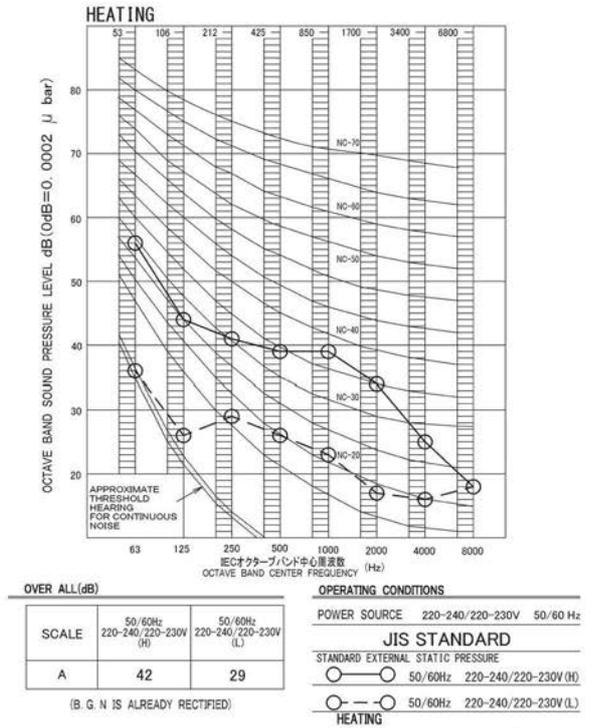
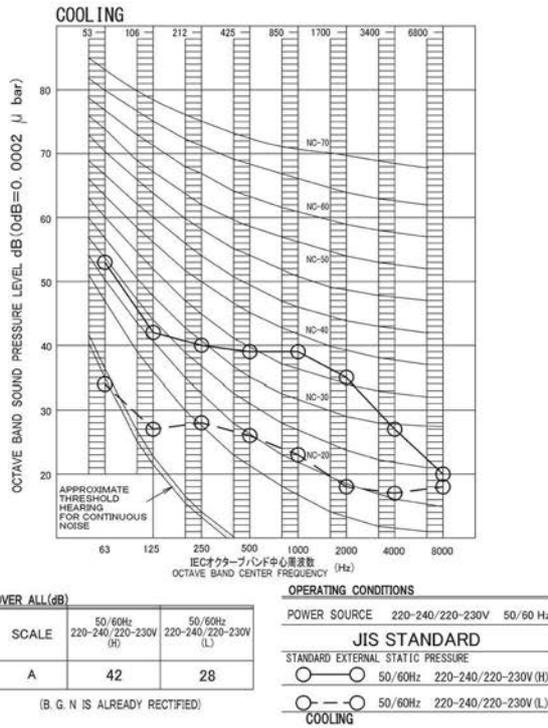
3D121533

CTXF25TVMA



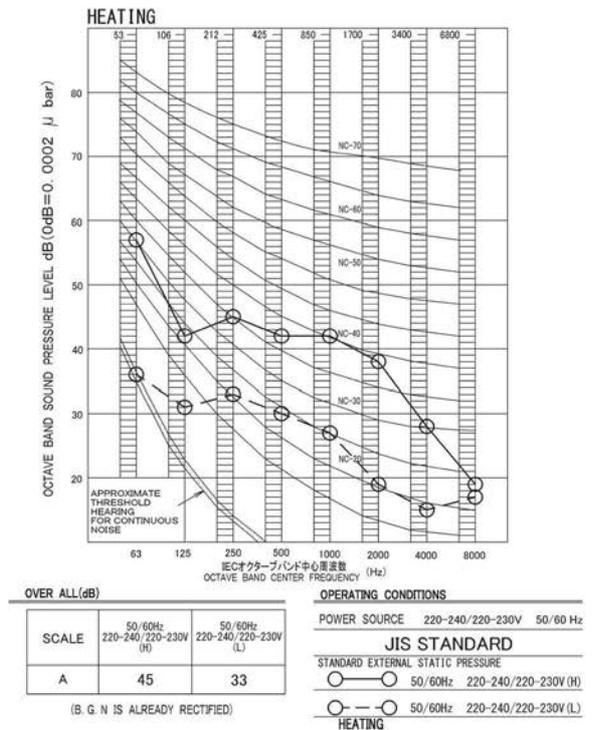
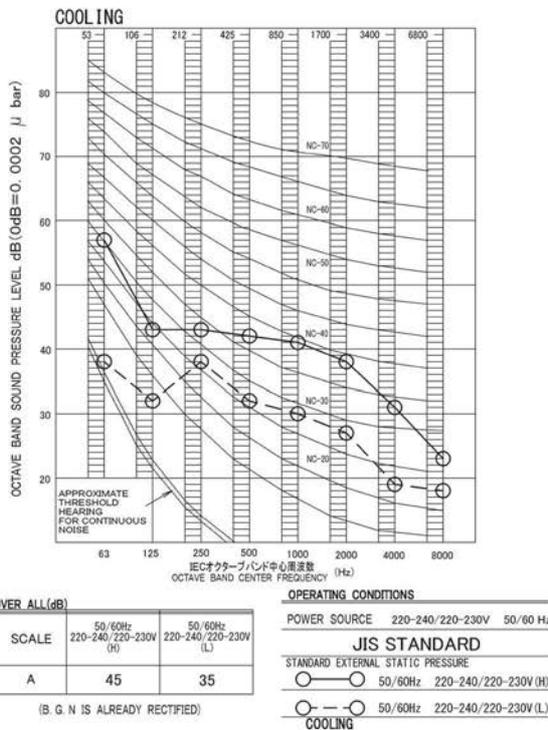
3D121535

CTXF35TVMA



3D121537

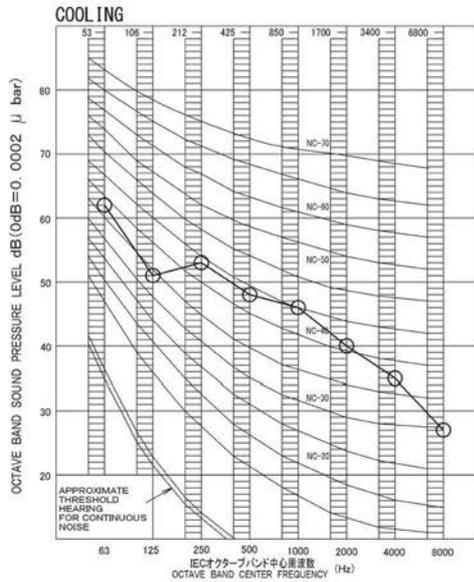
CTXF50TVMA



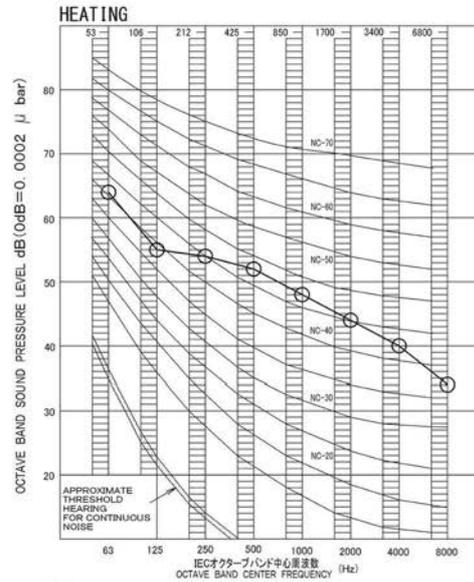
3D121538

9.3 Outdoor Unit

2MXF70T2VMA



OVER ALL (dB)		OPERATING CONDITIONS	
SCALE	50Hz: 220V-240V 60Hz: 220V-230V	POWER SOURCE	220-240/220-230V 50/60Hz
A	51	JIS STANDARD	
(B. G. N IS ALREADY RECTIFIED)		 COOLING	



OVER ALL (dB)		OPERATING CONDITIONS	
SCALE	50Hz: 220V-240V 60Hz: 220V-230V	POWER SOURCE	220-240/220-230V 50/60Hz
A	53	JIS STANDARD	
(B. G. N IS ALREADY RECTIFIED)		 HEATING	

3D121540A

10. Electric Characteristics

Outdoor Unit	Power Supply				Compressor	OFM	
	Hz - Volts	Voltage Range	MCA	MFA	RLA	W	FLA
2MXF70T2VMA	50 Hz - 220 V	Max. 50 Hz, 264 V Min. 50 Hz, 198 V	10.3	16	8.2	66	0.51
	50 Hz - 230 V				7.8		0.49
	50 Hz - 240 V				7.4		0.47
	60 Hz - 220 V	Max. 60 Hz, 253 V Min. 60 Hz, 198 V			8.2		0.51
	60 Hz - 230 V				7.8		0.49

Symbols:

MCA	: Min. circuit amps (A)
MFA	: Max. fuse amps (A)
RLA	: Rated load amps (A)
OFM	: Outdoor fan motor
W	: Fan motor rated output (W)
FLA	: Full load amps (A)

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. Be sure to install an earth leak detector.
(This unit uses an inverter, which means that an earth leak detector capable of handling high harmonics must be used in order to prevent malfunctioning of the earth leak detector.)

4D144762

11. Installation Manual

11.1 Indoor Unit

Safety Precautions (1)



Read the precautions in this manual carefully before operating the unit.



This appliance is filled with R32.

- The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.
- Meaning of WARNING and CAUTION notices

	WARNING	Failure to follow these instructions properly may result in personal injury or loss of life.
	CAUTION	Failure to follow these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

- The safety marks shown in this manual have the following meanings:

	Be sure to follow the instructions.		Be sure to establish an earth connection.		Never attempt.
--	-------------------------------------	--	---	--	----------------

- After completing installation, conduct a trial operation to check for faults and explain to the user how to operate the air conditioner and take care of it with the aid of the operation manual.

WARNING

- Ask your dealer or qualified personnel to carry out installation work.
Do not attempt to install the air conditioner yourself. Improper installation may result in water leakage, electric shock or fire.
- Install the air conditioner in accordance with the instructions in this installation manual. Improper installation may result in water leakage, electric shock or fire.
- Be sure to use only the specified accessories and parts for installation work. Failure to use the specified parts may result in the unit falling, water leakage, electric shock or fire.
- Install the air conditioner on a foundation strong enough to hold the weight of the unit.
A foundation of insufficient strength may result in the equipment falling and causing injury.
- Electrical work must be performed in accordance with relevant local and national regulations and with the instructions in this installation manual.
Be sure to use a dedicated power supply circuit only. Insufficient power supply and improper workmanship may result in electric shock or fire.
- Use a cable of suitable length. Do not use tapped wires or an extension lead, as this may cause overheating, electric shock or fire.
- Make sure that all wiring is secured, the specified wires are used, and that there is no strain on the terminal connections or wires. Improper connections or securing of wires may result in abnormal heat build-up or fire.
- When wiring the power supply and connecting the wiring between the indoor and outdoor units, position the wires so that the electrical wiring box cover can be securely fastened. Improper positioning of the electrical wiring box cover may result in electric shock, fire or overheating terminals.
- If refrigerant gas leaks during installation, ventilate the area immediately.
Toxic gas may be produced if the refrigerant comes into contact with fire.
- After completing installation, check for refrigerant gas leakage. Toxic gas may be produced if the refrigerant gas leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.
- When installing or relocating the air conditioner, do not let any other substances besides R32, such as air, enter the refrigerant circuit.
The presence of air or foreign matter in the refrigerant circuit causes an abnormal pressure rise, which may result in equipment damage and even injury.
- During installation, attach the refrigerant piping securely before operating the compressor. If the refrigerant pipes are not attached and the stop valve is open when the compressor is operated, air will be sucked in, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- During pump down, stop the compressor before removing the refrigerant piping. If the compressor is still operating and the stop valve is open during pump down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- Be sure to earth the air conditioner.
Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shock.
- Be sure to install an earth leakage circuit breaker. Failure to install an earth leakage circuit breaker may result in electric shock or fire.
- Do not use means to accelerate the defrosting process (if possible) or to clean, other than those recommended by the manufacturer.
- The appliance must be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odour.
- When the amount of refrigerant is 1.84kg or more, the room size of the room where equipment is installed, operated and stored is limited.
For details refer to the WARNING list in the "Safety Precautions" section of the installation manual for the outdoor unit.
- Comply with national gas regulations.
- Do not pump down when the refrigerant has leaked, otherwise the compressor may be damaged.
- When flared joints are reused indoors, the flare part shall be re-fabricated.

Safety Precautions (2)



CAUTION



- Do not install the air conditioner at any place where there is a danger of flammable gas leakage. In the event of a gas leakage, build-up of gas near the air conditioner may cause a fire to break out.
- While following the instructions in this installation manual, install drain piping to ensure proper drainage and insulate the piping to prevent condensation. Improper drain piping may result in indoor water leakage and property damage.
- Tighten the flare nut as specified, such as with a torque wrench. If the flare nut is too tight, it may crack after prolonged use, causing refrigerant leakage.
- Make sure to provide for adequate measure in order to prevent that the outdoor unit be used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.
- The temperature of refrigerant circuit will be high, please keep the inter-unit wiring away from copper pipes that are not thermally insulated.
- Only qualified personnel can handle, fill, purge and dispose of the refrigerant.

Accessories

Ⓐ Mounting plate	1	Ⓑ Mounting plate fixing screw M4 × 25L	7	Ⓒ Wireless remote controller	1
Ⓓ Remote controller holder	1	Ⓔ Remote controller holder fixing screw M3 × 20L	2	Ⓕ Dry battery AAA. LR03 (alkaline)	2
Ⓒ Indoor unit fixing screw M4 × 12L	2	Ⓗ Insulation tape	1	Ⓖ Operation manual	1
Ⓙ Installation manual	1				

Choosing an Installation Site

- Before choosing the installation site, obtain user approval.

1. Indoor unit

- The indoor unit should be positioned in a place where:
 - 1) the restrictions on the installation requirements specified in "Indoor Unit Installation Diagram" are met,
 - 2) both the air inlet and air outlet are unobstructed,
 - 3) the unit is not exposed to direct sunlight,
 - 4) the unit is away from sources of heat or steam,
 - 5) there is no source of machine oil vapour (this may shorten the indoor unit service life),
 - 6) cool or warm air is circulated throughout the room,
 - 7) the unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may affect the remote controller range,

- 8) the unit is at least 1m away from any television or radio set (the unit may cause interference with the picture or sound),
- 9) install at the recommended height (not less than 1.8 m),
- 10) no laundry equipment is nearby.

2. Wireless remote controller

- Turn on all the fluorescent lamps in the room, if any, and find a location where the remote controller signals are properly received by the indoor unit (within 7 m).

Installation Tips (1)

1. Removing and installing the front panel

• Removal method

- 1) Place your fingers in the indentations on the main unit (one each on the left and right sides), and open the front panel until it stops.
- 2) While pushing the left side front panel shaft outward, push up the front panel and remove it. (Remove the right side front panel shaft in the same manner.)
- 3) After removing both front panel shafts, pull the front panel toward yourself and remove it.



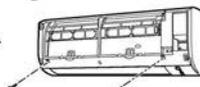
• Installation method

Align the tabs of the front panel with the grooves, and push all the way in, then close slowly. Push the centre of the lower panel surface firmly to engage the tabs.

2. Removing and installing the front grille

• Removal method

- 1) Remove the front panel and air filters.
- 2) Remove the 2 screws from the front grille. (The 50 class model have 3 screws.)



- 3) In front of the ○○○ mark on the front grille, there are 3 upper hooks. Lightly pull the front grille toward you with one hand, and push down on the hooks with the fingers of your other hand.



When there is insufficient work space because the unit is close to ceiling

⚠ CAUTION

- Be sure to wear protection gloves.

Place both hands under the centre of the front grille, and while pushing up, pull it toward you.



• Installation method

- 1) Install the front grille and firmly engage the upper hooks (3 locations).
- 2) Install 2 screws of the front grille. (The 50 class model have 3 screws.)
- 3) Install the air filters and then mount the front panel.

Installation Tips (2)

3. How to set the different addresses

When 2 indoor units are installed in one room, the 2 wireless remote controllers can be set for different addresses. Change the address setting of one of the two units.

When cutting the jumper be careful not to damage any of the surrounding parts.

1) Remove the battery cover on the remote controller and cut the address jumper.

2) Press **TEMP** (up), **TEMP** (down) and **OFF** at the same time.



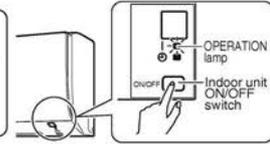
Jumper	ADDRESS
EXIST	1
CUT	2

3) Press **TEMP** (up), select **R**, press **FAN**.

(The indoor unit OPERATION lamp will blink for about 1 minute.)

4) Press the indoor unit ON/OFF switch while the OPERATION lamp is blinking.

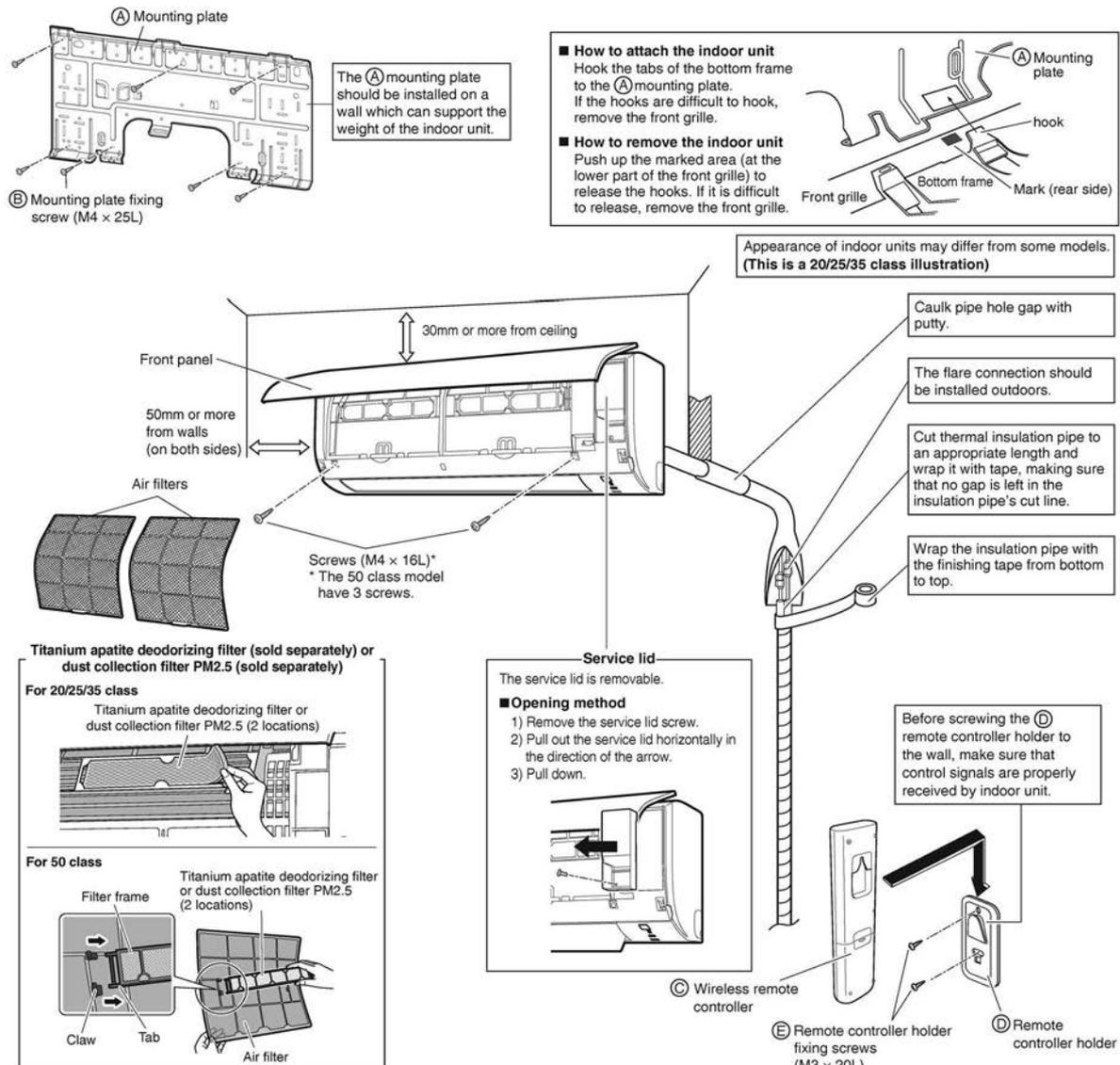
• If setting could not be carried out completely while the OPERATION lamp was blinking, carry out the setting process once again from the beginning.
• After setting is complete, pressing **FAN** for about 5 seconds will cause the remote controller to return to the previous display.



Indoor Unit Installation Diagram

NOTE

When flaring the pipe end and installing the unit, refer to Indoor Unit Installation (3) "1 Flaring the pipe end".

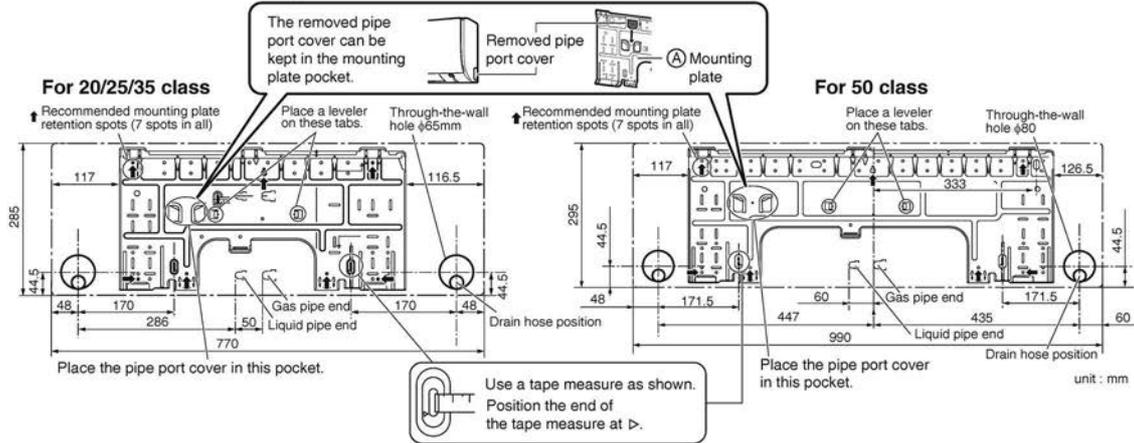


Indoor Unit Installation (1)

1 Installing the mounting plate

- The mounting plate should be installed on a wall which can support the weight of the indoor unit.
 - Temporarily secure the mounting plate to the wall, make sure that the plate is completely level, and mark the drilling points on the wall.
 - Secure the mounting plate to the wall with screws.

Recommended mounting plate retention spots and dimensions

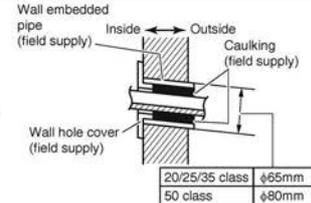


2 Drilling a wall hole and installing wall embedded pipe

WARNING

For metal frame or metal board walls, be sure to use a wall embedded pipe and wall hole cover in the feed-through hole to prevent possible heat, electrical shock, or fire.

- Drill a feed-through hole with a 65mm for 20/25/35 class or 80mm for 50 class diameter through the wall at a downward angle toward the outside.
- Insert a wall embedded pipe into the hole.
- Insert a wall hole cover into wall pipe.
- After completing refrigerant piping, wiring, and drain piping, caulk the pipe hole gap with putty.



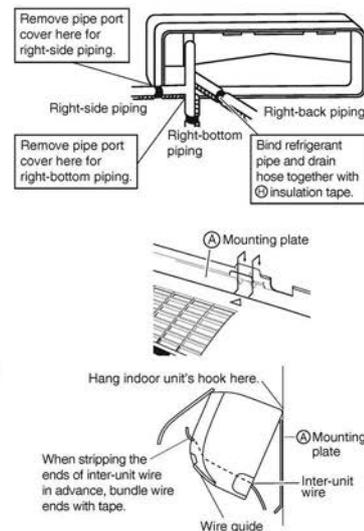
3 Installing the indoor unit

In the case of bending or curing refrigerant pipes, keep the following precautions in mind. Abnormal sound may be generated if improper work is conducted.

- Do not strongly press the refrigerant pipes onto the bottom frame.
- Do not strongly press the refrigerant pipes on the front grille, either.

3-1. Right-side, right-back, or right-bottom piping

- Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.
- Wrap the refrigerant pipes and drain hose together with (H) insulation tape.
- Pass the drain hose and refrigerant pipes through the wall hole, then position the indoor unit on the (A) mounting plate hooks, using the Δ markings at the top of the indoor unit as a guide.
- Open the front panel, then open the service lid. (Refer to "Installation Tips (1)".)
- Pass the inter-unit wire from the outdoor unit through the feed-through wall hole and then through the back of the indoor unit. Pull them through the front side. Bend the ends of cable tie wires upward for easier work in advance. (If the inter-unit wire ends are to be stripped first, bundle wire ends with adhesive tape.)
- Press the bottom frame of the indoor unit with both hands until it is firmly caught by the (A) mounting plate hooks. Make sure that the wires do not catch on the edge of the indoor unit.

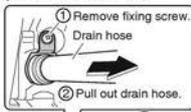


Indoor Unit Installation (2)

3-2. Left-side, left-back, or left-bottom piping

How to switch around the drain plug and drain hose

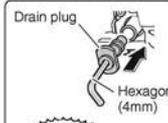
1) Remove the fixing screw and pull out the drain hose.



2) Pull out drain plug.



3) Switch around the drain hose and drain plug.



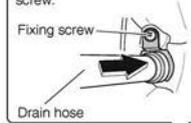
Push the drain plug all the way in using a hexagonal wrench (4mm).

Do not apply lubricating oil (refrigerant oil) to the drain plug when inserting it. The application of lubricating oil to the drain plug will deteriorate the plug to cause drain leakage from the plug.

Insert a hexagonal wrench (4mm).

No gap

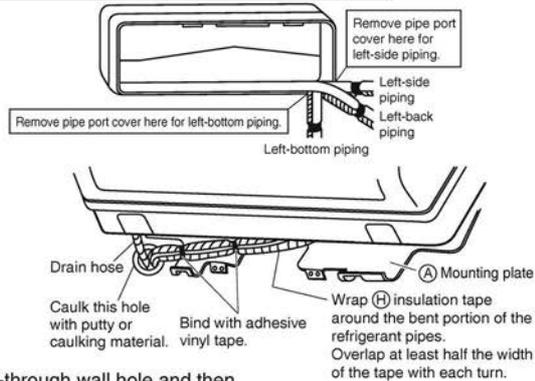
Insert drain hose securely and fix in place with fixing screw.



Fixing screw

Drain hose

- 1) Switch around the drain plug and drain hose.
- 2) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.
- 3) Shape the refrigerant pipes along the pipe path marking on the (A) mounting plate.
- 4) Pass the drain hose and refrigerant pipes through the wall hole, then position the indoor unit on the (A) mounting plate hooks, using the Δ markings at the top of the indoor unit as a guide.
- 5) Open the front panel, then open the service lid. (Refer to "Installation Tips (1)")
- 6) Pass the inter-unit wire from the outdoor unit through the feed-through wall hole and then through the back of the indoor unit. Pull them through the front side. Bend the ends of the tie wires upward for easier work in advance. (If the inter-unit wire ends are to be stripped first, bundle wire ends with adhesive tape.)
- 7) Connect the refrigerant pipes.
- 8) In case of pulling the drain hose through the back of the indoor unit, wrap the refrigerant pipes and drain hose together with (H) insulation tape as shown in the figure.
- 9) While exercising care so that the inter-unit wire does not catch the indoor unit, press the bottom frame of the indoor unit with both hands until it is firmly caught by the (A) mounting plate hooks. Make sure that the wires do not catch on the edge of the indoor unit.



Remove pipe port cover here for left-side piping.

Remove pipe port cover here for left-bottom piping.

Left-side piping

Left-back piping

Left-bottom piping

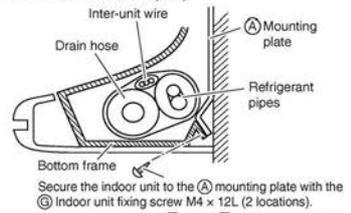
Drain hose

Caulk this hole with putty or caulking material.

Bind with adhesive vinyl tape.

Wrap (H) insulation tape around the bent portion of the refrigerant pipes. Overlap at least half the width of the tape with each turn.

(A) Mounting plate



Inter-unit wire

Drain hose

(A) Mounting plate

Refrigerant pipes

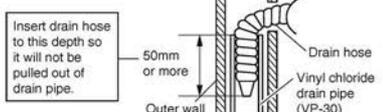
Bottom frame

Secure the indoor unit to the (A) mounting plate with the (B) indoor unit fixing screw M4 x 12L (2 locations).

3-3. Wall embedded piping

Follow the instructions given under left-side, left-back, or left-bottom piping.

- 1) Insert the drain hose to a depth of 50mm or more so it will not be pulled out of the drain pipe.



Insert drain hose to this depth so it will not be pulled out of drain pipe.

50mm or more

Outer wall

Inner wall

Drain hose

Vinyl chloride drain pipe (VP-30)

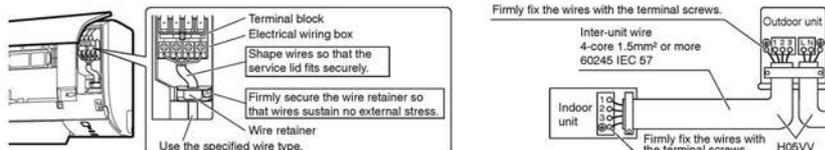
Refer to the installation manual for the outdoor unit also.

4 Wiring

⚠ WARNING

- Do not use tapped wires, extension cords, or starburst connections, as they may cause overheating, electrical shock, or fire.
- Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.
- Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.

- 1) Strip wire ends (20mm).
- 2) Match wire colours with terminal numbers on the indoor and outdoor unit's terminal blocks and firmly secure the wires in the corresponding terminals with the screws.
- 3) Connect the earth wire to the corresponding terminals.
- 4) Pull the wires lightly to make sure they are securely connected, then secure them with the wire retainer.
- 5) Shape the wires so that the service lid fits securely, then close the service lid.



Indoor Unit Installation (2)

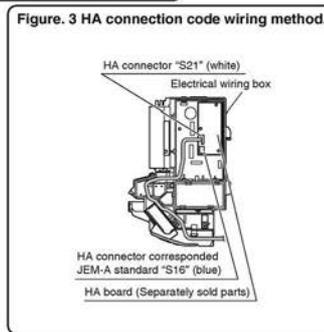
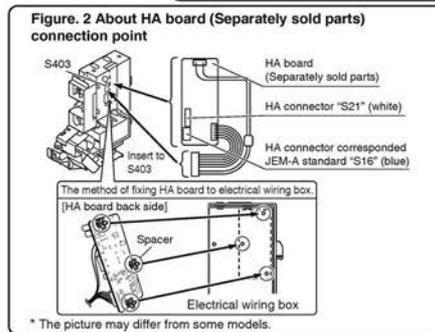
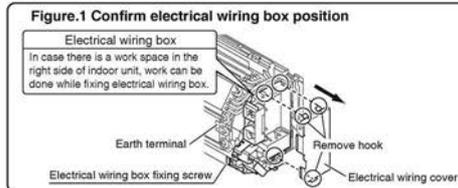
5 When connecting an HA system

For this procedure, separately sold parts are needed.

- In case there is a work space in the right side of indoor unit, the procedure can be done while fixing electrical wiring box. Skip to remove electrical wiring box if it is possible, in order to make effective work.

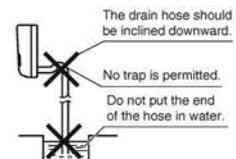
(For details, refer fixing manual which attached in HA board)

- Remove front grille. (For 20/25/35 class: 2 screws, for 50 class: 3 screws)
- Remove electrical wiring cover. **Figure. 1**
- Remove electrical wiring box.
 - Remove inter-unit wire.
 - Remove fan motor connector (S200), swing motor connector (S6).
 - Remove thermistor, earth wire from heat exchanger unit. (1 screw)
 - Remove electrical wiring box fixing screw. (1 screw)
- Fixing HA board (option part). **Figure. 2**
 - Fixing HA board (option part) at electrical wiring box.
 - Insert HA board (option part) connector to electrical wiring box connector (S403).
- Fixing HA connection code. **Figure. 1, 2**
 - Insert HA connection code to HA connector S21 (white) of HA board (option part). (HA connector S16 that corresponded to JEM-A standard is blue color.)
 - Wiring HA connection code as **Figure. 3**
- Fix electrical wiring box.
 - Fixing electrical wiring box fixing screw. (1 screw)
 - Fixing thermistor, earth wire to heat exchanger unit.
 - Fixing fan motor connector (S200), swing motor connector (S6).
 - Insert connection wiring.
- Fixing electrical wiring cover.
- Fixing front grille.

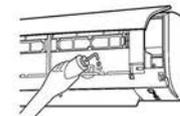


6 Drain piping

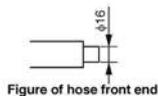
- Connect the drain hose, as described on the right.



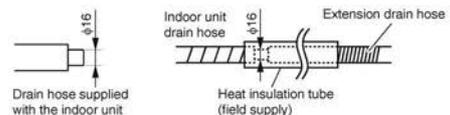
- Remove the air filters and pour some water into the drain pan to check the water flows smoothly.



- If drain hose extension or embedded drain piping is required, use appropriate parts that match the hose front end.



- When extending the drain hose, use a commercially available extension hose with an inner diameter of 16mm. Be sure to thermally insulate the indoor section of the extension hose.



Indoor Unit Installation (3)

Refrigerant piping work

Refer to the installation manual for the outdoor unit also.

1 Flaring the pipe end

⚠ WARNING

- Do not apply mineral oil to the flare.
- Prevent mineral oil from getting into the system as this would reduce the service life of the units.
- Never use piping which has been used for previous installations. Only use parts which are delivered with this unit.
- Never install a dryer to this R32 unit in order to guarantee its service life.
- The drying material may dissolve and damage the system.
- Incomplete flaring may result in refrigerant gas leakage.
- When flared joints are reused indoors, the flare part shall be re-fabricated.

- 1) Cut the pipe end with a pipe cutter.
- 2) Remove burrs with the cut surface facing downward, so that the filings do not enter the pipe.
- 3) Put the flare nut on the pipe.
- 4) Flare the pipe.
- 5) Check that the flaring has been done correctly.

Set exactly at the position shown below.

Flaring		Conventional flare tool	
Flare tool for R32	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
A	0-0.5mm	1.0-1.5mm	1.5-2.0mm

Cut exactly at right angles. Remove burrs.

Check: The flare's inner surface must be flaw-free. The pipe end must be evenly flared in a perfect circle. Make sure that the flare nut is fitted.

2 Refrigerant piping

⚠ CAUTION

- Use the flare nut fixed to the main unit. (This is to prevent the flare nut from cracking as a result of deterioration over time.)
 - To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R32.)
 - Use a torque wrench when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.
- Align the centres of both flares and tighten the flare nuts 3 or 4 turns by hand, then tighten them fully with a spanner and a torque wrench.

Apply oil

Tighten

Do not apply refrigeration oil to the flare nut to avoid tightening with excessive torque.

	Piping size	Flare nut tightening torque	Valve cap size	
			dimension AA, refer to Fig.1	Valve cap tightening torque
Gas side	O.D. 9.5mm (3/8 inch)	32.7 - 39.9N • m (330 - 407kgf • cm)	17mm	15.7 ± 1.5N • m (160 ± 15kgf • cm)
	O.D. 12.7mm (1/2 inch)	49.5 - 60.3N • m (505 - 615kgf • cm)	19mm	19.0 ± 1.9N • m (193 ± 20kgf • cm)
	O.D. 15.9mm (5/8 inch)	61.8 - 75.4N • m (630 - 770kgf • cm)	22mm	24.5 ± 3.9N • m (250 ± 40kgf • cm)
Liquid side	O.D. 6.4mm (1/4 inch)	14.2 - 17.2N • m (144 - 175kgf • cm)	27mm	53.9 ± 5.9N • m (550 ± 60kgf • cm)
Service port cap tightening torque		10.7 - 14.7N • m (110 - 150kgf • cm)	32mm	68.6 ± 6.9N • m (700 ± 70kgf • cm)

Fig.1

2-1. Caution on piping handling

- Protect the open end of the pipe against dust and moisture.
- All pipe bends should be as gentle as possible. Use a pipe bender for bending.

2-2. Selection of copper and heat insulation materials

When using commercial copper pipes and fittings, observe the following:

- Insulation material: Polyethylene foam
Heat transfer rate: 0.041 to 0.052W/mK (0.035 to 0.045kcal/mh°C)
Refrigerant gas pipe's surface temperature reaches 110°C max.
Choose heat insulation materials that will withstand this temperature.
- Be sure to insulate both the gas and liquid piping and observe the insulation dimensions as below.

	Piping size	Minimum bend radius	Piping thickness	Thermal insulation size	Thermal insulation thickness
Gas side	O.D. 9.5mm	30mm or more	0.8mm (C1220T-O)	I.D. 12-15mm	10mm Min.
	O.D. 12.7mm	40mm or more		I.D. 14-16mm	
	O.D. 15.9mm	50mm or more	1.0mm (C1220T-O)	I.D. 16-20mm	
Liquid side	O.D. 6.4mm	30mm or more	0.8mm (C1220T-O)	I.D. 8-10mm	

- Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

Indoor Unit Installation (3)

Trial operation and testing

- Before starting the trial operation, measure the voltage at the primary side of the circuit breaker.
- Check that all liquid and gas stop valves are fully open.
- Check that piping and wiring all match.

■ Trial operation should be carried out in COOL or HEAT operation.

1-1 Measure the supply voltage and make sure that it is within the specified range.

1-2 In COOL operation, select the lowest programmable temperature; in HEAT operation, select the highest programmable temperature.

1-3 Carry out the trial operation following the instructions in the operation manual to ensure that all functions and parts, such as the movement of the flap, are working properly.

- To protect the air conditioner, restart operation is disabled for 3 minutes after the system has been turned off.
- When trial operation is conducted in HEAT operation directly after the circuit breaker is turned on, in some cases no air will be output for about 3 to 20 minutes in order to protect the air conditioner.

1-4 After trial operation is complete, set the temperature to a normal level (26°C to 28°C in COOL operation, 20°C to 24°C in HEAT operation).

- When operating the air conditioner in COOL operation in winter, or HEAT operation in summer, set it to the trial operation mode using the following method.

1) Press ,  and  at the same time.

2) Press , select , press .

3) Press  or  to turn on the system.

- Trial operation will stop automatically after about 30 minutes.
To stop the operation, press .
- Some of the functions cannot be used in the trial operation mode.
- The air conditioner draws a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is turned on again.

Test items

Test items	Symptom	Check
Indoor and outdoor units are installed securely.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Draining line is properly installed.	Water leakage	
System is properly earthed.	Electrical leakage	
Only specified wires are used for all wiring, and all wires are connected correctly.	No operation or burn damage	
Indoor or outdoor unit's air inlet or air outlet are unobstructed.	Incomplete cooling/heating function	
Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote control commands.	No operation	
Pipes and wires are connected to the corresponding terminal blocks/ connection ports for the connected unit.	No cooling/heating	

ATTENTION

- Even when the air conditioner is not operating, it consumes some electric power. If the customer is not going to use the unit soon after it is installed, turn off the circuit breaker to avoid wasting electricity.

3P649186-10B

11.2 Outdoor Unit

Safety Precautions



Read the precautions in this manual carefully before operating the unit.



This appliance is filled with R32.

- The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.
- Meaning of WARNING and CAUTION notices

WARNING	Failure to follow these instructions properly may result in personal injury or loss of life.
CAUTION	Failure to follow these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

- The safety marks shown in this manual have the following meanings:

Be sure to follow the instructions.	Be sure to establish an earth connection.	Never attempt.
-------------------------------------	---	----------------

- After completing installation, conduct a trial operation to check for faults and explain to the user how to operate the air conditioner and take care of it with the aid of the operation manual.

WARNING

- Ask your dealer or qualified personnel to carry out installation work.
Do not attempt to install the air conditioner yourself. Improper installation may result in water leakage, electric shock or fire.
- Install the air conditioner in accordance with the instructions in this installation manual. Improper installation may result in water leakage, electric shock or fire.
- Be sure to use only the specified accessories and parts for installation work.
Failure to use the specified parts may result in the unit falling, water leakage, electric shock or fire.
- Install the air conditioner on a foundation strong enough to hold the weight of the unit. A foundation of insufficient strength may result in the equipment falling and causing injury.
- Electrical work must be performed in accordance with relevant local and national regulations and with the instructions in this installation manual. Be sure to use a dedicated power supply circuit only. Insufficient power supply and improper workmanship may result in electric shock or fire.
- Use a cable of suitable length. Do not use tapped wires or an extension lead, as this may cause overheating, electric shock or fire.
- Make sure that all wiring is secured, the specified wires are used, and that there is no strain on the terminal connections or wires. Improper connections or securing of wires may result in abnormal heat build-up or fire.
- When wiring the power supply and connecting the wiring between the indoor and outdoor units, position the wires so that the electrical wiring box cover can be securely fastened.
Improper positioning of the electrical wiring box cover may result in electric shock, fire or overheating terminals.
- If refrigerant gas leaks during installation, ventilate the area immediately.
Toxic gas may be produced if the refrigerant comes into contact with fire.
- After completing installation, check for refrigerant gas leakage.
Toxic gas may be produced if the refrigerant gas leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.
- When installing or relocating the air conditioner, do not let any other substances besides R32, such as air, enter the refrigerant circuit.
The presence of air or foreign matter in the refrigerant circuit causes an abnormal pressure rise, which may result in equipment damage and even injury.
- During installation, attach the refrigerant piping securely before operating the compressor. If the refrigerant pipes are not attached and the stop valve is open when the compressor is operated, air will be sucked in, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- During pump down, stop the compressor before removing the refrigerant piping. If the compressor is still operating and the stop valve is open during pump down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- Be sure to earth the air conditioner.
Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shock.
- Be sure to install an earth leakage circuit breaker. Failure to install an earth leakage circuit breaker may result in electric shock or fire.
- Do not use means to accelerate the defrosting process (if possible) or to clean, other than those recommended by the manufacturer.
- The appliance must be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odour.
- The appliance must be installed, operated and stored in a room with a floor area larger than –* m².
*When max refrigerant is less than 1.84kg, the minimum floor area does not need to follow IEC 60335-2-40 Ed.6.
- Comply with national gas regulations.
- Do not pump down when the refrigerant has leaked, otherwise the compressor may be damaged.
- Do not install the air conditioner at any place where there is a danger of flammable gas leakage.
In the event of a gas leakage, build-up of gas near the air conditioner may cause a fire to break out.
- When flared joints are reused indoors, the flare part shall be re-fabricated.

Safety Precautions

⚠ CAUTION

- While following the instructions in this installation manual, install drain piping to ensure proper drainage and insulate the piping to prevent condensation. Improper drain piping may result in indoor water leakage and property damage.
- Tighten the flare nut as specified, such as with a torque wrench. If the flare nut is too tight, it may crack after prolonged use, causing refrigerant leakage.
- Take adequate steps to prevent the outdoor unit being used as a shelter by small animals. If small animals or birds come into contact with electrical parts, this can cause malfunctions, smoke or fire. Please instruct the customer to always keep the area around the unit clean.
- The refrigerant circuit temperature will be high, therefore the inter-unit wires must be kept away from copper pipes that are not thermally insulated.
- Only qualified personnel can handle, fill, purge and dispose of the refrigerant.

Accessories

Ⓐ Wire retainer fixing screw M4 × 12L	3	Ⓒ Drain socket	 There is on the bottom packing case.	Ⓓ Installation manual	1
Ⓑ Reducer assembly	1			Ⓔ Refrigerant charge label	1
				Ⓕ Accessory set (For demand adaptor)	1

Precautions for Selecting the Location

NOTE

Cannot be installed suspended from a ceiling or stacked.

⚠ CAUTION

When operating the air conditioner in a low outdoor ambient temperature, be sure to follow the instructions described below.

- To prevent exposure to wind, install the outdoor unit with its suction side facing the wall.
- Never install the outdoor unit at a site where the suction side may be exposed directly to wind.
- To prevent exposure to wind, it is recommended to install a baffle plate on the air discharge side of the outdoor unit.
- In heavy snowfall areas, select an installation site where the snow will not affect the unit.



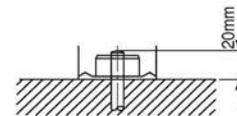
- Construct a large canopy.
- Construct a pedestal.

Install the unit high enough off the ground to prevent burying in snow.

- Choose a place solid enough to bear the weight and vibration of the unit, where the operating sound will not be amplified.
- Choose a location where the hot air discharged from the unit or the operating sound will not cause a nuisance to the neighbours of the user.
- Avoid locations, such as near bedrooms, where the operating sound may cause disturbance.
- There must be sufficient space to carry the unit into and out of the site.
- There must be sufficient space for air passage and no obstructions around the air inlet and the air outlet.
- The site must not be prone to flammable gas leaks in the surrounding area.
- Install units, power cords and inter-unit wire at least 3m away from television and radio sets. (This is to prevent interference to images and sounds. Noise may be produced even if they are more than 3m away depending on radio wave conditions.)
- In coastal areas or other places with a salty atmosphere or one containing sulphate gas, corrosion may shorten the life of the air conditioner.
- Since water will flow from the drain of the outdoor unit, do not place under the unit anything which must be kept away from moisture.

Precautions on Installation

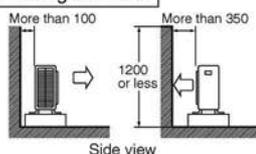
- Check the strength and level of the installation surface so that the unit does not cause any operating vibrations or noise after installation.
- Fix the unit in place securely using foundation bolts, as in the figure. (Prepare 4 sets of M8 or M10 foundation bolts, nuts and washers; all sold separately.)
- It is best to screw in the foundation bolts until their ends are 20mm from the foundation surface.



Installation Space Requirements

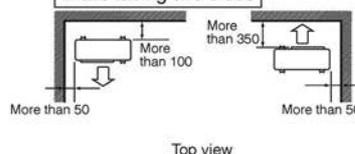
- Position the unit on a horizontal surface. Any tilt in the unit should be 3° or less to the horizontal.
- Where a wall or other obstacle is in the path of the outdoor unit's intake or exhaust airflow, follow the installation space requirements below.
- For any of the below installation patterns, the wall height on the outlet side should be 1200mm or less.

Wall facing one side



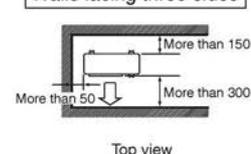
Side view

Walls facing two sides



Top view

Walls facing three sides



Top view

unit: mm

Outdoor Unit Installation Diagram

NOTE

When flaring the pipe end and installing the unit, refer to "3 Flaring the pipe end".

Max. allowable piping length (total for all units)	30m
Max. allowable piping length (between outdoor unit and each indoor unit)	25m
* Min. allowable piping length (between outdoor unit and each indoor unit)	3m
** Additional refrigerant required for refrigerant pipe exceeding 20m in length.	20g/m
Gas pipe	O.D. 9.5mm (Room A) O.D. 12.7mm (Room B)
Liquid pipe	O.D. 6.4mm
*** Max. allowable refrigerant charge amount	1.44kg

Refrigerant piping must be kept to a minimum.

* It is suggested that the minimum allowable length be used for the pipes connecting the indoor units to the outdoor unit in order to prevent noise and vibration from the outdoor unit.

(Mechanical noise and vibration may occur depending on how the unit is installed and the environment in which it is used.)

** Be sure to add the proper amount of additional refrigerant. Failure to do so may result in reduced performance.

*** Do not additionally charge refrigerant.

ⓔ Refrigerant charge label

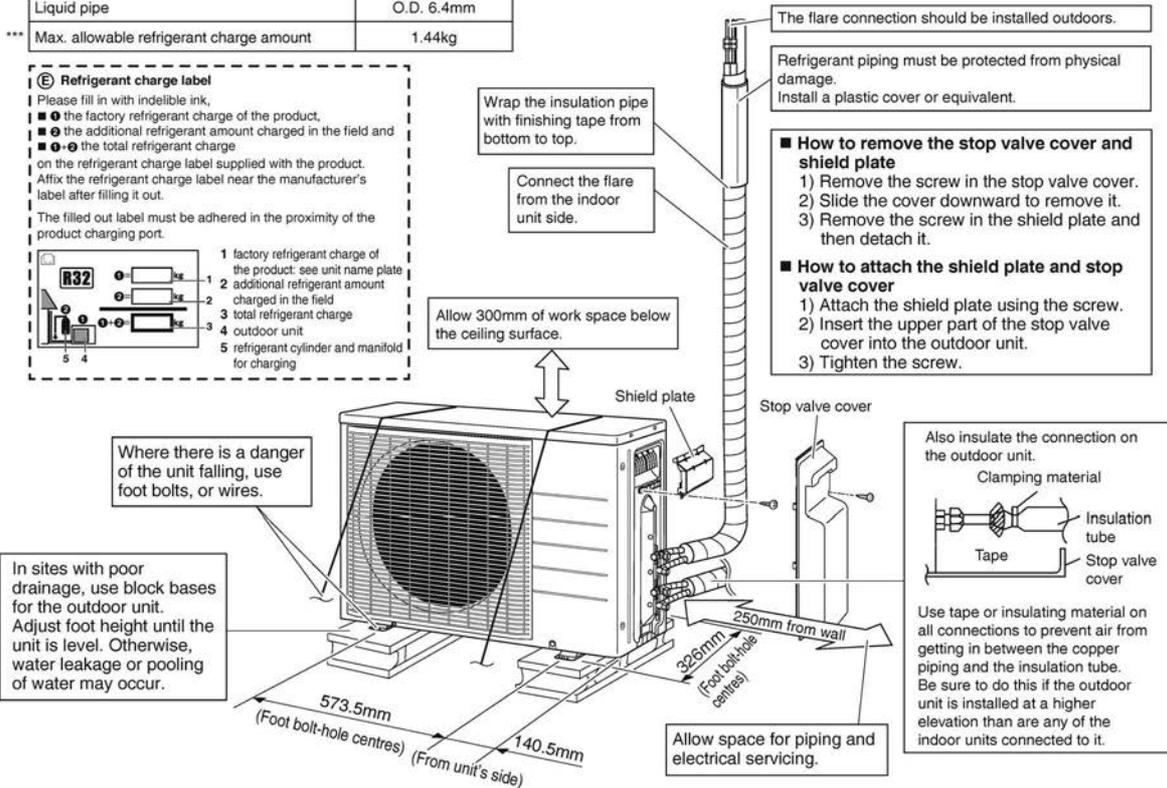
Please fill in with indelible ink.

- the factory refrigerant charge of the product.
- the additional refrigerant amount charged in the field and
- the total refrigerant charge

on the refrigerant charge label supplied with the product. Affix the refrigerant charge label near the manufacturer's label after filling it out.

The filled out label must be adhered in the proximity of the product charging port.

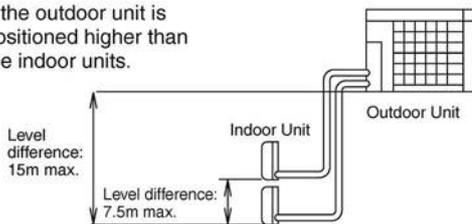
- 1 factory refrigerant charge of the product: see unit name plate
- 2 additional refrigerant amount charged in the field
- 3 total refrigerant charge
- 4 outdoor unit
- 5 refrigerant cylinder and manifold for charging



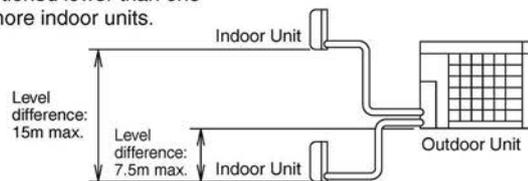
Selecting a Location for Installation of the Indoor Units

- The maximum allowable height difference between the outdoor and indoor units is as shown in the figures.

If the outdoor unit is positioned higher than the indoor units.



If the outdoor unit is positioned lower than one or more indoor units.



Important information regarding the refrigerant used

This product contains fluorinated greenhouse gases.

Refrigerant type: **R32**

GWP⁽¹⁾ value: **675**

⁽¹⁾GWP = global warming potential

The refrigerant quantity is indicated on the unit name plate.

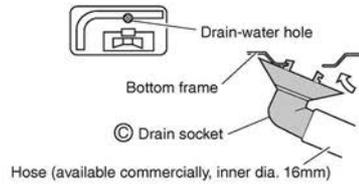
Outdoor Unit Installation (1)

1 Installing the outdoor unit

- When installing the outdoor unit, refer to "Precautions for Selecting the Location" and the "Outdoor Unit Installation Diagram".

2 Drain Work

- Use the © drain socket for drainage.
- When attaching the drain socket to the bottom frame make sure to first connect the drain hose to the drain socket.
- If the drain port is covered by a mounting base or floor surface, place additional foot bases of at least 30mm in height under the outdoor unit's feet.
- In cold areas, do not use a drain hose with the outdoor unit. (Otherwise, drain water may freeze, impairing heating performance.)

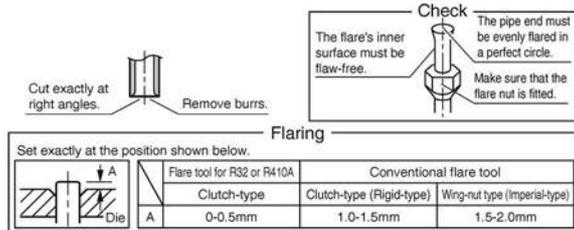


3 Flaring the pipe end

⚠ WARNING

- Do not apply mineral oil to the flare.
- Prevent mineral oil from getting into the system as this would reduce the service life of the units.
- Never use piping which has been used for previous installations. Only use parts which are delivered with this unit.
- Never install a dryer to this R32 unit in order to guarantee its service life.
- The drying material may dissolve and damage the system.
- Incomplete flaring may result in refrigerant gas leakage.
- When flared joints are reused indoors, the flare part shall be re-fabricated.

- Cut the pipe end with a pipe cutter.
- Remove burrs with the cut surface facing downward, so that the filings do not enter the pipe.
- Put the flare nut on the pipe.
- Flare the pipe.
- Check that the flaring has been done correctly.

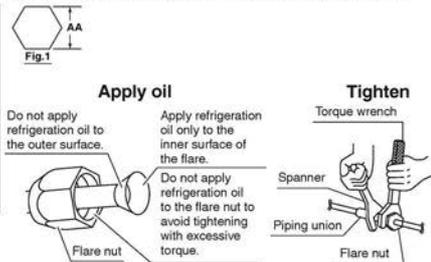


4 Refrigerant piping

⚠ CAUTION

- Use the flare nut fixed to the main unit. (This is to prevent the flare nut from cracking as a result of deterioration over time.)
- To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R32 or R410A.)
- Use a torque wrench when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.
- Align the centres of both flares and tighten the flare nuts 3 or 4 turns by hand, then tighten them fully with a spanner and a torque wrench.

Piping size	Flare nut tightening torque	Valve cap size		Valve cap tightening torque
		dimension AA, refer to Fig.1		
Gas side	O.D. 9.5mm (3/8 inch)	32.7-39.9N • m (330-407kgf • cm)	17mm	15.7 ± 1.5N • m (160 ± 15kgf • cm)
	O.D. 12.7mm (1/2 inch)	49.5-60.3N • m (505-615kgf • cm)	19mm	19.0 ± 1.9N • m (193 ± 20kgf • cm)
	O.D. 15.9mm (5/8 inch)	61.8-75.4N • m (630-770kgf • cm)	22mm	24.5 ± 3.9N • m (250 ± 40kgf • cm)
Liquid side	O.D. 6.4mm (1/4 inch)	14.2-17.2N • m (144-175kgf • cm)	27mm	53.9 ± 5.9N • m (550 ± 60kgf • cm)
	Service port cap tightening torque	10.7-14.7N • m (110-150kgf • cm)	32mm	68.6 ± 6.9N • m (700 ± 70kgf • cm)



Cautions on pipe handling

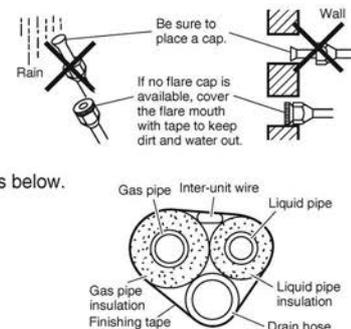
- Protect the open end of the pipe from dust and moisture.
- All pipe bends should be as gentle as possible. Use a pipe bender for bending.

Selection of copper and heat insulation materials

When using commercial copper pipes and fittings, observe the following:

- Insulation material: Polyethylene foam
Heat transfer rate: 0.041 to 0.052W/mK (0.035 to 0.045kcal/mh°C)
Refrigerant gas pipe's surface temperature reaches 110°C max.
Choose heat insulation materials that will withstand this temperature.
- Be sure to insulate both the gas and liquid piping and observe the insulation dimensions as below.

Piping size	Minimum bend radius	Piping thickness	Thermal insulation size		Thermal insulation thickness
			I.D.	O.D.	
Gas side	O.D. 9.5mm	30mm or more	0.8mm (C1220T-O)	I.D. 12-15mm	10mm Min.
	O.D. 12.7mm	40mm or more	0.8mm (C1220T-O)	I.D. 14-16mm	
	O.D. 15.9mm	50mm or more	1.0mm (C1220T-O)	I.D. 16-20mm	
Liquid side	O.D. 6.4mm	30mm or more	0.8mm (C1220T-O)	I.D. 8-10mm	



- Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

Outdoor Unit Installation (2)

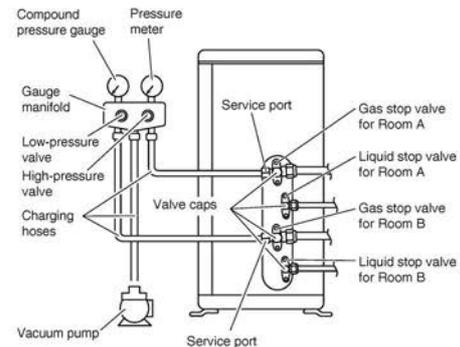
5 Evacuating the air with a vacuum pump and checking for gas leakage

⚠ WARNING

- Make sure that air or any matter other than refrigerant (R32) does not get into the refrigeration cycle.
- If refrigerant gas leaks should occur, ventilate the room as soon and as much as possible.
- R32, as well as other refrigerants, should always be recovered and never be released directly into the environment.
- Use tools for R32 or R410A (such as the gauge manifold, charging hose, or vacuum pump adapter).

- When piping work is complete, it is necessary to evacuate air with a vacuum pump and check for gas leakage.
- Use a hexagonal wrench (4mm) to operate the stop valve rods.
- All refrigerant pipe joints should be tightened with a torque wrench to the specified tightening torque.

- 1) Connect the charging hoses from the gauge manifold to the service ports for the gas stop valves.
 - 2) Fully open the low-pressure valve (Lo) on the gauge manifold and fully close the high-pressure valve (Hi).
(High-pressure valve will require no further operation.)
 - 3) Begin vacuum pumping and make sure that the compound pressure gauge reads -0.1MPa (-760mmHg).
Evacuation for **at least 1 hour** is recommended.
 - 4) Close the low-pressure valve (Lo) on the gauge manifold and stop vacuum pumping.
(Maintain this condition for 4-5 minutes to make sure that the compound pressure gauge pointer does not swing back.)*1.
 - 5) Remove the valve caps from the liquid stop valves and gas stop valves.
 - 6) To open the liquid stop valves, turn the rods of the valves 90° counter-clockwise using a hexagonal wrench.
Close them after 5 seconds, and check for gas leakage.
Using soapy water, check for gas leakage from the indoor unit's flare and outdoor unit's flare and valve rods.
After the check is complete, wipe all soapy water off.
 - 7) Disconnect the charging hoses from the service ports for the gas stop valves, then fully open the liquid and gas stop valves.
(Do not attempt to turn the valve rods further than they can go.)
 - 8) Tighten the valve caps and service port caps for the liquid and gas stop valves with a torque wrench to the specified torques.
Refer to "4. Refrigerant piping" for details.
- *1. If the compound pressure gauge pointer swings back, the refrigerant may have water content or there may be a loose pipe joint. Check all pipe joints and retighten nuts as needed, then repeat steps 2) through 4).



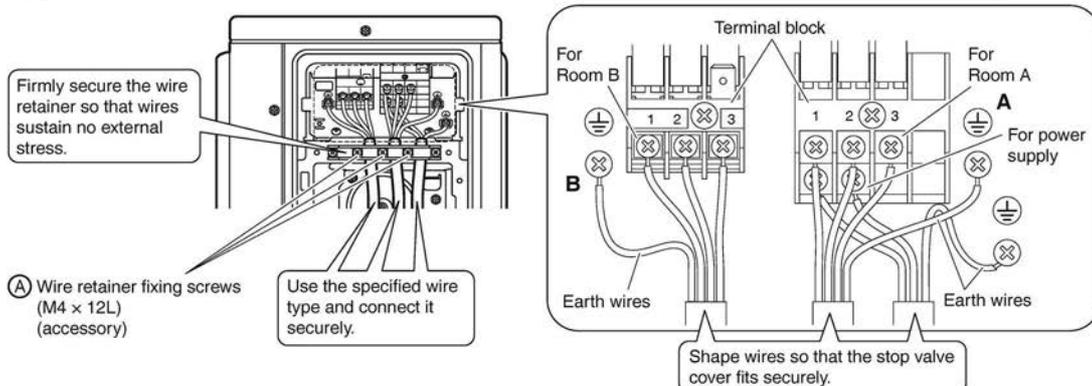
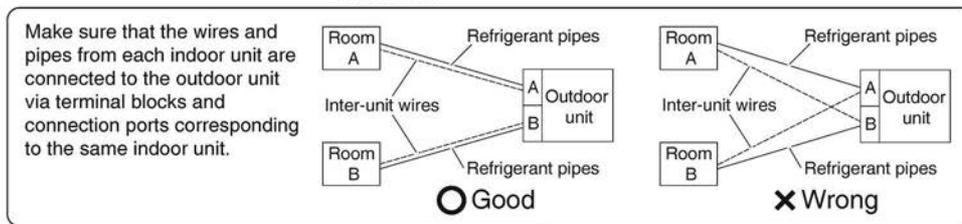
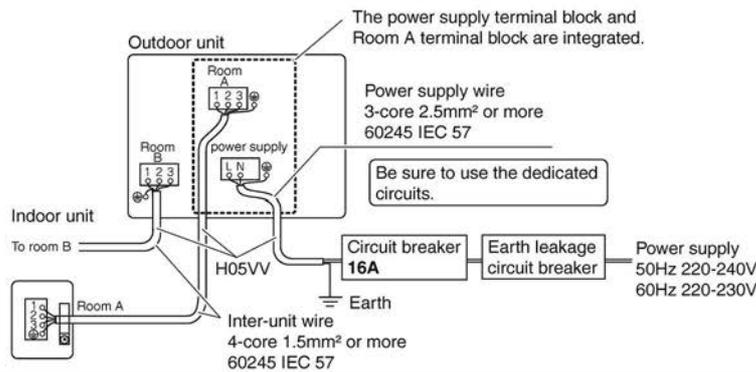
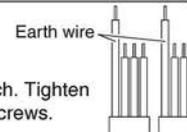
Outdoor Unit Installation (2)

6 Wiring (1)

⚠ WARNING

- Do not use tapped wires, extension cords, or starburst connections, as they may cause overheating, electric shock, or fire.
- Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.
- Be sure to install an earth leakage detector. (One that can handle higher harmonics.)
(This unit uses an inverter. Therefore, a earth leakage circuit breaker capable of handling higher harmonics must be used in order to prevent the earth leakage circuit breaker malfunctioning.)
- Use an all-pole disconnection type circuit breaker with at least 3mm between the contact point gaps.
- Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.
- There is a risk of electric shock if the earth wires are disconnected, so please make sure the earth wires are longer than the other wires.
(The earth wires should be the last wires to be disconnected if the inter-unit wires are pulled.)

- Do not turn on the circuit breaker until all work is completed.
 - 1) Cut the wires in such a way that the earth wires are longer than the other wires.
 - 2) Strip the insulation from the wire (20mm).
 - 3) Connect the inter-unit wires between the indoor and outdoor units so that the terminal numbers match. Tighten the terminal screws securely. It is recommended that a flathead screwdriver be used to tighten the screws.
 - 4) **Be sure to match the symbols for wiring and piping.**
 - 5) Pull the wire lightly to make sure that it does not disconnect.
 - 6) Fix in place the wire retainer using the screws pre-attached to the wire retainer and the (A) wire retainer fixing screws (M4 x 12L). (5 screws)
 - 7) After completing the work, reattach the shield plate and stop valve cover to their original positions.



- The earth wires should be longer than the other wires.

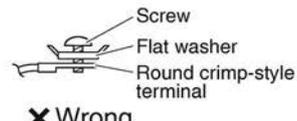
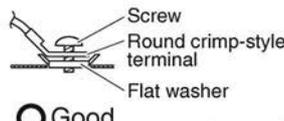
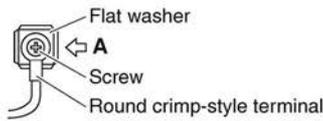
Outdoor Unit Installation (3)

7 Wiring (2)

⚠ CAUTION

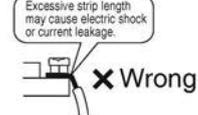
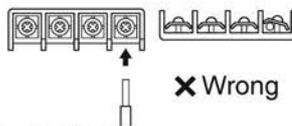
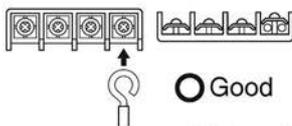
Precautions to be taken for power supply wiring

- When using stranded wires, make sure to use the round crimp-style terminal for connection to the power supply terminal block.
- Use the following method when installing a round crimp-style terminal.



Arrow view A

- When connecting the inter-unit wire to the terminal block using a single core wire, be sure to curl the end of the lead. Improper work may cause heat and fire.



Stripping wire at terminal block

- If the power cord is damaged, it should be replaced by the manufacturer, authorized dealer or qualified technician, in order to avoid hazards.

Earthing

This air conditioner must be earthed. For earthing, follow the applicable local standard for electrical installations.

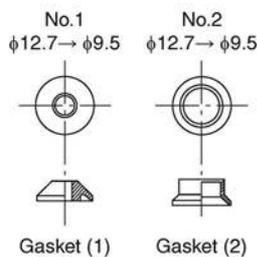
Connections (connection port)

Install the indoor unit according to the table below, which shows the relationship between the class of indoor unit and the corresponding port.

Room	
A	20, 25, 35
B	(20), (25), (35), 50

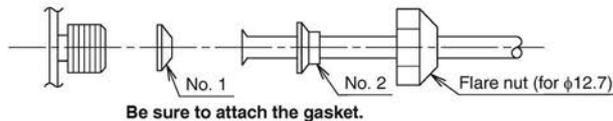
○ : Use the (B) reducer (accessory) to connect pipes.
Refer to "How to Use the (B) Reducers (accessory)" for information on reducer numbers and their shapes.

How to Use the (B) Reducers (accessory)



Use the (B) reducers (accessory) supplied with the unit as described below.

Connecting a pipe of φ9.5 to a gas pipe connection port for φ12.7:



- When using the (B) reducer (accessory) packing shown above, be careful not to overtighten the nut, or the smaller pipe may become damaged. (Apply about 2/3 to 3/3 the normal torque.)
- Apply a coat of refrigeration oil to the threaded connection port of the outdoor unit where the flare nut comes in.
- Use an appropriate wrench to avoid damaging the connection thread by overtightening the flare nut.

Piping size	Flare nut tightening torque
O. D. 9.5mm	32.7-39.9N • m (333-407kgf • cm)
O. D. 12.7mm	49.5-60.3N • m (505-615kgf • cm)

Outdoor Unit Installation (3)

Pump Down Operation

“Pump Down” means to collect refrigerant in the outdoor unit.

⚠ WARNING

- Make sure that air or any matter other than refrigerant (R32) does not get into the refrigeration cycle.
- When performing a pump down, turn off the compressor before detaching the refrigerant pipes.
(If the refrigerant pipes are detached when the compressor is operating and the stop valves are open, air will be drawn in leading to abnormally high pressure in the refrigeration cycle. This may result in rupturing and bodily injury.)

⚠ CAUTION

- When performing a pump down, forced cooling operation must run on both indoor units (Room A and Room B), otherwise, it will not be possible to isolate the refrigerant and refrigerant may leak.

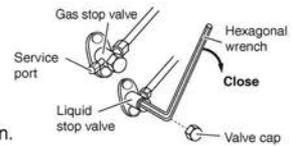
In order to protect the environment, be sure to pump down when relocating or disposing of the unit.

- 1) Remove the valve caps from the liquid stop valves and gas stop valves for Room A and Room B.
- 2) Begin forced cooling operation following the method below.

■ Using the indoor unit ON/OFF switch

Press and hold the ON/OFF switch for the Room A or Room B indoor unit for at least 5 seconds.
(The operation will start on both indoor units.)^[1]

- 3) After about 5 minutes, close the liquid stop valves for Room A and Room B with a hexagonal wrench.
- 4) After about 5 minutes, close the gas stop valves for Room A and Room B, and stop forced cooling operation.



After the operation, reattach the valve cap to the original condition.

Note

- [1] Forced cooling operation will stop automatically after about 15 minutes.
To stop the operation, press the indoor unit ON/OFF switch.

Trial operation and testing

- Before starting the trial operation, measure the voltage at the primary side of the circuit breaker.
- Check that all liquid and gas stop valves are fully open.
- Check that piping and wiring all match.

■ Trial operation should be carried out in COOL or HEAT operation.

1-1 Measure the supply voltage and make sure that it is within the specified range.

1-2 In COOL operation, select the lowest programmable temperature; in HEAT operation, select the highest programmable temperature.

1-3 Carry out the trial operation following the instructions in the operation manual to ensure that all functions and parts, such as the movement of the flap, are working properly.

- To protect the air conditioner, restart operation is disabled for 3 minutes after the system has been turned off.
- When trial operation is conducted in HEAT operation directly after the circuit breaker is turned on, in some cases no air will be output for about 3 to 20 minutes in order to protect the air conditioner.

1-4 After trial operation is complete, set the temperature to a normal level (26°C to 28°C in COOL operation, 20°C to 24°C in HEAT operation).

- When operating the air conditioner in COOL operation in winter, or HEAT operation in summer, set it to the trial operation mode using the following method.

- 1) Press **TEMP** (up), **TEMP** (down) and **OFF** at the same time.
- 2) Press **TEMP** (up), select **T**, press **FAN**.
- 3) Press **COOL** or **HEAT** to turn on the system.

- Trial operation will stop automatically after about 30 minutes. To stop the operation, press **OFF**.
- Some of the functions cannot be used in the trial operation mode.
- The air conditioner draws a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is turned on again.

Test items

Test items	Symptom	Check
Indoor and outdoor units are installed securely.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Draining line is properly installed.	Water leakage	
System is properly earthed.	Electrical leakage	
Only specified wires are used for all wiring, and all wires are connected correctly.	No operation or burn damage	
Indoor or outdoor unit's air inlet or air outlet are unobstructed.	Incomplete cooling/heating function	
Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote control commands.	No operation	
Pipes and wires are connected to the corresponding terminal blocks/connection ports for the connected unit.	No cooling/heating	

ATTENTION

- Even when the air conditioner is not operating, it consumes some electric power. If the customer is not going to use the unit soon after it is installed, turn off the circuit breaker to avoid wasting electricity.

SAFETY PRECAUTIONS

- Failure to follow these instructions properly may result in personal injury or loss WARNING of life.
- Be sure to turn off the circuit breaker before installing.
- Do not turn on the circuit breaker before the installation is complete.
- When installing, refer also to the installation manual and wiring diagrams for the outdoor unit.

This unit has demand response capability which is compliant with AS/NZS 4755.3.1; 2012. To activate this function, you need to make a contract with remote agents such as electric supply company, then this unit should be connected to Demand response enabling device (DRED). For further information, consult your dealer. This unit supports 3 Demand Response Modes (DRMs): DRM1, DRM2 and DRM3.

WARNING

- Ask your dealer or technical representative to install the unit.
Any deficiency caused by your own installation may result in an electric shock or fire.
- Ensure that installation work is done correctly following this instruction manual.
Any deficiency caused by installation may result in an electric shock or fire.
- Firmly connect the wiring using the specified cables.
Carefully check that the cables do not exert any forces on the terminals.
Improper wiring connections may produce heat and possibly a fire.
- Never try any modification.
Any deficiency caused by your modification or repair may result in an electric shock or fire.
Consult with your dealer about repair.
- All electrical work must be performed by a licensed technician, according to local regulations and the instructions given in this manual.
Any lack of electric circuit or any deficiency caused by installation may result in an electric shock or fire.
- Do not move and re-install this device yourself. Any deficiency caused by installation may result in an electric shock or fire. Ask your distributor or special vendor for moving and installation.
- Stop the operation if any malfunction occurs.
If malfunction occurs (burning smell, etc.) stop the operation and turn off the power supply.
Contact your dealer or technical representative. If the controller continues to operate after a malfunction occurs, this may cause damage, electric shock or fire.

CAUTION

- Wire so that it does not receive any tension.
Tension may cause wire breakage, heating or fire cause.
- Use standard wires in compliance with the current capacity.
A failure to this may result in an electric leakage, heating or fire.
- Do not wash with water. Doing so may cause an electric shock or malfunction.
- Do not connect the demand control transmission cable to the terminal block for power supply.
- Do not pull, extremely bend or apply strong pressure on the wire to prevent failure.
- Secure electrical wiring above clamp.
- Do not get DRED wire caught in the panel.
- Secure the power supply cord, indoor/outdoor unit connecting wire and DRED wire with the clamp and band.

DEMAND RESPONSE MODE

These units have demand response capability which is compliant with AS/NZS 4755.3.1; 2012.

Connection of demand response

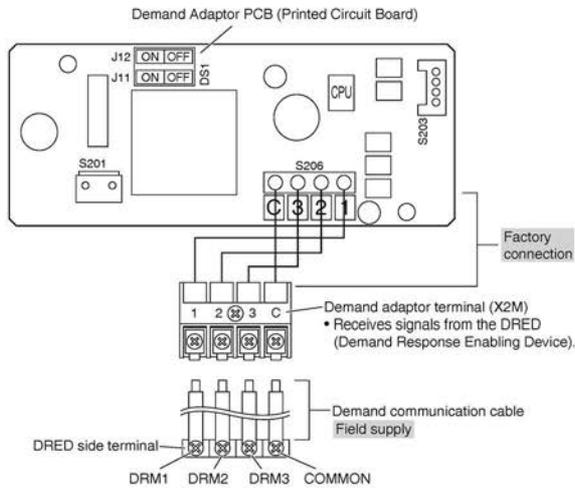


Fig.1

DEMAND RESPONSE MODES (DRMs)

These units support 3 demand response modes (DRMs)

DRM	Description of operation in this mode
DRM 1	The compressor is off. The air conditioner does not perform cooling or heating operation during the demand response event.
DRM 2	The air conditioner continues to perform cooling or heating operation during the demand response event, but the electrical energy consumed by the air conditioner in a half hour period is not more than 50% of the total electrical energy that would be consumed if operating at the rated capacity in a half hour period.
DRM 3	The air conditioner continues to perform cooling or heating operation during the demand response event, but the electrical energy consumed by the air conditioner in a half hour period is not more than 75% of the total electrical energy that would be consumed if operating at the rated capacity in a half hour period.

NOTES

- DRM is automatically enabled from DRED. Manually changing DRM is not possible.
- You might feel these units do not sufficiently perform cooling or heating operation during DRM.
- Operation settings can be changed as usual with the remote controller during DRM. However, you might not feel cool or warm enough as DRM is prioritized.
- When this unit receives the DRM1 signal, the response time until the DRM1 mode is activated is within 60 sec. However, if the maintenance and safety modes are activated, those modes have priority.
- The terminal block for the DRED satisfies the ELV requirements.

DEMAND COMMUNICATION CABLE SPECIFICATION (FIELD SUPPLY)

• Use cable conformed to AS/NZS 5000.2.

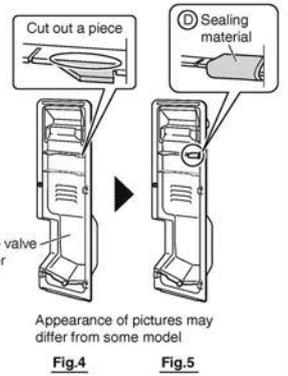
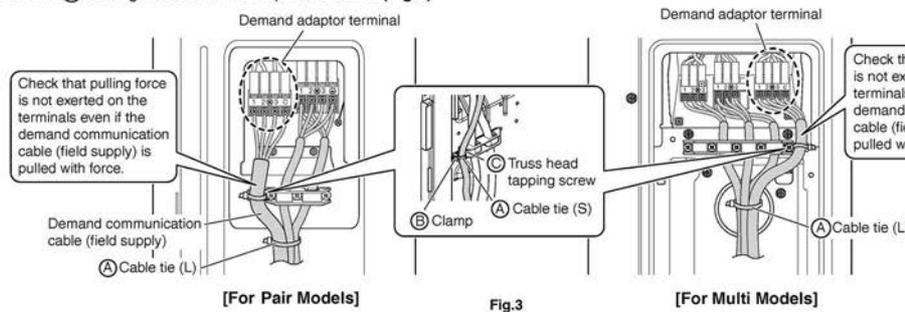
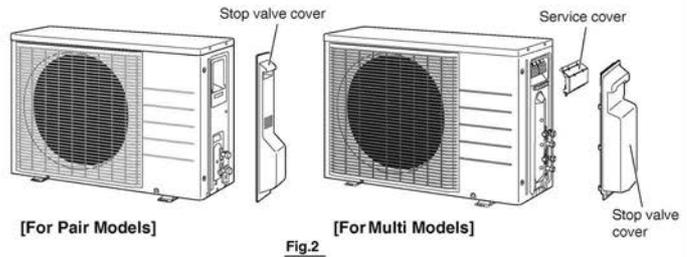
Type	Double insulated	Size	0.5-1.5mm ²	Maximum wiring length	30m
------	------------------	------	------------------------	-----------------------	-----

INSTALLATION PROCEDURE

ACCESSORIES

(A) Cable tie 	2	(C) Truss head tapping screw M4-16 (for wire retainer) 	1	(E) Installation and operation manual 	1
(B) Clamp 	1	(D) Sealing material 	1		

1. Remove the stop valve cover for pair models. (Fig.2)
Remove the stop valve cover and service cover for multi models. (Fig.2)
2. Carry out wiring.
(Refer to "Connection of demand response" (Fig.1) in DEMAND RESPONSE MODE.)
3. Fasten down the demand communication cable with 2 pcs. of (A) cable tie. (Fig.3)
 - Remove the screw from the wire retainer and then replace (C) truss head tapping screw M4-16 and fasten with (B) clamp. (make sure to connect the cable to the appropriate terminal).
4. Remove the sealing material from the back of the stop valve cover and cut a square notch. (Fig.4)
5. Affix (D) sealing material to the stop valve cover. (Fig.5)



6. Install each component to the original position.

C: 3P708955-1

12. Operation Manual

12.1 20/25/35 Class

Read Before Operation

Safety Precautions

	Read the precautions in this manual carefully before operating the unit.		This appliance is filled with R32.
---	--	---	------------------------------------

- Keep this manual where the user can easily find it.
- The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.

 WARNING	Failure to follow these instructions properly may result in personal injury or loss of life.
 CAUTION	Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

 Never attempt.	 Be sure to follow the instructions.	 Be sure to establish an earth connection.
--	---	--

- After reading, keep this manual in a convenient place so that you can refer to it whenever necessary. If the equipment is transferred to a new user, be sure also to hand over the manual.

WARNING

-  Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance must be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odour.
- When the amount of refrigerant is 1.84kg or more, the room size of the room where equipment is installed, operated and stored is limited.
For details refer to the WARNING list in the "Safety Precautions" section of the installation manual for the outdoor unit.
- To avoid fire, explosion or injury, do not operate the unit when harmful gases (e.g. flammable or corrosive) are detected near the unit.
- Be aware that prolonged, direct exposure to cool or warm air from the air conditioner, or to air that is too cool or too warm, can be harmful to your physical condition and health.
- Do not place objects, including rods, your fingers, etc., in the air inlet or outlet. Product damage or personal injury may result due to contact with the air conditioner's high-speed fan blades.
- Do not attempt to repair, dismantle, reinstall or modify the air conditioner yourself as this may result in water leakage, electric shock or fire hazards.
- Do not use flammable spray near the air conditioner, or otherwise fire may result.
- Do not use a refrigerant other than the one indicated on the outdoor unit (R32) when installing, moving or repairing. Using other refrigerants may cause trouble or damage to the unit, and personal injury.
- To avoid electric shock, do not operate with wet hands.

-  Beware of fire in case of refrigerant leakage. If the air conditioner is not operating correctly, i.e. not generating cool air, refrigerant leakage could be the cause. Consult your dealer for assistance. The refrigerant within the air conditioner is safe and normally does not leak.
However, in the event of a leakage, contact with a naked burner, heater or cooker may result in generation of noxious gas. Do not use the air conditioner until a qualified service person confirms that the leakage has been repaired.
- Do not attempt to install or repair the air conditioner yourself. Improper workmanship may result in water leakage, electric shock or fire hazards. Please contact your local dealer or qualified personnel for installation and maintenance work.
- If the air conditioner is malfunctioning (giving off a burning odour, etc.), turn off power to the unit and contact your local dealer. Continued operation under such circumstances may result in a failure, electric shock or fire hazards.
- Be sure to install an earth leakage circuit breaker. Failure to install an earth leakage circuit breaker may result in electric shock or fire.

-  Be sure to earth the unit. Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shock.

CAUTION

-  Do not use the air conditioner for purposes other than those for which it is intended. Do not use the air conditioner for cooling precision instruments, food, plants, animals or works of art as this may adversely affect the performance, quality and/or longevity of the object concerned.
- Do not expose plants or animals directly to the airflow from the unit as this may cause adverse effects.
- Do not place appliances that produce naked flames in places exposed to the airflow from the unit as this may impair combustion of the burner.
- Do not block the air inlets nor outlets. Impaired airflow may result in insufficient performance or trouble.

Read Before Operation

- 
 - Do not sit on the outdoor unit, put things on the unit, or pull the unit. Doing so may cause accidents, such as falling or toppling down, thus resulting in injury, product malfunctioning, or product damage.
 - Do not place objects that are susceptible to moisture directly beneath the indoor or outdoor units. Under certain conditions, condensation on the main unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping, resulting in fouling or failure of the object concerned.
 - After prolonged use, check the unit stand and its mounts for damage. If they are left in a damaged condition, the unit may fall and cause injury.
 - To avoid injury, do not touch the air inlet or aluminium fins of the indoor or outdoor units.
 - The appliance is not intended for use by unattended young children or infirm persons. Impairment of bodily functions and harm to health may result.
 - Children should be supervised to ensure that they do not play with the unit or its remote controller. Accidental operation by a child may result in impairment of bodily functions and harm health.
 - Avoid impacts to the indoor and outdoor units, or otherwise product damage may result.
 - Do not place flammable items, such as spray cans, within 1m of the air outlet.
The spray cans may explode as a result of hot air from the indoor or outdoor units.
 - Be careful not to let pets urinate on the air conditioner. Urination on the air conditioner may result in electric shock or fire.
 - Do not wash the air conditioner with water, as this may result in electric shock or fire.
 - Do not place water containers (vases, etc.) above the unit, as this may result in electric shock or fire hazards if they should topple over.
 - Do not insert the batteries in the wrong polarity (+/-) orientation as this may result in short circuiting, fire, or battery leakage.
 - Do not sit or hang on the panel. The panel may fall, and injury or product malfunctioning may result.
 - Do not sway the panel. The panel may hit people or objects, and injury or property damage may result.
 - Do not let children play around the panel. Injury or property damage may result.
 - Do not pull the wires. The wires may be broken and the panel may fall, and injury or property damage may result.
 - Do not locate obstacles in the route. The panel may fall, and injury or property damage may result.
 - Do not bend or damage the wires. The wires may be broken and the panel may fall, and injury or property damage may result.
 - Do not put objects on the panel, or otherwise production malfunctioning may result.
 - Do not use an unstable stand at the time of operating or maintaining the air conditioner, or otherwise you may topple over or injury yourself.
 - Locate the remote controller in places out of reach of children. The wrong operation of the remote controller may result in injury.
-
- 
 - To avoid oxygen depletion, ensure that the room is adequately ventilated if equipment such as a burner is used together with the air conditioner.
 - Before cleaning, be sure to stop unit operation and turn off the circuit breaker. Otherwise, an electric shock and injury may result.
 - Only connect the air conditioner to the specified power supply circuit. Power supplies other than the one specified may result in electric shock, overheating and fires.
 - Arrange the drain hose to ensure smooth drainage. Imperfect drainage may cause wetting of the building, furniture, etc.
 - Do not place objects in direct proximity of the outdoor unit and do not let leaves and other debris accumulate around the unit. Leaves are a hotbed for small animals which can enter the unit. Once inside the unit, such animals can cause malfunctions, smoke or fire if they come into contact with electrical parts.
 - Do not place objects around the indoor unit.
Doing so may have an adverse influence on the performance, product quality, and life of the air conditioner.
 - This appliance is not intended to be used by persons with reduced physical, sensory or mental capabilities, or with lack of operation knowledge, unless they have been given supervision or instruction concerning the appliance use by person responsible for their safety. Keep out of children's reach to ensure that they do not play with the appliance.

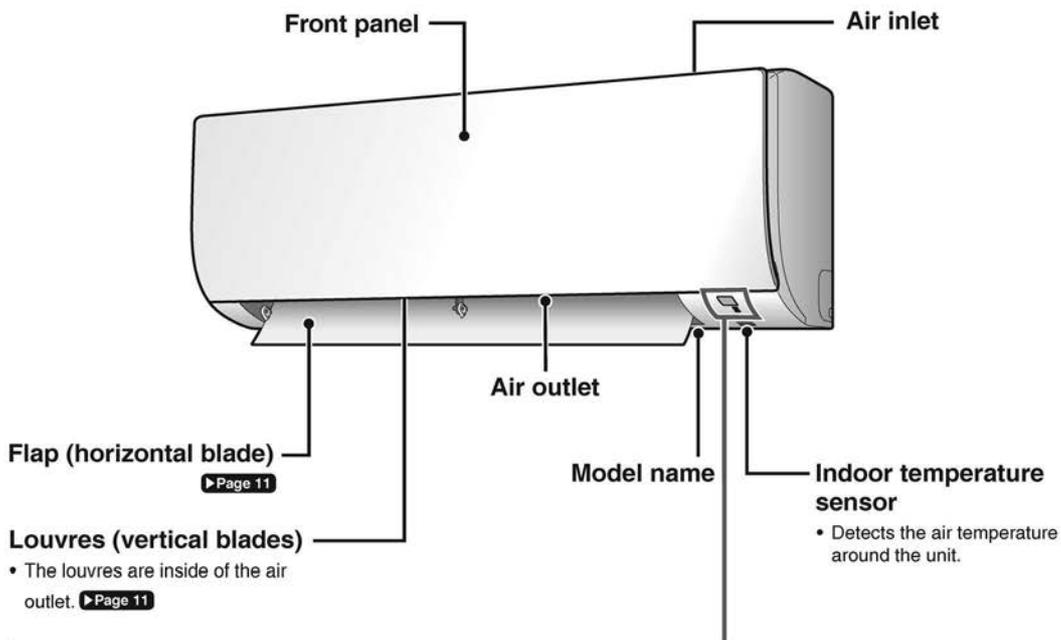
Precautions relating to area surrounding the indoor and outdoor units

- Be sure to follow the instructions below.
 - The indoor unit is at least 1m away from any television or radio set (unit may cause interference with the picture or sound).
 - Refrain from using the units in areas prone to high levels of oily smoke, such as a kitchen. Water leakage may result.

Read Before Operation

Names of Parts

Indoor Unit



Display

Signal receiver

- Receives signals from the remote controller.
- When the unit receives a signal, you will hear a beep sound.

Case	Sound type
Operation start	beep-beep
Setting changed	beep
Operation stop	long beep

OPERATION lamp (green)

TIMER lamp (orange)
▶Page 16,17

ON/OFF

Indoor unit ON/OFF switch

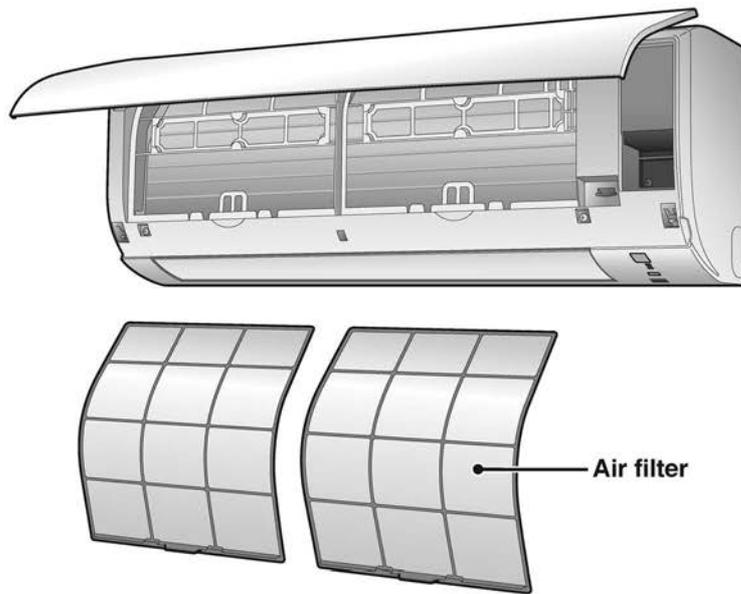
- Press this switch once to start operation. Press once again to stop it.
- For the operation mode setting, refer to the following table.

Mode	Temperature setting	Airflow rate
AUTO	25.0°C	AUTO

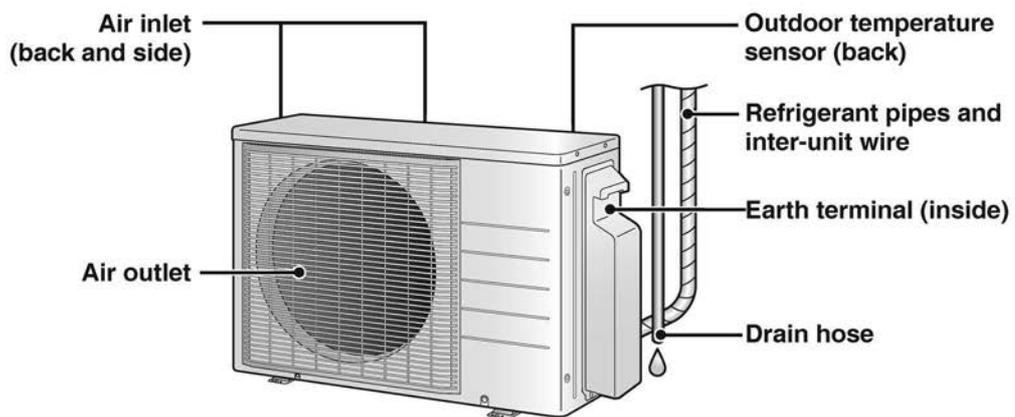
- This switch can be used when the remote controller is missing.

Read Before Operation

■ Open the front panel



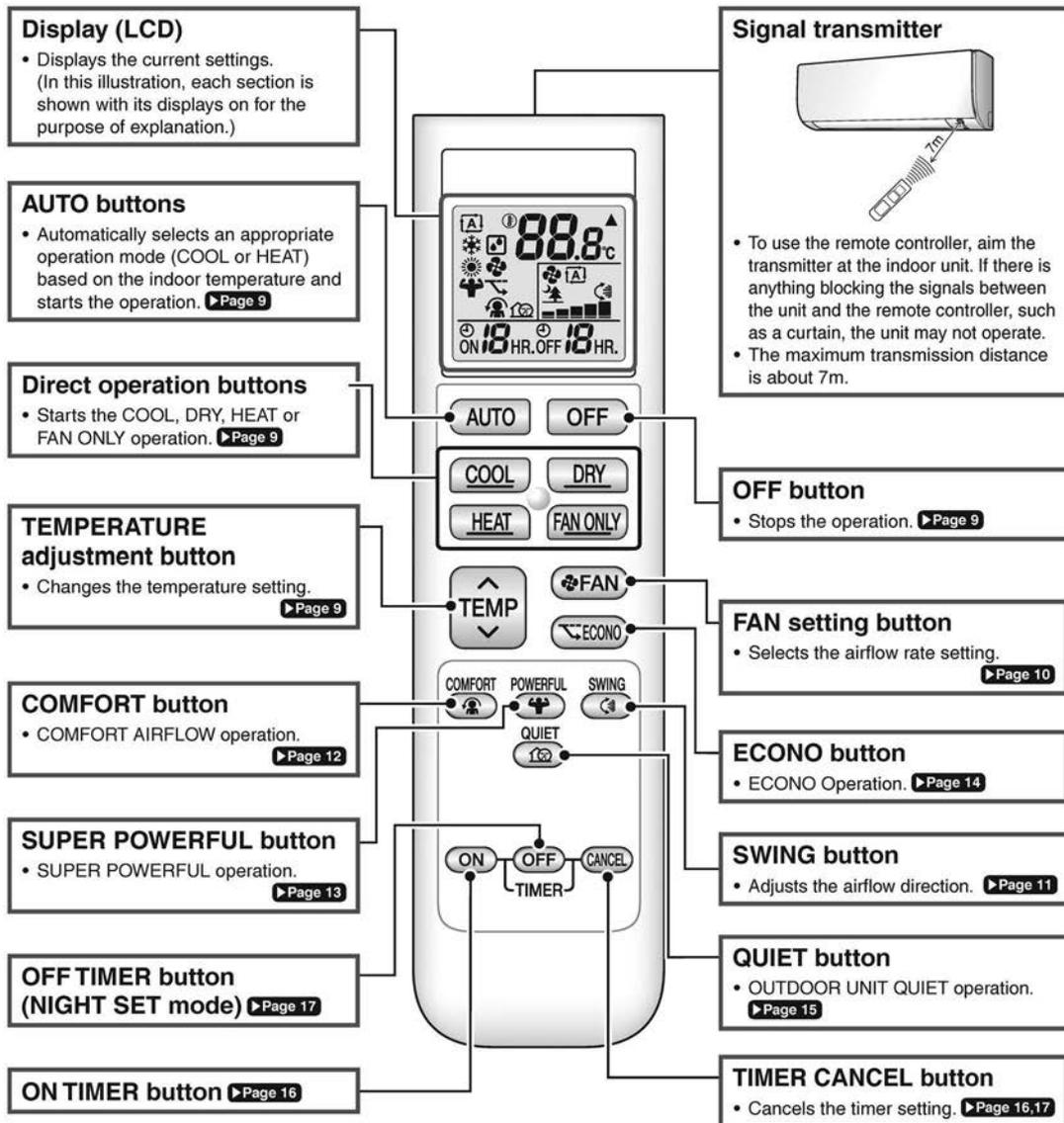
Outdoor Unit



Read Before Operation

Names of Parts

Remote Controller



Model name | ARC480A55

Read Before Operation

Preparation Before Operation

⚠ CAUTION

Incorrect handling of batteries can result in injury from battery leakage, rupturing or heating, or lead to equipment failure. Please observe the following precautions and use safely.

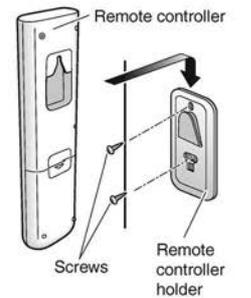
- If the alkaline solution from the batteries should get in the eyes, do not rub the eyes. Instead, immediately flush the eyes with tap water and seek the attention of a medical professional.
- Keep batteries out of reach of children. In the event that batteries are swallowed, seek the immediate attention of a medical professional.
- Do not expose batteries to heat or fire. Do not disassemble or modify batteries. The insulation or gas release vent inside the battery may be damaged, resulting in battery leakage, rupturing, or heating.
- Do not damage or peel off labels on the batteries.

■ To insert the batteries



■ To fix the remote controller holder to a wall

1. Choose a place from where the signals reach the unit.
2. Fix the holder to a wall, a pillar, or similar location with the screws supplied with the holder.
3. Hang the remote controller on the remote controller holder.



■ To attach the titanium apatite deodorizing filter (sold separately) and dust collection filter PM2.5 (sold separately)

- If attaching the separately sold filters, attach them before turning the power on. ▶ Page 20

■ Turn on the circuit breaker

- After the power is turned on, the flap of the indoor unit opens and closes once to set the reference position.

NOTE

Notes on batteries

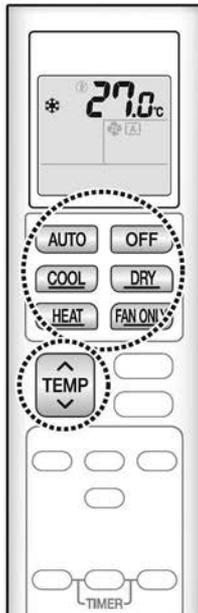
- To avoid possible injury or damage from battery leakage or rupturing, remove the batteries when not using the product for long periods of time.
- The standard replacement time is 1 year. Both batteries should be replaced at the same time. Be sure to replace them with new size AAA.LR03 (alkaline) batteries.
- When battery power has run out, the LCD will begin blinking as an alert that the batteries need replacing. In some cases, when battery consumption is accelerated owing usage conditions, signal reception may decline before the LCD begins blinking.
- The batteries supplied with the remote controller are for initial operation. The batteries may run out in less than 1 year.

Note on remote controller

- Do not drop the remote controller. Do not get it wet.

Basic Operation

AUTO · COOL · DRY · HEAT · FAN ONLY Operation



The air conditioner operates with the operation mode of your choice.

■ To start operation

▶ Press button of your desired operation mode.

AUTO operation

Press **AUTO** . “**A**” appears on the LCD.

COOL operation

Press **COOL** . “**❄**” appears on the LCD.

DRY operation

Press **DRY** . “**☁**” appears on the LCD.

HEAT operation

Press **HEAT** . “**☀**” appears on the LCD.

FAN ONLY operation

Press **FAN ONLY** . “**🌀**” appears on the LCD.

- The OPERATION lamp lights green.



Display

■ To stop operation

▶ Press **OFF** .

- The OPERATION lamp goes off.

■ To change the temperature setting

▶ Press **TEMP** .

- Press **▲** to raise the temperature and press **▼** to lower the temperature. Each pressing of the button changes the temperature by 0.5°C.

COOL operation	HEAT operation	AUTO operation	DRY or FAN ONLY operation
18.0-32.0°C	10.0-30.0°C	18.0-30.0°C	The temperature setting cannot be changed.

NOTE

Notes on AUTO operation

- In AUTO operation, the system selects an appropriate operation mode (COOL or HEAT) based on the indoor starts the operation.
- The system automatically reselects setting at a regular interval to bring the indoor temperature to user-setting level.

Note on DRY operation

- Eliminates humidity while maintaining the indoor temperature as much as possible. It automatically controls temperature and airflow rate, so manual adjustment of these functions is unavailable.



Adjusting the Airflow Rate



You can adjust the airflow rate to increase your comfort.

■ To adjust the airflow rate setting

▶ Press .

- Each pressing of  changes the airflow rate setting in sequence.



- When the airflow is set to "  ", quiet operation starts and noise from the indoor unit will become quieter.
- In the quiet operation mode, the airflow rate is set to a weak level.
- In DRY operation, the airflow rate setting cannot be changed.
- At smaller airflow rates, the cooling (heating) effect is also smaller.

Tips for saving energy

Keeping the temperature setting at a moderate level helps save energy.

- Recommended temperature setting
 - For cooling: 26.0-28.0°C
 - For heating: 20.0-24.0°C

Cover windows with a blind or a curtain.

- Blocking sunlight and air from outdoors increases the cooling (heating) effect.

Keep the air filters clean.

- Clogged air filters cause inefficient operation and waste energy. Clean them once in about every 2 weeks. [▶Page 19](#)

If you are not going to use the air conditioner for a long period, for example in spring or autumn, turn off the circuit breaker.

- The air conditioner always consumes a small amount of electricity even while it is not operating.

Basic Operation



Adjusting the Airflow Direction



You can adjust the airflow direction to increase your comfort.

⚠ CAUTION

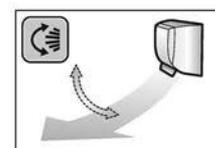
- Always use a remote controller to adjust the angle of the flap.
- If you attempt to move the flap forcibly by hand when it is swinging, the mechanism may be damaged.
- Be careful when adjusting the louvres.
- Inside the air outlet, a fan is rotating at a high speed.

Auto swing

For up and down airflow direction

1. Press .

- "  " appears on the LCD
- The flap (horizontal blade) will begin to swing.



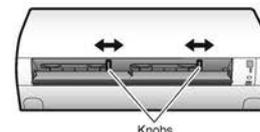
2. If you want to stop the movement of the flap, press again when the flap reaches the desired position.

Manual adjustment

For right and left airflow direction

▶ Hold the knobs and move the louvres (vertical blades) to the desired position.

- There are knobs in 2 places.

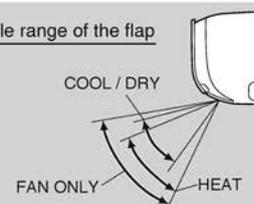


NOTE

Notes on airflow direction setting

- The movable range of the flap varies according to the operation mode.
- The flap will stop at the upper position when the airflow rate is changed to low during the up and down swing setting.

Movable range of the flap





COMFORT AIRFLOW Operation



The air direction and flow rate are adjusted so that the air will not blow directly at people in the room.

■ To start

Press  .

- “” appears on the LCD.

	COOL operation	DRY operation	HEAT operation
Flap direction	Goes up		Goes down
Airflow rate	The airflow rate can be set to any level	AUTO	The airflow rate can be set to any level

- Not available in FAN ONLY mode.

■ To cancel

Press  again.

- “” disappears from the LCD.
- The flap will return to the memory position from before COMFORT AIRFLOW operation.

NOTE

Note on COMFORT AIRFLOW operation

- If the up and down airflow direction is selected, COMFORT AIRFLOW operation will be cancelled.

Useful Functions



SUPER POWERFUL Operation



SUPER POWERFUL operation quickly maximises the cooling (heating) effect in any operation mode. In this mode, the air conditioner operates at maximum capacity.

■ To start

Press **POWERFUL** .

- “” appears on the LCD.
- SUPER POWERFUL operation ends in 20 minutes. Then the system automatically operates again with the previous settings which were used before SUPER POWERFUL operation.

■ To cancel

Press **POWERFUL**  again.

- “” disappears from the LCD.

NOTE

Notes on SUPER POWERFUL operation

- Pressing **OFF** causes the settings to be cancelled, and “” disappears from the LCD.
- SUPER POWERFUL operation will not increase the capacity of the air conditioner if the air conditioner is already in operation with its maximum capacity demonstrated.
 - In **COOL, HEAT and AUTO** operation
 - To maximise the cooling (heating) effect, the capacity of outdoor unit increases and the airflow rate becomes fixed at the maximum setting.
 - The temperature and airflow settings cannot be changed in COOL and HEAT operation.
 - Airflow settings cannot be changed in AUTO operation.
 - In **DRY** operation
 - The temperature setting is lowered by 2.5°C and the airflow rate is slightly increased.
 - In **FAN ONLY** operation
 - The airflow rate is fixed at the maximum setting.

Regarding the combination of SUPER POWERFUL and other operations

SUPER POWERFUL + COMFORT AIRFLOW	Not available*
SUPER POWERFUL + ECONO	
SUPER POWERFUL + OUTDOOR UNIT QUIET	

*Priority is given to the function of whichever button is pressed last.

Useful Functions



ECONO Operation



ECONO operation enables efficient operation by limiting the maximum power consumption. This function is useful to prevent the circuit breaker from tripping when the unit operates alongside other appliances on the same circuit.

■ To start

▶ Press  .

- “” appears on the LCD.
- Not available in FAN ONLY mode.

■ To cancel

▶ Press  again.

- “” disappears from the LCD.

NOTE

Notes on ECONO operation

- This operation is performed with lower power and therefore may not provide a sufficient cooling (heating) effect.
- Pressing  causes the settings to be cancelled, and “” disappears from the LCD.
- If the power consumption level is already low, switching to ECONO operation will not reduce the power consumption.

Some useful functions can be used together.

COMFORT AIRFLOW + ECONO	Available
OUTDOOR UNIT QUIET + ECONO	

Useful Functions



OUTDOOR UNIT QUIET Operation



OUTDOOR UNIT QUIET operation lowers the noise level of the outdoor unit by changing the frequency and fan speed on the outdoor unit. This function is convenient during night.

■ To start

▶ Press  .

- "  " appears on the LCD.

■ To cancel

▶ Press  again.

- "  " disappears from the LCD.

NOTE

Notes on OUTDOOR UNIT QUIET operation

- SUPER POWERFUL operation and OUTDOOR UNIT QUIET operation cannot be used at the same time. Priority is given to the function of whichever button is pressed last.
- Even the operation is stopped by using the remote controller or the indoor unit ON/OFF switch when using OUTDOOR UNIT QUIET operation, "  " will remain on the remote controller display.
- OUTDOOR UNIT QUIET operation will drop neither the frequency nor fan speed if they have been already dropped low enough.

Possible combinations of OUTDOOR UNIT QUIET operation and basic operations

OUTDOOR UNIT QUIET	Operation mode				
	AUTO	DRY	COOL	HEAT	FAN
	√	-	√	√	-

TIMER Operation



ON/OFF TIMER Operation



Timer functions are useful for automatically switching the air conditioner on or off in the morning or at night. You can also use the ON TIMER and OFF TIMER together.

[ON TIMER operation]

■ To set

▶ Press **ON**.

"ON iHR." appears on the LCD.

- Each pressing of **ON** changes the time setting by 1 hour. The time can be set between 1 and 12 hours.
- The TIMER lamp lights orange.



Display

■ To cancel

▶ Press **CANCEL**.

- "ON iHR." disappears from the LCD.
- The TIMER lamp goes off.

NOTE

In the following cases, set the timer again.

- After the circuit breaker has turned off.
- After a power failure.
- After replacing the batteries in the remote controller.

TIMER Operation



ON/OFF TIMER Operation



[OFF TIMER operation]

■ To set

▶ Press **OFF**.



"OFF 1HR." appears on the LCD.

- Each pressing of **OFF** changes the time setting by 1 hour. The time can be set between 1 and 12 hours.
- The TIMER lamp lights orange.



Display

■ To cancel

▶ Press **CANCEL**.

- "OFF 1HR." disappears from the LCD.
- The TIMER lamp goes off.

[ON/OFF TIMER combination]

■ To combine

- A sample setting for combining the 2 timers is shown below.
- "ON" and "OFF" are appears on the LCD.

[Example]



When setting while the unit is operating

- Stops the unit 1 hour later and starts it 7 hours after that.



When setting while the unit is stopped

- Starts the unit 2 hours later and stops it 3 hours after that.

NOTE

NIGHT SET mode

- When the OFF TIMER is set, the air conditioner automatically adjusts the temperature setting (0.5°C up in COOL, 2.0°C down in HEAT) to prevent excessive cooling (heating) during sleeping hours.

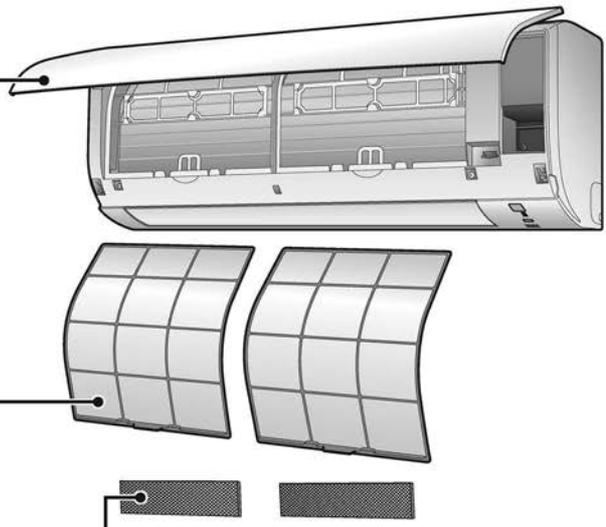
Care and Cleaning

⚠ CAUTION

- Before cleaning, be sure to stop the operation and turn off the circuit breaker.
- Do not touch the aluminium fins of the indoor unit. If you touch those parts, this may cause an injury.

■ Quick reference

Cleaning parts



Front panel

- Wipe it with a soft damp cloth.
- Only neutral detergent may be used.

If dirty



Air filter

- Vacuum dust or wash the filter.

Once every 2 weeks

▶ Page 19

Indoor unit, outdoor unit and remote controller

- Wipe them with a soft cloth.

If dirty

Titanium apatite deodorizing filter (sold separately) and dust collection filter (PM2.5) (sold separately)

Titanium apatite deodorizing filters and dust collection filters are sold separately (not included with the air conditioner). To purchase, contact the dealer where you bought the air conditioner.

Item	Part No.
Titanium apatite deodorizing filter - without frame (set of 2)	KAF970A46
Dust collection filter (PM2.5) - without frame (set of 2)	BAFP046A41

Titanium apatite deodorizing filter

- Vacuum dust or replace the filter.

[Cleaning]

Once every 6 months

▶ Page 20

[Replacement]

Once every 3 years

▶ Page 20

Dust collection filter (PM2.5)

- No cleaning is required. Please replace the filter every 6 months. ▶ Page 20

NOTE

For cleaning, do not use any of the following:

- Water hotter than 40°C
- Volatile liquid such as benzine, petrol and thinner
- Polishing compounds
- Rough materials such as a scrubbing brush



Care

Care and Cleaning

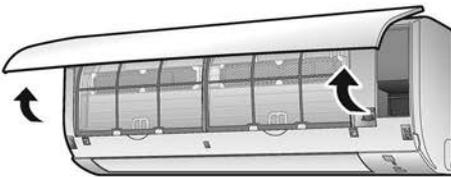
⚠ CAUTION

- Do not touch the aluminium fins by bare hand at the time of dismantling or mounting the filter.

■ Air filter

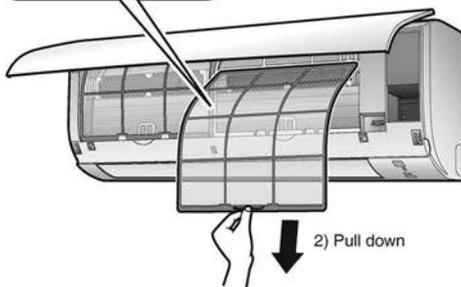
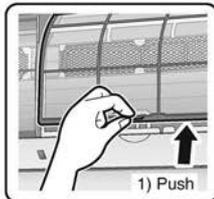
1. Open the front panel.

- Hold the front panel by the sides and open it.



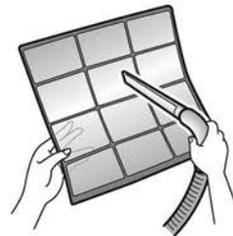
2. Pull out the air filters.

- Push the filter tab at the centre of each air filter a little upwards, then pull it down.



3. Wash the air filters with water or clean them with vacuum cleaner.

- It is recommended to clean the air filters every 2 weeks.



If the dust does not come off easily

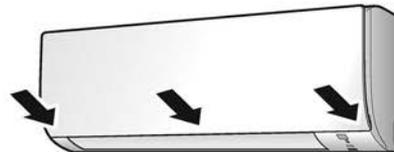
- Wash the air filters with neutral detergent thinned with lukewarm water, then dry them up in the shade.



4. Reattach the filters.

5. Close the front panel slowly.

- Press the panel at both sides and the centre.

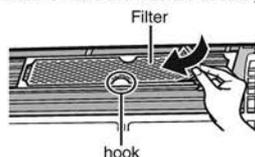


- Make sure that the front panel is securely fixed.

■ Titanium apatite deodorizing filter (sold separately) /
dust collection filter (PM2.5) (sold separately)

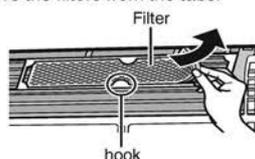
Attaching

1. Open the front panel and pull out the air filters. **▶ Page 19**
2. Insert the titanium apatite deodorizing filters or dust collection filters (PM2.5).
 - Check that the filters are inserted securely under the tabs.



Cleaning and Replacement

1. Open the front panel and pull out the air filters. **▶ Page 19**
2. Take off the titanium apatite deodorizing filters or dust collection filters (PM2.5).
 - Remove the filters from the tabs.



3. Clean or replace the titanium apatite deodorizing filters or dust collection filters (PM2.5).

[Cleaning for titanium apatite deodorizing filter (Blue-Black)]

3-1 Vacuum dust, and soak in lukewarm water or water for about 10 to 15 minutes if very dirty.

3-2 After washing, shake off remaining water and let them dry in the shade.

- This filter can be renewed by washing it with water once **every 6 months** and we recommend replacing it once **every 3 years**.
- Do not wring out the filter when removing water from it.

[Cleaning for dust collection filter (PM2.5) (White)]

- Do not wash the filters as this will reduce their efficiency.
- It is recommended to replace it once **every 6 months**.

[Replacement]

Remove each filter from the front grille by detaching them from the 6 tabs and then install the new filters.

- When attaching the filter, check that the filter is properly set in the tabs.

4. Set the filters as they were and close the front panel.

- Press the front panel at both sides and the center.

NOTE

- Operation with dirty filters:
 - cannot deodorise the air,
 - cannot clean the air,
 - results in poor cooling,
 - may cause odour.
- Dispose of old filters as non-flammable waste.

Care

Care and Cleaning

■ Prior to a long period of non-use

1. Operate the FAN ONLY mode for several hours on a fine day to dry out the inside.

- Press **FAN ONLY**.

2. After operation stops, turn off the circuit breaker for the room air conditioner.

3. Clean the air filters and reattach them. [▶ Page 19](#)

4. To prevent battery leakage, take out the batteries from the remote controller.

■ We recommend periodical maintenance

- In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a specialist in addition to regular cleaning by the user.
- For specialist maintenance, please contact the dealer where you bought the air conditioner.
- The maintenance cost must be borne by the user.

When the Need Arises

FAQ

Indoor unit

The flap does not start swinging immediately.

- The air conditioner is adjusting the position of the flap. The flap will start moving soon.

The air conditioner stops generating airflow during HEAT operation.

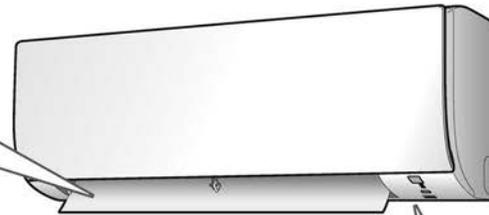
- Once the set temperature is reached, the airflow rate is reduced and operation stopped in order to avoid generating a cool airflow. Operation will resume automatically when the indoor temperature falls.

HEAT operation stops suddenly and a flowing sound is heard.

- The outdoor unit is defrosting. HEAT operation starts after the frost on the outdoor unit has been removed. This can take about 4 to 12 minutes.

Operation does not start soon.

- When **AUTO** or any direct operation button was pressed soon after operation was stopped.
- When the mode was reselected.
 - This is to protect the air conditioner. You should wait for about 3 minutes.



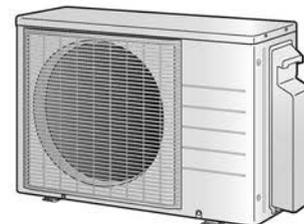
Different sounds are heard.

- **A sound like flowing water**
 - This sound is generated because the refrigerant in the air conditioner is flowing.
 - This is a pumping sound of the water in the air conditioner and can be heard when the water is pumped out from the air conditioner during COOL or DRY operation.
 - Refrigerant flows inside the air conditioner even when one indoor unit is not in operation if the other indoor unit is in operation.
- **Blowing sound**
 - This sound is generated when the flow of the refrigerant in the air conditioner is switched over.
- **Ticking sound**
 - This sound is generated when the cabinet and frame of the air conditioner slightly expand or shrink as a result of temperature changes.
- **Whistling sound**
 - This sound is generated when refrigerant flows during defrosting operation.
- **Clicking sound during operation or idle time**
 - This sound is generated when the refrigerant control valves or the electrical parts operate.
- **Clopping sound**
 - This sound is heard from the inside of the air conditioner when the exhaust fan is activated while the room doors are closed. Open the window or turn off the exhaust fan.

Outdoor unit

The outdoor unit emits water.

- **In HEAT operation**
 - The frost on the outdoor unit melts into water or steam when the air conditioner is in defrosting operation.
- **In COOL or DRY operation**
 - Moisture in the air condenses into water on the cool surface of the outdoor unit piping and drips.



When the Need Arises

Troubleshooting

Before making an inquiry or a request for repair, please check the following.
If the problem persists, consult your dealer.



Not a problem

This case is not a problem.



Check

Please check again before requesting repairs.

The air conditioner does not operate

Case	Description / what to check
OPERATION lamp is off.	<ul style="list-style-type: none"> • Has the circuit breaker been tripped or the fuse blown? • Is there a power failure? • Are batteries set in the remote controller?
OPERATION lamp is blinking.	<ul style="list-style-type: none"> • Turn off the power with the circuit breaker and restart operation with the remote controller. If the OPERATION lamp is still blinking, check the error code and consult your dealer. ▶Page 26

The air conditioner suddenly stops operating

Case	Description / what to check
OPERATION lamp is on.	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> • To protect the system, the air conditioner may stop operating after sudden large voltage fluctuations. It automatically resumes operation in about 3 minutes.
OPERATION lamp is blinking.	<ul style="list-style-type: none"> • Are the air filters dirty? Clean the air filters. • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? Stop operation and after turning off the circuit breaker, remove the obstruction. Then restart operation with the remote controller. If the OPERATION lamp is still blinking, check the error code and consult your dealer. ▶Page 26

The air conditioner does not stop operating

Case	Description / what to check
The air conditioner continues operating even after operation is stopped.	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> ■ Immediately after the air conditioner is stopped <ul style="list-style-type: none"> • The outdoor unit fan continues rotating for about another 1 minute to protect the system. ■ While the air conditioner is not in operation <ul style="list-style-type: none"> • When the outdoor temperature is high, the outdoor unit fan may start rotating to protect the system.

The room does not cool down / warm up

Case	Description / what to check
Air does not come out	<ul style="list-style-type: none"> ■ In HEAT operation <ul style="list-style-type: none"> • The air conditioner is warming up. Wait for about 1 to 4 minutes. • During defrosting operation, hot air does not flow out of the indoor unit. ■ When the air conditioner operates immediately after the circuit breaker is turned on <ul style="list-style-type: none"> • The air conditioner is preparing to operate. Wait for about 3 to 20 minutes.
Air does not come out / Air comes out.	<ul style="list-style-type: none"> ■ Is the airflow rate setting appropriate? <ul style="list-style-type: none"> • Is the airflow rate setting low, such as "Indoor unit quiet" or "Airflow rate 1"? Increase the airflow rate setting. ■ Is the set temperature appropriate? ■ Is the adjustment of the airflow direction appropriate?
Air comes out.	<ul style="list-style-type: none"> • Is there any furniture directly under or beside the indoor unit? • Is the unit you are operating or another unit running in ECONO operation? ▶Page 14 • Are the air filters dirty? • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? • Is a window or door open? • Is an exhaust fan turning?

When the Need Arises

Mist comes out

Case	Description / what to check
Mist comes out of the indoor unit.	<input checked="" type="checkbox"/> • This happens when the air in the room is cooled into mist by the cold airflow during COOL or other operation.

Remote controller

Case	Description / what to check
The unit does not receive signals from the remote controller or has a limited operating range.	<input checked="" type="checkbox"/> • The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to "Preparation Before Operation". ▶ Page 8 • Signal communication may be disabled if an electronic-starter-type fluorescent lamp (such as inverter-type lamps) is in the room. Consult your dealer if that is the case. • The remote controller may not function correctly if the transmitter is exposed to direct sunlight.
LCD is faint, is not working, or the display is erratic.	<input checked="" type="checkbox"/> • The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to "Preparation Before Operation". ▶ Page 8
The LCD is blinking and the remote controller cannot be operated.	<input checked="" type="checkbox"/> • Battery power has run out. Replace both batteries at the same time with new size AAA.LR03 (alkaline) batteries. Leaving exhausted batteries in the remote controller can result in injury due to battery leakage, rupturing or heating, or lead to equipment failure. (Even when the LCD is blinking, the OFF button remains functional.)
Other electric devices start operating.	<input checked="" type="checkbox"/> • If the remote controller activates other electric devices, move them away or consult your dealer.

Air has an odour

Case	Description / what to check
The air conditioner gives off an odour.	<input checked="" type="checkbox"/> • The room odour absorbed in the unit is discharged with the airflow. We recommend you to have the indoor unit cleaned. Please consult your dealer.

Others

Case	Description / what to check
The air conditioner suddenly starts behaving strangely during operation.	<input checked="" type="checkbox"/> • The air conditioner may malfunction due to lightning or radio. If the air conditioner malfunctions, turn off the power with the circuit breaker and restart the operation with the remote controller.

NOTE

Mode	Operating conditions
COOL / DRY	Outdoor temperature: 10-46°C Indoor temperature: 18-32°C Indoor humidity: 80% max.
HEAT	Outdoor temperature: -15-24°C Indoor temperature: 10-30°C

Notes on the operating conditions

- If operation continues under any conditions other than those listed in the table,
 - A safety device may activate to stop the operation.
 - Dew may form on the indoor unit and drip from it when COOL or DRY operation is selected.

When the Need Arises

Troubleshooting

■ Call your dealer immediately

WARNING

When an abnormality (such as a burning smell) occurs, stop operation and turn off the circuit breaker.

- Continued operation in an abnormal condition may result in problems, electric shock or fire.
- Consult the dealer where you bought the air conditioner.

Do not attempt to repair or modify the air conditioner by yourself.

- Incorrect work may result in electric shock or fire.
- Consult the dealer where you bought the air conditioner.

If one of the following symptoms takes place, call your dealer immediately.

- The power cord is abnormally hot or damaged.
- An abnormal sound is heard during operation.
- The circuit breaker, a fuse, or the earth leakage circuit breaker cuts off the operation frequently.
- A switch or a button often fails to work properly.
- There is a burning smell.
- Water leaks from the indoor unit.

Turn off the circuit breaker and call your dealer. 

■ After a power failure

- The air conditioner automatically resumes operation in about 3 minutes. You should just wait for a while.

■ Lightning

- If there is a risk lightning could strike in the neighbourhood, stop operation and turn off the circuit breaker to protect the system.

■ Disposal requirements

- Dismantling of the unit, handling of the refrigerant, oil and other parts, should be done in accordance with the relevant local and national regulations.

When the Need Arises



■ Fault diagnosis by remote controller

- In case the air conditioner is malfunctioning, you can check the error code via the remote controller before consulting with service personnel and informing them of the malfunction code.

1. When **CANCEL is held down for about 5 seconds, “00” blinks in the temperature display section.**

2. Press **CANCEL repeatedly until a long beep is produced.**

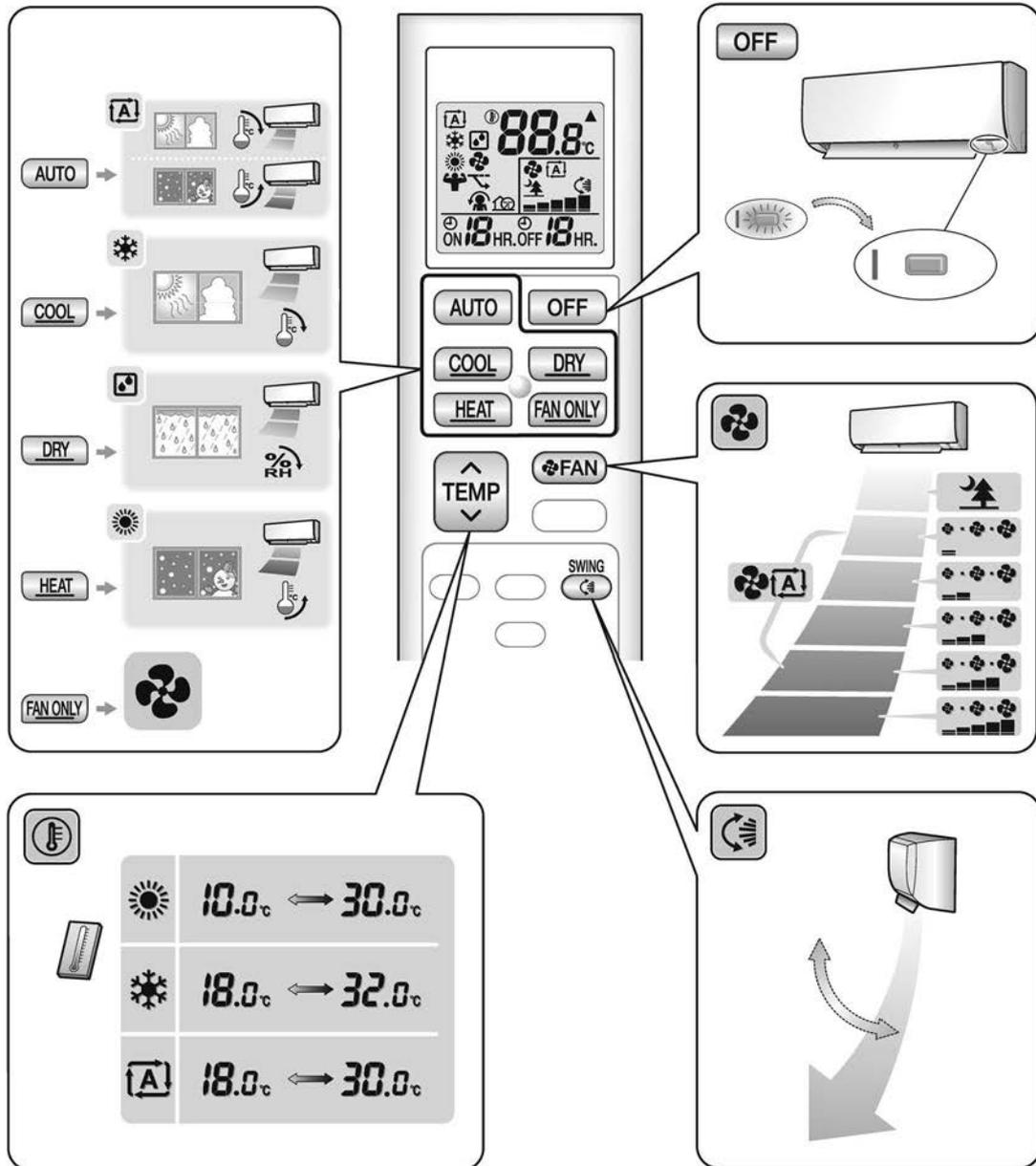
- The code indication changes as shown below, and notifies you with a long beep.

	CODE	MEANING
SYSTEM	00	NORMAL
	UA	INDOOR-OUTDOOR UNIT COMBINATION FAULT
	U0	REFRIGERANT SHORTAGE
	U2	DROP VOLTAGE OR MAIN CIRCUIT OVERVOLTAGE
INDOOR UNIT	U4	FAILURE OF TRANSMISSION (BETWEEN INDOOR UNIT AND OUTDOOR UNIT)
	A1	INDOOR PCB DEFECTIVENESS
	A5	FREEZE-UP PROTECTOR
	A6	FAN MOTOR FAULT
	C4	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	C9	FAULTY SUCTION AIR TEMPERATURE SENSOR
OUTDOOR UNIT	EA	COOLING-HEATING SWITCHING ERROR
	E1	CIRCUIT BOARD FAULT
	E5	OL STARTED
	E6	FAULTY COMPRESSOR START UP
	E7	DC FAN MOTOR FAULT
	E8	OVERCURRENT INPUT
	F3	HIGH TEMPERATURE DISCHARGE PIPE CONTROL
	F6	HIGH PRESSURE CONTROL (IN COOLING)
	F8	OPERATION HALT DUE TO COMPRESSOR INTERNAL TEMPERATURE ABNORMALITY
	H0	SENSOR FAULT
	H6	OPERATION HALT DUE TO FAULTY POSITION DETECTION SENSOR
	H8	DC CURRENT SENSOR FAULT
	H9	FAULTY SUCTION AIR TEMPERATURE SENSOR
	J3	FAULTY DISCHARGE PIPE TEMPERATURE SENSOR
	J6	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	L3	ELECTRICAL PARTS HEAT FAULT
L4	HIGH TEMPERATURE AT INVERTER CIRCUIT HEATSINK	
L5	OUTPUT OVERCURRENT	
P4	FAULTY INVERTER CIRCUIT HEATSINK TEMPERATURE SENSOR	

NOTE

- A short beep indicates non-corresponding codes.
- To cancel the code display, hold **CANCEL** down for about 5 seconds. The code display also clears if no button is pressed for 1 minute.

Quick Reference



12.2 50 Class

Read Before Operation

Safety Precautions

	Read the precautions in this manual carefully before operating the unit.		This appliance is filled with R32.
---	--	---	------------------------------------

- Keep this manual where the user can easily find it.
- The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.

 WARNING	Failure to follow these instructions properly may result in personal injury or loss of life.
 CAUTION	Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

 Never attempt.	 Be sure to follow the instructions.	 Be sure to establish an earth connection.
--	---	--

- After reading, keep this manual in a convenient place so that you can refer to it whenever necessary. If the equipment is transferred to a new user, be sure also to hand over the manual.

WARNING

-  Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance must be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odour.
- When the amount of refrigerant is 1.84kg or more, the room size of the room where equipment is installed, operated and stored is limited.
For details refer to the WARNING list in the "Safety Precautions" section of the installation manual for the outdoor unit.
- To avoid fire, explosion or injury, do not operate the unit when harmful gases (e.g. flammable or corrosive) are detected near the unit.
- Be aware that prolonged, direct exposure to cool or warm air from the air conditioner, or to air that is too cool or too warm, can be harmful to your physical condition and health.
- Do not place objects, including rods, your fingers, etc., in the air inlet or outlet. Product damage or personal injury may result due to contact with the air conditioner's high-speed fan blades.
- Do not attempt to repair, dismantle, reinstall or modify the air conditioner yourself as this may result in water leakage, electric shock or fire hazards.
- Do not use flammable spray near the air conditioner, or otherwise fire may result.
- Do not use a refrigerant other than the one indicated on the outdoor unit (R32) when installing, moving or repairing. Using other refrigerants may cause trouble or damage to the unit, and personal injury.
- To avoid electric shock, do not operate with wet hands.

-  Beware of fire in case of refrigerant leakage. If the air conditioner is not operating correctly, i.e. not generating cool air, refrigerant leakage could be the cause. Consult your dealer for assistance. The refrigerant within the air conditioner is safe and normally does not leak.
However, in the event of a leakage, contact with a naked burner, heater or cooker may result in generation of noxious gas. Do not use the air conditioner until a qualified service person confirms that the leakage has been repaired.
- Do not attempt to install or repair the air conditioner yourself. Improper workmanship may result in water leakage, electric shock or fire hazards. Please contact your local dealer or qualified personnel for installation and maintenance work.
- If the air conditioner is malfunctioning (giving off a burning odour, etc.), turn off power to the unit and contact your local dealer. Continued operation under such circumstances may result in a failure, electric shock or fire hazards.
- Be sure to install an earth leakage circuit breaker. Failure to install an earth leakage circuit breaker may result in electric shock or fire.

-  Be sure to earth the unit. Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shock.

CAUTION

-  Do not use the air conditioner for purposes other than those for which it is intended. Do not use the air conditioner for cooling precision instruments, food, plants, animals or works of art as this may adversely affect the performance, quality and/or longevity of the object concerned.
- Do not expose plants or animals directly to the airflow from the unit as this may cause adverse effects.
- Do not place appliances that produce naked flames in places exposed to the airflow from the unit as this may impair combustion of the burner.
- Do not block the air inlets nor outlets. Impaired airflow may result in insufficient performance or trouble.

Read Before Operation

- 
 - Do not sit on the outdoor unit, put things on the unit, or pull the unit. Doing so may cause accidents, such as falling or toppling down, thus resulting in injury, product malfunctioning, or product damage.
 - Do not place objects that are susceptible to moisture directly beneath the indoor or outdoor units. Under certain conditions, condensation on the main unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping, resulting in fouling or failure of the object concerned.
 - After prolonged use, check the unit stand and its mounts for damage. If they are left in a damaged condition, the unit may fall and cause injury.
 - To avoid injury, do not touch the air inlet or aluminium fins of the indoor or outdoor units.
 - The appliance is not intended for use by unattended young children or infirm persons. Impairment of bodily functions and harm to health may result.
 - Children should be supervised to ensure that they do not play with the unit or its remote controller. Accidental operation by a child may result in impairment of bodily functions and harm health.
 - Avoid impacts to the indoor and outdoor units, or otherwise product damage may result.
 - Do not place flammable items, such as spray cans, within 1m of the air outlet.
The spray cans may explode as a result of hot air from the indoor or outdoor units.
 - Be careful not to let pets urinate on the air conditioner. Urination on the air conditioner may result in electric shock or fire.
 - Do not wash the air conditioner with water, as this may result in electric shock or fire.
 - Do not place water containers (vases, etc.) above the unit, as this may result in electric shock or fire hazards if they should topple over.
 - Do not insert the batteries in the wrong polarity (+/-) orientation as this may result in short circuiting, fire, or battery leakage.
 - Do not sit or hang on the panel. The panel may fall, and injury or product malfunctioning may result.
 - Do not sway the panel. The panel may hit people or objects, and injury or property damage may result.
 - Do not let children play around the panel. Injury or property damage may result.
 - Do not pull the wires. The wires may be broken and the panel may fall, and injury or property damage may result.
 - Do not locate obstacles in the route. The panel may fall, and injury or property damage may result.
 - Do not bend or damage the wires. The wires may be broken and the panel may fall, and injury or property damage may result.
 - Do not put objects on the panel, or otherwise production malfunctioning may result.
 - Do not use an unstable stand at the time of operating or maintaining the air conditioner, or otherwise you may topple over or injury yourself.
 - Locate the remote controller in places out of reach of children. The wrong operation of the remote controller may result in injury.
-
- 
 - To avoid oxygen depletion, ensure that the room is adequately ventilated if equipment such as a burner is used together with the air conditioner.
 - Before cleaning, be sure to stop unit operation and turn off the circuit breaker. Otherwise, an electric shock and injury may result.
 - Only connect the air conditioner to the specified power supply circuit. Power supplies other than the one specified may result in electric shock, overheating and fires.
 - Arrange the drain hose to ensure smooth drainage. Imperfect drainage may cause wetting of the building, furniture, etc.
 - Do not place objects in direct proximity of the outdoor unit and do not let leaves and other debris accumulate around the unit. Leaves are a hotbed for small animals which can enter the unit. Once inside the unit, such animals can cause malfunctions, smoke or fire if they come into contact with electrical parts.
 - Do not place objects around the indoor unit.
Doing so may have an adverse influence on the performance, product quality, and life of the air conditioner.
 - This appliance is not intended to be used by persons with reduced physical, sensory or mental capabilities, or with lack of operation knowledge, unless they have been given supervision or instruction concerning the appliance use by person responsible for their safety. Keep out of children's reach to ensure that they do not play with the appliance.

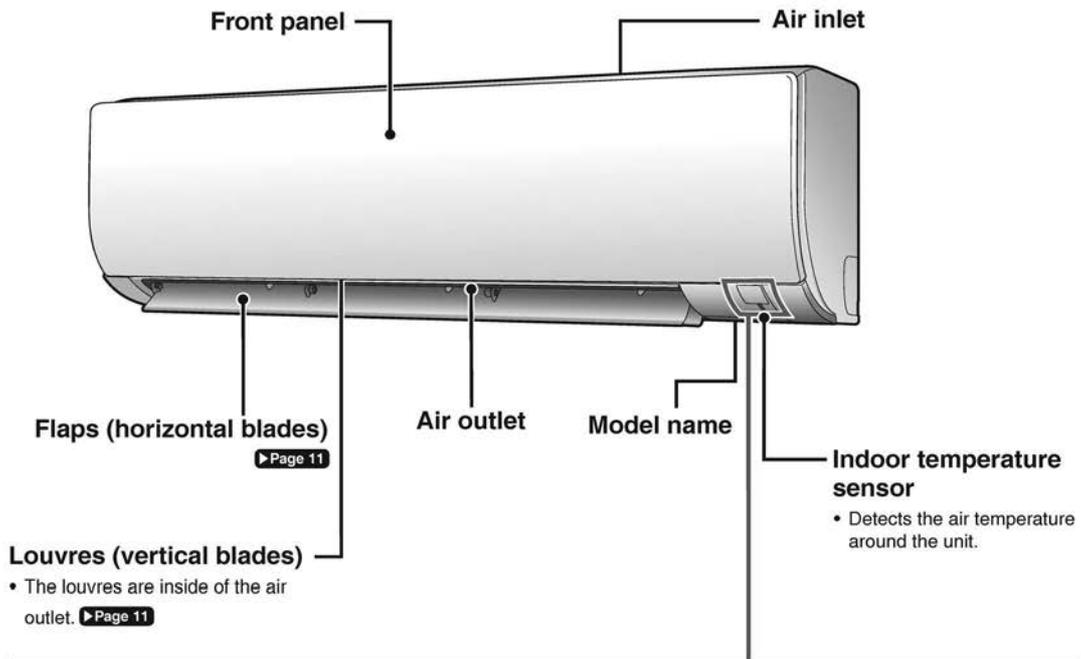
Precautions relating to area surrounding the indoor and outdoor units

- Be sure to follow the instructions below.
 - The indoor unit is at least 1m away from any television or radio set (unit may cause interference with the picture or sound).
 - Refrain from using the units in areas prone to high levels of oily smoke, such as a kitchen. Water leakage may result.

Read Before Operation

Names of Parts

Indoor Unit



Display

Signal receiver

- Receives signals from the remote controller.
- When the unit receives a signal, you will hear a beep sound.

Case	Sound type
Operation start	beep-beep
Setting changed	beep
Operation stop	long beep

OPERATION lamp (green)

TIMER lamp (orange)

▶Page 16,17

Indoor unit ON/OFF switch

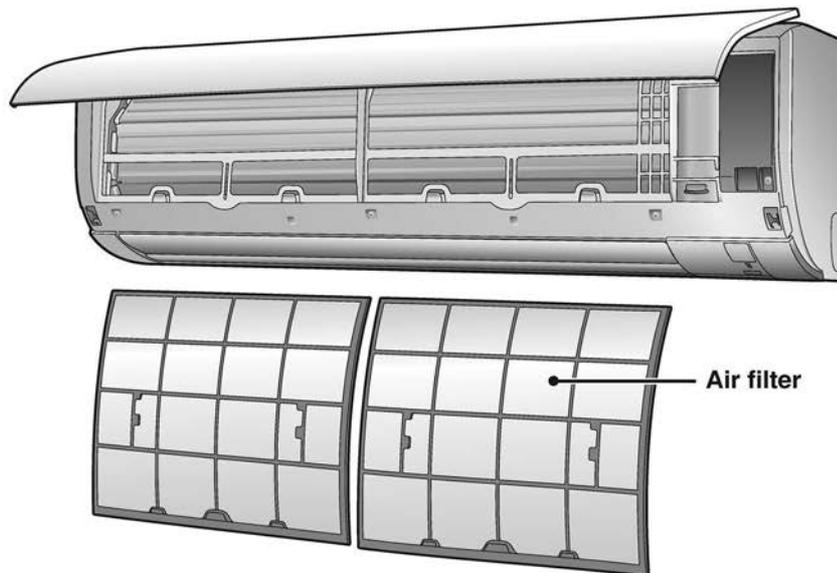
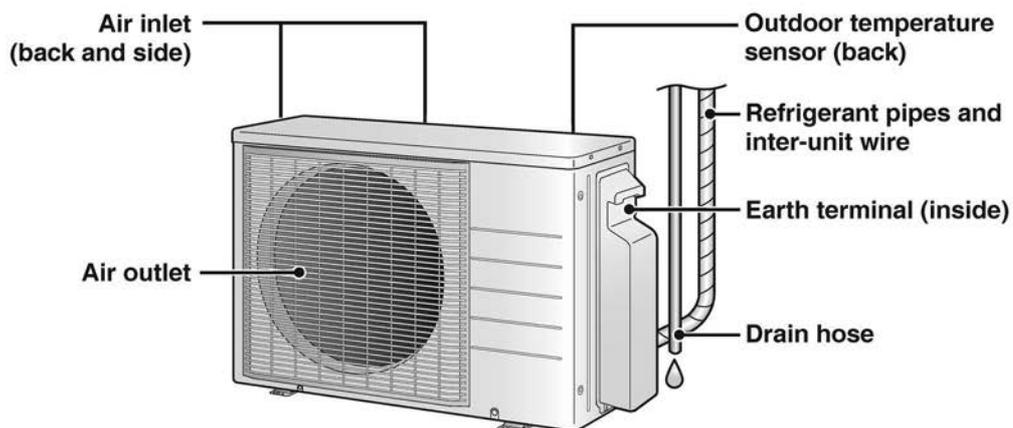
- Press this switch once to start operation. Press once again to stop it.
- For the operation mode setting, refer to the following table.

Mode	Temperature setting	Airflow rate
AUTO	25.0°C	AUTO

- This switch can be used when the remote controller is missing.

Read Before Operation

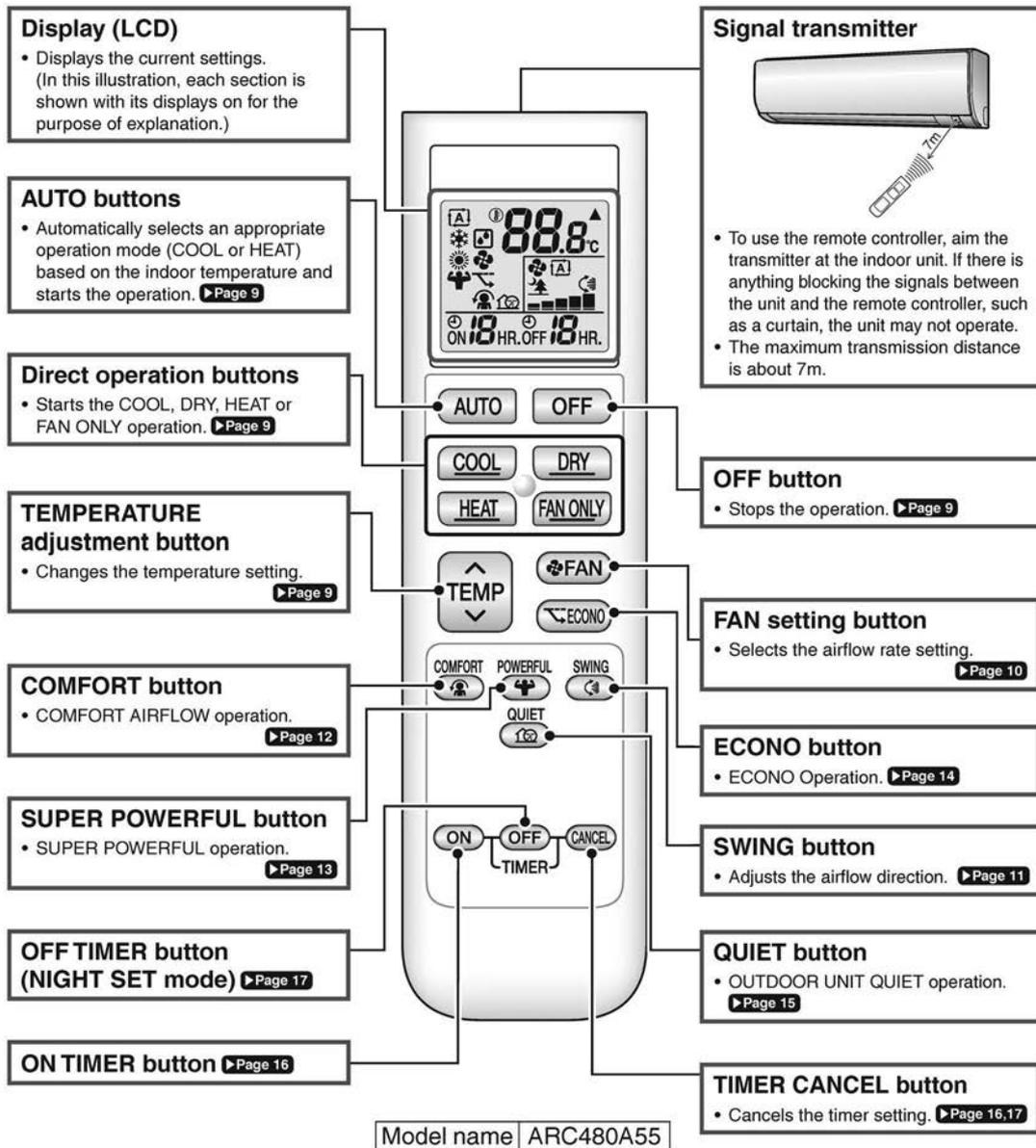
■ Open the front panel

**Outdoor Unit**

Read Before Operation

Names of Parts

Remote Controller



Read Before Operation

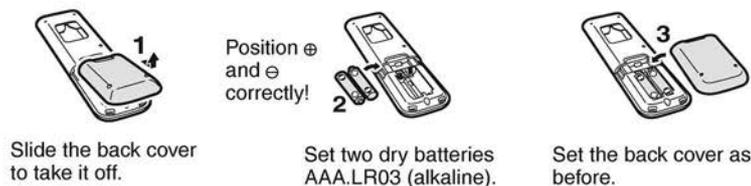
Preparation Before Operation

CAUTION

Incorrect handling of batteries can result in injury from battery leakage, rupturing or heating, or lead to equipment failure. Please observe the following precautions and use safely.

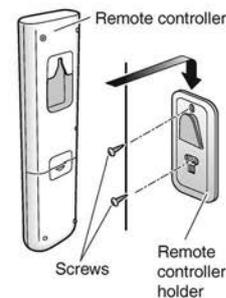
- If the alkaline solution from the batteries should get in the eyes, do not rub the eyes. Instead, immediately flush the eyes with tap water and seek the attention of a medical professional.
- Keep batteries out of reach of children. In the event that batteries are swallowed, seek the immediate attention of a medical professional.
- Do not expose batteries to heat or fire. Do not disassemble or modify batteries. The insulation or gas release vent inside the battery may be damaged, resulting in battery leakage, rupturing, or heating.
- Do not damage or peel off labels on the batteries.

■ To insert the batteries



■ To fix the remote controller holder to a wall

1. Choose a place from where the signals reach the unit.
2. Fix the holder to a wall, a pillar, or similar location with the screws supplied with the holder.
3. Hang the remote controller on the remote controller holder.



■ To attach the titanium apatite deodorizing filter (sold separately) and dust collection filter PM2.5 (sold separately)

- If attaching the separately sold filters, attach them before turning the power on. [▶ Page 20](#)

■ Turn on the circuit breaker

- After the power is turned on, the flaps of the indoor unit open and close once to set the reference position.

NOTE

Notes on batteries

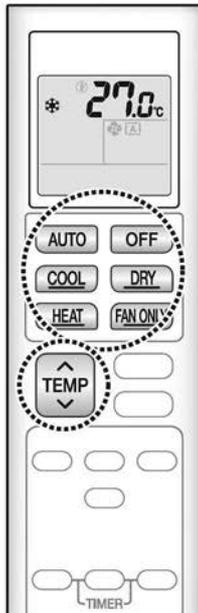
- To avoid possible injury or damage from battery leakage or rupturing, remove the batteries when not using the product for long periods of time.
- The standard replacement time is 1 year. Both batteries should be replaced at the same time. Be sure to replace them with new size AAA.LR03 (alkaline) batteries.
- When battery power has run out, the LCD will begin blinking as an alert that the batteries need replacing. In some cases, when battery consumption is accelerated owing usage conditions, signal reception may decline before the LCD begins blinking.
- The batteries supplied with the remote controller are for initial operation. The batteries may run out in less than 1 year.

Note on remote controller

- Do not drop the remote controller. Do not get it wet.

Basic Operation

AUTO · COOL · DRY · HEAT · FAN ONLY Operation



The air conditioner operates with the operation mode of your choice.

■ To start operation

▶ Press button of your desired operation mode.

AUTO operation

Press **AUTO** . “**A**” appears on the LCD.

COOL operation

Press **COOL** . “**❄**” appears on the LCD.

DRY operation

Press **DRY** . “**☁**” appears on the LCD.

HEAT operation

Press **HEAT** . “**☀**” appears on the LCD.

FAN ONLY operation

Press **FAN ONLY** . “**🌀**” appears on the LCD.

• The OPERATION lamp lights green.



Display

■ To stop operation

▶ Press **OFF** .

• The OPERATION lamp goes off.

■ To change the temperature setting

▶ Press **TEMP** .

• Press **▲** to raise the temperature and press **▼** to lower the temperature. Each pressing of the button changes the temperature by 0.5°C.

COOL operation	HEAT operation	AUTO operation	DRY or FAN ONLY operation
18.0-32.0°C	10.0-30.0°C	18.0-30.0°C	The temperature setting cannot be changed.

NOTE

Notes on AUTO operation

- In AUTO operation, the system selects an appropriate operation mode (COOL or HEAT) based on the indoor starts the operation.
- The system automatically reselects setting at a regular interval to bring the indoor temperature to user-setting level.

Note on DRY operation

- Eliminates humidity while maintaining the indoor temperature as much as possible. It automatically controls temperature and airflow rate, so manual adjustment of these functions is unavailable.



Adjusting the Airflow Rate



You can adjust the airflow rate to increase your comfort.

■ To adjust the airflow rate setting

▶ Press .

- Each pressing of  changes the airflow rate setting in sequence.



- When the airflow is set to "  ", quiet operation starts and noise from the indoor unit will become quieter.
- In the quiet operation mode, the airflow rate is set to a weak level.
- In DRY operation, the airflow rate setting cannot be changed.
- At smaller airflow rates, the cooling (heating) effect is also smaller.

Tips for saving energy

Keeping the temperature setting at a moderate level helps save energy.

- Recommended temperature setting
 - For cooling: 26.0-28.0°C
 - For heating: 20.0-24.0°C

Cover windows with a blind or a curtain.

- Blocking sunlight and air from outdoors increases the cooling (heating) effect.

Keep the air filters clean.

- Clogged air filters cause inefficient operation and waste energy. Clean them once in about every 2 weeks. [▶Page 19](#)

If you are not going to use the air conditioner for a long period, for example in spring or autumn, turn off the circuit breaker.

- The air conditioner always consumes a small amount of electricity even while it is not operating.

Basic Operation



Adjusting the Airflow Direction



You can adjust the airflow direction to increase your comfort.

⚠ CAUTION

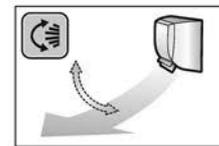
- Always use a remote controller to adjust the angle of the flaps.
- If you attempt to move the flaps forcibly by hand when they are swinging, the mechanism may be damaged.
- Be careful when adjusting the louvres.
- Inside the air outlet, a fan is rotating at a high speed.

Auto swing

For up and down airflow direction

1. Press  .

- "  " appears on the LCD.
- The flaps (horizontal blade) will begin to swing.



2. If you want to stop the movement of the flaps, press

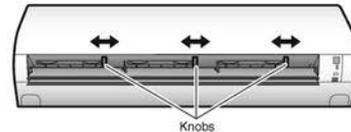
 again when the flaps reach the desired position.

Manual adjustment

For right and left airflow direction

▶ Hold the knobs and move the louvres (vertical blades) to the desired position.

- There are knobs in 3 places.

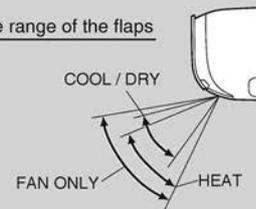


NOTE

Notes on airflow direction setting

- The movable range of the flaps varies according to the operation mode.
- The flaps will stop at the upper position when the airflow rate is changed to low during the up and down swing setting.

Movable range of the flaps



Useful Functions



COMFORT AIRFLOW Operation



The air direction and flow rate are adjusted so that the air will not blow directly at people in the room.

■ To start

Press  .

- “” appears on the LCD.

	COOL operation	DRY operation	HEAT operation
Flaps direction	Goes up		Goes down
Airflow rate	The airflow rate can be set to any level	AUTO	The airflow rate can be set to any level

- Not available in FAN ONLY mode.

■ To cancel

Press  again.

- “” disappears from the LCD.
- The flaps will return to the memory position from before COMFORT AIRFLOW operation.

NOTE

Note on COMFORT AIRFLOW operation

- If the up and down airflow direction is selected, COMFORT AIRFLOW operation will be cancelled.

Useful Functions



SUPER POWERFUL Operation



SUPER POWERFUL operation quickly maximises the cooling (heating) effect in any operation mode. In this mode, the air conditioner operates at maximum capacity.

■ To start

▶ Press **POWERFUL** .

- “” appears on the LCD.
- SUPER POWERFUL operation ends in 20 minutes. Then the system automatically operates again with the previous settings which were used before SUPER POWERFUL operation.

■ To cancel

▶ Press **POWERFUL**  again.

- “” disappears from the LCD.

NOTE

Notes on SUPER POWERFUL operation

- Pressing **OFF** causes the settings to be cancelled, and “” disappears from the LCD.
- SUPER POWERFUL operation will not increase the capacity of the air conditioner if the air conditioner is already in operation with its maximum capacity demonstrated.
- **In COOL, HEAT and AUTO operation**
To maximise the cooling (heating) effect, the capacity of outdoor unit increases and the airflow rate becomes fixed at the maximum setting. The temperature and airflow settings cannot be changed in COOL and HEAT operation. Airflow settings cannot be changed in AUTO operation.
- **In DRY operation**
The temperature setting is lowered by 2.5°C and the airflow rate is slightly increased.
- **In FAN ONLY operation**
The airflow rate is fixed at the maximum setting.

Regarding the combination of SUPER POWERFUL and other operations

SUPER POWERFUL + COMFORT AIRFLOW	Not available*
SUPER POWERFUL + ECONO	
SUPER POWERFUL + OUTDOOR UNIT QUIET	

*Priority is given to the function of whichever button is pressed last.

Useful Functions



ECONO Operation



ECONO operation enables efficient operation by limiting the maximum power consumption.

This function is useful to prevent the circuit breaker from tripping when the unit operates alongside other appliances on the same circuit.

■ To start

▶ Press .

- "  " appears on the LCD.
- Not available in FAN ONLY mode.

■ To cancel

▶ Press  again.

- "  " disappears from the LCD.

NOTE

Notes on ECONO operation

- This operation is performed with lower power and therefore may not provide a sufficient cooling (heating) effect.
- Pressing  causes the settings to be cancelled, and "  " disappears from the LCD.
- If the power consumption level is already low, switching to ECONO operation will not reduce the power consumption.

Some useful functions can be used together.

COMFORT AIRFLOW + ECONO	Available
OUTDOOR UNIT QUIET + ECONO	

Useful Functions



OUTDOOR UNIT QUIET Operation



OUTDOOR UNIT QUIET operation lowers the noise level of the outdoor unit by changing the frequency and fan speed on the outdoor unit. This function is convenient during night.

■ To start

▶ Press  .

- “” appears on the LCD.

■ To cancel

▶ Press  again.

- “” disappears from the LCD.

NOTE

Notes on OUTDOOR UNIT QUIET operation

- SUPER POWERFUL operation and OUTDOOR UNIT QUIET operation cannot be used at the same time. Priority is given to the function of whichever button is pressed last.
- Even the operation is stopped by using the remote controller or the indoor unit ON/OFF switch when using OUTDOOR UNIT QUIET operation, “” will remain on the remote controller display.
- OUTDOOR UNIT QUIET operation will drop neither the frequency nor fan speed if they have been already dropped low enough.

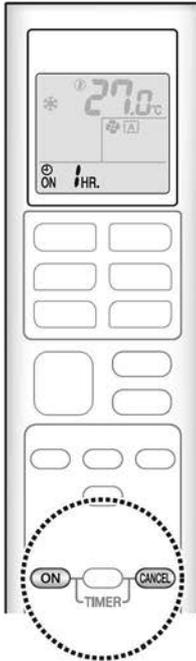
Possible combinations of OUTDOOR UNIT QUIET operation and basic operations

OUTDOOR UNIT QUIET	Operation mode				
	AUTO	DRY	COOL	HEAT	FAN
	√	-	√	√	-

TIMER Operation



ON/OFF TIMER Operation



Timer functions are useful for automatically switching the air conditioner on or off in the morning or at night. You can also use the ON TIMER and OFF TIMER together.

[ON TIMER operation]

■ To set

▶ Press **ON**.



"ON HR." appears on the LCD.

- Each pressing of **ON** changes the time setting by 1 hour. The time can be set between 1 and 12 hours.
- The TIMER lamp lights orange.



Display

■ To cancel

▶ Press **CANCEL**.

- "ON HR." disappears from the LCD.
- The TIMER lamp goes off.

NOTE

In the following cases, set the timer again.

- After the circuit breaker has turned off.
- After a power failure.
- After replacing the batteries in the remote controller.

TIMER Operation



ON/OFF TIMER Operation



[OFF TIMER operation]

■ To set

▶ Press **OFF**.



- Each pressing of **OFF** changes the time setting by 1 hour. The time can be set between 1 and 12 hours.
- The TIMER lamp lights orange.



Display

■ To cancel

▶ Press **CANCEL**.

- "OFF 1HR." disappears from the LCD.
- The TIMER lamp goes off.

[ON/OFF TIMER combination]

■ To combine

- A sample setting for combining the 2 timers is shown below.
- "ON" and "OFF" are appears on the LCD.

[Example]



When setting while the unit is operating

- Stops the unit 1 hour later and starts it 7 hours after that.



When setting while the unit is stopped

- Starts the unit 2 hours later and stops it 3 hours after that.

NOTE

NIGHT SET mode

- When the OFF TIMER is set, the air conditioner automatically adjusts the temperature setting (0.5°C up in COOL, 2.0°C down in HEAT) to prevent excessive cooling (heating) during sleeping hours.

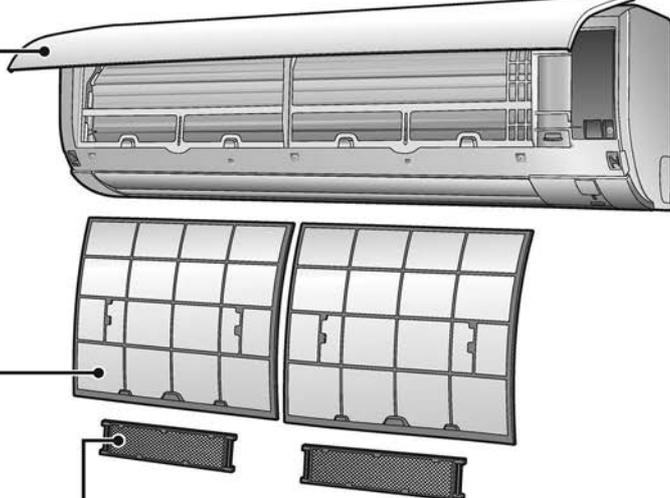
Care and Cleaning

⚠ CAUTION

- Before cleaning, be sure to stop the operation and turn off the circuit breaker.
- Do not touch the aluminium fins of the indoor unit. If you touch those parts, this may cause an injury.

■ Quick reference

Cleaning parts



Front panel

- Wipe it with a soft damp cloth.
- Only neutral detergent may be used.

If dirty



Air filter

- Vacuum dust or wash the filter.

Once every 2 weeks

▶ Page 19

Indoor unit, outdoor unit and remote controller

- Wipe them with a soft cloth.

If dirty

Titanium apatite deodorizing filter (sold separately) and dust collection filter (PM2.5) (sold separately)

Titanium apatite deodorizing filters and dust collection filters are sold separately (not included with the air conditioner). To purchase, contact the dealer where you bought the air conditioner.

Item	Part No.
Titanium apatite deodorizing filter - with frame (set of 2)	KAF970A45
Dust collection filter (PM2.5) - with frame (set of 2)	BAFP046A42

Titanium apatite deodorizing filter

- Vacuum dust or replace the filter.

[Cleaning] **Once every 6 months** ▶ Page 20

[Replacement] **Once every 3 years** ▶ Page 20

Dust collection filter (PM2.5)

- No cleaning is required. Please replace the filter every 6 months. ▶ Page 20

NOTE

For cleaning, do not use any of the following:

- Water hotter than 40°C
- Volatile liquid such as benzine, petrol and thinner
- Polishing compounds
- Rough materials such as a scrubbing brush



Care

Care and Cleaning

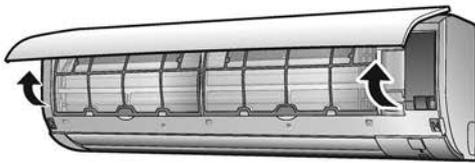
⚠ CAUTION

- Do not touch the aluminium fins by bare hand at the time of dismounting or mounting the filter.

■ Air filter

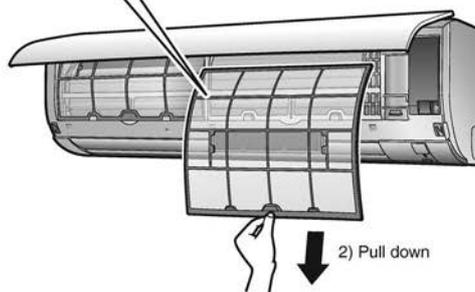
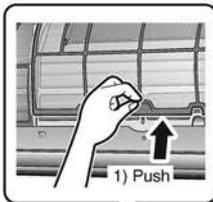
1. Open the front panel.

- Hold the front panel by the sides and open it.



2. Pull out the air filters.

- Push the filter tab at the centre of each air filter a little upwards, then pull it down.



3. Wash the air filters with water or clean them with vacuum cleaner.

- It is recommended to clean the air filters every 2 weeks.



If the dust does not come off easily

- Wash the air filters with neutral detergent thinned with lukewarm water, then dry them up in the shade.



4. Reattach the filters.

5. Close the front panel slowly.

- Press the panel at both sides and the centre.



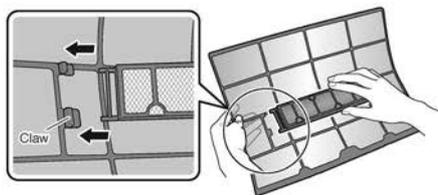
- Make sure that the front panel is securely fixed.

■ **Titanium apatite deodorizing filter (sold separately) / dust collection filter (PM2.5) (sold separately)**

Attaching

1. Open the front panel and pull out the air filters. **▶ Page 19**
2. Insert the titanium apatite deodorizing filters or dust collection filters (PM2.5).

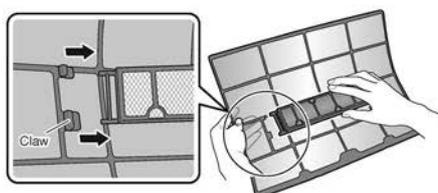
- Check that the filters are inserted securely under the tabs.



Cleaning and Replacement

1. Open the front panel and pull out the air filters. **▶ Page 19**
2. Take off the titanium apatite deodorizing filters or dust collection filters (PM2.5).

- Hold the recessed parts of the frame and unhook the 4 claws.
- Remove the filters from the tabs.



NOTE

- Operation with dirty filters:
 - cannot deodorise the air,
 - cannot clean the air,
 - results in poor cooling,
 - may cause odour.
- Dispose of old filters as non-flammable waste.

3. Clean or replace the titanium apatite deodorizing filters or dust collection filters (PM2.5).

[Cleaning for titanium apatite deodorizing filter (Blue-Black)]

3-1 Vacuum dust, and soak in lukewarm water or water for about 10 to 15 minutes if very dirty.

3-2 After washing, shake off remaining water and let them dry in the shade.

- This filter can be renewed by washing it with water once **every 6 months** and we recommend replacing it once **every 3 years**.
- Do not wring out the filter when removing water from it.

[Cleaning for dust collection filter (PM2.5) (White)]

- Do not wash the filters as this will reduce their efficiency.
- It is recommended to replace it once **every 6 months**.

[Replacement]

Remove the filter from the filter frame and prepare a new one.

- Do not throw away the filter frame. Reuse the filter frame when replacing the titanium apatite deodorizing filter and dust collection filter (PM2.5).



- When attaching the filter, check that the filter is properly set in the tabs.

4. Set the filters as they were and close the front panel.

- Press the front panel at both sides and the center.

Care

Care and Cleaning

■ Prior to a long period of non-use

1. Operate the FAN ONLY mode for several hours on a fine day to dry out the inside.

- Press **FAN ONLY**.

2. After operation stops, turn off the circuit breaker for the room air conditioner.

3. Clean the air filters and reattach them. [▶ Page 19](#)

4. To prevent battery leakage, take out the batteries from the remote controller.

■ We recommend periodical maintenance

- In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a specialist in addition to regular cleaning by the user.
- For specialist maintenance, please contact the dealer where you bought the air conditioner.
- The maintenance cost must be borne by the user.

When the Need Arises

FAQ

Indoor unit

The flaps do not start swinging immediately.

- The air conditioner is adjusting the position of the flaps. The flaps will start moving soon.

The air conditioner stops generating airflow during HEAT operation.

- Once the set temperature is reached, the airflow rate is reduced and operation stopped in order to avoid generating a cool airflow. Operation will resume automatically when the indoor temperature falls.

HEAT operation stops suddenly and a flowing sound is heard.

- The outdoor unit is defrosting. HEAT operation starts after the frost on the outdoor unit has been removed. This can take about 4 to 12 minutes.

Operation does not start soon.

- When **AUTO** or any direct operation button was pressed soon after operation was stopped.
- When the mode was reselected.
 - This is to protect the air conditioner. You should wait for about 3 minutes.

**Different sounds are heard.**■ **A sound like flowing water**

- This sound is generated because the refrigerant in the air conditioner is flowing.
- This is a pumping sound of the water in the air conditioner and can be heard when the water is pumped out from the air conditioner during COOL or DRY operation.
- Refrigerant flows inside the air conditioner even when one indoor unit is not in operation if the other indoor unit is in operation.

■ **Blowing sound**

- This sound is generated when the flow of the refrigerant in the air conditioner is switched over.

■ **Ticking sound**

- This sound is generated when the cabinet and frame of the air conditioner slightly expand or shrink as a result of temperature changes.

■ **Whistling sound**

- This sound is generated when refrigerant flows during defrosting operation.

■ **Clicking sound during operation or idle time**

- This sound is generated when the refrigerant control valves or the electrical parts operate.

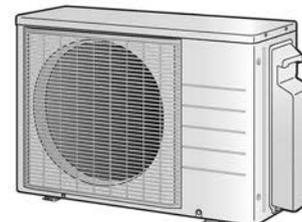
■ **Clopping sound**

- This sound is heard from the inside of the air conditioner when the exhaust fan is activated while the room doors are closed. Open the window or turn off the exhaust fan.

Outdoor unit

The outdoor unit emits water.

- **In HEAT operation**
 - The frost on the outdoor unit melts into water or steam when the air conditioner is in defrosting operation.
- **In COOL or DRY operation**
 - Moisture in the air condenses into water on the cool surface of the outdoor unit piping and drips.



When the Need Arises

Troubleshooting

Before making an inquiry or a request for repair, please check the following.
If the problem persists, consult your dealer.



Not a problem

This case is not a problem.



Check

Please check again before requesting repairs.

The air conditioner does not operate

Case	Description / what to check
OPERATION lamp is off.	<ul style="list-style-type: none"> • Has the circuit breaker been tripped or the fuse blown? • Is there a power failure? • Are batteries set in the remote controller?
OPERATION lamp is blinking.	<ul style="list-style-type: none"> • Turn off the power with the circuit breaker and restart operation with the remote controller. If the OPERATION lamp is still blinking, check the error code and consult your dealer. ▶Page 26

The air conditioner suddenly stops operating

Case	Description / what to check
OPERATION lamp is on.	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> • To protect the system, the air conditioner may stop operating after sudden large voltage fluctuations. It automatically resumes operation in about 3 minutes.
OPERATION lamp is blinking.	<ul style="list-style-type: none"> • Are the air filters dirty? Clean the air filters. • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? Stop operation and after turning off the circuit breaker, remove the obstruction. Then restart operation with the remote controller. If the OPERATION lamp is still blinking, check the error code and consult your dealer. ▶Page 26

The air conditioner does not stop operating

Case	Description / what to check
The air conditioner continues operating even after operation is stopped.	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> ■ Immediately after the air conditioner is stopped <ul style="list-style-type: none"> • The outdoor unit fan continues rotating for about another 1 minute to protect the system. ■ While the air conditioner is not in operation <ul style="list-style-type: none"> • When the outdoor temperature is high, the outdoor unit fan may start rotating to protect the system.

The room does not cool down / warm up

Case	Description / what to check
Air does not come out	<ul style="list-style-type: none"> ■ In HEAT operation <ul style="list-style-type: none"> • The air conditioner is warming up. Wait for about 1 to 4 minutes. • During defrosting operation, hot air does not flow out of the indoor unit. ■ When the air conditioner operates immediately after the circuit breaker is turned on <ul style="list-style-type: none"> • The air conditioner is preparing to operate. Wait for about 3 to 20 minutes.
Air does not come out / Air comes out.	<ul style="list-style-type: none"> ■ Is the airflow rate setting appropriate? <ul style="list-style-type: none"> • Is the airflow rate setting low, such as "Indoor unit quiet" or "Airflow rate 1"? Increase the airflow rate setting. ■ Is the set temperature appropriate? ■ Is the adjustment of the airflow direction appropriate?
Air comes out.	<ul style="list-style-type: none"> • Is there any furniture directly under or beside the indoor unit? • Is the unit you are operating or another unit running in ECONO operation? ▶Page 14 • Are the air filters dirty? • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? • Is a window or door open? • Is an exhaust fan turning?

When the Need Arises

Mist comes out

Case	Description / what to check
Mist comes out of the indoor unit.	<input checked="" type="checkbox"/> • This happens when the air in the room is cooled into mist by the cold airflow during COOL or other operation.

Remote controller

Case	Description / what to check
The unit does not receive signals from the remote controller or has a limited operating range.	<input checked="" type="checkbox"/> • The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to "Preparation Before Operation". ▶ Page 8 • Signal communication may be disabled if an electronic-starter-type fluorescent lamp (such as inverter-type lamps) is in the room. Consult your dealer if that is the case. • The remote controller may not function correctly if the transmitter is exposed to direct sunlight.
LCD is faint, is not working, or the display is erratic.	<input checked="" type="checkbox"/> • The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to "Preparation Before Operation". ▶ Page 8
The LCD is blinking and the remote controller cannot be operated.	<input checked="" type="checkbox"/> • Battery power has run out. Replace both batteries at the same time with new size AAA.LR03 (alkaline) batteries. Leaving exhausted batteries in the remote controller can result in injury due to battery leakage, rupturing or heating, or lead to equipment failure. (Even when the LCD is blinking, the OFF button remains functional.)
Other electric devices start operating.	<input checked="" type="checkbox"/> • If the remote controller activates other electric devices, move them away or consult your dealer.

Air has an odour

Case	Description / what to check
The air conditioner gives off an odour.	<input checked="" type="checkbox"/> • The room odour absorbed in the unit is discharged with the airflow. We recommend you to have the indoor unit cleaned. Please consult your dealer.

Others

Case	Description / what to check
The air conditioner suddenly starts behaving strangely during operation.	<input checked="" type="checkbox"/> • The air conditioner may malfunction due to lightning or radio. If the air conditioner malfunctions, turn off the power with the circuit breaker and restart the operation with the remote controller.

NOTE

Notes on the operating conditions

- If operation continues under any conditions other than those listed in the table,
 - A safety device may activate to stop the operation.
 - Dew may form on the indoor unit and drip from it when COOL or DRY operation is selected.

Mode	Operating conditions
COOL / DRY	Outdoor temperature: 10-46°C Indoor temperature: 18-32°C Indoor humidity: 80% max.
HEAT	Outdoor temperature: -15-24°C Indoor temperature: 10-30°C

When the Need Arises

Troubleshooting

■ Call your dealer immediately

WARNING

When an abnormality (such as a burning smell) occurs, stop operation and turn off the circuit breaker.

- Continued operation in an abnormal condition may result in problems, electric shock or fire.
- Consult the dealer where you bought the air conditioner.

Do not attempt to repair or modify the air conditioner by yourself.

- Incorrect work may result in electric shock or fire.
- Consult the dealer where you bought the air conditioner.

If one of the following symptoms takes place, call your dealer immediately.

- The power cord is abnormally hot or damaged.
- An abnormal sound is heard during operation.
- The circuit breaker, a fuse, or the earth leakage circuit breaker cuts off the operation frequently.
- A switch or a button often fails to work properly.
- There is a burning smell.
- Water leaks from the indoor unit.

Turn off the circuit breaker and call your dealer. 

■ After a power failure

- The air conditioner automatically resumes operation in about 3 minutes. You should just wait for a while.

■ Lightning

- If there is a risk lightning could strike in the neighbourhood, stop operation and turn off the circuit breaker to protect the system.

■ Disposal requirements

- Dismantling of the unit, handling of the refrigerant, oil and other parts, should be done in accordance with the relevant local and national regulations.

When the Need Arises



■ Fault diagnosis by remote controller

- In case the air conditioner is malfunctioning, you can check the error code via the remote controller before consulting with service personnel and informing them of the malfunction code.

1. When **CANCEL is held down for about 5 seconds, “00” blinks in the temperature display section.**

2. Press **CANCEL repeatedly until a long beep is produced.**

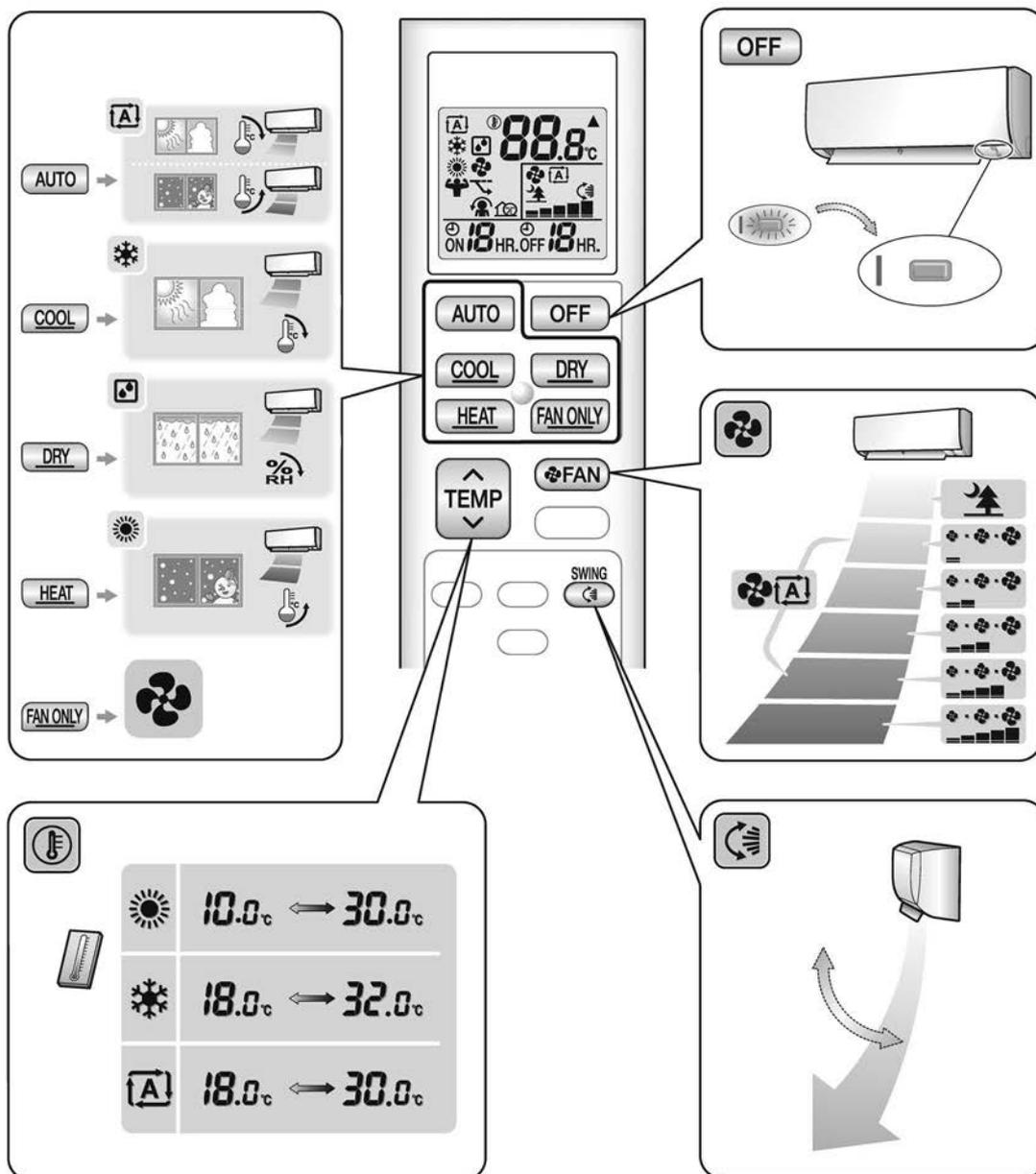
- The code indication changes as shown below, and notifies you with a long beep.

	CODE	MEANING
SYSTEM	00	NORMAL
	UA	INDOOR-OUTDOOR UNIT COMBINATION FAULT
	U0	REFRIGERANT SHORTAGE
	U2	DROP VOLTAGE OR MAIN CIRCUIT OVERVOLTAGE
INDOOR UNIT	U4	FAILURE OF TRANSMISSION (BETWEEN INDOOR UNIT AND OUTDOOR UNIT)
	A1	INDOOR PCB DEFECTIVENESS
	A5	FREEZE-UP PROTECTOR
	A6	FAN MOTOR FAULT
	C4	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
OUTDOOR UNIT	C9	FAULTY SUCTION AIR TEMPERATURE SENSOR
	EA	COOLING-HEATING SWITCHING ERROR
	E1	CIRCUIT BOARD FAULT
	E5	OL STARTED
	E6	FAULTY COMPRESSOR START UP
	E7	DC FAN MOTOR FAULT
	E8	OVERCURRENT INPUT
	F3	HIGH TEMPERATURE DISCHARGE PIPE CONTROL
	F6	HIGH PRESSURE CONTROL (IN COOLING)
	F8	OPERATION HALT DUE TO COMPRESSOR INTERNAL TEMPERATURE ABNORMALITY
	H0	SENSOR FAULT
	H6	OPERATION HALT DUE TO FAULTY POSITION DETECTION SENSOR
	H8	DC CURRENT SENSOR FAULT
	H9	FAULTY SUCTION AIR TEMPERATURE SENSOR
	J3	FAULTY DISCHARGE PIPE TEMPERATURE SENSOR
	J6	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	L3	ELECTRICAL PARTS HEAT FAULT
L4	HIGH TEMPERATURE AT INVERTER CIRCUIT HEATSINK	
L5	OUTPUT OVERCURRENT	
P4	FAULTY INVERTER CIRCUIT HEATSINK TEMPERATURE SENSOR	

NOTE

- A short beep indicates non-corresponding codes.
- To cancel the code display, hold **CANCEL** down for about 5 seconds. The code display also clears if no button is pressed for 1 minute.

Quick Reference



13. Optional Accessories

13.1 Indoor Unit

	Option Name	20/25/35 Class	50 Class	Manual No.	
				Installation Manual	Operation Manual
1	Wireless LAN connecting adaptor	BRP072C42 ★1	BRP072C42 ★2	4P518835-2K	—
2	Remote control PC-board set	BRP067A42	—	1P518834-1	—
		—	BRP980B42	1P518836-1	—
3	Wired remote controller ★5	BRC944B2 ★1	BRC944B2 ★2	3P202923-2B	3P202922-2B
		BRC073A4 ★1	BRC073A4 ★2	3P422721-1	3P422724-1
4	Wired remote controller cord	Length 3 m (shielded wire)	BRCW901A03	3P201487-1	—
		Length 8 m (shielded wire)	BRCW901A08		
5	Wiring adaptor for timer clock / remote controller ★3 (normal open pulse contact / normal open contact)	KRP413BB1S ★1	KRP413BB1S ★2	3P248024-2K	—
6	Central remote controller ★4	DCS302CA61		2P162816-1	3P124623-8D
7	Unified ON/OFF controller ★4	DCS301BA61		1P162827-1A	2P167410-1
8	Schedule timer ★4	DST301BA61		3P162015-1A	3P124623-5C
9	Interface adaptor for DIII-NET (residential air conditioner)	KRP928BB2S ★1	KRP928BB2S ★2	3P248024-1K 3P248024-3D	—
10	Titanium apatite deodorizing filter (without frame)	KAF970A46	—	—	—
11	Titanium apatite deodorizing filter (with frame)	—	KAF970A45	—	—
12	Dust collection filter (PM2.5) (without frame)	BAFP046A41	—	—	—
13	Dust collection filter (PM2.5) (with frame)	—	BAFP046A42	—	—
14	Remote controller loss prevention with chain	KKF910A4		—	—

- Notes:**
- ★1 Remote control PC-board set (BRP067A42) is also required for each indoor unit.
 - ★2 Remote control PC-board set (BRP980B42) is also required for each indoor unit.
 - ★3 Timer clock and other devices ; obtained locally.
 - ★4 An interface adaptor (KRP928BB2S) is also required for each indoor unit.
 - ★5 3 m (BRCW901A03) or 8 m (BRCW901A08) length wired remote controller cord is necessary.

13.2 Outdoor Unit

	Option Name	Model Name	Manual No.	
			Installation Manual	Operation Manual
1	Air direction adjustment grille	KPW937F4	3P561128-1	—
2	Drain plug ★	KKP937A4	—	—
3	Demand adaptor ★	BRP070A45	—	—

- Note:** ★ Standard accessory



Warning



- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.